July 21, 2004

Honorable Larry E. Craig
Chairman
Special Committee on Aging
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

In response to your request, the Congressional Budget Office has prepared a long-term analysis of Plan #2 in the December 2001 report of the President's Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*. The CBO analysis considers the impact that the proposed reform would have on the Social Security program, the federal budget, the U.S. economy, and present and future beneficiaries.

If you wish further details on this analysis, we would be pleased to provide them. The CBO staff contact is Noah Meyerson, who can be reached at 225-2592.

Sincerely,

Douglas Holtz-Eakin

Enclosure

cc: Honorable John B. Breaux
Ranking Member

Honorable Charles E. Grassley
Chairman
Committee on Finance

Honorable Max Baucus
Ranking Democratic Member

Long-Term Analysis of Plan 2 of the President's Commission to Strengthen Social Security

July 21, 2004
(Updated September 30, 2004)[1]

Bill Summary

The President's Commission to Strengthen Social Security (CSSS) described three reform plans. This analysis considers Plan 2.[2] The plan would introduce individual accounts (IAs) and switch from wage indexing of initial benefits to price indexing. It would also introduce a new minimum benefit for workers with many years of low earnings, increase the survivor benefit for some widows and widowers, and transfer some funds from the federal government's general fund to the Social Security trust funds. More information can be found in the analysis of each provision.[3]

CSSS Plan 2 would introduce IAs by:

- Allowing workers to divert 4 percentage points of their payroll taxes, up to $1,000, to a personal account, which would belong to covered workers;
- Disbursing the principal and interest in those accounts—in the form of annuities that would supplement Social Security benefits—to workers at retirement or to their heirs if they died before retirement; and
- Reducing the traditional benefit by the annuitized value of a notional (or theoretical) account, equivalent to the diverted payroll taxes accrued at the Treasury interest rate minus 1 percentage point.

Participation in IAs would be voluntary, but there is an unambiguous incentive for individuals to participate. In this analysis, CBO assumes 100 percent participation.

CSSS Plan 2 would lower benefits relative to current law by changing the computation of benefits from wage indexing to price indexing starting in 2011. CSSS Plan 2 would partially offset the benefit reduction resulting from price indexing by:

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[1]This version reflects the addition of CBO's analysis of the proposed plan's potential effects on the macroeconomy.

[2]The President's Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans* (December 2001).

[3]Details of the proposal were taken from the report of the President's Commission and the accompanying memorandum by the Social Security Administration's Office of the Chief Actuary. CBO assumed all provisions would be implemented two years later than the dates that the Commission proposed in 2001.

- Establishing a "low-earner enhanced benefit" for low-earner OAI worker beneficiaries with at least 20 years of work and for DI beneficiaries with quarters of covered work at least equal to two times the number of years since age 22 until claim.
- Raising the survivor benefit to 75 percent of the couple benefit for widows and widowers, if the resulting survivor benefit is higher than the current-law benefit. The benefit under this provision would be limited to the amount that the survivor would have received if his or her PIA was the mean PIA of all retired workers from the previous year.

CSSS Plan 2 would transfer general funds to the Social Security trust funds whenever the balance of the trust funds fell below zero.

CBO projects that under current law, the government will be unable to pay scheduled benefits starting in 2053 and Social Security outlays will exceed revenues from payroll taxes and taxation of benefits beginning in 2019. CSSS Plan 2 would enable the government to pay the benefits scheduled under that law without transferring additional money from the general fund until 2036. From 2036 through 2050, transfers from the general fund would be required. After 2050, scheduled benefits would fall sufficiently that dedicated revenues would be large enough to pay them in full.

Including payouts from IAs, expected annual benefits under CSSS Plan 2 would generally be stable in constant (2004) dollars, but as real (inflation-adjusted) earnings increased, those benefits would replace a declining portion of preretirement earnings. As a result of increasing life expectancy, expected benefits received over a lifetime would increase in real dollars. However, total expected benefits, including OASDI benefits and IA payouts, would be less than under current law, even though current-law benefits would fall below scheduled benefits with the exhaustion of the trust funds.

For a more detailed description of Social Security under current law, see the "Background" appendix.

Overview of the Analysis

This long-term analysis considers the effects of CSSS Plan 2 on:

- The Social Security system, including revenues, outlays, and balances (revenues less outlays);
- The finances of the federal government;
- Total benefits received by beneficiaries, including those from IAs;
- Benefit levels for beneficiaries across cohorts and the earnings distribution;
- The relationship between taxes paid and benefits received for different beneficiaries; and
- The macroeconomy.

CBO projects annual outlays (benefits plus administrative costs) and revenues (payroll taxes and income taxes on benefits) (see Figures 1A and 1B and Tables 1A and 1B). Because those Social Security projections are made over a long horizon and because the system's revenues and outlays are large compared with the size of the economy, it is useful to consider projected outlays and revenues not in dollars but relative to gross domestic product (GDP), a comprehensive measure of the nation's economic resources.

Social Security is not the only source of projected federal budget deficits.[4] Thus, legislation that reduces or eliminates shortfalls in Social Security may not eliminate projected federal deficits. However, it is useful to consider the effects of such proposals on the total budget surplus or deficit (see Figures 2A and 2B).

Most Social Security revenues come from payroll taxes. Because earnings subject to payroll taxes are a generally constant portion of GDP, under current law, Social Security revenues will remain stable throughout the projection period at about 5 percent of GDP. In contrast, as the baby-boom generation retires, scheduled outlays will rise from the current level of 4.3 percent of GDP. The fastest growth in outlays as a share of GDP will occur from 2018 to 2023, CBO projects, when that share will increase at an average rate of 2.2 percent a year. As the baby-boom beneficiaries die, outlays relative to GDP will stabilize for about 15 years but will resume their increase as life spans continue to lengthen. By 2100, CBO projects, scheduled outlays will equal 6.8 percent of GDP—56 percent higher than in 2003. Those outlay projections depend on assumptions about a number of factors. The uncertainty about outlays grows over time, reflecting growing uncertainty about how long future generations will live and collect benefits. Under current law, most risk from uncertainty about the level of scheduled benefits is borne by the government (see Figures 3A and 3B).

An important aspect of the economic impact and policy design of the Social Security program is its effects on individuals, both as taxpayers and as beneficiaries. CBO presents four measures of the benefits received and taxes paid by program participants (categorized by the decade of their birth and their earnings level).

The first three measures display benefits received by retired workers:[5]

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[4]See Congressional Budget Office, *The Long-Term Budget Outlook* (December 2003), for a more complete discussion.

[5]See Congressional Budget Office, *Measuring Changes to Social Security Benefits*, Long-Range Fiscal Policy Brief No. 11 (December 2003), for a discussion of these three measures.

- First-year retirement benefits in constant 2004 dollars (see Table 2);
- First-year replacement rate—the percentage of preretirement earnings replaced by retirement benefits (see Table 3); and
- Lifetime retirement benefits in 2004 dollars (see Table 4).

These measures consider only benefits for retired workers and are presented for seven 10-year birth cohorts and the lowest, middle, and highest household earnings quintiles (a quintile is 20 percent of all individuals) of people who receive retirement benefits.[6] A more comprehensive perspective is given by the ratio of the present value of total Social Security benefits—Disability Insurance (DI) payments as well as OASI payments—received by all individuals over a lifetime to the present value of total Social Security payroll taxes paid over a lifetime. Those four measures compute benefits net of the income taxes paid on those benefits and credited to the Social Security trust funds (see Figures 4A, 4B, and 4C).

The ratio of lifetime benefits to lifetime taxes provides a notion of money's worth for individual participants in Social Security. For example, a ratio of 150 percent means that the present value of benefits is 50 percent greater than the present value of taxes. (Social Security is a pay-as-you-go social insurance system. For that reason, this and other measures of the system's rate of return are not comparable to those that would be achieved through private investments.) Taxes paid include both employer and employee payroll taxes, and benefits received include a worker's retirement and disability benefits as well as benefits paid to the worker's dependents and survivors.[7]

Ratios are given for seven 10-year birth cohorts and the lowest, middle, and highest quintiles of individuals who live to at least age 45, based on lifetime household earnings. Beneficiaries prefer higher benefits, of course, but they also prefer more certainty. When projections of benefits are considered, both the level and the uncertainty about those benefits are important. Thus, the figures present the 80 percent range of uncertainty for the projected lifetime benefit-to-tax ratios by showing the 90th and 10th percentiles.

Like any other significant change to Social Security policy, CSSS Plan 2 could affect the overall level of economic output. Social Security policies affect the economy primarily by changing the level and riskiness of people's expected lifetime incomes and by changing the marginal return to an additional hour of work. Those changes can influence how much and how long people work and how much of their income they spend on current consumption rather than saving. Because

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[6]An individual's household earnings quintile may differ from his or her individual earnings quintile. For example, a woman who was out of the labor force most of her life while married to a high-earning man would have low lifetime individual earnings but high lifetime household earnings.

[7]This measure does not include any payments made to children or young survivors.

those interactions are particularly uncertain, they are not incorporated into the budgetary analysis. (See the "Effects on the Macroeconomy" section at the end of the analysis for further discussion.)

This analysis is one of CBO's first long-term analyses of proposed changes to the Social Security program. Subsequent results may differ modestly in some respects from those presented here as a result of ongoing improvements in CBO's analytical methods and updates to the underlying data and economic and demographic assumptions.

Alternative Baselines

It is unclear how to project future benefit levels under current law. CBO projects that the Social Security trust funds will become exhausted in 2052. On the one hand, trust-fund exhaustion will not affect a beneficiary's right to benefits specified in law. On the other hand, the Social Security Administration will not have the legal authority to pay full benefits.

Consequently, this analysis presents three baseline projections of future benefit spending. In the "**scheduled benefits**" scenario, outlays after trust-fund exhaustion are assumed to include the full benefits owed, despite any shortfall in the system's annual revenues. In the figures and tables that follow, this scheduled benefits baseline is labeled "A."

Alternatively, in the "**trust-fund-financed benefits**" scenario, outlays are assumed to include only those benefits that could be financed by annual system revenues. That scenario assumes that all types of benefits are reduced annually, by an equal percentage, once the trust funds are exhausted so that total outlays equal total revenues. In figures and tables, this trust-fund-financed benefits baseline is labeled "B."

These two baselines are necessary for a balanced analysis. If legislation reduced outlays sufficiently so that the Social Security trust funds were never exhausted, it would not be fair to compare those lower benefits with current-law scheduled benefits, since the former are fully financed while the latter are not. Thus, the trust-fund-financed benefits baseline provides a consistent comparison.

If legislation raised revenues sufficiently to fully finance outlays, the scheduled and trust-fund-financed benefits scenarios would show equivalent outcomes. However, it is also possible that a proposal would not reduce outlays or increase revenues sufficiently to pay scheduled benefits. If that was so, then the scheduled and trust-fund-financed scenarios under the proposal would show different outcomes.

Legislative proposals may also shift funds from other government accounts into the Social Security trust funds instead of increasing dedicated taxes. The impact of such transfers on individuals may not be evaluated since their financing either is not specified or is not possible to

evaluate. Therefore, under the "**dedicated-tax-financed benefits**" scenario, individual outcomes are measured only for those benefits funded by dedicated revenues. That scenario is labeled "C."

Analyzing Alternative Investments

Social Security proposals often call for using private securities, either through the government directly investing some of the trust funds or through individuals investing in IAs. Assets like corporate bonds or equities have higher expected returns than Treasury bonds have (the Social Security trust funds are currently invested in Treasury securities), but they also expose holders to greater risk.

The individual account proposal in CSSS Plan 2 calls for individual investments in government securities, corporate bonds, and equities. Individuals would be able to select a specific asset allocation. CBO assumes that participants would invest their IAs in the following portfolio:

Investment	Share of Portfolio	Annual real expected return
Treasury bonds	20%	3.3%
Corporate bonds	30%	3.8%
Equities	50%	6.8%

The weighted average real return of this portfolio is 5.2 percent; individuals are assumed to rebalance the portfolio annually. Administrative costs are assumed to reduce returns by 0.3 percent, resulting in a net expected real annual return of 4.9 percent.[8] While this portfolio has a higher expected return than Treasury bonds, it also results in higher risk.

This analysis contains both single-number (labeled "expected") and range estimates. The expected estimates are generated by a single simulation in which the demographic and economic assumptions necessary for long-run projections are set to the most likely value. In that calculation, the effects of the higher expected returns in IA investments are computed net of the cost of the additional risk. Thus, the returns are "risk-adjusted" and set equal to the returns on Treasury bonds.[9]

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[8]For a discussion of the factors affecting administrative costs, see Congressional Budget Office, *Administrative Costs of Private Accounts in Social Security* (March 2004).

[9]For additional discussion of this issue, see Congressional Budget Office, *Evaluating and Accounting for Federal Investment in Corporate Stocks and Other Private Securities* (January 2003).

Range estimates are based on hundreds of stochastic simulations in which historical experience is used to generate a probability distribution of possible future outcomes for the various demographic and economic inputs, including returns on equities, corporate bonds, and Treasury bonds.[10] Those estimates capture both the higher expected returns and higher risk of IA investments. The range estimate is presented as the 80 percent range of uncertainty—that is, the range between the 10th and 90th percentiles—within which the actual value has an 80 percent chance of falling. In some cases, the median—or middle—of the range of outcomes is also presented. The expected and median values both indicate the "typical" results. However, the median of the multiple-simulation results will generally differ somewhat from the single-simulation result.

Analysis of CSSS Plan 2

Social Security Revenues and Outlays Over Time

Scheduled Benefits Scenario
CBO projects that under current law, Social Security revenues (payroll taxes and income taxes on benefits) will exceed outlays (benefits and administrative costs) until 2019 (see Figure 1A, top panel). Thereafter, projected outlays will be larger than revenues throughout the century; the gap will reach around 2 percent of GDP. In 2100, outlays will be almost 7 percent of GDP.
Under CSSS Plan 2, Social Security revenues drop from about 5 percent of GDP to 4.2 percent of GDP in 2007 as payroll taxes are diverted into IAs (see Figure 1A, bottom panel). Social Security outlays grow as the baby-boom generation retires, although at a slower pace than under current law, peaking at 5.4 percent of GDP in 2030. As the effect of price indexing outweighs the impact of the growth in the elderly population, total outlays will decline as a share of GDP, falling below revenues in 2052 and to below 2 percent of GDP by the end of the 100-year projection period. Neither the portion of payroll taxes that is directed to IAs nor transfers from the rest of government are included as Social Security revenues. Outlays include only OASDI benefits; payouts from IAs are not included.

Trust-Fund-Financed Benefits Scenario
Under current law, trust-fund exhaustion is projected to occur in 2052, so starting in 2053, trust-fund-financed outlays would be limited to annual revenues (see Figure 1B, top panel).[11] Trust-fund-financed benefits would then be 19 percent lower than scheduled benefits; by 2105, they would be 30 percent lower.

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[10]See Congressional Budget Office, *Uncertainty in Social Security's Long-Term Finances: A Stochastic Analysis* (December 2001) and Joel Smith and John Sabelhaus, "Alternative Methods for Projecting Equity Returns: Implications for Evaluating Social Security Reform Proposals," CBO Technical Paper 2003-8 (August 2003).

[11]While the OASI and DI trust funds would actually become exhausted in different years, they are assumed to be combined for the purposes of this analysis.

Under CSSS Plan 2, proposed benefits are necessarily fully funded because any shortfalls will be covered by general fund transfers. As a result, projected outlays under the trust-fund-financed benefits scenario are equal to those under the scheduled benefits scenario (see Figure 1B, bottom panel).

Effects on Revenues and Outlays

<u>Scheduled Benefits Scenario</u>

Net Effect of Proposal
Beginning in 2007, Social Security revenues would be substantially lower because of the diversion of government revenues to IAs. The proposed reductions in Social Security outlays would not fully offset the diversion of revenues to IAs, so the net Social Security balance would initially be lower than under current law. Scheduled outlays would be reduced by an increasing amount each year. For example, outlays would be reduced by 0.4 percent of GDP in 2025 and by 3.2 percent of GDP in 2065. By 2033, the reduction in outlays would be sufficient to offset the lost revenues, resulting in an improved Social Security balance. By 2052, the balance would be positive, and in 2105, it would be close to 2 percent of GDP.

CBO projects that CSSS Plan 2 would also result in transfers from the federal government's general fund to the Social Security trust funds between 2036 and 2050. The transfers would peak at 1.0 percent of GDP.

Effect of Individual Provisions
CSSS Plan 2 contains four provisions, each with differing effects on the Social Security balance. (See "Provisions - Effect on Balance" in Table 1A. The table presents the effect of each of the bill's provisions and the effects of interactions among the provisions on the annual balance. Interest effects are not included.)

The provision with the largest total budgetary effect is the switch to price indexing of initial benefits. Over long periods, real GDP generally grows at the same pace as real wages. If benefits grew at the rate of prices, they would continuously shrink relative to GDP. The savings would be offset slightly by lower revenues from the taxation of benefits. The effect of this provision compounds over time. In 2025, it would reduce the balance by 0.38 percent of GDP; in 2085—when scheduled outlays would be 6.7 percent of GDP under current law—it would reduce the balance by over 3 percent of GDP.

In earlier years, the provision with the largest effect on system finances is the introduction of IAs. Starting in 2007, individuals aged 57 and younger would be allowed to invest 4 percentage points of their payroll taxes, up to a specified level ($1,000 at first and then an equivalent wage-indexed amount), thus redirecting roughly 0.8 percent of GDP in revenues from the system. Upon

retirement, the balances in those accounts would be annuitized and used to supplement their owners' Social Security benefit income. However, Social Security benefits would be reduced by an amount equal to the annuity that the worker would have earned had the IA earned the Treasury bond rate less 1 percentage point.

Therefore, participating in IAs would increase the total expected value of an individual's lifetime benefits. Contributions to IAs are expected to earn an annual return of 3.0 percent—the 3.3 percent expected return on Treasury bonds less 0.3 percent owing to administrative costs. The "notional account" that is used to compute the offset amount is expected to increase at an annual rate of 2.3 percent—1 percent below the Treasury bond rate. Therefore, the IA is expected to grow 0.7 percent faster than the notional account. At retirement, the beneficiary would receive an annual payout of the annuitized value of the IA, and annual OASDI benefits would be reduced by the annuitized value of the smaller notional account. In the multiple-simulation projections, the benefit of participating will often turn out to be greater, but those projections will also show the additional risk.

At first, the reduction in revenues from the diversion of payroll taxes will outweigh the reduction in benefits, resulting in reduced annual balances of 0.8 percent of GDP in 2007 through 2020. The effect will decline over time. Beginning in 2058, the benefit reductions will be larger, and the provision will result in slightly improved balances. In 2105, the improvement would be 0.22 percent of GDP.

Raising the minimum benefits would change the balance by -0.11 percent of GDP in 2025, growing to around -0.3 percent in 2045 and thereafter. Increasing the benefit for lower-earning survivors would have a relatively small budgetary effect, generally reducing the expected balance by around 0.02 percent of GDP each year.

Uncertainty
The uncertainty about Social Security that individuals and policymakers face is an important economic and policy consideration. The range estimates show the 80 percent range of uncertainty, falling between the 10th and 90th percentiles. By definition, there is a 10 percent chance that the actual value will fall below the 10th percentile, a 10 percent chance that it will fall above the 90th percentile, and an 80 percent chance that it will fall between the two. For example, while the expected balance in 2045 under CSSS Plan 2 is -0.43 percent of GDP, CBO projects that there is a 10 percent chance that it will be less than -1.78 percent of GDP and a 10 percent chance that it will be greater than 0.68 percent (see the bottom of Table 1A). In addition, the median outcome is -0.42. By 2105, the uncertainty grows to an 80 percent range spanning 0.6 percent to 1.9 percent of GDP.

As noted above, the median under multiple simulations and the single-simulation results generally differ somewhat even under current law. Under CSSS Plan 2, however, there is another difference between the single-simulation and median estimates of the balance: CBO's

median estimate for CSSS Plan 2 is based on a probability distribution of IA returns with an expected value of 4.9 percent. The single-simulation path uses a risk-adjusted return of 3.0 percent (the expected 3.3 percent return on Treasury bonds less administrative expenses of 0.3 percent). While the government would not face any direct investment risk under the proposal, the size of payouts from IAs would depend on the returns that individuals earn on stocks and corporate bond investments.

Trust-Fund-Financed Benefits Scenario

Effect of Proposal and Provisions
Under the trust-fund-financed benefits scenario, there can be no negative balance after trust-fund exhaustion because benefits, and thus outlays, would automatically be reduced to a level consistent with trust-fund income. Therefore, in 2053 and later, expected outlays would exactly equal revenues. The amount by which total benefits would be automatically lowered below scheduled benefits is considered an "automatic benefit reduction." (See the "Current Law" panel of Table 1B.) For example, in 2065, the projected automatic benefit reduction is 1.57 percent of GDP—the same size as the projected deficit in 2065 in the scheduled benefits scenario.

The estimated effect of each provision is the same as under the scheduled benefits scenario but should be interpreted slightly differently: the values show the effect on the sum of the balance *plus* the automatic benefit reduction. After trust-fund exhaustion, a slight reduction in scheduled benefits would not reduce total outlays but only reduce the size of the automatic benefit reductions. For example, if under current law there were a shortfall—and therefore an automatic benefit reduction—of 1 percent of GDP and a particular provision reduced scheduled benefits by 0.4 percent of GDP, the automatic benefit reduction would be reduced to 0.6 percent of GDP, even though total outlays remained unchanged.

Under CSSS Plan 2, any Social Security shortfalls would automatically trigger transfers from the general fund, so the trust fund would always avoid exhaustion. Because the trust funds would never be exhausted, there would be no need for automatic benefit reductions. Transfers are projected to occur from 2036 through 2050. Still, expected annual outlays would exceed expected annual dedicated revenues under CSSS Plan 2 starting in 2007 with the introduction of personal accounts, and the balance would become positive only in 2052.

Uncertainty
Under the trust-fund-financed scenario, after trust-fund exhaustion, the balance will by definition be zero. However, the trust-fund exhaustion date is uncertain; under current law, there is a 10 percent chance that the exhaustion date will be 2034 or earlier and a 10 percent chance that it will be after 2085.[12] In addition, it is possible for the system to experience a positive annual balance

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[12]See Congressional Budget Office, *The Outlook for Social Security* (June 2004), pp.6-7.

even after trust-fund exhaustion. As a result, there is still some uncertainty about future balances, but it diminishes relative to the scheduled benefits scenario. In 2105, the 80 percent range of uncertainty is only -0.18 to 0.26 percent of GDP—about one-ninth the uncertainty that exists under the scheduled benefits scenario.

Under CSSS Plan 2, the 80 percent range of uncertainty for the annual balance is quite similar for the scheduled and trust-fund-financed benefits scenarios, since any shortfalls trigger automatic transfers from the general fund.

Effect of CSSS Plan 2 on the Total Federal Budget

At different points in the projection period, the total budget will be either in surplus or in deficit. A positive change in the federal budget due to changes to Social Security reflects either an increase in the projected surplus or a decrease in projected deficits.

Scheduled Benefits Scenario
Transfers to IAs would begin in 2006 under CSSS Plan 2. The resulting outlays would increase budget deficits or decrease budget surpluses (see Figure 2A). (Federal revenues would not change, although revenues allocated to the Social Security trust funds would be smaller.)   Over time, the bill would reduce proposed benefits sufficiently to offset the higher outlays, and beginning in 2050, the changes from CSSS Plan 2 would result in an improved annual total budget situation. In 2085, the median improvement—including reduced unified interest outlays —would be over 7 percentage points of GDP. However, the projections carry substantial uncertainty: the 10th and 90th percentile lines bracket a range of from 2 to 15 percentage points in that year.

The improvement in the total annual budget would be much larger than the improvement in the Social Security balance. Unlike the Social Security balance, the total budget measure includes the effect of lower interest outlays.

Trust-Fund-Financed Benefits Scenario
In the first few decades, the effect of the bill on the federal budget would be the same as under the scheduled baseline. But later, the effects of CSSS Plan 2 on the federal budget would be smaller under this scenario because of differences in the baselines. Under the trust-fund-financed baseline, benefits would be cut upon trust-fund exhaustion. As a result, the proposed reductions in benefits under CSSS Plan 2 would have comparatively little effect on projected total outlays, the assumption being that large reductions would have been made anyway upon trust-fund exhaustion.

Keeping that in mind helps explain why the effect of CSSS Plan 2 on total budget balances is so different under the trust-fund-financed benefits scenario. Under that scenario, the proposed

reductions in benefits under CSSS Plan 2 would have a much smaller effect on projected total outlays. As under the scheduled benefits scenario, CSSS Plan 2 would transfer a share of Social Security revenues to IAs, effectively increasing outlays from a total budget perspective in early years. But the median outcome would be one in which CSSS Plan 2 resulted in lower total budget balances until 2064 (see Figure 2B). And in 2085, instead of an improvement of 7 percentage points of GDP, as in the scheduled benefits scenario, the improvement would be less than 2 percentage points—again, reflecting the assumption that much of the reduction would have been made anyway upon trust-fund exhaustion.

In later years, CSSS Plan 2 would result in improvements in budget balances. The median improvement would grow to 1.6 percent of GDP by 2065 and to 3.6 percent of GDP in 2105 (see Figure 2B). Under the 10th percentile, however, the budget balance would be worse. That outcome would occur if scheduled benefits were much higher than expected, resulting in larger than expected general-fund transfers.

Benefits from Social Security and Individual Accounts

Scheduled Benefits Scenario
Over the next 30 years, scheduled current-law OASDI benefits are projected to grow from slightly more than 4 percent of GDP to about 6 percent. Both the projected level of benefits and the uncertainty of the projections increase over time, with a projected range of 5.2 percent to 9.1 percent of GDP in 2100 (see Figure 3A, top panel). Much of the uncertainty about benefits reflects uncertainty about future wage levels and thus benefit levels, the number of beneficiaries, and how long each of those beneficiaries will live.

The proposed switch from wage to price indexing under CSSS Plan 2 would reduce benefits relative to current law, and the reduction would grow over time. The reduction would be partially offset for some participants by the new minimum benefit and survivors' provisions. Introduction of the IA provision would result in a large reduction in OASDI benefits because of the offset provision, which would reduce OASDI benefits by the annuitized value of a notional account. The expected IA payout would be bigger than the offset, however, resulting in higher total benefits. So the IA provision as a whole would slightly offset the benefit reduction because of price indexing. On net, in 2065, total scheduled benefits would be 4.5 percent of GDP— almost 30 percent lower than under current law. In 2105, they would be more than 50 percent lower.

Upon a worker's retirement, the balances in those accounts would be annuitized and would supplement the OASDI benefit. However, OASDI benefits would be reduced by an amount equal to the annuity that the worker would have earned had the IA earned the Treasury bond rate less 1 percentage point. On an expected basis, participating in IAs would result, on net, in the total value of an individual's lifetime benefit being increased by the amount that his or her IA

contributions would have earned with a 0.7 percent return (the "extra" 1 percentage point less the 0.3 percent administrative cost).

A different perspective is given by considering the range of possible outcomes. As discussed above, CBO assumes that IAs would be invested in a portfolio of assets with both higher expected returns and higher risk than Treasury bonds have. The range estimates incorporate both of those effects, and in general, the range estimates of total benefits under CSSS Plan 2 are higher than the expected estimate. Because of the risk of the portfolio, uncertainty under the proposal is greater than under current law.

While those alternative investments are likely to result in the availability of more financial resources to Social Security, extra returns are not "free" from the perspective of the economy as a whole. Regardless of how IAs are invested, increased consumption by beneficiaries will require either reduced consumption by others or reduced national savings.[13]

Comparing only OASDI benefits provides a different perspective. (See Figure 3A, bottom panel. Because there are no IAs under current law, the current-law ranges in both panels are the same.) The gap between proposed OASDI benefits under CSSS Plan 2 and under current law is even greater than the gap in total benefits. By 2105, scheduled OASDI benefits would be only 1.7 percent of GDP, one-fourth the level scheduled under current law.

Trust-Fund-Financed Benefits Scenario
Under current law, trust-fund-financed benefits fall substantially once the trust funds are exhausted—to exactly the level of revenues. While the expected trust-fund exhaustion date is 2053, the 80 percent range of uncertainty for the date of exhaustion spans 2034 to 2086. Because long-term projections of Social Security revenues are more reliable than projections of outlays, the range of trust-fund-financed benefits under current law is smaller than that of scheduled benefits under current law. By 2105, the 80 percent range of uncertainty spans 4 percent to 5 percent of GDP (see Figure 3B, top panel).

While the expected value of OASDI benefits drops suddenly in 2053, the 10th and 90th percentiles do not exhibit the same sudden fall. That difference occurs because of the uncertainty about the year of trust-fund exhaustion. In the stochastic runs used to produce the range estimates, exhaustion occurred in different years in different runs, so trust-fund exhaustion has a gradual effect on the 80 percent range of uncertainty.

Under CSSS Plan 2, expected total benefits—including payouts from IAs—are below those projected under current law beginning in 2013. As a result of the sharp decline in current-law benefits following trust-fund exhaustion, CSSS Plan 2 benefits are slightly higher from 2055 to

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[13]See Congressional Budget Office, *Evaluating and Accounting for Federal Investment*.

2061, but they then fall below current-law benefits. Because of the switch to price indexing, the gap grows. By 2085, expected trust-fund-financed benefits under CSSS Plan 2 are lower by 0.7 percent of GDP.

As a result of the higher expected return from IA investments, the range estimates give a different picture. Total trust-fund-financed benefits are likely to be higher under CSSS Plan 2 than under current law, but there will be greater uncertainty. The 80 percent range of total trust-fund-financed benefits spans 3 percent to 8 percent of GDP by 2105.

Expected OASDI benefits are lower under CSSS Plan 2 than under current law in all projection years. The range of proposed trust-fund-financed OASDI benefits is larger than under current law but narrower than the range of total benefits under CSSS Plan 2; proposed OASDI benefits span 1 percent to 3 percent of GDP by 2105. (See Figure 3B, bottom panel. Again, because there are no IAs under current law, the current-law ranges in both panels are the same.)

Benefit Levels for Different Age and Income Groups

The discussion so far has focused on the aggregate measures of benefits and revenues. However, current law treats different people differently, and any change to that law is likely to have implications for the distribution of benefits and taxes.

First-Year Annual Benefits[14]
The initial level of benefits that a retired worker receives (in 2004 dollars) measures his or her purchasing power. Initial benefits rise with the age at which a worker claims benefits. To ensure that the data are comparable, this analysis considers a standardized benefit amount: the benefit that workers would receive if everyone claimed benefits at age 65.

Scheduled benefit levels increase over time owing to growth in real average earnings, although that growth over the next 20 years will be offset in part by the scheduled increase in the normal retirement age (see Table 2, current law column A). For the 1990s cohort—the first 10-year cohort to all reach age 65 after the year that the trust funds are expected to be exhausted—trust-fund-financed benefits will be more than 20 percent lower than scheduled benefits (see Table 2, current law, column B). Those automatic benefit reductions, which are due to projected revenue shortfalls, will grow to 30 percent by 2105; however, earnings growth will also continue, so benefits will resume growth in real terms for the 2000s cohort. Projections show that under both scenarios, Social Security awards higher benefits to those with higher earnings, reflecting the equity goal of paying higher benefits to those who have paid more Social Security taxes.

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[14]The following two sections were updated August 3, 2004, reflecting updated outcomes in Tables 2 and 3.

CSSS Plan 2 would reduce expected retirement benefits relative to scheduled benefits for all later cohorts, even when the benefits paid from IAs under CSSS Plan 2 are included (compare CSSS Plan 2, column A, with current law, column A, in Table 2).[15] Price indexing of benefits is intended to result in benefits that are constant in real terms, and first-year real benefits are projected to remain generally constant. Benefits are now scheduled to increase with real wages, so CSSS Plan 2 benefits would be lower than under current law, except for the 1950s and 1960s cohorts in the lowest household earnings quintile for whom the low-earner benefit provision would raise benefits relative to current law. For example, benefits for the 1980s birth cohort would be 15 percent lower for the lowest quintile and 30 percent lower for the middle and highest quintiles, and benefits for the 2000s cohort would be 32 percent lower for the lowest quintile and 45 percent lower for the middle and highest quintiles.

Under CSSS Plan 2, the trust funds can never become exhausted. Therefore, a different perspective is given by comparing the outcomes under the trust-fund-financed scenarios (compare current law, column B, and CSSS Plan 2, column B, in Table 2). Under current law, most members of the 1980s cohort would receive first-year scheduled benefits, so benefits under CSSS Plan 2 would be about 30 percent lower than those under the current-law trust-fund-financed scenario for the middle and highest quintiles, and 11 percent lower for the lowest quintile. Relative to the trust-fund-financed baseline, the 2000s cohort would experience a 10 percent reduction for the lowest quintile and a 27 percent reduction for the middle and highest quintiles—much smaller than the reduction under the scheduled benefits scenario.

Under CSSS Plan 2, about 10 percent of the first-year benefits received by the 1970s cohort would be financed by transfers from the general fund (see the final column of Table 2). First-year benefits for other cohorts would be entirely or almost entirely funded by dedicated Social Security revenues.

First-Year Replacement Rates
First-year replacement rates provide a different perspective by comparing first-year benefits with average career earnings (see Table 3). Replacement rates illustrate the adequacy goal of the Social Security system: replacing a higher share of earnings in retirement for those lower in the earnings distribution.

Scheduled replacement rates decline under current law as the normal retirement age increases for the 1940s and 1950s birth cohorts (see current law, column A, of Table 3). In contrast, the replacement rate for the lowest quintile is projected to increase between the 1970s and 1980s birth cohorts because earnings for that group are projected to grow more slowly than average. As that group's earnings decline relative to the rest of the population, the progressive benefit formula replaces a greater fraction of career average earnings.

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[15]Since the medians are presented here as point estimates, IA payouts are computed assuming risk-adjusted returns equal to the Treasury bond rate.

Trust-fund-financed replacement rates are projected to fall by over 20 percent for the 1990s cohort and by 25 percent for the 2000s cohort (see current law, column B, of Table 3).

Since replacement rates are directly related to first-year benefits, CSSS Plan 2 would have the same effect on replacement rates as on first-year benefits. For the 2000s cohort, replacement rates would be about half the rates experienced by the 1940s cohort for the middle and highest quintiles and 40 percent lower for the lowest quintile (see CSSS Plan 2, column B, in Table 3). Compared with the trust-fund-financed scenario under current law, replacement rates would be 16 percent lower for the lowest quintile and 30 percent lower for the middle and highest quintiles in the 2000s cohort (compare current law, column B, and CSSS Plan 2, column B, in Table 3).

As noted above, under CSSS Plan 2, about 10 percent of the first-year benefits received by the 1970s cohort would be financed by transfers from the general fund (see the final column of Table 3). First-year benefits for other cohorts would be entirely or almost entirely funded by dedicated Social Security revenues.

Lifetime Retirement Benefits
Lifetime retirement benefits reflect the present value of all projected worker benefits that a beneficiary receives from the program during retirement, discounted to age 60 and presented in 2004 dollars (see Table 4). That measure is equivalent to the amount of money that, if invested in Treasury bonds, would pay retirement benefits over a person's lifetime. (The measure reflects actual projected lifetime benefits based on the age at which benefits are claimed and the age at death.)

Scheduled lifetime benefit levels increase over time owing to growth in real average earnings and longer life expectancy (see current law, column A, in Table 4). As later cohorts live longer, they will collect benefits for a longer time. That second effect also differs across the earnings distribution since higher earners live longer than lower earners on average.

Under the trust-fund-financed benefits scenario, the automatic benefit reductions apply to all benefits. Thus, trust-fund-financed lifetime benefits would drop relative to scheduled benefits starting with the 1960s cohort (see current law, column B, in Table 4). Trust-fund-financed lifetime benefits for the 2000s cohort would be nearly 30 percent lower than scheduled. Despite those cuts relative to scheduled benefits, the levels of lifetime benefits would continue to grow across the cohorts.

Under CSSS Plan 2, lifetime benefits—including both benefits paid from the trust fund and those paid from IAs—would increase for each cohort at all income levels. Initial benefits would be generally constant in real dollars; however, because future retirees are projected to live longer and collect benefits for a longer time, lifetime benefit would be higher for later cohorts. Relative to the scheduled benefits scenario, however, CSSS Plan 2 would result in lower lifetime benefits. (Compare CSSS Plan 2, column A, with current law, column A, in Table 4.)

Since proposed benefits under CSSS Plan 2 are fully financed while current-law benefits are not, the more balanced comparison would be the outcomes under the trust-fund-financed scenarios. Under CSSS Plan 2, those benefits would be approximately the same for the lowest quintile but would be lower for the middle and highest quintiles. For example, for the highest quintile, lifetime benefits would be 18 percent lower than under current law. (Compare CSSS Plan 2, column B, to current law, column B, in Table 4.)

Under CSSS Plan 2, around 5 percent of the lifetime benefits received by the 1960s and 1970s cohorts would be financed by transfers from the general fund (see the final column of Table 4). Lifetime benefits for the other cohorts would be entirely or almost entirely funded by dedicated Social Security revenues.

Comparing Benefits Received with Taxes Paid

A more comprehensive perspective on individual outcomes is given by the ratio of the present value of total Social Security benefits—DI payments as well as OASI payments—received by all individuals over a lifetime to the present value of total Social Security payroll taxes paid over a lifetime. The section above considered expected values, so the rate of return on IA holdings was risk-adjusted. The analysis of lifetime benefit-to-tax ratios considers both the level and the range of projected outcomes, so both the expected (non-risk-adjusted) rate of return and variance around that return are used. That generally results in a higher projected benefit-to-tax level but also results in greater uncertainty about the projections, reflecting the higher investment risk borne by individuals.

Scheduled Benefits Scenario
Consider the scheduled benefits baseline for current law (see Figure 4A). For all quintiles, the benefit-to-tax ratios fall under current law for those born in the 1940s and 1950s as a result of the scheduled increase in the normal retirement age, but they rise for succeeding cohorts owing to increasing life expectancy, which would increase benefits collected by more than taxes paid.

Under CSSS Plan 2, the benefits would include IA payouts, and taxes would include the amounts redirected into IAs. The 80 percent range of uncertainty increases for all of the quintiles under CSSS Plan 2, reflecting the increased risk from investments in IAs. In general, the ranges for CSSS Plan 2 are similar to those under current law for earlier cohorts and lower than those under current law for later cohorts.

Under both current law and CSSS Plan 2, the ratios would be greatest for the lowest quintile. While those lower-earning workers have shorter life expectancies and thus collect retiree benefits for fewer years, those factors are more than offset by the progressive benefit formula and those workers' higher probability of disability.

Trust-Fund-Financed Benefits Scenario

Making a similar comparison under the trust-fund-financed scenario offers a different perspective (see Figure 4B). The projected ratios under current law are lower than under the scheduled benefits scenario, and they are less certain because of uncertainty about the date of trust-fund exhaustion and the magnitude of the automatic benefit reductions. Under CSSS Plan 2, the ranges are quite similar to those under current law. For the lowest income quintile, they are slightly higher, but for the middle and highest quintiles, they are slightly lower.

Under current law, the ratio falls for later cohorts as benefits are reduced after trust-fund exhaustion. Under CSSS Plan 2, the ratio falls for later cohorts because taxes grow with wages, but OASDI benefits grow only with prices. The IAs are assumed to earn higher returns, resulting in higher average benefits. Along with those higher expected benefits come higher risks, however. Yet under CSSS Plan 2, there is no risk of trust-fund exhaustion, which would be prevented by automatic general fund transfers. (Another way to recognize the higher risks is to consider the expected benefit-to-tax ratio, in which investment returns are risk-adjusted. See the figures in the appendix.)

Finally, the analysis compares dedicated-tax-financed benefits with lifetime taxes. (See Figure 4C. The current-law outcomes are the same as under the trust-fund-financed benefits scenario shown in Figure 4B.) Because some benefits for later cohorts would be financed by general fund transfers, lifetime benefits for other cohorts would be entirely or almost entirely funded by dedicated Social Security revenues.

Effects on the Macroeconomy

CSSS Plan 2, like other significant changes in Social Security policy, could affect the level of economic output through changes in the amount of labor that households supply to the economy and in the amount of money they save. Illustrative calculations suggest that under CSSS Plan 2, real (inflation-adjusted) gross national product (GNP) could be about half a percent higher by 2025—and about 3 percent to 4 percent higher by 2080—than it would be under current law.[16] That range of results comes from differing assumptions about how open the U.S. economy is to flows of foreign capital and how Social Security will be structured in the long run.

CBO analyzed the potential overall economic effects of CSSS Plan 2 using a model of economic growth that is suitable for assessing the macroeconomic impact of changes in Social Security policy. The model distinguishes between people of different ages, earning abilities, and earning

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[16]In July 2004, CBO analyzed the macroeconomic effects of the Bipartisan Retirement Security Act of 2001, H.R. 3821, and provided estimates of its long-run (well beyond 100 years) impact on real GNP, but did not publish estimates of the effects in 2080. Like CSSS Plan 2, H.R. 3821 would increase real GNP by 3 percent to 4 percent in 2080. In the long run, CSSS Plan 2 could boost real GNP by even more than H.R. 3821 might, although the amount of the increase would depend on how the growing budget surpluses that the plan implies would be used. The plan does not address that issue.

histories. In the model's economy, people are forward-looking, adjust their behavior in anticipation of future changes in tax rates and benefits, and believe with certainty that those changes will occur.[17] The simulations were carried out under the "trust-fund-financed benefits" baseline scenario. Under that scenario, Social Security remains financially viable in the long run, once the trust funds have been exhausted, through cuts in benefits. Because of the complexity of calculating macroeconomic effects, some of the provisions of CSSS Plan 2 were simplified in the analysis. However, those simplifications would be unlikely to significantly alter CBO's general conclusions about the plan's effects.

CSSS Plan 2 would affect the economy primarily through its changes to scheduled benefits—which would alter households' expectations. Under the plan, benefits (adjusted for risk) would be reduced for most of the first 50 years, relative to those that people would receive under the baseline scenario, even after including payouts from individual accounts (see Figure 3B). The cut in benefits would reduce households' spending and boost their saving before retirement. Under CSSS Plan 2, the total budget deficit would be larger than it would be under the baseline scenario for the first several decades because a portion of payroll tax revenues would be redirected to individual accounts. Eventually, however, CSSS Plan 2 would cut outlays by more than it would cut revenues and have a positive effect on the budget balance in the long run (see Figure 2B). According to CBO's simulations, national wealth (the sum of private wealth and cumulative budget surpluses) would be 10 percent to 12 percent higher in 2080 than it would be under the baseline scenario.

The proposed policy's effect on the supply of labor is ambiguous, but it is likely to be small. On the one hand, the drop in (risk-adjusted) benefits under CSSS Plan 2 might boost the number of people who would perceive the payroll tax as a tax on labor income rather than as a contribution for their pension, which could discourage those individuals from participating in the labor market or induce them to retire earlier. On the other hand, reduced benefits could cause some people to work longer or harder to make up for the lost resources. CBO's illustrative simulations suggested that the range of changes to the supply of labor would be small—within 1 percent of the baseline's value for the first 50 years and within 1½ percent for the subsequent 25 years.

Although CSSS Plan 2 would raise real GNP in the long run, the size of that gain would depend on how the government structured the Social Security program in the long term. Because the plan would keep real benefits at roughly the current level but allow payroll tax revenues to rise with the trend growth of wages and salaries, cumulative total budget surpluses would grow without limit relative to the size of the economy. At some point, the government would probably adjust fiscal policy by raising benefits, cutting taxes, or both. In its analysis, CBO assumed that those changes would occur after 100 years. If benefits increased then, people would tend to work and save less in the long run than they would have otherwise. If, alternatively, policymakers reduced

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[17]For a more detailed description of the model, see Shinichi Nishiyama, *Analyzing an Aging Population—A Dynamic General Equilibrium Approach*, Technical Paper 2004-3 (February 2004), available from CBO's Macroeconomic Analysis Division or at www.cbo.gov.

the payroll tax rate, both the supply of labor and private saving would be higher after the tax cut (although possibly lower before it). In both cases, however, real GNP under CSSS Plan 2 would still be above its level in the baseline scenario in the long run.

CBO's estimates illustrate the potential effects of CSSS Plan 2, but it is important to note that they are very uncertain. Estimates that were based on different assumptions or that were produced by using another economic model could differ substantially.

Appendix: Background

In 2003, the federal government spent a total of $479 billion on the Social Security program. That year, about 47 million people received Social Security benefits: 29.5 million retired workers; 5.9 million disabled workers; and 11.6 million family members of retired, disabled, or deceased workers. Social Security has two components. The Old-Age and Survivors Insurance (OASI) program provides benefits to retired workers, members of their families, and their survivors; the Disability Insurance (DI) program pays benefits to disabled workers younger than the normal retirement age and their dependents. OASI is by far the larger program; last year it accounted for about 85 percent of spending for the two parts combined (referred to as OASDI). On average, retired workers received a monthly OASDI benefit of about $922 in December 2003; disabled workers received an average of $862 in DI benefits.

Benefits are financed primarily through payroll taxes, with half collected from employers and half from workers. The combined rate, currently 12.4 percent, is levied on wages and self-employment income covered by the OASDI program, up to a maximum of $87,900. (That threshold rises annually with average earnings in the economy.) Last year, 154 million workers were covered by Social Security, earned taxable wages of $4.3 trillion, and paid $534 billion in Social Security payroll taxes.

The Social Security system also is credited with the income taxes that approximately one-third of its beneficiaries (those with the highest income) pay on their Social Security benefits. Such revenues totaled about $13 billion in 2003.

How Benefits Are Calculated

All Social Security benefits are based on a worker's primary insurance amount (PIA). In turn, the PIA depends on a measure of a worker's career earnings in employment subject to the Social Security payroll tax, expressed as his or her average indexed monthly earnings (AIME).

AIME. For people who attain age 62 after 1990, the AIME is calculated based on the highest 35 years of earnings on which the individual paid Social Security taxes (up to the taxable maximum, which is $87,900 in 2004). Earnings before age 60 are indexed to compensate both for inflation and for real (after-inflation) growth in wages, and earnings after age 59 enter the computations at their actual levels. Dividing the total earnings by 420 (35 years times 12 months) yields the AIME.

PIA. The PIA is the monthly amount payable to a worker who begins receiving Social Security retirement benefits at the age at which he or she is eligible for full benefits or payable to a disabled worker who has never received a retirement benefit. (The age of eligibility is discussed in the next section.)

The PIA formula is designed to ensure that initial Social Security benefits replace a larger proportion of preretirement earnings for people with low average earnings than for those with higher earnings. For workers who turn 62, become disabled, or die this year, the formula is:

PIA = (90 percent of the first $612 of the AIME) + (32 percent of the AIME between $612
          and $3,689) + (15 percent of the AIME over $3,689)

The thresholds at which the percentage of the AIME changes are known as "bend points." They change each year along with changes in the average annual earnings for the labor force as a whole. Consequently, as wages rise over time, initial benefits increase at a similar pace.

Workers who are 62 now, who had average earnings throughout their career, and who wait to claim benefits until they reach the age at which they will be eligible for full benefits (65 and 10 months for this group) will receive a monthly benefit of $1,321. That payment will replace about 41 percent of their earnings in the year before they claimed benefits. If, instead, they claim benefits this year soon after their 62nd birthday, they will be eligible for a permanently reduced benefit of $942 a month. That amount will replace about 34 percent of their pretax earnings last year.

In addition, at the end of each year, SSA adjusts the PIA by the amount of any increase in the consumer price index (CPI). The 2.1 percent cost-of-living adjustment that took effect in December 2003 reflected the increase in the CPI for urban wage earners and clerical workers (CPI-W) that occurred between the third quarter of 2002 and the third quarter of 2003.

Because of Social Security's indexing rules, the payments received by newly eligible beneficiaries reflect both increases in prices and real growth in earnings throughout the economy during the years that those beneficiaries worked. Later increases in their payments—through annual COLAs—reflect only increases in prices after the beneficiaries became eligible for benefits. Thus, as long as real wages continue to rise, new beneficiaries will generally receive higher real benefits than older beneficiaries.

Monthly Benefits. The PIA governs all benefits paid under Social Security. A retired or disabled worker may receive 100 percent of the PIA; a spouse or child of a retired or disabled worker may receive 50 percent of the worker's PIA. For survivors, the rules differ for elderly surviving spouses and for younger widows and widowers who are caring for the deceased worker's children. The former may receive 100 percent of the worker's PIA, while the latter may be eligible for 75 percent. Eligible surviving children similarly may receive 75 percent of the PIA. The actual percentages any of these beneficiaries receive often differ from those percentages for a variety of reasons, as discussed below.

Early and Delayed Retirement. Under current law, the age at which a worker becomes eligible for full Social Security retirement benefits—the normal retirement age (NRA)—depends on the worker's year of birth. For people born before 1938, the NRA was 65. For slightly younger workers, it increases by two months per birth year, reaching 66 for people born in 1943. The NRA remains at

66 for workers born between 1944 and 1954 and then begins to increase in two-month increments again, reaching 67 for workers born in 1960 or later. For workers whose 62nd birthday falls this year, the NRA is 65 years and 10 months.

Workers can begin receiving permanently reduced monthly retirement benefits as early as age 62. People who start collecting retirement benefits at age 62 this year will incur a permanent 24.2 percent reduction in their monthly benefits. As the normal retirement age rises to 67 for future groups of workers, that maximum reduction will also increase. (Once the NRA is 67, the maximum permanent reduction will be 30 percent.) Similarly, workers who delay collecting benefits beyond their normal retirement age receive a delayed-retirement credit to compensate them for the reduction in the length of time they will receive benefits.[18]

The size of the early-retirement reduction for workers is intended to be "actuarially fair"—in the sense that the total value of the reduced monthly benefits that an average worker could expect to receive between age 62 and death is similar to the total value of the full monthly benefits that the worker could expect to receive over that time by waiting until he or she was eligible for full benefits.

More than two-thirds of the workers who began receiving Social Security retirement benefits in the past decade started collecting benefits before the NRA. The majority of those early recipients began collecting benefits at age 62.

Earnings Test. Social Security benefits are reduced if recipients who have not attained the NRA earn more than a certain amount. The rules, known as the retirement earnings test, apply to earnings but not to income from dividends, pensions, or interest. This year, the benefits of Social Security recipients who have not yet reached the NRA will be reduced by $1 for each $2 they earn above $11,640. That earnings threshold automatically rises each year to match the increase in a national index of average wages. Workers whose initial benefits are reduced because of the retirement earnings test will receive higher monthly benefits later.

Maximum Family Benefits. The total amount of benefits that a family can receive on the basis of a worker's earnings record is limited by a family cap (which is generally between 150 percent and 188 percent of the worker's PIA, although family benefits in DI cases are subject to additional limitations). The family maximum generally applies when three or more family members are entitled to benefits.

In general, if their marriage lasted at least 10 years, ex-husbands and ex-wives are entitled to the same benefits based on their former spouse's earnings as they would be if they had remained married. Benefits for former spouses do not count against the family maximum.

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2.   Starting with beneficiaries born in 1943, each year delayed beyond the normal retirement age (which will be 66 for that group), up to age 70, will add 8 percent to their retired-worker benefits. The delayed-retirement credit for workers reaching the normal retirement age this year is 6.5 percent.

Dual Entitlement. If a spouse or widow(er) has worked long enough to earn retired- or disabled-worker benefits on his or her own, Social Security does not pay the full amount of both benefits. Instead, it pays the larger of the two amounts for which the recipient is eligible. Those people who receive their own benefit plus a portion of the other benefit are labeled "dually entitled."

As a rule of thumb, the lower earner of a couple does not receive any spousal benefits if he or she earned at least one-third as much as the spouse earned. However, upon the death of a spouse, the lower earner of a couple generally receives additional benefits based on the earnings record of the deceased spouse.

Definitions of Key Terms

Actuarial reduction - percentage decrease in benefits below the primary insurance amount owing to claiming before the normal retirement age; the earlier the claim, the larger the reduction.

Average indexed monthly earnings (AIME) - for retired workers who attain age 62 after 1990, the AIME is calculated on the basis of the highest 35 years of earnings on which the individual paid Social Security taxes (up to the taxable maximum, which is $87,900 in 2004). Earnings before age 60 are indexed to compensate both for inflation and for real (inflation-adjusted) growth in wages; earnings after age 59 enter the computations at their actual levels. Dividing the total earnings by 420 (35 years times 12 months) yields the AIME.

Bend point - the thresholds at which the percentage of the AIME replaced by the PIA changes. The bend points change each year along with changes in the average annual earnings for the labor force as a whole.

Bend rates - the percentages of the AIME replaced in the PIA formula after each bend point. The current bend rates are 90 percent, 32 percent, and 15 percent.

Cohort - individuals born in the same year or decade.

Cost-of-living adjustment (COLA) - annual increase in benefits reflecting the increase in the cost of living; under current law, equal to the percentage increase in the CPI-W (the consumer price index for urban wage earners and clerical workers).

CPI-adjusted - amounts adjusted to remove the effects of inflation, as measured by the CPI-W.

Dedicated-tax-financed benefits - benefits that can be paid by taxes that are specifically dedicated to Social Security; equal to "trust-fund-financed benefits," less that portion of benefits that are financed by intragovernmental transfers.

Delayed retirement credit (DRC) - percentage increase in benefits above the primary insurance amount as a result of claiming after the normal retirement age but before age 70.

Elapsed years - the number of years between an individual's age of first eligibility for DI or OASI benefits and age 22.

First-year replacement rate - the first-year monthly benefit as a percentage of average career monthly earnings.

Median - the middle of the distribution of outcomes; there is a 50 percent chance that the actual outcome will be higher, and a 50 percent chance it will be lower.

Normal retirement age (NRA) - the age at which a person becomes entitled to unreduced retirement benefits—that is, benefits equal to the PIA

Percentile - a point in the distribution of outcomes; for example, there is a 10 percent chance that the actual outcome will be lower than the 10th percentile and a 10 percent chance that it will be higher than the 90th percentile. Thus, there is an 80 percent chance that the actual outcome will be between the 10th and 90th percentiles.

Primary insurance amount (PIA) - the monthly amount payable to a worker who begins receiving Social Security retirement benefits at the age at which he or she is eligible for full benefits, or the amount payable to a disabled worker who has never received a retirement benefit reduced for age. For workers who turn 62, become disabled, or die this year, the formula is:

PIA = (90 percent of the first $612 of the AIME) + (32 percent of the AIME between $612 and $3,689) + (15 percent of the AIME over $3,689)

Risk-adjusted - the rate of investment return used for projections that do not display uncertainty; a rate equal to the Treasury bond rate.

Scheduled benefits - benefits as specified under law; contrast with "trust-fund-financed benefits" and "dedicated-tax-financed benefits."

Stochastic - method of simulation used for projecting a probability distribution of potential outcomes that is based on fluctuations in historical data.

Taxable maximum - maximum level of covered earnings upon which the OASDI payroll tax is levied each year.

Trust-fund-financed benefits - benefits that can be paid from balances in the trust funds as specified in law; in years after trust-fund exhaustion, this is equal to benefits that can be financed from revenues in a given year.

Total budget - the presentation of the federal budget in which revenues from all sources and outlays to all activities are consolidated.

OASDI Revenues and Outlays as a Share of GDP, 1985-2105 (Scheduled Benefits)
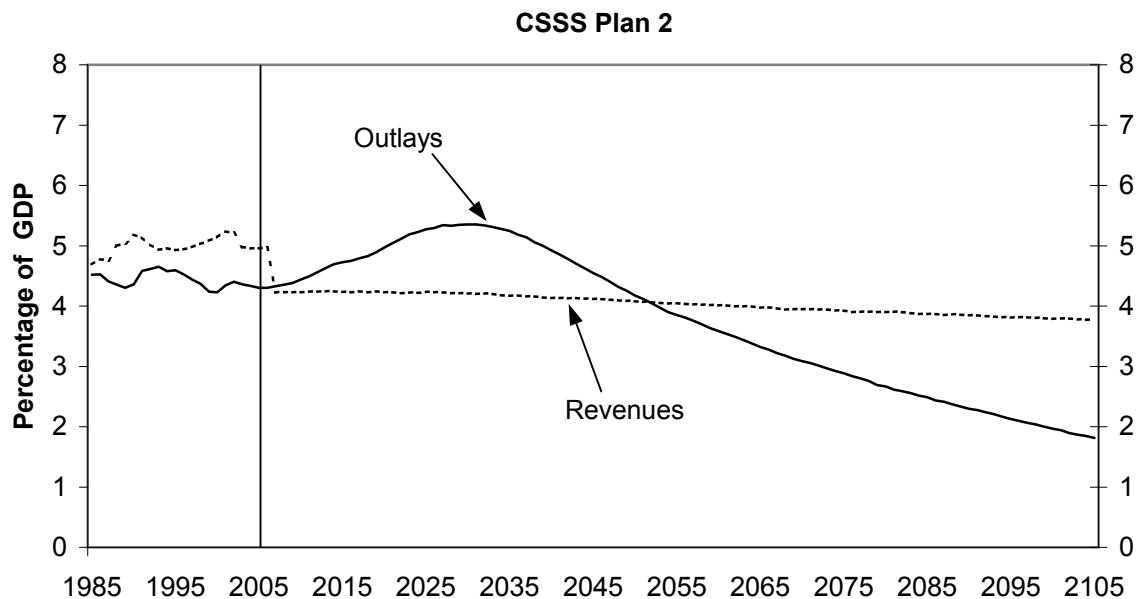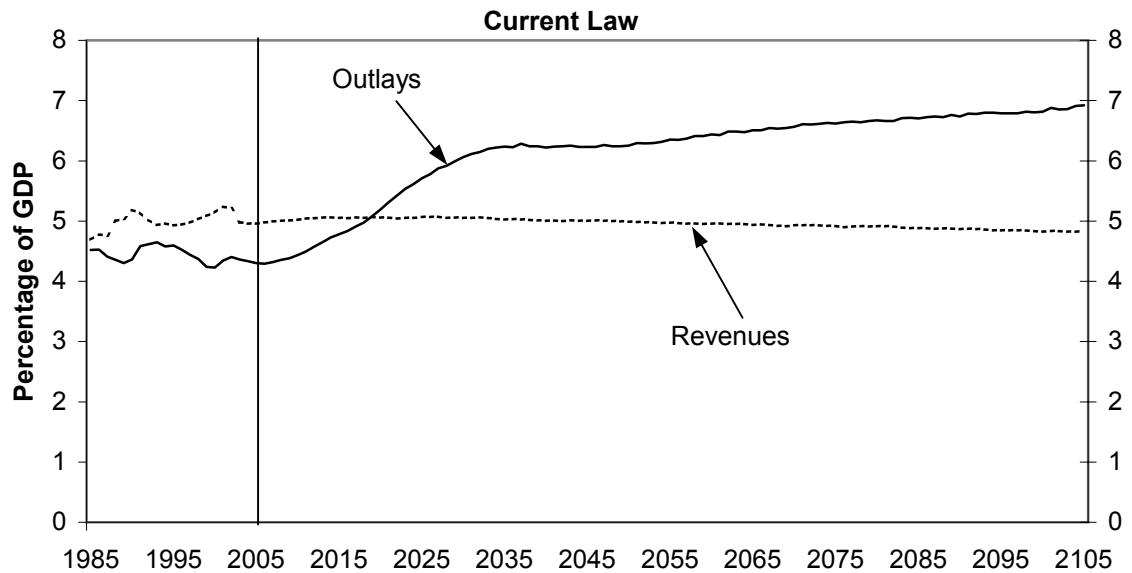
Current Law

CSSS Plan 2

Source: Congressional Budget Office.
Notes: Results are based on a single simulation using the Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions. Revenues include payroll taxes and income taxes on benefits; outays include scheduled OASDI benefits and administrative costs. Under current law, outlays exceed revenues starting in 2019; scheduled benefits cannot be paid starting in 2053. Under CSSS Plan 2, outlays exceed revenues starting in 2007, but drop below revenues in 2052.

OASDI Revenues and Outlays as a Share of GDP, 1985-2105 (Trust-Fund-Financed Benefits)
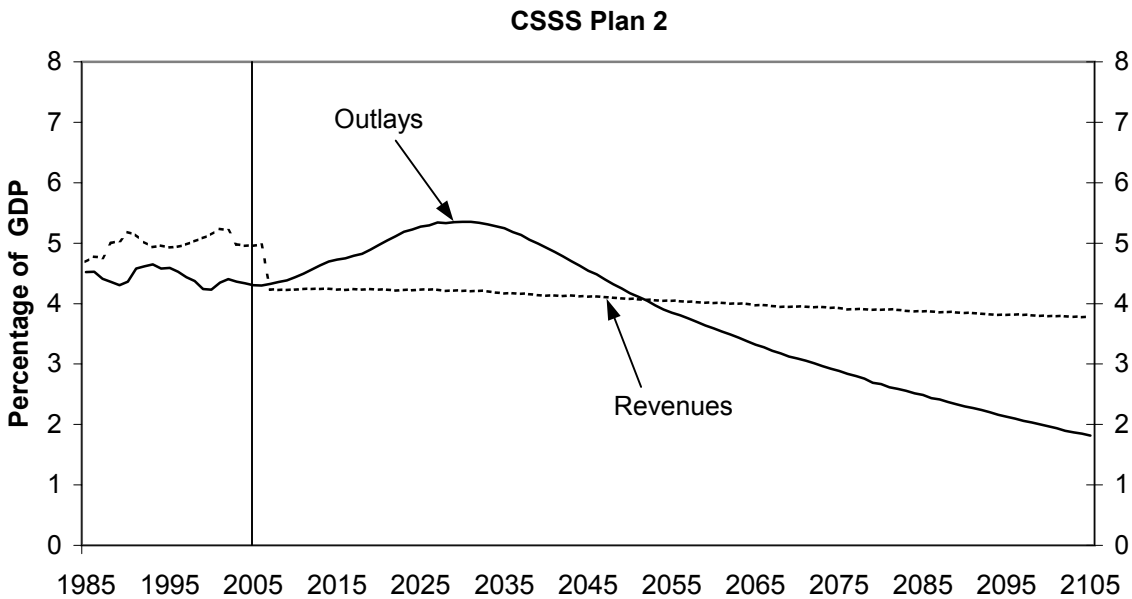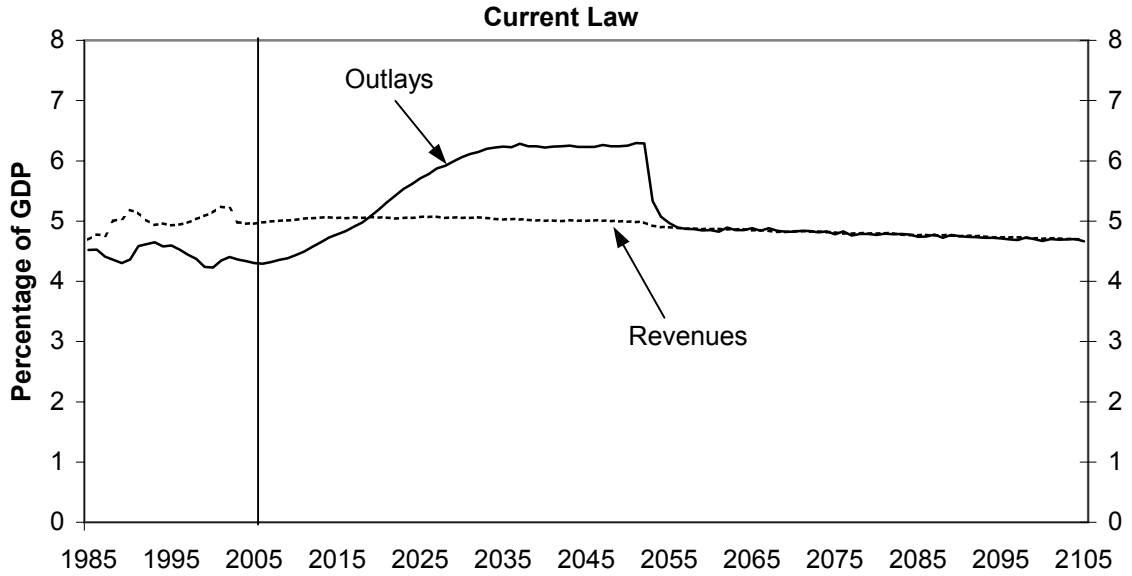
Current Law

CSSS Plan 2

Source: Congressional Budget Office.

Notes: Results are based on a single simulation using the Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions. Revenues include payroll taxes and income taxes on benefits; outays include trust-fund-financed OASDI benefits and administrative costs. Under current law, outlays exceed revenues starting in 2019; scheduled benefits cannot be paid starting in 2053. Under CSSS Plan 2, outlays exceed revenues starting in 2007, but drop below revenues in 2052.

Effects on Social Security Finances as a Share of GDP Under CSSS Plan 2
(Scheduled Benefits)

	Based on Single, Risk-Adjusted Simulation /1					
	2005	2025	2045	2065	2085	2105
Current Law						
Revenues /2	4.96	5.07	5.01	4.93	4.88	4.83
Outlays /3	4.30	5.71	6.23	6.51	6.70	6.92
Balance /4	0.65	-0.64	-1.23	-1.57	-1.82	-2.09
Provisions - Effect on Balance						
Add individual accounts with offsets /5	0.00	-0.67	-0.22	0.11	0.17	0.22
Increase the minimum benefit	0.00	-0.11	-0.28	-0.31	-0.34	-0.31
Raise benefit for widow(er)s	0.00	-0.02	-0.02	0.00	-0.01	-0.03
Change benefit calculation to price indexing	0.00	0.38	1.30	2.33	3.21	3.99
Interactions across provisions	0.00	0.01	0.02	0.10	0.17	0.18
Total from all benefit and tax provisions /6	0.00	-0.40	0.80	2.22	3.20	4.05
CSSS Plan 2						
Revenues /7	4.96	4.23	4.12	3.97	3.87	3.78
Outlays	4.30	5.27	4.55	3.32	2.49	1.82
Balance	0.65	-1.04	-0.43	0.65	1.38	1.96
Transfers from rest of government /8	0.00	0.00	0.40	0.00	0.00	0.00
	Based on Multiple Simulations /9					
	2005	2025	2045	2065	2085	2105
Current Law - Balance						
Median - 50th Percentile	0.65	-0.73	-1.04	-1.72	-2.33	-2.39
10th Percentile	0.49	-1.47	-2.39	-3.44	-4.61	-4.58
90th Percentile	0.78	-0.13	-0.14	-0.39	-0.77	-0.81
CSSS Plan 2 - Balance						
Median - 50th Percentile	0.64	-1.24	-0.42	0.71	1.34	1.92
10th Percentile	0.49	-2.36	-1.78	-0.86	-0.37	0.57
90th Percentile	0.78	-0.45	0.68	1.60	2.21	2.75

Source: Congressional Budget Office, based on Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004
  economic assumptions.

/1 Assumes that all private investments earn a risk-adjusted rate of return that is equivalent to the Treasury bond rate.

/2 Revenues equal payroll taxes and income taxes on benefits as a share of gross domestic product (GDP) in the specified year.

/3 Outlays equals scheduled OASDI benefits and administrative costs as a share of GDP in the specified year.

/4 The balance is the difference between revenues and outlays as a share of GDP in the specified year; may not equal the difference due to rounding.

/5 For more details about each provision, please refer to the accompanying description of how CBO interpreted the CSSS Plan 2 provisions.

/6 Excludes any effects from transferring revenue from the general fund.

/7 Does not include funds diverted to individual accounts.

/8 Measures the specified transfers from the general fund as a share of GDP made during the 2036-2050 period.

/9 10th, 50th, and 90th percentile values are based on 500 stochastic simulations for current law and for CSSS Plan 2. Percentiles are derived by ranking
  each simulation's outcome from worst to best regarding system finances. Actual outcomes have an 80 percent chance of falling between the 10th
  and 90th percentiles. Individual accounts are assumed to be invested in 50% equities with an expected 6.8% return, 30% corporate bonds with an
  expected 3.8% return, and 20% Treasury bonds with an expected 3.3% return.

Effects on Social Security Finances as a Share of GDP Under CSSS Plan 2
(Trust-Fund-Financed Benefits)

	Based on Single, Risk-Adjusted Simulation /1					
	2005	2025	2045	2065	2085	2105
Current Law						
Revenues /2	4.96	5.07	5.01	4.86	4.74	4.70
Outlays /3	4.30	5.71	6.23	4.86	4.74	4.70
Balance /4	0.65	-0.64	-1.23	0.00	0.00	0.00
Automatic benefit reduction /5	0.00	0.00	0.00	1.57	1.82	2.09
Provisions - Effect on Balance						
+ Automatic Benefit Reduction						
Add individual accounts with offsets /6	0.00	-0.67	-0.22	0.11	0.17	0.22
Increase the minimum benefit	0.00	-0.11	-0.28	-0.31	-0.34	-0.31
Raise benefit for widow(er)s	0.00	-0.02	-0.02	0.00	-0.01	-0.03
Change benefit calculation to price indexing	0.00	0.38	1.30	2.33	3.21	3.99
Interactions across provisions	0.00	0.01	0.02	0.10	0.17	0.18
Total from all benefit and tax provisions /7	0.00	-0.40	0.80	2.22	3.20	4.05
CSSS Plan 2						
Revenues /8	4.96	4.23	4.12	3.97	3.87	3.78
Outlays	4.30	5.27	4.55	3.32	2.49	1.82
Balance	0.65	-1.04	-0.43	0.65	1.38	1.96
Transfers from rest of government /9	0.00	0.00	0.40	0.00	0.00	0.00
Automatic benefit reduction	0.00	0.00	0.00	0.00	0.00	0.00

	Based on Multiple Simulations /10					
	2005	2025	2045	2065	2085	2105
Current Law - Balance						
Median - 50th Percentile	0.65	-0.71	-0.40	-0.06	-0.03	0.05
10th Percentile	0.49	-1.49	-1.81	-1.51	-0.69	-0.18
90th Percentile	0.78	-0.12	0.15	0.14	0.17	0.26
CSSS Plan 2 - Balance						
Median - 50th Percentile	0.64	-1.24	-0.42	0.71	1.34	1.92
10th Percentile	0.49	-2.36	-1.78	-0.86	-0.37	0.57
90th Percentile	0.78	-0.45	0.68	1.60	2.21	2.75

Source: Congressional Budget Office, based on Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions.

/1 Assumes that all private investments earn a risk-adjusted rate of return that is equivalent to the Treasury bond rate.

/2 Revenues equal payroll taxes and income taxes on benefits as a share of gross domestic product (GDP) in the specified year.

/3 Outlays equals scheduled OASDI benefits and administrative costs as a share of GDP in the specified year.

/4 The balance is the difference between revenues and outlays as a share of GDP in the specified year; may not equal the difference due to rounding.

/5 The reduction in cost as a share of GDP that occurs through benefit cuts once the Social Security trust funds are exhausted.

/6 For more details about each provision, please refer to the accompanying description of how CBO interpreted the CSSS Plan 2 provisions.

/7 Excludes any effects from transferring revenue from the general fund.

/8 Does not include funds diverted to individual accounts.

/9 Measures the specified transfers from the general fund as a share of GDP made during the 2036-2050 period.
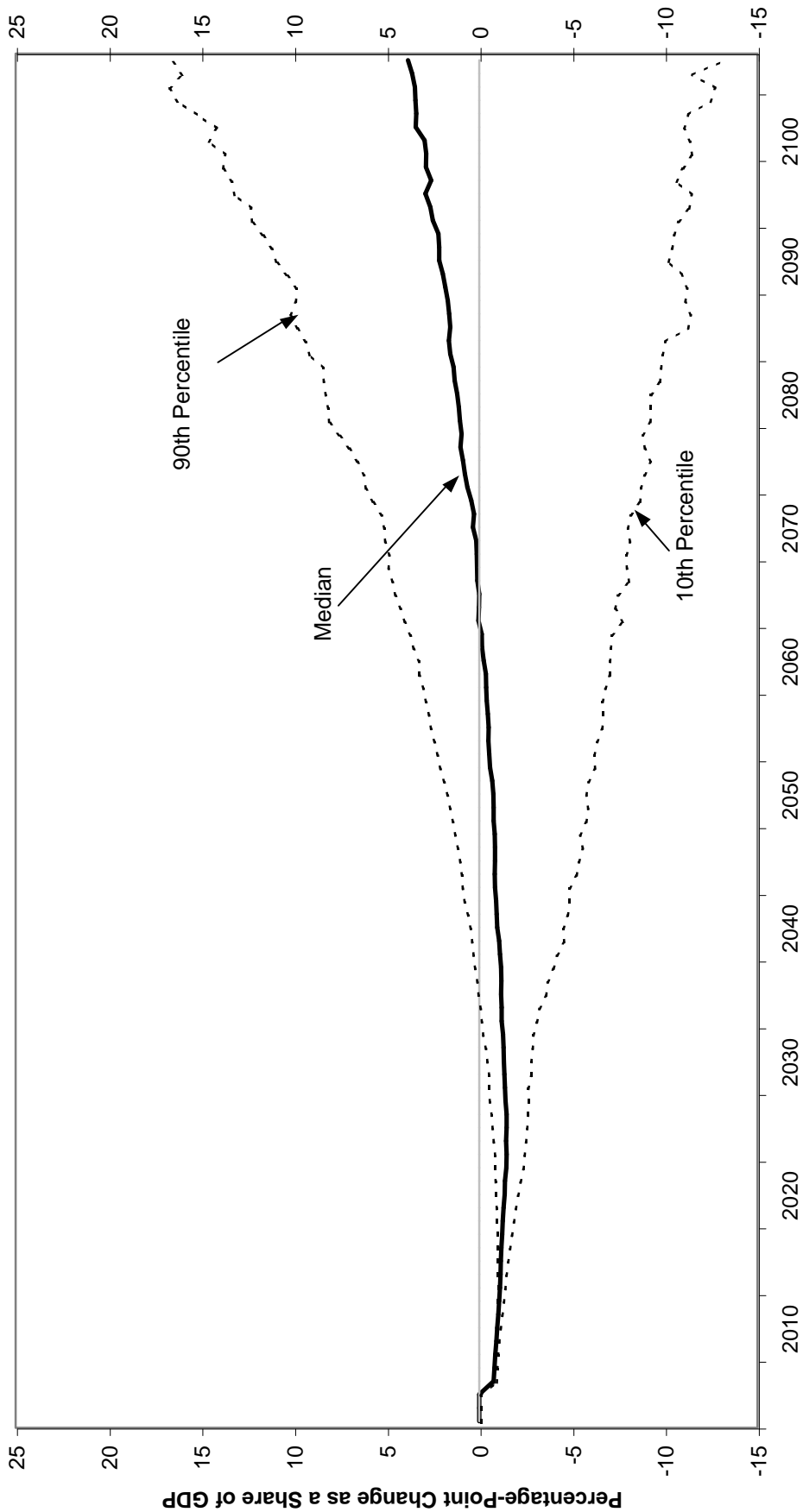
/10 10th, 50th, and 90th percentile values are based on 500 stochastic simulations for current law and for CSSS Plan 2. Percentiles are derived by ranking each simulation's outcome from worst to best regarding system finances. Actual outcomes have an 80 percent chance of falling between the 10th and 90th percentiles. Individual accounts are assumed to be invested in 50% equities with an expected 6.8% return, 30% corporate bonds with an expected 3.8% return, and 20% Treasury bonds with an expected 3.3% return.

Figure 2A.

Effects on Total Budget Balances as a Share of GDP Changing to CSSS Plan 2 from Current Law, 2004-2105 (Scheduled Benefits)
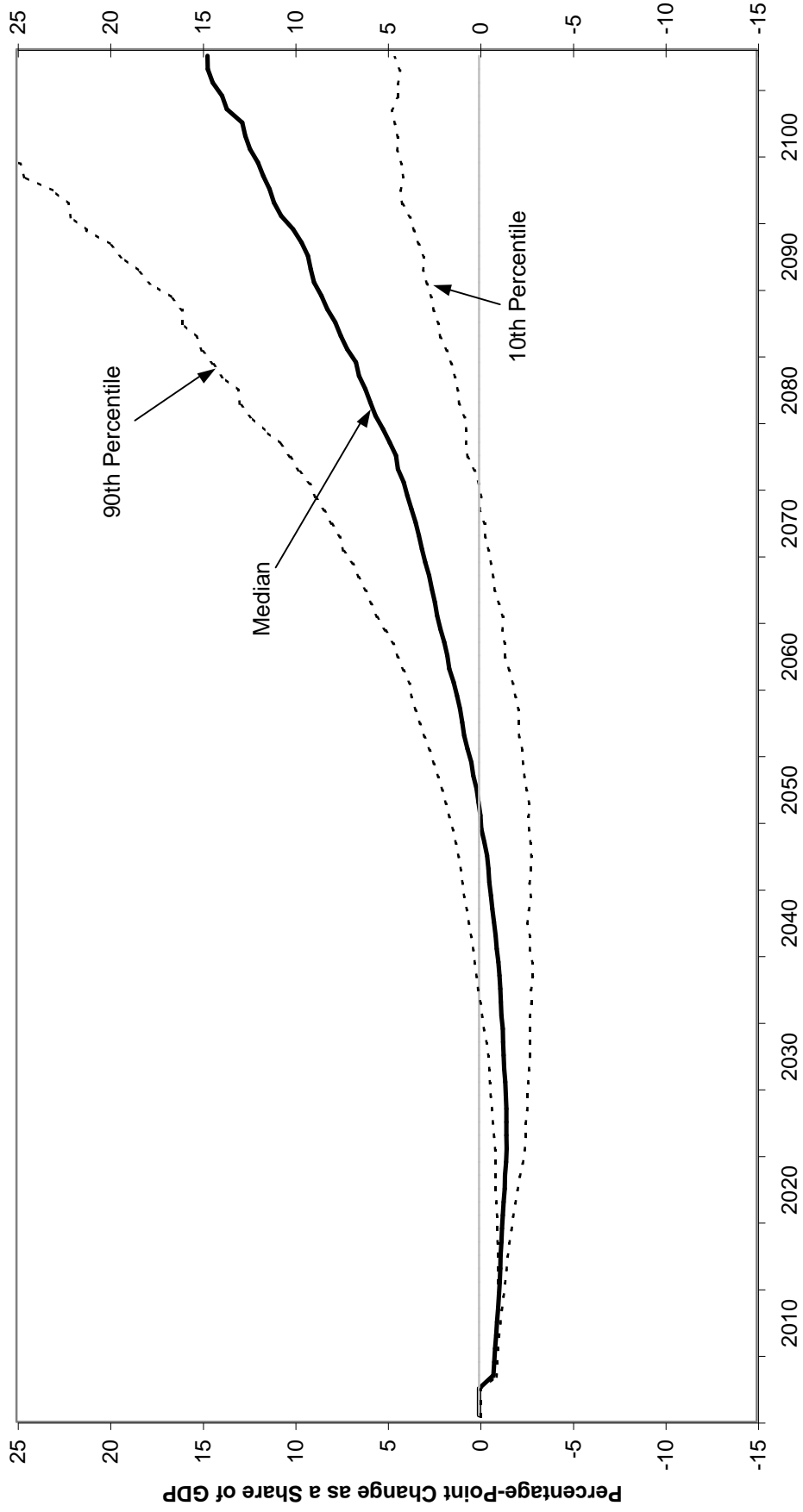
Source: Congressional Budget Office.

Notes: Results are based on 500 stochastic simulations centered around the Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions. The 10th and 90th percentiles, derived by ranking each stochastic outcome from worst to best regarding changes in total budget balances, span the 80 percent range of uncertainty. Annual total budget balances equal all federal receipts less all federal spending. Spending includes interest on outstanding debt.

Figure 2B.

Effects on Total Budget Balances as a Share of GDP
Changing to CSSS Plan 2 from Current Law, 2004-2105 (Trust-Fund-Financed Benefits)

Percentage-Point Change as a Share of GDP

90th Percentile

Median

10th Percentile

Potential Range of Benefits as a Share of GDP Under Current Law and CSSS Plan 2, 2004 to 2105 (Scheduled Benefits)

(Percentage of GDP)

OASDI Benefits and Individual Account Payouts

- Current Law, 80 Percent Range of Uncertainty
- CSSS Plan 2, 80 Percent Range of Uncertainty

Current Law Expected

CSSS Plan 2 Expected

OASDI Benefits

- Current Law, 80 Percent Range of Uncertainty
- CSSS Plan 2, 80 Percent Range of Uncertainty
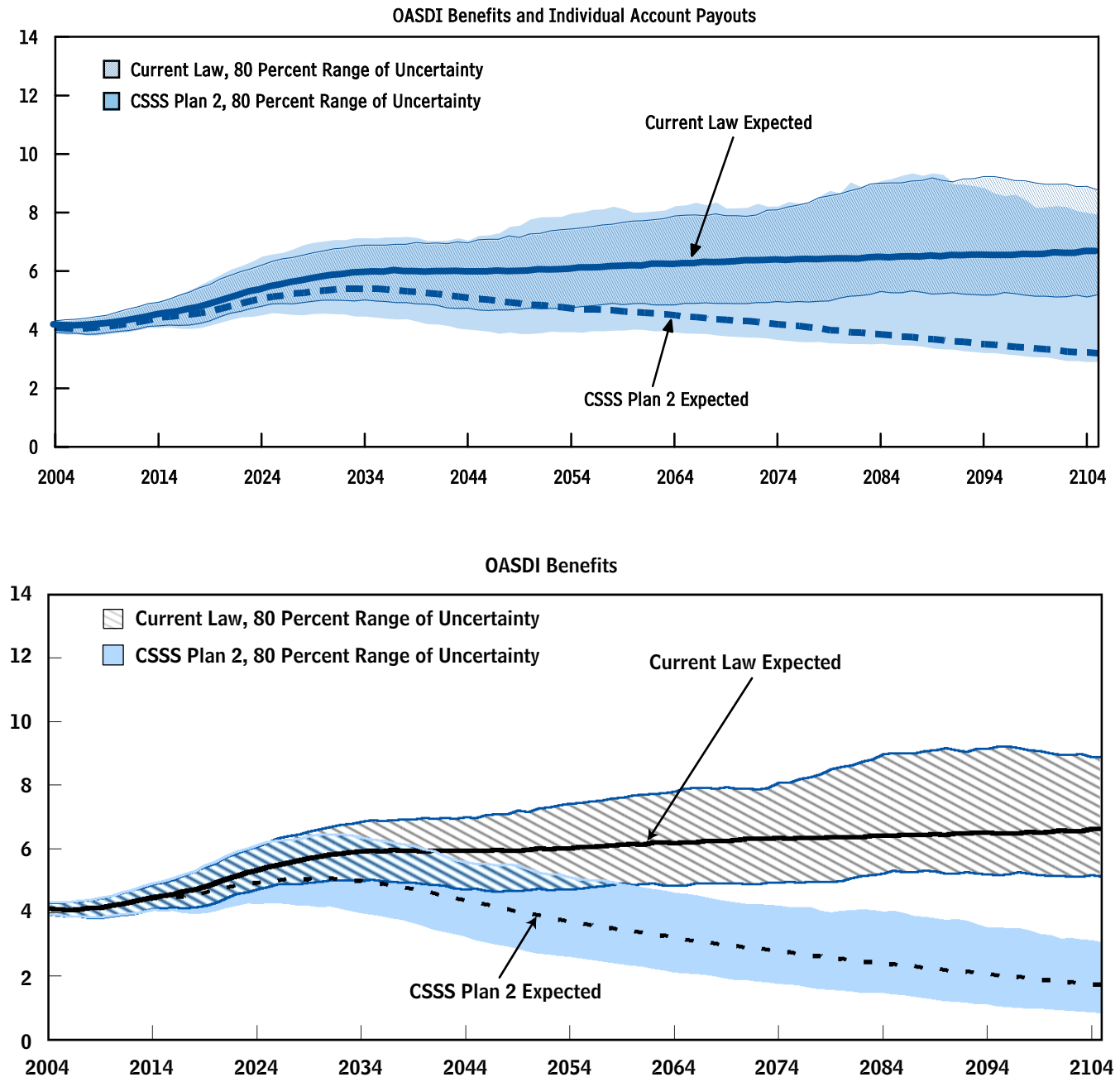
Current Law Expected

CSSS Plan 2 Expected

Source: Congressional Budget Office.

Notes: Results are based on 500 stochastic simulations centered around the Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions. The diagonally hatched area represents the projected range of scheduled benefits as a percentage of GDP under current law; the shaded area represents the projected range of proposed benefit payments under CSSS Plan 2. The dark lines indicate the expected benefits using risk-adjusted returns.

Figure 3B.

Potential Range of Benefits as a Share of GDP Under Current Law and CSSS Plan 2, 2004 to 2105 (Trust-Fund-Financed Benefits)

(Percentage of GDP)

OASDI Benefits and Individual Account Payouts
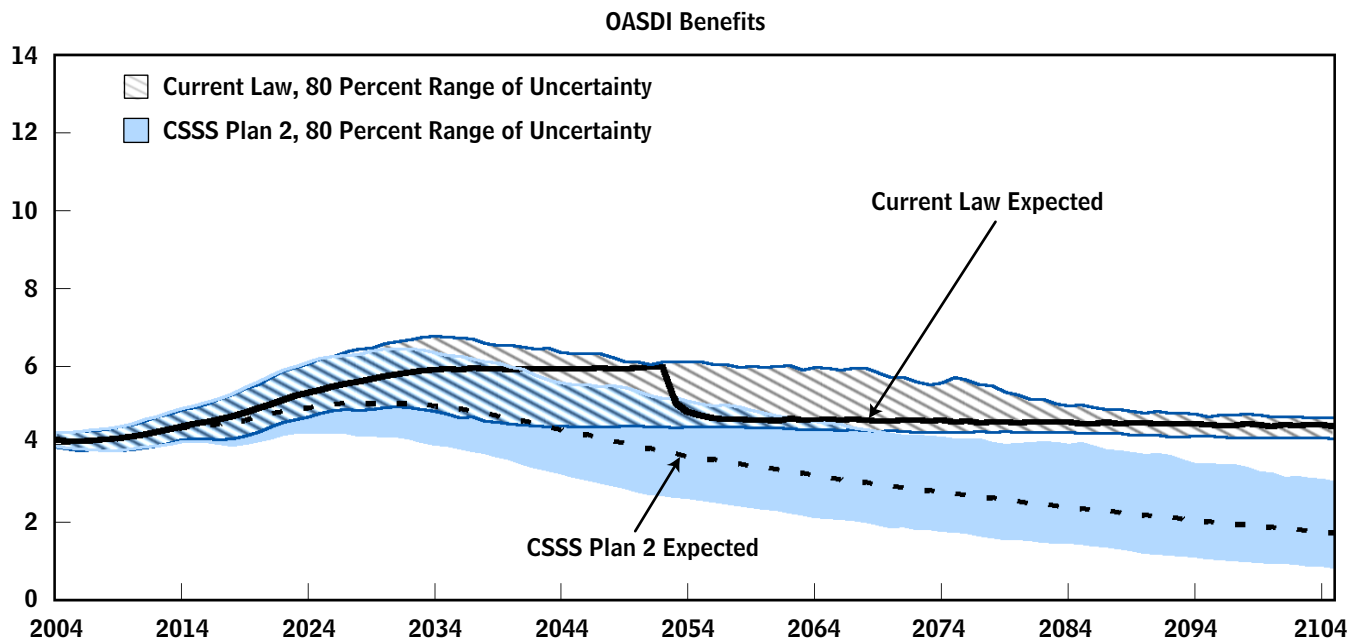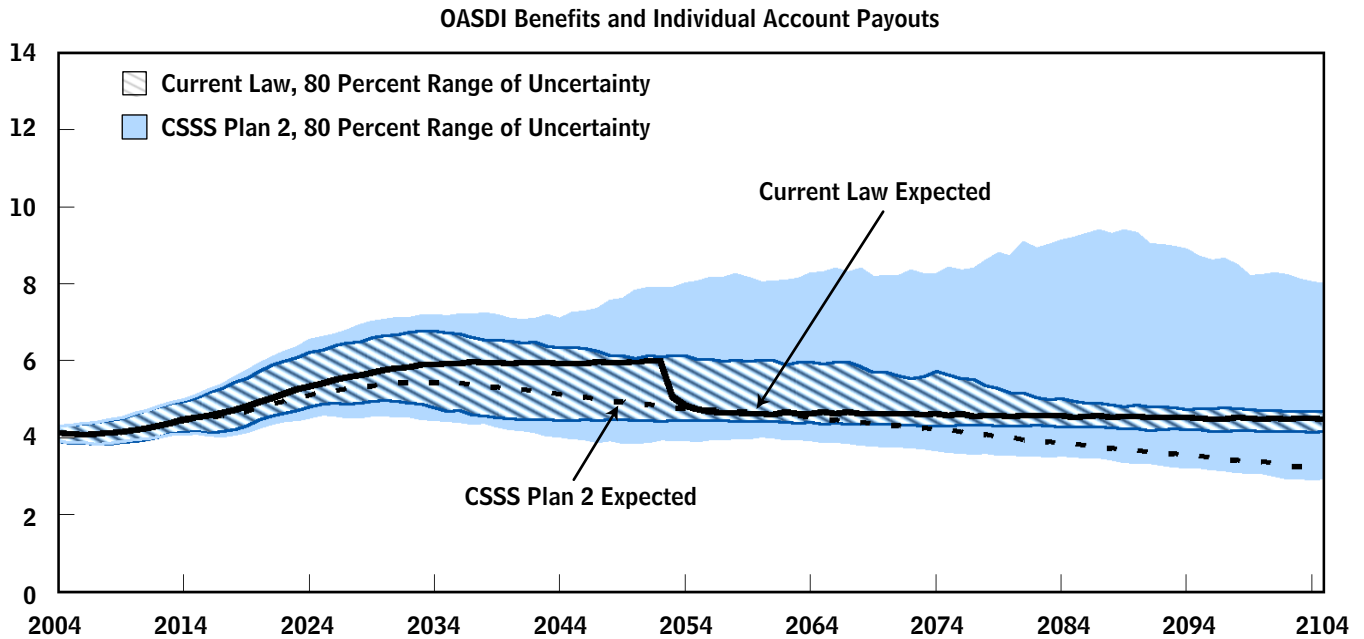

OASDI Benefits

Source: Congressional Budget Office.

Notes: Results are based on 500 stochastic simulations centered around the Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions. The diagonally hatched area represents the projected range of scheduled benefits as a percentage of GDP under current law; the shaded area represents the projected range of proposed benefit payments under CSSS Plan 2. The dark lines indicate the expected benefits using risk-adjusted returns.

Table 2.

First-Year Annual Benefits for the Median Retired Worker If Benefits Are Claimed at Age 65, by Birth Cohort and Earnings Level

10-Year Birth Cohort Starting in Year	Current Law		CSSS Plan 2		
	Scheduled Benefits	Trust-Fund-Financed Benefits /1	Proposed Benefits + IA	Trust-Fund-Financed Benefits + IA	Benefits Financed with General Fund Transfers /2
	A	B	A	B	
	Median in Lowest Household Earnings Quintile				
1940	7,400	7,400	7,400	7,400	0.0%
1950	8,200	8,200	8,500	8,500	0.0%
1960	8,500	8,500	8,800	8,800	0.0%
1970	9,500	9,500	9,100	9,100	9.1%
1980	10,200	9,800	8,700	8,700	2.2%
1990	11,500	9,000	8,600	8,600	0.0%
2000	13,000	9,800	8,900	8,900	0.0%
	Median in Middle Household Earnings Quintile				
1940	14,900	14,900	14,900	14,900	0.0%
1950	15,200	15,300	14,100	14,100	0.0%
1960	15,500	15,500	13,100	13,100	0.0%
1970	17,700	17,700	13,600	13,600	8.2%
1980	20,500	19,700	14,300	14,300	1.5%
1990	23,300	18,100	14,500	14,500	0.0%
2000	26,400	19,900	14,600	14,600	0.0%
	Median in Highest Household Earnings Quintile				
1940	19,900	19,900	19,800	19,800	0.0%
1950	21,600	21,600	20,000	20,000	0.0%
1960	22,400	22,400	19,000	19,000	0.0%
1970	25,200	25,200	19,400	19,400	9.1%
1980	29,500	28,400	20,400	20,400	1.5%
1990	33,200	25,900	20,700	20,700	0.0%
2000	37,600	28,400	20,800	20,800	0.0%

Source: Congressional Budget Office.

Notes: Results are based on a single simulation using the Social Security trustees' 2004 intermediate demographic assumptions, CBO's January 2004 economic assumptions, and risk-adjusted returns for all private investments. First-year annual benefits have been adjusted for inflation to put them into 2004 dollars. All workers are assumed to have claimed benefits at age 65. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

/1 The trust-fund-financed baseline subjects all beneficiaries to an across-the-board cut in benefits each year such that total projected benefits equal projected payroll tax revenues plus taxes on benefits once the Social Security trust funds have been exhausted, including any specified transfers into the trust funds. Current-law trust-fund-financed benefits are reduced starting in 2053; trust-fund-financed benefits under CSSS Plan 2 are not reduced.

/2 General fund transfers are necessary to finance benefits under CSSS Plan 2 from 2037 to 2050.

Table 3.

First-Year Replacement Rates for the Median Retired Worker If Benefits Are Claimed at Age 65, by Birth Cohort and Earnings Level

10-Year Birth Cohort Starting in Year	Current Law		CSSS Plan 2		
	Scheduled Benefits	Trust-Fund-Financed Benefits /1	Proposed Benefits + IA	Trust-Fund-Financed Benefits + IA	Benefits Financed with General Fund Transfers /2
	A	B	A	B	
	Median in Lowest Household Earnings Quintile				
1940	72.7	72.7	72.7	72.7	0.0%
1950	69.5	69.5	70.6	70.6	0.0%
1960	65.2	65.2	64.1	64.1	0.0%
1970	65.8	65.8	58.7	58.7	9.2%
1980	69.9	66.3	55.0	55.0	1.2%
1990	70.8	54.7	49.1	49.1	0.0%
2000	69.7	52.2	43.8	43.8	0.0%
	Median in Middle Household Earnings Quintile				
1940	42.9	42.9	42.8	42.8	0.0%
1950	43.0	43.0	39.9	39.9	0.0%
1960	41.0	41.0	34.8	34.8	0.0%
1970	40.5	40.5	30.9	30.9	8.6%
1980	39.8	38.7	27.4	27.4	1.4%
1990	39.5	30.8	24.6	24.6	0.0%
2000	39.6	29.8	21.7	21.7	0.0%
	Median in Highest Household Earnings Quintile				
1940	28.5	28.5	28.4	28.4	0.0%
1950	27.8	27.8	25.9	25.9	0.0%
1960	26.3	26.3	22.3	22.3	0.0%
1970	25.4	25.3	19.6	19.6	9.0%
1980	22.9	22.0	15.7	15.7	1.2%
1990	22.6	17.6	13.9	13.9	0.0%
2000	22.8	17.2	12.5	12.5	0.0%

Source: Congressional Budget Office.

Notes: Results are based on a single simulation using the Social Security trustees' 2004 intermediate demographic assumptions, CBO's January 2004 economic assumptions, and risk-adjusted returns for all private investments. First-year replacement rates are computed as the ratio of first-year annual benefits to career average earnings. All workers are assumed to have claimed benefits at age 65. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

/1 The trust-fund-financed baseline subjects all beneficiaries to an across-the-board cut in benefits each year such that total projected benefits equal projected payroll tax revenues plus taxes on benefits once the Social Security trust funds have been exhausted, including any specified transfers into the trust funds. Current-law trust-fund-financed benefits are reduced starting in 2053; trust-fund-financed benefits under CSSS Plan 2 are not reduced.

/2 General fund transfers are necessary to finance benefits under CSSS Plan 2 from 2037 to 2050.

Table 4.

Present Value of Lifetime Benefits for the Median Retired Worker, by Birth Cohort and Earnings Level

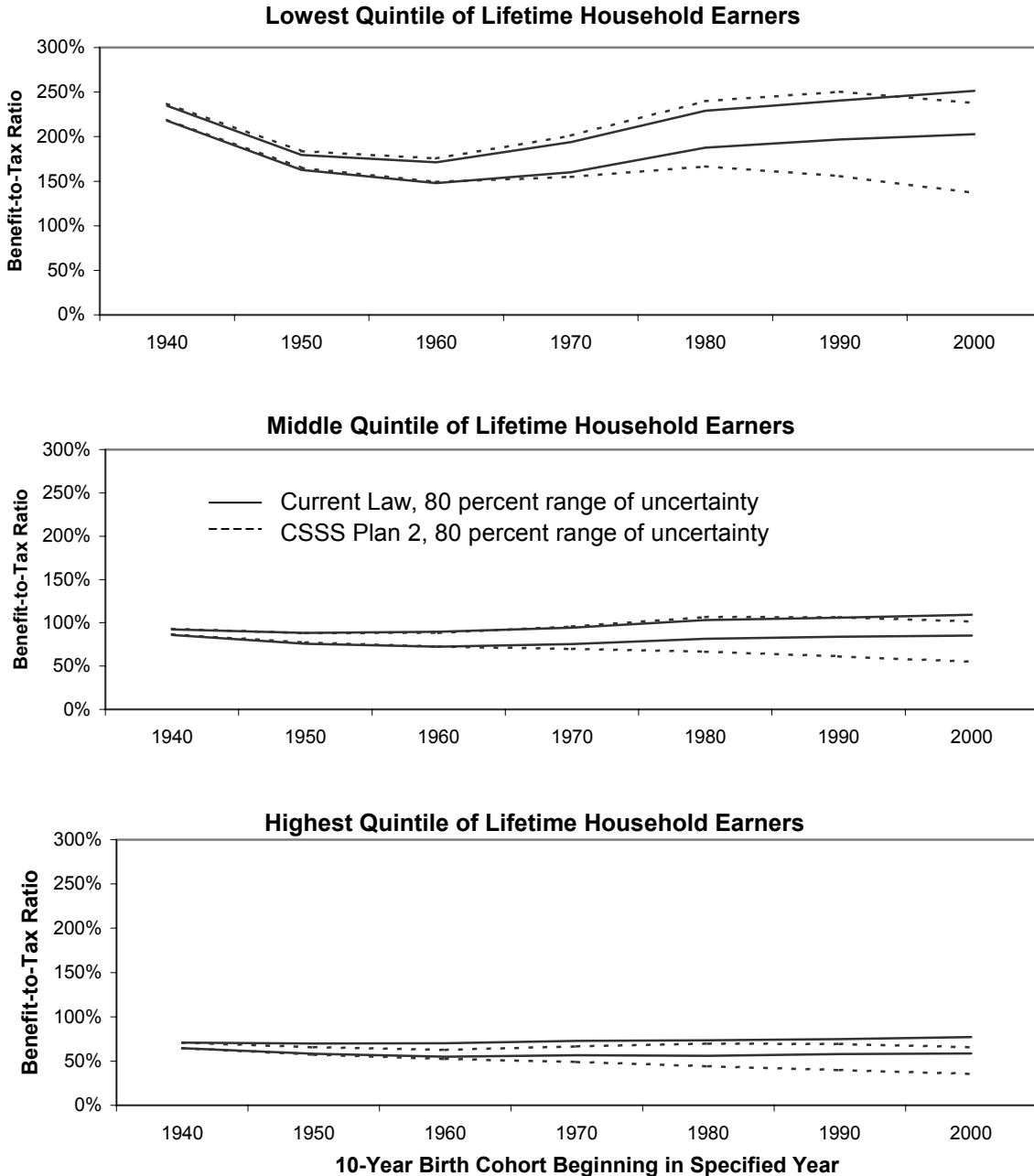| | Current Law | | CSSS Plan 2 | | |
| | Scheduled Benefits | Trust-Fund-Financed Benefits /1 | Proposed Benefits + IA | Trust-Fund-Financed Benefits + IA | Benefits Financed with General Fund Transfers /2 |
10-Year Birth Cohort Starting in Year	A	B	A	B	
	Median in Lowest Household Earnings Quintile				
1940	60,200	60,200	60,000	60,000	0.2%
1950	66,200	66,100	67,200	67,200	0.4%
1960	71,100	70,800	70,100	70,100	3.7%
1970	78,600	76,900	73,600	73,600	5.9%
1980	85,100	73,700	72,400	72,400	0.8%
1990	100,000	75,000	77,800	77,800	0.0%
2000	119,100	87,200	82,600	82,600	0.0%
	Median in Middle Household Earnings Quintile				
1940	138,800	138,800	138,700	138,700	0.1%
1950	148,200	148,100	146,400	146,400	1.3%
1960	160,800	159,500	149,700	149,700	4.6%
1970	187,100	178,400	161,200	161,200	4.4%
1980	223,500	187,200	174,500	174,500	0.0%
1990	264,200	199,800	186,200	186,200	0.0%
2000	302,500	217,300	190,600	190,600	0.0%
	Median in Highest Household Earnings Quintile				
1940	209,200	209,200	208,400	208,400	0.2%
1950	235,200	235,200	220,800	220,800	1.6%
1960	250,000	248,300	220,000	220,000	5.0%
1970	295,900	279,100	236,100	236,100	3.7%
1980	352,200	293,800	255,700	255,700	0.7%
1990	407,400	306,200	268,200	268,200	0.0%
2000	465,800	339,800	280,200	280,200	0.0%

Source: Congressional Budget Office.

Notes: Results are based on a single simulation using the Social Security trustees' 2004 intermediate demographic assumptions, CBO's January 2004 economic assumptions, and risk-adjusted returns for all private investments. The present value of lifetime retirement benefits are computed by discounting to age 60 benefits received from the initial claim until death and adjusting each for inflation into 2004 dollars. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

/1 The trust-fund-financed baseline subjects all beneficiaries to an across-the-board cut in benefits each year such that total projected benefits equal projected payroll tax revenues plus taxes on benefits once the Social Security trust funds have been exhausted, including any specified transfers into the trust funds. Current-law trust-fund-financed benefits are reduced starting in 2053; trust-fund-financed benefits under CSSS Plan 2 are not reduced.

/2 General fund transfers are necessary to finance benefits under CSSS Plan 2 from 2037 to 2050.

Figure 4A.

Potential Range of the Ratio of Lifetime Benefits to Lifetime Taxes by Birth Cohort and Earnings Level Under Current Law and CSSS Plan 2 (Scheduled Benefits)

Lowest Quintile of Lifetime Household Earners

Middle Quintile of Lifetime Household Earners

——— Current Law, 80 percent range of uncertainty
- - - - - CSSS Plan 2, 80 percent range of uncertainty

Highest Quintile of Lifetime Household Earners

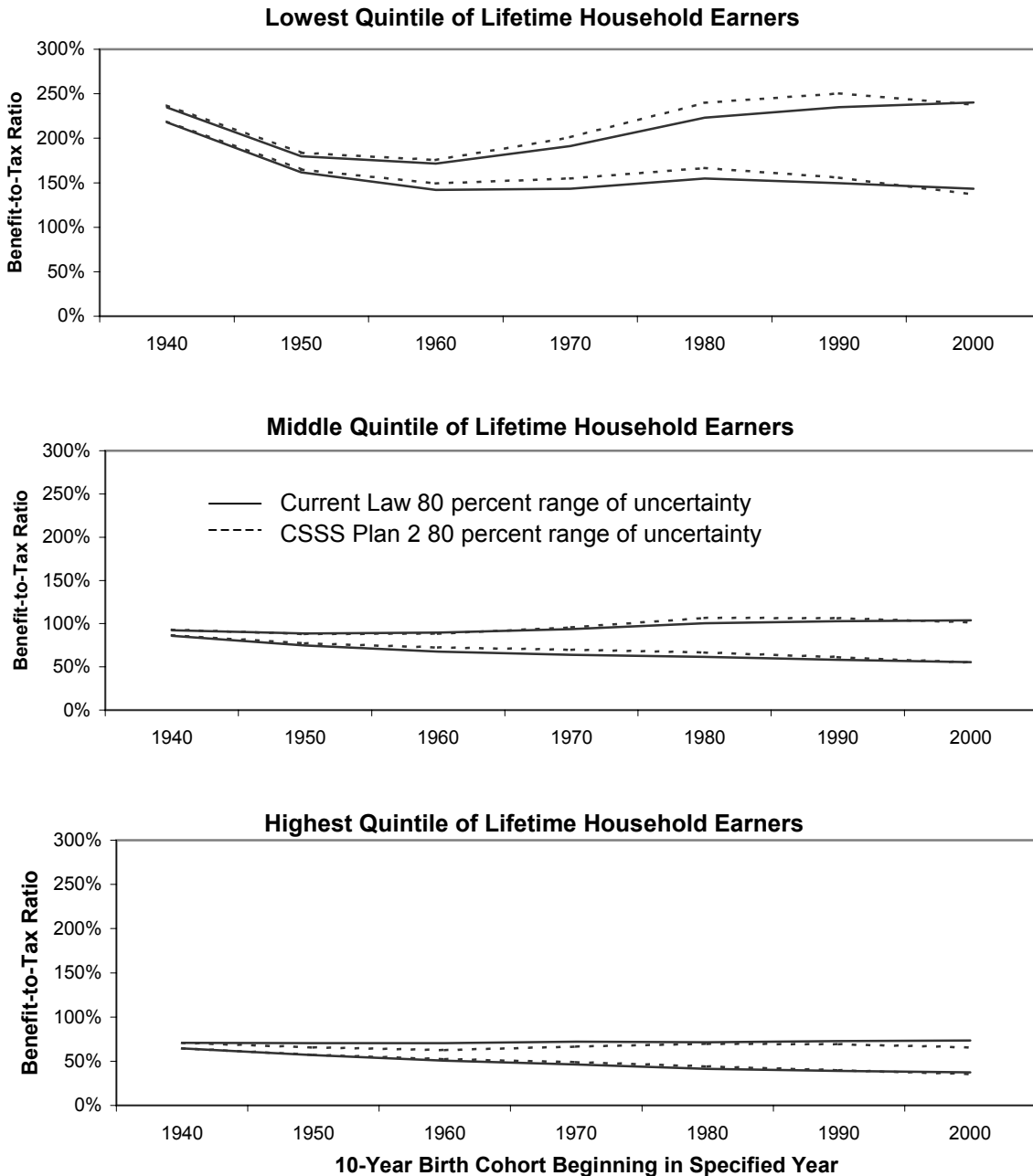**10-Year Birth Cohort Beginning in Specified Year**

Source: Congressional Budget Office.

Notes: Results are based on 500 stochastic simulations centered around the Social Security trustees' 2004 intermediate demographic assumptions and CBO's January 2004 economic assumptions, including only simulated individuals who live to at least age 45. Benefits include OASDI scheduled benefits net of income taxes and individual account payouts. Taxes include employer and employee payroll taxes and individual account contributions. The 80 percent range of uncertainty reflects the range in which actual outcomes have an 80 percent chance of falling.

**Potential Range of the Ratio of Lifetime Benefits to Lifetime Taxes
by Birth Cohort and Earnings Level Under Current Law and CSSS Plan 2
(Trust-Fund-Financed Benefits)**

Lowest Quintile of Lifetime Household Earners

Middle Quintile of Lifetime Household Earners

Current Law 80 percent range of uncertainty
----- CSSS Plan 2 80 percent range of uncertainty

Highest Quintile of Lifetime Household Earners

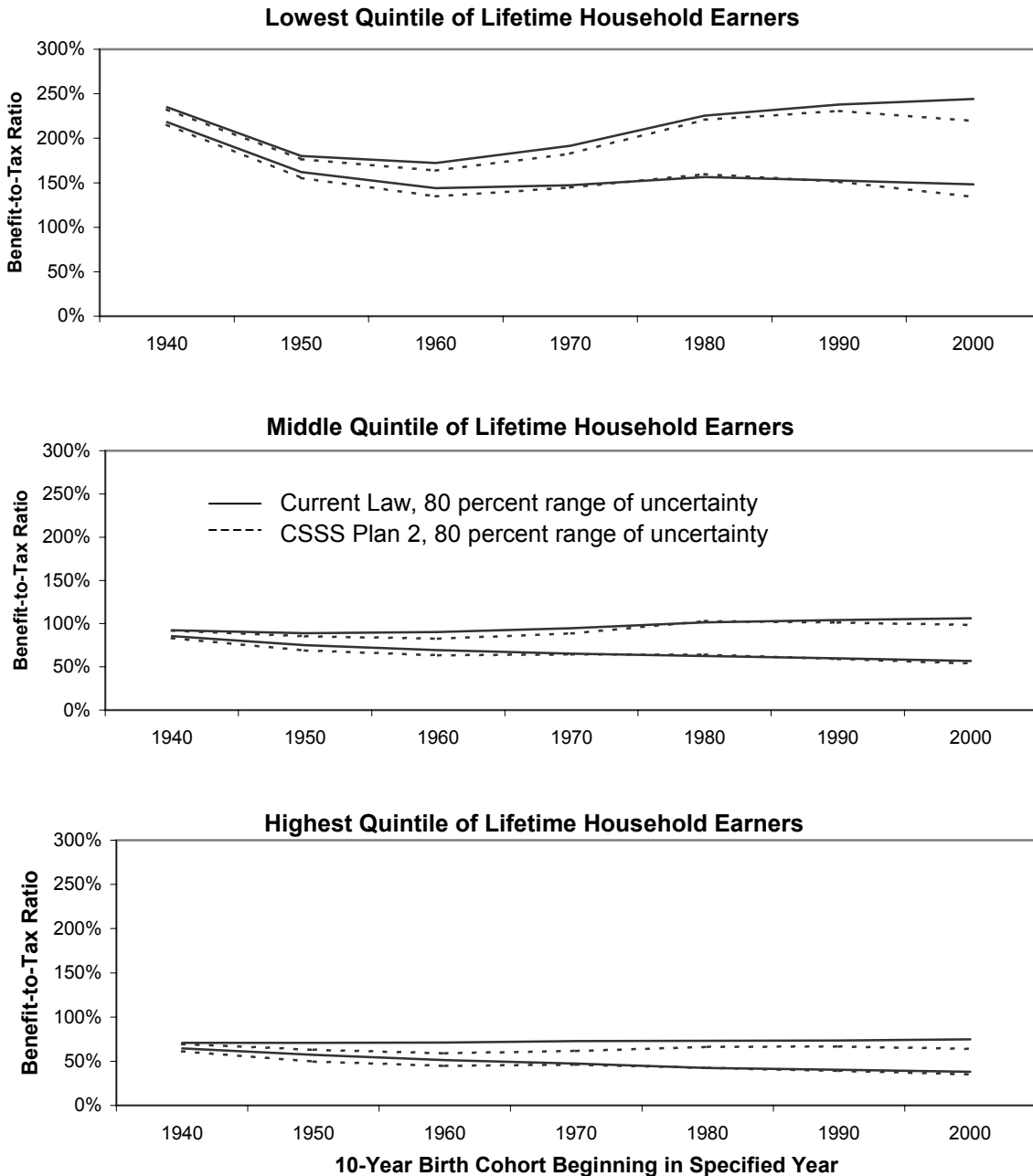**10-Year Birth Cohort Beginning in Specified Year**

Source: Congressional Budget Office.
Notes: Results are based on 500 stochastic simulations centered around the Social Security trustees' 2004
intermediate demographic assumptions and CBO's January 2004 economic assumptions, including only individuals
who live to at least age 45. Benefits include OASDI trust-fund-financed benefits net of income taxes and individual
account payouts. Taxes include employer and employee payroll taxes and individual account contributions. The 80
percent range of uncertainty reflects the range in which the actual outcomes have an 80 percent chance of falling.

**Potential Range of the Ratio of Lifetime Benefits to Lifetime Taxes
by Birth Cohort and Earnings Level Under Current Law and CSSS Plan 2
(Dedicated-Tax-Financed Benefits)**

Source: Congressional Budget Office.
Notes: Results are based on 500 stochastic simulations centered around the Social Security trustees' 2004
intermediate demographic assumptions and CBO's January 2004 economic assumptions, including only individuals
who live to at least age 45. Benefits include OASDI dedicated-tax-financed benefits net of income taxes and individual
account payouts. Taxes include employer and employee payroll taxes and individual account contributions. The 80
percent range of uncertainty reflects the range in which the actual outcomes have an 80 percent chance of falling.