



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

*Douglas Holtz-Eakin, Director*

July 21, 2004

Honorable Jim Kolbe  
U.S. House of Representatives  
Washington, DC 20515

Dear Congressman:

In response to your request, the Congressional Budget Office (CBO) has prepared the enclosed analysis of the long-term impact of H.R. 3821, the Bipartisan Retirement Security Act of 2004 (as introduced on February 24, 2004). The 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. CBO has also prepared a separate cost estimate of the bill that addresses the budgetary effects of the legislation over the 2005-2014 period, assuming enactment this year.

If you wish further details on these analyses, we would be pleased to provide them. The CBO staff contacts are Kathy Ruffing (for the cost estimate), who can be reached at 226-2820, and Noah Meyerson (for the long-term analysis), who can be reached at 226-2666.

Sincerely,

A handwritten signature in black ink that reads "Douglas Holtz-Eakin".

Douglas Holtz-Eakin

Enclosure

cc: Honorable William "Bill" M. Thomas  
Chairman  
Committee on Ways and Means

Honorable Charles B. Rangel  
Ranking Member

Identical letter sent to the Honorable Charles W. Stenholm.



# Long-Term Analysis of H.R. 3821, the Bipartisan Retirement Security Act of 2004

July 21, 2004

## Summary

H.R. 3821, the Bipartisan Retirement Security Act of 2004, introduced by Representatives Kolbe and Stenholm, would make numerous changes to the Social Security system.<sup>1</sup> The bill would establish a system of individual accounts (IAs) funded by the existing payroll tax, and would generally reduce defined benefits compared with current law. Some provisions would raise scheduled benefits for some recipients or increase payroll taxes for some workers.

H.R. 3821 would redirect approximately 2.3 percentage points of the current 12.4 percent payroll tax for Old-Age, Survivors and Disability Insurance (OASDI) to individual accounts, which would belong to covered workers. The principal and interest in those accounts would be disbursed in the form of annuities that would supplement Social Security benefits. (They would be paid to a worker's heirs if the individual dies before claiming benefits.) Those distributions would be taxed as Social Security benefits are taxed under current law, and the receipts would be credited to the OASDI trust funds.

The bill would lower benefits specified under current law by:

- Adjusting parameters in the benefit formula;
- Accelerating the schedule for increasing the normal retirement age (NRA)—the age at which workers may collect unreduced benefits—so that the NRA reaches 67 for those born in 1949 (under current law, those born in 1960 would be the first to have an NRA of 67);
- Raising the actuarial reduction for workers and aged spouses claiming benefits before the NRA, while increasing the delayed retirement credit for workers claiming after the NRA;
- Basing benefits of retired workers on all years of earnings (compared with the top 35 years under current law);

---

1. At the request of the sponsors' staff, CBO assumed numerous corrections and changes in the legislative language of H.R. 3821 to carry out the sponsors' intent and to reflect assumed enactment in the fall of 2004.

- Reducing annual cost-of-living adjustments (COLAs) for Social Security and other indexed programs, including various indexed provisions of the individual income tax; and
- Adjusting benefits for life expectancy.

H.R. 3821 would further alter the benefit formula by:

- Replacing the current 32 percent middle bracket in the formula for calculating benefits with two brackets: one 70 percent and one 20 percent; and reducing the 15 percent rate for the top bracket to 10 percent;
- Increasing the minimum benefit for low-paid beneficiaries with many years of work;
- Increasing the benefit for some widows and widowers to 75 percent of the couple's benefit; and
- Limiting spousal benefits for high-earning married couples.

The legislation would increase payroll tax revenues by increasing the maximum amount of earnings subject to the payroll tax. In addition, H.R. 3821 would transfer funds between government accounts by:

- Crediting to the Social Security trust funds the income taxes on benefits that are currently credited to the Medicare trust fund; and
- Specifying certain amounts to be transferred from the general funds of the Treasury into the Social Security trust funds.

CBO projects that under current law, the Social Security Administration will be unable to pay scheduled benefits starting in 2053 and that Social Security outlays will exceed revenues from payroll taxes and taxation of benefits beginning in 2019. H.R. 3821 would enable the Social Security Administration to pay the benefits scheduled under that law throughout the 100-year projection period, and it would gradually establish a balance between Social Security revenues and outlays. Introducing IAs and linking the benefit formula to life expectancy would shift some uncertainty about scheduled benefits from the federal government—that is, taxpayers and beneficiaries of other government programs—to retirees. The bill would trim benefits proportionately more for workers with high lifetime earnings than for those with lower earnings.

For more detailed description of Social Security under current law and under H.R. 2821, see the appendices ("Background" and "Major Provisions of H.R. 3821").

## Overview of the Analysis

This long-term analysis considers the effects of H.R. 3821 on:

1. The Social Security system, including revenues, outlays, and balances (revenues less outlays);
2. The finances of the federal government;
3. Total benefits received by beneficiaries, including those from IAs;
4. Benefit levels for beneficiaries across cohorts and the earnings distribution;
5. The relationship between taxes paid and benefits received for different beneficiaries; and
6. 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 these 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.<sup>2</sup> 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

---

<sup>2</sup>See Congressional Budget Office, *The Long-Term Budget Outlook* (December 2003), for a more complete discussion.

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:<sup>3</sup>

7. First-year retirement benefits in 2004 dollars (see Table 2);
8. First-year replacement rate—the percentage of preretirement earnings replaced by retirement benefits (see Table 3); and
9. 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.<sup>4</sup> 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 Old-Age and Survivors (OASI) payments—received by all individuals over a lifetime to the present value of total Social Security payroll taxes paid over a lifetime. The 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

---

<sup>3</sup>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.

<sup>4</sup>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.

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.<sup>5</sup>

Ratios are given for seven 10-year birth cohorts and the lowest, middle, and highest quintiles of individuals who lived 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 90<sup>th</sup> and 10<sup>th</sup> percentiles.

Like any other significant change to Social Security policy, H.R. 3821 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 those interactions are particularly uncertain, in general they are not incorporated into the 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 to 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."

---

<sup>5</sup>This measure does not include any payments made to children or young survivors.

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 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, as opposed to 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. This 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 H.R. 3821 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:

<u>Investment</u>	<u>Share of Portfolio</u>	<u>Annual Real Expected Return</u>
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.<sup>6</sup> 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.<sup>7</sup>

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.<sup>8</sup> 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 10<sup>th</sup> and 90<sup>th</sup> 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 H.R. 3821**

### **Social Security Revenues and Outlays Over Time**

#### Scheduled Benefits Scenario

Under current law, CBO projects that Social Security revenues (payroll taxes and income taxes on benefits) will exceed outlays (benefits and administrative costs) until 2019 (see Figure 1A, top panel).

---

<sup>6</sup>For a discussion of the factors affecting administrative costs, see Congressional Budget Office, *Administrative Costs of Private Accounts in Social Security* (March 2004).

<sup>7</sup>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).

<sup>8</sup>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,” Technical Paper 2003-8 (August 2003).

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.<sup>9</sup>

Under H.R. 3821, Social Security revenues drop from 5.0 percent of GDP to 4.4 percent of GDP in 2006 as payroll taxes are diverted into IAs, although the drop is mitigated somewhat by the increase in the taxable maximum (see Figure 1A, bottom panel). (The diversion would not affect total federal payroll tax revenues because the portion of payroll taxes that funded IA contributions would still be recorded as revenues to the government. But instead of financing Social Security benefits, those funds would be immediately directed to IAs and classified as federal outlays.) Social Security outlays would grow as the baby-boom generation retired, although at a slower pace than under current law, peaking at 5.2 percent of GDP in 2034. As the various benefit formula changes phased in, total outlays would decline as a share of GDP, to within 0.15 percentage points of revenues in 2067. Annual deficits would grow slowly thereafter. Neither the portion of payroll taxes that is directed to IAs nor transfers from the rest of government are included as Social Security revenues in Figure 1A, but those revenues do include income taxes levied on payouts from IAs. 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).<sup>10</sup> Trust-fund-financed benefits would then be 19 percent lower than scheduled benefits; by 2105, they would be 30 percent lower.

Under H.R. 3821, proposed benefits would be fully funded by trust fund receipts, so projected outlays under the trust-fund-financed benefits scenario would equal those under the scheduled benefits scenario (see Figure 1B, bottom panel).

## **Effects on Revenues and Outlays**

### Scheduled Benefits Scenario

#### *Net Effect of Proposal*

---

<sup>9</sup>See Congressional Budget Office, *The Outlook for Social Security* (June 2004).

<sup>10</sup>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.

Beginning in 2006, revenues to the Social Security system would be about 0.6 percent of GDP lower because of the diversion of government revenues to IAs. The proposed reductions in Social Security outlays would not offset the diversion of revenues to IAs, so initially the net Social Security balance would be lower than it is under current law. Scheduled outlays would be reduced by an increasing amount each year. For example, outlays would be reduced by 0.7 percent of GDP in 2025 and by 2 percent of GDP in 2065. By 2022, the reduction in outlays would be sufficient to offset the lost revenues, resulting in an improved Social Security balance. By 2065, revenues would almost cover outlays; the balance would be -0.17 percent of GDP. In later years, the gap would grow slightly (see Figure 1A).

### *Effect of Individual Provisions*

H.R. 3821 contains numerous 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 negative effect on system finances is the introduction of IAs. Starting in 2006, individuals aged 55 and younger would be required to invest 3 percent of their taxable earnings, up to a specified level (\$10,000 at first and then an equivalent wage-indexed amount), and 2 percent of their taxable earnings above that level in their IAs, 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 the Social Security benefit income of account holders. Over time, the effect of the provision shrinks relative to GDP. That is due in part to a projected decline in taxable earnings relative to GDP, which occurs because workers are assumed to take an increasing share of their compensation in the form of nontaxable benefits, such as health insurance and pensions.

H.R. 3821 also includes various changes to the benefit formula that would reduce outlays. The largest projected effect comes from the reduction in the benefit formula’s bend rates; the indexing of initial benefits to life expectancy would also have a significant effect.

The benefit formula’s bend rates would be changed in two ways. First, the bill would add a bend rate (and bend point) to the benefit formula by replacing the current 32 percent middle bracket with new 70 percent and 20 percent brackets and would reduce the 15 percent bracket to 10 percent. That change would affect the distribution of benefits, but it would have a minimal effect on total outlays for benefits. A second provision would reduce the benefit formula’s bend rates, lowering the 90, 70, 20, and 10 percent rates to approximately 57.2, 27.5, 7.9, and 3.9 percent in 2060. By 2065, this provision would lower outlays by 1.9 percent of GDP, but it would also slightly reduce revenues because revenues from income taxes on benefits would be lower, for a net improvement in the balance of 1.8 percent of GDP.

The indexing of initial benefits to life expectancy would begin in 2012, using measures of expected increases in life expectancy at age 62. The increase in the number of years that individuals are expected to live to collect benefits would be offset by a reduction in the benefits paid each year. By 2065, this provision would, net of a small reduction in revenues through lower income taxes on benefits, improve the balance by 0.5 percent of GDP.

H.R. 3821 would also result in transfers from the rest of government (both the Medicare trust fund and the general fund) to the Social Security trust funds. Those transfers would generally be between 0.3 percent and 0.4 percent of GDP over the projection period.

### *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 10<sup>th</sup> and 90<sup>th</sup> percentiles. By definition, there is a 10 percent chance that the value will fall below the 10<sup>th</sup> percentile, a 10 percent chance that it will fall above the 90<sup>th</sup> percentile, and an 80 percent chance that it will fall between the two. For example, while the expected balance in 2045 under H.R. 3821 is -0.44 percent of GDP, CBO projects that there is a 10 percent chance that it will be less than -1.32 percent of GDP and a 10 percent chance that it will be greater than 0.53 percent (see bottom of Table 1A). In addition, the median outcome is -0.23 percent. By 2105, the uncertainty grows to an 80 percent range spanning 0.7 percent to -1.8 percent of GDP.

As noted above, the median under multiple-simulation and single-simulation results generally differs somewhat even under current law. Under H.R. 3821, however, there is another difference between the single-simulation and median estimate of the balance: CBO's median estimate for H.R. 3821 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 bill, the size of payouts from IAs would depend on the returns that individuals earned on investments in stocks and corporate bonds. Since payments from the accounts are taxed for beneficiaries with high income, the amount of tax revenue and thus the system balance will vary with investment returns.

### Trust-Fund-Financed Benefits Scenario

#### *Effect of Proposal*

Under the trust-fund-financed benefits scenario, there could be no negative balance after trust-fund exhaustion because benefits, and thus outlays, would automatically be reduced to a level consistent with revenues. 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 “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 was 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 H.R. 3821, outlays would be reduced sufficiently so that the trust funds would be expected to maintain a positive balance—that is, avoid exhaustion—in all years. Because the trust funds would never be exhausted, there would be no need for automatic benefit reductions. That would hold true even without the specified transfers from the rest of government. Still, expected annual outlays would exceed expected annual revenues under H.R. 3821 starting in 2017.

### *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.<sup>11</sup> In addition, it is possible for the system to experience a positive annual balance 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 H.R. 3821, the 80 percent range of uncertainty for the annual balance is quite similar for the scheduled and trust-fund-financed benefits scenarios, which is not surprising, given that the system is expected to be fully financed by dedicated revenues. However, under certain economic and demographic outcomes, the system would fall short and require benefit cuts. Therefore, the range under the trust-fund-financed benefits scenario differs slightly from the range under the scheduled benefits scenario.

### **Effect of H.R. 3821 on the Total Federal Budget**

---

<sup>11</sup>See Congressional Budget Office, *The Outlook for Social Security*, pp.6-7.

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 as a result of changes in Social Security reflects either an increase in the surplus or a decrease in projected deficits.

#### Scheduled Benefits Scenario

Transfers to IAs would begin in 2006 under H.R. 3821. 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 scheduled benefits and increase revenues sufficiently to offset the higher outlays, and beginning in 2040, the changes from H.R. 3821 would result in an improved annual total budget situation. In 2085, the median improvement would be almost 8 percentage points of GDP. However, the projections estimate substantial uncertainty: the 10th and 90th percentile lines bracket a range of from 4 to 16 percentage points in that year.

The improvement in the total budget balance is much larger than the improvement in the Social Security balance. The effects of changes to non-Social Security outlays and revenues contribute slightly to that improvement. (Other revenues would increase by about 0.1 percent of GDP in 2025 and 0.2 percent of GDP in 2085. Other non-Social Security spending would decline by less than 0.1 percent of GDP in 2025 and slightly more than 0.1 percent of GDP in 2085.) But most of the difference occurs because, unlike the Social Security balance, the total budget balance 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 it would be under the scheduled baseline. But later, the effects of H.R. 3821 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 H.R. 3821 would have comparatively little effect on projected total outlays, the assumption being that large reductions would have been made anyway upon trust-fund exhaustion.

Consequently, under this scenario, the median outcome is that H.R. 3821 results in only slight improvements in total budget balances after 2025; the median improvement would grow to 1 percent of GDP by 2050 and generally remain at that level (see Figure 2B).

### **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 increases over time, with a projected range of 5 percent to 9 percent of GDP in 2105 (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.

OASDI benefits under H.R. 3821 would be lower than under current law because of the many changes in the benefit formula, but the bill would supplement the system's benefits with payouts from IAs. On an expected basis—with a risk-adjusted return on IA investments—the payouts from IAs would be smaller than the expected reduction in OASDI benefits, so total proposed benefits would be lower than under current law. The reduction in expected payouts varies over time, ranging from 0.2 to 0.5 percentage points of GDP. (Compare the dark, solid line and the dashed line in Figure 3A.)

But it is possible that over the long run, total benefits, including payouts from IAs, would exceed those scheduled under current law. 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. The range estimates incorporate both of those effects. Over the next few decades, total benefits from Social Security and individual account payouts would probably be slightly lower than scheduled under current law. In the longer term, the potential range of total benefits would be approximately the same as or higher than under current law, but the uncertainty would be greater owing to the higher risk of private investments. In 2105, the projected 80 percent range of uncertainty is 6 percent to 11 percent of GDP under H.R. 3821, compared with 5 percent to 9 percent under current law.

While those alternative investments are likely to result in the availability of more financial resources to beneficiaries, extra returns are not “free” from the perspective of the economy as a whole. Regardless of how IAs are invested, increased consumption by beneficiaries requires either reduced consumption by others or reduced national savings.<sup>12</sup>

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.) Proposed OASDI benefits under H.R. 3821 would be 3 percent to 6 percent of GDP in 2105, rather than the 5 percent to 9 percent scheduled under current law. Uncertainty about total benefits paid by the government would be lower under the bill. Uncertainty about mortality is one of the leading causes of uncertainty about long-run Social Security benefit levels.<sup>13</sup> Under current law, unexpected changes in life expectancy would directly affect OASDI benefits, as beneficiaries lived and collected benefits for a longer or shorter period than expected. Under H.R. 3821, benefit levels would be indexed to life

---

<sup>12</sup>See Congressional Budget Office, *Evaluating and Accounting for Federal Investment*.

<sup>13</sup>See Congressional Budget Office, *Uncertainty in Social Security's Long-Term Finances*.

expectancy, so greater-than-anticipated life expectancy would be offset by lowered annual benefit levels.

### Trust-Fund-Financed Benefits Scenario

Under current law, trust-fund-financed benefits fall substantially after exhaustion of the trust funds to exactly the level of revenues. Although 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 10<sup>th</sup> and 90<sup>th</sup> percentiles do not exhibit the same sudden drop. 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 occurs in different years in different runs, so trust-fund exhaustion has a gradual effect on the 80 percent range of uncertainty.

Under H.R. 3821, expected total benefits—including payouts from IAs—are below those projected under current law in years before 2053 but higher in later years, when current-law benefits are projected to drop after trust-fund exhaustion. However, it is possible that under certain economic and demographic outcomes, the system would fall short and require benefit cuts. The 80 percent range of total trust-fund-financed benefits spans 6 percent to 11 percent of GDP in 2105.

Expected OASDI benefits are lower under H.R. 3821 than under current law in all projection years. (See Figure 3B, bottom panel. Again, because there are no IAs under current law, the current law ranges in both panels are the same.) The range of proposed trust-fund-financed OASDI benefits is larger than under current law but narrower than the range of total benefits under H.R. 3821; proposed OASDI benefits span 3 percent to 6 percent of GDP by 2105.

## **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

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 (inflation-adjusted) 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.

H.R. 3821 would reduce expected retirement benefits relative to scheduled benefits, even when the benefits paid from IAs under H.R. 3821 are included (compare current law, column A, with H.R. 3821, column A, in Table 2).<sup>14</sup> Those reductions would be phased in over time, although benefits would still rise in real terms for almost every successive cohort, with the exception of the 1950s middle and highest quintiles. The benefit reductions would be larger for those with higher household earnings. Although the lowest quintile in the 2000s cohort would experience an increase in first-year benefits, the middle quintile would experience a 22 percent drop, and the highest quintile would experience a 32 percent drop.

However, since under H.R. 3821 proposed benefits are fully financed while current-law benefits are not, the more meaningful comparison would be the outcomes under the trust-fund-financed scenarios (compare current law, column B, and H.R. 3821, column B, in Table 2). That comparison again shows that for later cohorts, H.R. 3821 would result in larger reductions in first-year benefits for those with higher household earnings. First-year benefits for the lowest quintile in the 2000s cohort would be 60 percent higher than under current law, benefits for the middle quintile would increase slightly, and the benefits for the highest quintile would show a 10 percent drop.

Under H.R. 3821, benefits are adequately funded with dedicated-tax revenues and do not require intragovernmental transfers (see the final column of Table 2).

### 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

---

<sup>14</sup>Since the medians are presented here as point estimates, IA payouts are computed by assuming risk-adjusted returns equal to the Treasury bond rate.

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.

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

Since replacement rates are directly related to first-year benefits, H.R. 3821 will have the same effect on replacement rates as on first-year benefits. Considering only trust-fund-financed benefits, under H.R. 3821, the lowest quintile in the 2000s cohort would experience a 23 percentage-point increase in replacement rates; the effect on the middle quintile would be roughly the same; and the highest quintile would experience an 11 percentage-point drop (compare current law, column B, and H.R. 3821, column B, in Table 3).

As noted above, under H.R. 3821, benefits are adequately funded with dedicated-tax revenues (see the final column of Table 3).

#### 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 as a result of 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 longer. This second effect also differs across the earnings distribution since higher earners live longer 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 cohorts (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 these cuts relative to scheduled benefits, the levels of lifetime benefits would continue to grow across the cohorts.

Under H.R. 3821, lifetime benefits—including both benefits paid from the trust fund and those paid from IAs—would increase relative to current-law scheduled benefits for the 1960s and later cohorts in the lowest quintile by as much as 36 percent. The middle and highest quintiles would experience decreases in scheduled lifetime benefits of 7 percent to 15 percent. (Compare current law, column A, with H.R. 3821, column A, in Table 4.)

Since proposed benefits under H.R. 3821 are fully financed while current-law benefits are not, the more balanced comparison would be the outcomes under the trust-fund-financed scenarios. Under H.R. 3821, those benefits would fall relative to current law for earlier cohorts—by about 8 percent for the 1940s cohort—but increase for later cohorts. The lowest quintile in the 2000s cohort would experience an 82 percent increase in lifetime benefits, while the middle and highest quintiles would experience increases of 21 percent and 28 percent, respectively. (Compare current law, column B, and H.R. 3821, column B, in Table 4.)

Under H.R. 3821, benefits would be adequately funded with dedicated-tax revenues (see the final column of Table 3).

### **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 is 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 owing to the scheduled increase in the normal retirement age, but they rise for succeeding cohorts because of increasing life expectancy, which would increase benefits collected more than taxes paid. Under H.R. 3821, the ratios for those early cohorts are reduced further as benefit reductions are phased in.

Under H.R. 3821, the benefits include IA payouts, and taxes include the amounts redirected into IAs. The 80 percent range of uncertainty increases for all of the quintiles under H.R. 3821, reflecting the increased risk from investments in IAs. Although the 90<sup>th</sup> percentile under H.R. 3821 is above the 90<sup>th</sup>

percentile under current law for the later cohorts in all quintiles, only the lowest quintile has a higher 10<sup>th</sup> percentile.

Under both current law and H.R. 3821, the ratios would be greatest for the lowest quintile. While these 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 earners' higher probability of disability.

#### Trust-Fund-Financed Benefits Scenario

Making a similar comparison under the trust-fund-financed scenario gives 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 doubts about the date of trust-fund exhaustion and the magnitude of the automatic benefit reductions. Under H.R. 3821, proposed dedicated revenues are expected to be sufficient to pay proposed benefits, so moving to the trust-fund-financed benefits scenario has little effect on the benefit-to-tax ratios.

Under current law, the ratio falls for later cohorts as benefits are reduced after trust-fund exhaustion. Under H.R. 3821, benefits are reduced relative to current law for earlier cohorts, allowing later cohorts to receive higher trust-fund-financed benefits. Ratios remain generally stable or increasing, both because of the savings from reduced benefits for earlier generations and because later cohorts have contributed longer to IAs. The IAs are assumed to earn higher returns, resulting in higher average benefits. Along with those higher expected benefits come higher risks, however, captured by the wide range of potential outcomes under H.R. 3821. (Another way to recognize those higher risks is to consider the expected benefit-to-tax ratio, in which investment returns are risk-adjusted. See the figures in the appendix.)

#### Dedicated-Tax-Financed Benefits Scenario

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.) Under H.R. 3821, proposed dedicated-tax revenues are expected to be sufficient to pay proposed benefits; thus, the results are similar to those shown in Figure 4A and Figure 4B. However, under certain economic and demographic outcomes, the system would fall short and require benefit cuts. Because Figure 4C reflects those outcomes, it differs slightly from Figures 4A and 4B.

### **Effects on the Macroeconomy**

H.R. 3821, like any other significant change to Social Security policy, could affect the level of economic output. Illustrative calculations suggest that under H.R. 3821, economic output could be about 1 percent higher by 2025—and about 3 percent to 5 percent higher in the long run—than it would be under current law.

For consistency, those calculations were made under the “dedicated-tax-financed benefits” baseline, so that both H.R. 3821 and current law are financially viable from both a programmatic and overall budgetary perspective. In addition, the analysis assumes that in both cases, people fully expect the policies in the dedicated-tax-financed benefits scenario to occur. (That means that the analysis assumes that people expect substantial benefit cuts under current law once the trust funds are exhausted and they behave accordingly; people’s actual expectation—and even the degree to which they alter behavior in response to policies far in the future—is difficult to ascertain.)

Because of the complexity of estimating economic effects, the macroeconomic analysis is based on only the most important provisions of the proposal. However, the provisions that were not analyzed would have relatively minor economic effects, and including them in the analysis would not be likely to significantly alter its general conclusions.

### General Effects

Social Security policies affect the economy primarily by changing the level and riskiness of people’s expected lifetime income and by changing the marginal return to an additional hour of work. Those changes can influence how much of their income people spend on current consumption rather than saving, and how much and how long people work.

H.R. 3821 would be likely to affect the economy most through its impact on after-tax income. Compared with a dedicated-tax-financed benefits baseline, the bill would reduce lifetime disposable income for most people who were born earlier than 1970 and earned average or greater wages, although it could increase income for lower-earning workers born as early as 1960 (see Table 4 and Figure 4C). Disposable income for those born after those dates would be increased by the bill, with the increase greater the later they were born.

Lower disposable income would, other things being equal, tend to lead people to reduce their consumption. Similarly, the decline in expected future income would tend to induce those cohorts to work more hours and retire later to partially offset the fall in resources.

Both those effects tend to raise economic output. Because output that is not consumed is available for investment in productive capital, lower current consumption tends to result in a higher level of the capital stock, which implies greater output. (In the long run, that greater output can sustain higher consumption. In other words, the reduced consumption of early cohorts would enable later cohorts to consume more.) More simply, additional work directly implies higher output.

However, other features of H.R. 3821 could offset some of those positive effects on output. First, as described above, some younger and poorer people—for example, those in the lowest lifetime earnings quintile and currently less than about 40 years old—would on average receive higher disposable income

under the bill than under current law. That could lead them to consume more and work less, which would tend to reduce output.

Second, decreases in benefits under the proposal might reduce the marginal return to an additional hour worked for many people. The Social Security benefits formula provides higher benefits to people who have worked and earned more. That means that the return to an hour's work includes not only current after-tax pay but also an increase in future Social Security benefits owing to a higher earnings history. Decreased benefits suggest that that extra increment is smaller, reducing the total return to an hour's work. Other things being equal, a lower perceived marginal return to an hour's work tends to lead to fewer hours of work and earlier retirement, which would tend to reduce output. Of course, for later and poorer cohorts for whom the proposal increases benefits, the effect would be to increase work incentives. Also, these changes to the return to work would only affect the behavior of people who fully understand how the benefit formula, and any changes to it, affect the marginal return to an hour's work.

Finally, H.R. 3821 would change the riskiness of future income relative to current law, but the direction of that effect is uncertain. The bill would replace some traditional benefits with saving in IAs. Many assets in the accounts would generate an uncertain real rate of return, which would introduce a new source of uncertainty into the retirement income from Social Security. However, the effect of a greater rate-of-return risk could be offset if people felt that the accounts were less vulnerable to policy changes—such as legislated changes in retirement benefits—than the traditional system was. The overall effect on perceived risk is therefore difficult to estimate.

### Illustrative Simulations

CBO has analyzed potential overall economic effects of H.R. 3821 using a model of economic growth well suited for analyzing the economic impact of changes to Social Security: it distinguishes between people born in different years, and it incorporates the assumption that people are forward-looking and will adjust their behavior in anticipation of future changes in tax rates and benefits.<sup>15</sup>

CBO's analysis projects that under those assumptions, H.R. 3821 could increase economic output by about 1 percent by 2025 and by about 3 percent to 5 percent in the long run, relative to its level under current law. (The range of results comes from differing assumptions about the openness of the economy to flows of foreign capital.) Those increases stem almost entirely from increases in the capital stock resulting from initial reductions in consumption. These estimates provide an illustration of potential effects, but it is important to note that they are very uncertain. Estimates that were based on different assumptions or that were produced using a different model of the economy could differ substantially.

---

<sup>15</sup>For a more detailed description of the life-cycle 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 at [www.cbo.gov/tech.cfm](http://www.cbo.gov/tech.cfm).

## 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:

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

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.<sup>16</sup>

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.

---

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.

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.

*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.

## **Appendix: Major Provisions of H.R. 3821**

### **Individual Accounts**

H.R. 3821 would establish a new system of individual accounts (labeled individual security accounts), which would be funded primarily through receipts from the existing payroll tax and earnings on the accounts' investments. Beginning in 2006, workers born after 1949 would have a portion of their payroll taxes deposited into the IAs—3 percent of their wages under \$10,000 and 2 percent of wages above that level up to the taxable maximum. Payroll taxes credited to the Social Security trust funds would be reduced by a corresponding amount. The \$10,000 threshold would be adjusted each year to reflect changes in the average wage in the economy. (The bill also would permit voluntary additional contributions to the IAs, but neither CBO nor the Joint Committee on Taxation has estimated the impact of this aspect of the proposed legislation.)

Initially, the IAs would be managed by the Social Security Administration (SSA), which would credit deposits into the accounts and allocate them according to the investment options selected by the accountholder. If the balance of an account exceeds \$7,500 (indexed to inflation after 2006), the accountholder could request SSA to transfer the funds to a private investment institution. Whether the funds are administered by SSA or a private institution, the accounts would be considered nonfederal for all budget purposes. Moreover, the rules for distributing the proceeds of the accounts would be the same regardless of who administers them.

Distributions from the accounts would generally commence when the accountholders begin drawing Social Security retirement benefits. However, if, by that time, an account were to grow sufficiently large to permit the accountholder to purchase an indexed annuity that would equal or exceed (in combination with the recipient's Social Security benefit) 185 percent of the poverty line, the worker could withdraw those excess funds for any purpose. All distributions from the accounts would be treated for income tax purposes as if they were Social Security benefits.

### **Changing the AIME, PIA, and Actuarial Adjustment Factors**

As described earlier, under current law, Social Security benefits are calculated by applying a formula to a summary measure of a worker's career earnings. The average indexed monthly earnings (AIME) is converted into a primary insurance amount (PIA) using a three-bracket formula intended to provide lower-wage earners with relatively higher benefits than higher-wage earners. Actual monthly benefits include adjustments to account for early or delayed retirements, an earnings test for beneficiaries under the age for unreduced retirement benefits, and a maximum on benefits paid on one earnings record.

**Including Additional Years of Earnings in AIME Calculations.** H.R. 3821 would alter the AIME calculation in two ways. First, the number of years in the averaging period (the denominator) would gradually increase from 35 years to 40 years over the 2006-2014 period. Second, the total earnings to be averaged (the numerator) would be increased from 35 years of earnings to all years of earnings in 2014 and beyond (see Table 5).

The effects of these changes to the AIME calculation would vary significantly across the beneficiary populations. Workers who are employed steadily after completing their education and work late in life could see a noticeable increase in their benefits. For example, a worker who was employed at the average wage in the economy after graduating from high school at age 18 until he retired at the normal retirement age (age 66) in 2014 would see a 24 percent benefit increase. In contrast, a similar classmate who worked 10 fewer years before age 62 and who begins collecting benefits at that age would experience an 11 percent drop in benefits.

**TABLE 5. SUMMARY OF PROPOSED CHANGES IN THE CALCULATION OF AVERAGE INDEXED MONTHLY EARNINGS**

Newly Eligible in:	Current Law	Proposed Changes				
	All Years	2006-2007	2008-2009	2010-2011	2012-2013	2014 +
Years of Included Earnings (numerator)	35	37	39	41	43	all
Years to be Averaged Over (denominator)	35	36	37	38	39	40

**Changes to the PIA Calculation.** H.R. 3821 would modify the formula used to calculate PIAs in several ways (see Table 6):

- The current 32 percent bracket would be divided into a 70 percent bracket and a 20 percent bracket;
- The percentage applied to the top bracket would be reduced from 15 percent to 10 percent over the 2006-2015 period;

- The percentages in the revised formula—except the 90 percent bracket—would be reduced by 2.5 percent annually from 2012 to 2030, and all bracket percentages would be reduced by 1.5 percent a year from 2031 to 2060; and
- The PIAs calculated under the new formula would be reduced by factors reflecting improved life expectancies of new retirees.

**TABLE 6. FORMULAS FOR DERIVING THE PIA FROM AIME (FOR 2004) UNDER H.R. 3821**

Eligible Beginning in	First Bracket: First \$612	Middle Bracket (s)		Top Bracket: Above \$3,689	Assumed Percentage Factor For Life Expectancy
2004	90.0%	32% of next \$3,077	N.A.	15.0%	N.A.
2015 <sup>a</sup>	90.0%	63.3% of next \$513	18.1% of next \$2,564	9.0%	98.9
2030 <sup>a</sup>	90.0%	43.3% of next \$513	12.4% of next \$2,564	6.2%	94.5
2060 <sup>a</sup>	57.2%	27.5% of next \$513	7.9% of next \$2,564	3.9%	87.2

NOTES: PIA = Primary Insurance Amount; AIME = Average Indexed Monthly Earnings; N.A. = not applicable.

a. Dollar amounts in this table are 2004 levels to facilitate comparison. Actual amounts would be indexed by the growth in average wages. Bracket percentages for years after 2004 reflect the changes that would result from H.R. 3821.

To illustrate the potential effects on recipients, CBO has estimated the PIAs for three hypothetical retirees in various cohorts of future beneficiaries (see Table 7). The retirees are assumed to have steady earnings at one of three levels: 50 percent of the average earnings, the average earnings, and the maximum earnings subject to Social Security payroll taxes. The calculations use 2004 earnings levels for ease of comparison.

The first panel of Table 7 illustrates the effects of the addition of the new bracket, the lowering of the percentage in the top bracket from 15 to 10, and the annual reductions of the bracket percentages of 2.5 percent (2012-2030) and 1.5 percent (2031-2060). In combination, the PIA changes would have significantly greater effects on workers with higher earnings than on those further down the earnings

distribution. For example, those who always earned the maximum taxable wage would see traditional Social Security benefits reduced, relative to those under the current formula, by 34 percent in 2030 and 58 percent in 2060 before adjustments for mortality improvements; low earners would experience a 1 percent increase in 2030 and a 36 percent decrease in 2060.

**TABLE 7. PIAs FOR HYPOTHETICAL WORKERS BECOMING ELIGIBLE FOR BENEFITS IN VARIOUS YEARS BASED ON 2004 EARNINGS LEVELS (IN 2004 DOLLARS)**

Becoming Eligible in	Earner at 50% of Average Earnings	Earner at 100% of Average Earnings	Earner at Maximum Taxable Earnings
PIA Excluding Life Expectancy Adjustment			
2004	798	1,242	1,866
2015 <sup>a</sup>	922	1,173	1,538
2030 <sup>a</sup>	805	976	1,226
2060 <sup>a</sup>	512	620	779
PIA Including Assumed Life Expectancy Adjustments			
2004	798	1,242	1,866
2015 <sup>a</sup>	912	1,160	1,520
2030 <sup>a</sup>	760	922	1,158
2060 <sup>a</sup>	446	541	679

a. These monthly benefits would be supplemented by payouts from IAs.

H.R. 3821 also would provide for reductions in the bracket percentages to reflect future changes in life expectancies at age 62. Specifically, the bill would adjust those percentages starting in 2012 by a ratio that captures the increase in life expectancy at age 62 for the each cohort as it reaches that age. For any given cohort, the ratio would equal life expectancy at age 62 for the cohort reaching age 62 in 2008 divided by the life expectancy at age 62 for the cohort reaching age 62 three years prior to the cohort in question. (For example, the ratio used for the cohort reaching age 62 in 2020 would reflect the difference between the life expectancy of the cohort reaching age 62 in 2017 and the one reaching age 62 in 2008.) Life expectancy would be computed by sex each year, based on projected mortality rates, and would be the population-weighted average of the male and female numbers. In general, the ratio would get smaller each year; the bill specifies that it could not increase from year to year even if life expectancy falls.<sup>17</sup> Under the

3. This reduction for rising life expectancy is only applied to DI beneficiaries upon conversion to retired-worker benefits at the normal retirement age. The reduction in the DI worker benefits at conversion is not as large as

mortality assumptions used by CBO (and the intermediate assumptions of the Social Security trustees), these adjustments would further reduce monthly PIAs by 5.6 percent in 2030 and 12.7 percent in 2060.

These calculations do not include distributions from the IAs. Over time, payouts from IAs would become an increasingly important component of retirement income, and total benefits (including those payouts) might or might not be greater than benefits under current law.

**Minimum Social Security Benefit.** A new formula for raising benefits for long-term workers with relatively low earnings would be introduced for workers becoming eligible for benefits beginning in 2014. (The existing formula for a special minimum PIA affects relatively few workers and is gradually diminishing in importance because it is not adjusted for real wage growth.) H.R. 3821 specifies that a new minimum PIA would be calculated based on a worker's quarters of coverage (QCs). The minimum PIA would be 2 percent of the poverty level for each QC above 40 (10 years of earnings) and up to 80 QCs, and 1 percent of the poverty level for QCs above 80 but not more than 160. Thus, for someone with 20 years of earnings, the minimum PIA would typically be 80 percent of the poverty level; at 40 years, the amount would be 120 percent of the poverty level. (For disabled workers, fewer quarters would be required because of their shortened careers.) Beginning in 2014, the effective poverty levels would be increased with average wages.

**Adjustments for Early and Delayed Retirement.** The bill would increase the reduction factors for retired workers who apply for benefits before the NRA, and increase the credit for postponing benefits after the NRA. The reduction factors for spousal benefits also would be increased. When the NRA reaches 67, the proposed changes would have the effect of reducing the PIA for benefits at age 62 by 37 percent for retired workers (compared with 30 percent under current law) and by 42 percent for spousal benefits (compared with 35 percent under current law). For those who postpone receiving benefits, H.R. 3821 would increase the delayed retirement credit to 10 percent per year until age 70, instead of the 8 percent adjustment under current law.

### Using a New CPI Measure for COLA Computations

H.R. 3821 would further slow the growth in benefits by lowering annual COLAs for Social Security and most indexed benefit programs. It also would increase revenues by reducing various adjustments in the income tax code. The bill would substitute the consumer price index for urban consumers (CPI-U) for the

---

it would be for the non-disabled, to reflect the reduced number of years the disabled worker spent in the labor market. The reduction equals the weighted average of the benefit with and without the full adjustment for longevity improvements applicable at the time of DI claim, where the weight is elapsed years relative to potential career (40 years). Thus, for example, beneficiaries with a potential career of 30 years would experience only three-fourths of the adjustment.

consumer price index for urban wage and clerical workers (CPI-W) as the basis for the COLA. It also would adjust the increases to reflect a perceived bias in the way the CPI measures price increases. Many economists believe that the CPI-U and CPI-W overstate price increases because they do not fully reflect the responses of consumers to changes in the relative prices of goods and services. Although the Bureau of Labor Statistics has made major strides in improving the CPI, the basic measures still contain one major source of bias generally referred to as “upper level substitution bias.” Recently, the BLS has constructed an alternative CPI, the chained consumer price index for urban consumers (C-CPI-U), which attempts to capture and eliminate that bias.

Effectively, H.R. 3821 would index benefits by the lesser of the CPI-U and the C-CPI-U. Based upon the experience of the last decade or so and the CPI-U increases it projects, CBO estimates that this change would reduce COLAs by about 0.3 percentage points annually.

The impact of this proposed change on beneficiaries would depend on the number of years they were affected by the reduced COLA. For a retired worker who begins to collect benefits at age 62 and lives for 20 years, the reduction in the last year of life would be about 5.4 percent. For a disabled worker awarded benefits at age 45 who lives to a comparable age, the reduction would be 10 percent.

### **Increase in the Benefit and Contribution Base**

The benefit and contribution base, which is also referred to as the maximum taxable wage (TAXMAX), limits the amount of wages subject to the OASDI payroll tax and represents the upper bound on annual wages that is used in benefit computations. The TAXMAX is increased annually to reflect increases in the average wage in the economy; in 2004 it stood at \$87,900. H.R. 3821 would increase the TAXMAX in four steps to \$133,200 in 2008. In subsequent years, the SSA Commissioner would set the level such that 87 percent of earnings would be taxable each year.

### **Acceleration of the Increase in Social Security Eligibility Age**

As a part of the Social Security Amendments of 1983, the age at which individuals could receive unreduced retirement benefits was increased from 65 to 67 in two stages. The first stage raised the age by two months a year each year from 2000 to 2005, so that workers turning 62 in 2005 will face an NRA of 66. The second stage is scheduled for 2017-2022, when the age will increase from 66 to 67. H.R. 3821 would shift the second stage to begin in 2006 and end in 2011.

### **Increase in Benefits for Surviving Spouses**



H.R. 3821 would boost payments to some surviving spouses by ensuring that benefits equal 75 percent of a couple's combined benefits. Under current law, surviving spouses generally receive the higher of their own retired worker benefit or the deceased spouse's benefit. For single-earner couples in which each spouse receives unreduced benefits, the surviving spouse receives two-thirds of the couple's benefits. In two-earner couples, a surviving spouse could receive as little as 50 percent of the couple's combined benefit. Under the bill, the new minimum benefit for the surviving spouse could not exceed the average PIA for retired-worker benefits in the December before the month of entitlement to the widow(er)s benefit (or, if the month of entitlement is December, then that same month). The proposed change would be implemented for those who apply for a surviving spouse's benefit after 2005.

### **Limitation on Benefits of Married Couples to the Level of the Maximum Worker Benefit**

The bill would limit benefits for couples in many cases where the primary worker's earnings are above the national average. Specifically, the spousal benefit would be reduced in any situation where the couple's benefit would exceed the PIA of a worker who always earned the TAXMAX and reached eligibility age in the same year as the primary earner. Therefore, in the extreme, where the primary earner has earned the TAXMAX each year, no spousal benefit would be paid.

### **Transfers To Social Security Trust Funds**

H.R. 3821 would bolster the balances in the Social Security trust funds by redirecting the income taxes on Social Security benefits that are currently credited to Medicare's Hospital Insurance (HI) program and by creating a new transfer from general funds.

**Redirection of HI's Share of Taxes on OASDI Benefits.** Under current law, a portion of Social Security benefits is subject to the income tax, and those income tax revenues are transferred to the OASDI and HI trust funds. For recipients whose income, including 50 percent of OASDI benefits, exceeds \$25,000 for individuals and \$32,000 for couples, up to 50 percent of benefits are subject to income taxation; the additional income taxes are credited to the OASDI funds. For recipients with incomes above \$34,000 (for individuals) or \$44,000 (for couples), up to 85 percent of benefits can be taxed; the resulting additional taxes are credited to the HI trust fund.

H.R. 3821 would redirect to the OASDI trust funds increasing portions of the amounts that would be credited to HI under current law until, beginning in 2020, all taxes on Social Security benefits would flow into the OASDI trust funds. The provision would not affect total revenues, but transfers that would have been entirely on-budget (from the general fund to the HI trust fund) would now consist of an on-budget payment with an off-budget receipt (to the OASDI trust funds).

**General-Fund Transfer.** The bill would establish a new general-fund transfer to the OASI trust fund, which would gradually climb to equal 0.57 percent of earnings subject to the payroll tax (see Table 8).

**Table 8. SPECIFIED TRANSFERS TO THE OASI TRUST FUND UNDER H.R. 3821**

	By Fiscal Year											
	2006	2007	2008	2009	2010	2011	2012	2013	2014- 2019	2020- 2043	2044- 2063	After 2063
Percent of Earnings Subject to the Payroll Tax	0.02	0.04	0.10	0.12	0.13	0.20	0.24	0.29	0.33	0.39	0.47	0.57

## 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 10<sup>th</sup> percentile and a 10 percent chance that it will be higher than the 90<sup>th</sup> percentile. Thus, there is an 80 percent chance that the actual outcome will be between the 10<sup>th</sup> and 90<sup>th</sup> 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.

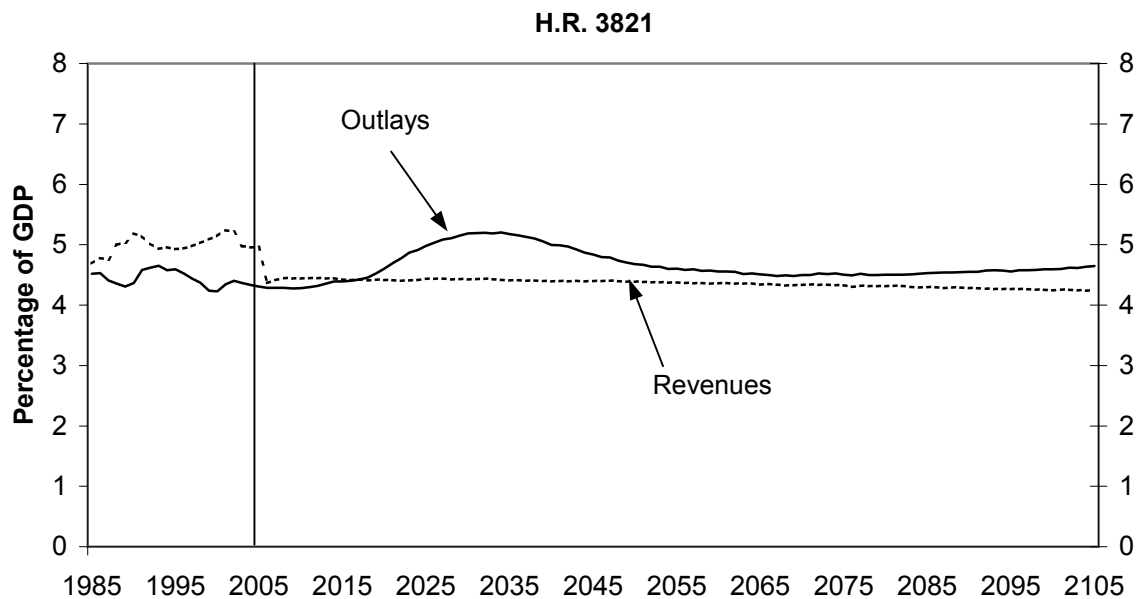
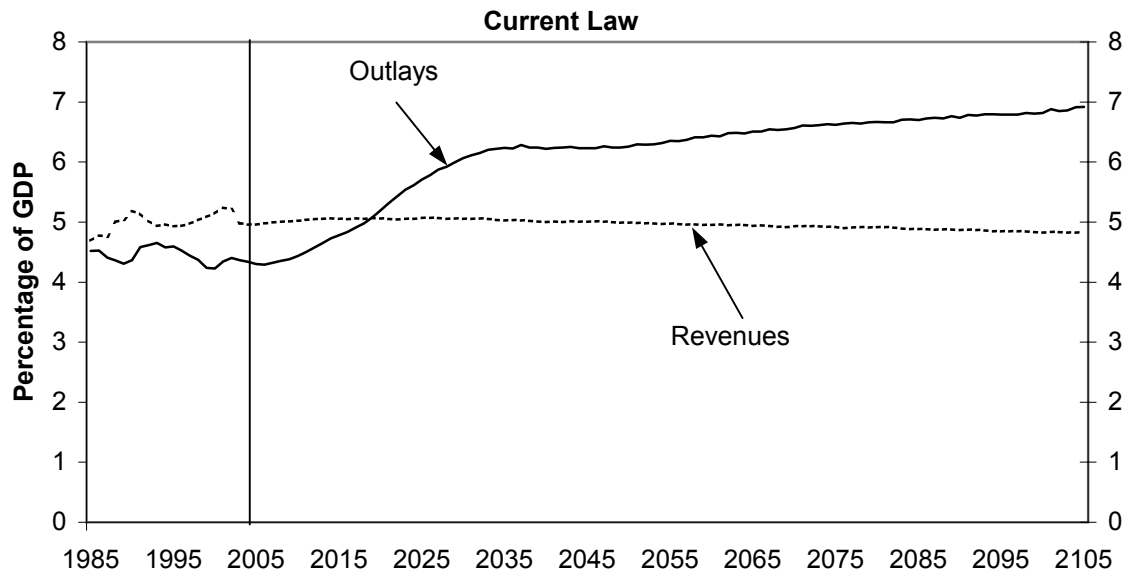
**Taxable maximum** - maximum level of covered earnings upon which the OASDI payroll tax is levied each year.

**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.

**Figure 1A.**

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

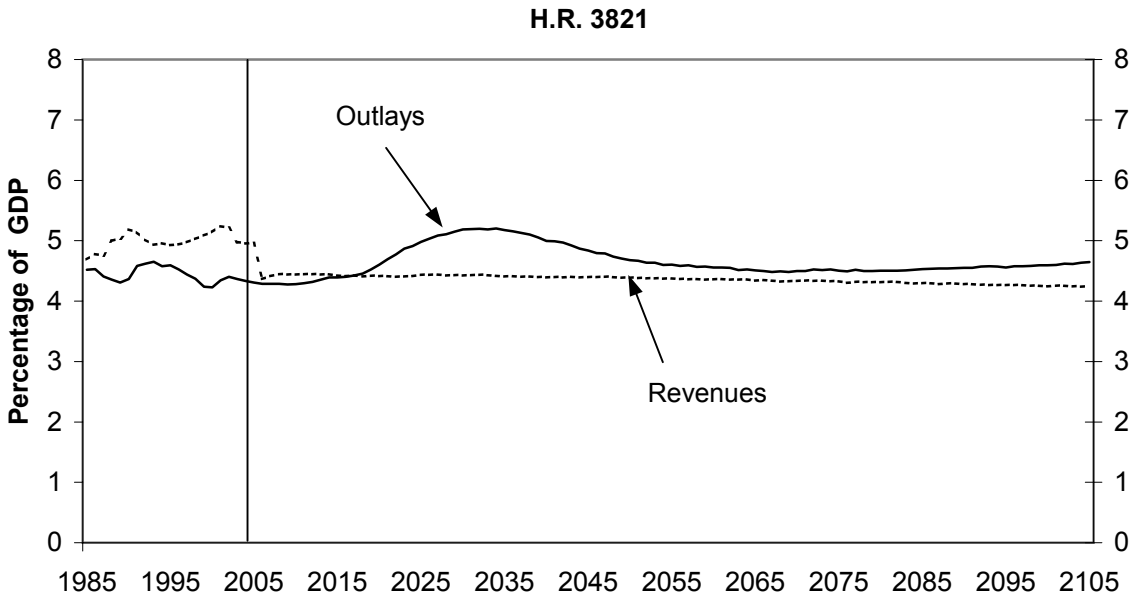
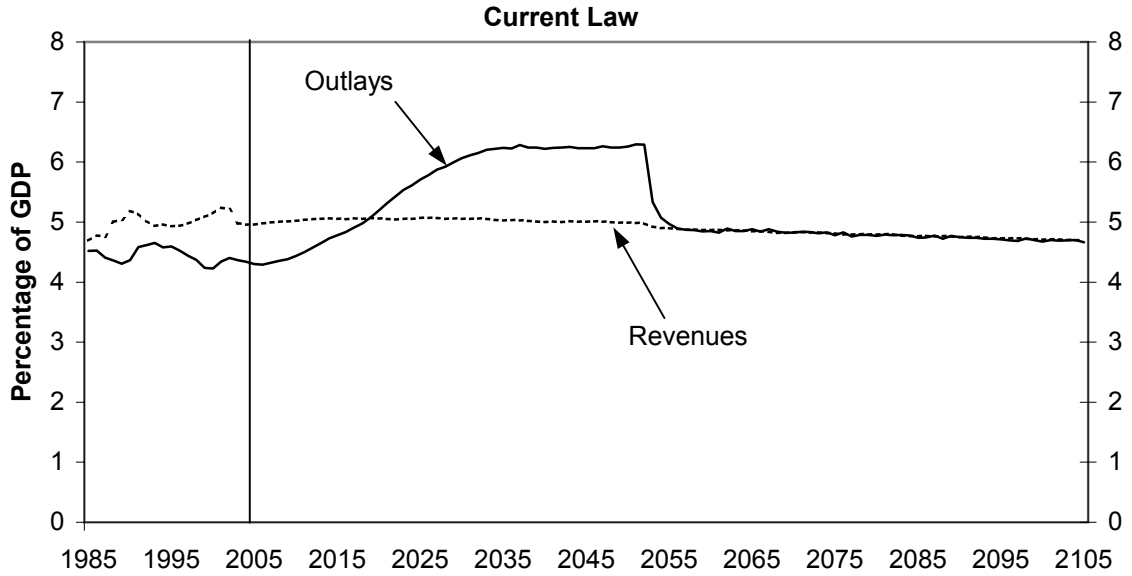


Source: Congressional Budget Office.

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; outlays 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 H.R. 3821, outlays exceed revenues starting in 2017.

**Figure 1B.**

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



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; outlays 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 H.R. 3821, outlays exceed revenues starting in 2017.

**Table 1A.**

**Effects on Social Security Finances as a Share of GDP Under H.R. 3821  
(Scheduled Benefits)**

	Based on Single, Risk-Adjusted Simulation /1					
	2005	2025	2045	2065	2085	2105
<b>Current Law</b>						
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
<b>Provisions - Effect on Balance</b>						
Add individual accounts /5	0.00	-0.92	-0.88	-0.82	-0.81	-0.78
Increase the minimum benefit	0.00	-0.05	-0.11	-0.15	-0.15	-0.18
Raise benefit for widow(er)s	0.00	-0.01	-0.02	0.00	-0.01	-0.02
Add 70% and 20% bend rates in PIA formula	0.00	0.01	0.07	0.10	0.10	0.11
Limit spouse benefits for high-earner couples	0.00	0.02	0.02	0.02	0.03	0.03
Tax individual account payouts	0.00	0.01	0.06	0.10	0.10	0.10
Eliminate NRA hiatus	0.00	0.10	0.03	0.01	-0.01	-0.02
Increase actuarial adjustments and DRCs	0.00	0.13	0.15	0.16	0.16	0.16
Extend averaging period for AIME	0.00	0.12	0.14	0.14	0.14	0.14
Reduce COLA	0.00	0.17	0.24	0.25	0.25	0.28
Raise taxable maximum	0.01	0.27	0.21	0.14	0.13	0.12
Index PIA to life expectancy /6	0.00	0.07	0.26	0.47	0.65	0.82
Lower PIA bend rates /6	0.00	0.28	0.99	1.81	2.18	2.27
Interactions across provisions	-0.01	-0.10	-0.39	-0.84	-1.17	-1.34
Total from all benefit and tax provisions /7	0.00	0.10	0.78	1.40	1.59	1.69
<b>H.R. 3821</b>						
Revenues /8	4.96	4.43	4.40	4.34	4.30	4.24
Outlays	4.31	4.98	4.84	4.51	4.53	4.65
Balance	0.65	-0.55	-0.44	-0.17	-0.23	-0.40
Transfers from rest of government /9	0.01	0.31	0.36	0.41	0.41	0.41
<b>Based on Multiple Simulations /10</b>						
<b>Current Law - Balance</b>						
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
<b>H.R. 3821 - Balance</b>						
Median - 50th Percentile	0.64	-0.58	-0.23	-0.13	-0.39	-0.36
10th Percentile	0.48	-1.30	-1.32	-1.35	-1.80	-1.82
90th Percentile	0.78	0.02	0.53	0.88	0.65	0.71

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 equal 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 provisions of H.R. 3821.

/6 Includes the treatment of disabled beneficiaries.

/7 Excludes any effects from transferring revenue from the general fund or the Medicare trust funds into the OASDI trust funds.

/8 Does not include funds diverted to individual accounts.

/9 Measures the specified transfers from the general fund, including diversion of income taxes on benefits from the Medicare trust fund, as a share of GDP.

/10 10th, 50th, and 90th percentile values are based on 500 stochastic simulations for current law and for H.R. 3821. 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 50% in equities with an expected 6.8% return, 30% in corporate bonds with an expected 3.8% return, and 20% in Treasury bonds with an expected 3.3% return.



**Table 1B.**

**Effects on Social Security Finances as a Share of GDP Under H.R. 3821  
(Trust-Fund-Financed Benefits)**

	Based on Single, Risk-Adjusted Simulation /1					
	2005	2025	2045	2065	2085	2105
<b>Current Law</b>						
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
<b>Provisions - Effect on Balance + Automatic Benefit Reduction</b>						
Add individual accounts /6	0.00	-0.92	-0.88	-0.82	-0.81	-0.78
Increase the minimum benefit	0.00	-0.05	-0.11	-0.15	-0.15	-0.18
Raise benefit for widow(er)s	0.00	-0.01	-0.02	0.00	-0.01	-0.02
Add 70% and 20% bend rates in PIA formula	0.00	0.01	0.07	0.10	0.10	0.11
Limit spouse benefits for high-earner couples	0.00	0.02	0.02	0.02	0.03	0.03
Tax individual account payouts	0.00	0.01	0.06	0.10	0.10	0.10
Eliminate NRA hiatus	0.00	0.10	0.03	0.01	-0.01	-0.02
Increase actuarial adjustments and DRCs	0.00	0.13	0.15	0.16	0.16	0.16
Extend averaging period for AIME	0.00	0.12	0.14	0.14	0.14	0.14
Reduce COLA	0.00	0.17	0.24	0.25	0.25	0.28
Raise taxable maximum	0.01	0.27	0.21	0.14	0.13	0.12
Index PIA to life expectancy /7	0.00	0.07	0.26	0.47	0.65	0.82
Lower PIA bend rates /7	0.00	0.28	0.99	1.81	2.18	2.27
Interactions across provisions	-0.01	-0.10	-0.39	-0.84	-1.17	-1.34
Total from all benefit and tax provisions /8	0.00	0.10	0.78	1.40	1.59	1.69
<b>H.R. 3821</b>						
Revenues /9	4.96	4.43	4.40	4.34	4.30	4.24
Outlays	4.31	4.98	4.84	4.51	4.53	4.65
Balance	0.65	-0.55	-0.44	-0.17	-0.23	-0.40
Transfers from rest of government /10	0.01	0.31	0.36	0.41	0.41	0.41
Automatic benefit reduction	0.00	0.00	0.00	0.00	0.00	0.00
	Based on Multiple Simulations /11					
	2005	2025	2045	2065	2085	2105
<b>Current Law - Balance</b>						
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
<b>H.R. 3821 - Balance</b>						
Median - 50th Percentile	0.64	-0.62	-0.27	-0.19	-0.41	-0.39
10th Percentile	0.48	-1.31	-1.16	-1.05	-1.67	-1.67
90th Percentile	0.78	-0.06	0.43	0.74	0.55	0.59

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 equal trust-fund-financed 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 automatic benefit reduction as a share of GDP is the drop in outlays 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 provisions of H.R. 3821 .

/7 Includes the treatment of disabled beneficiaries.

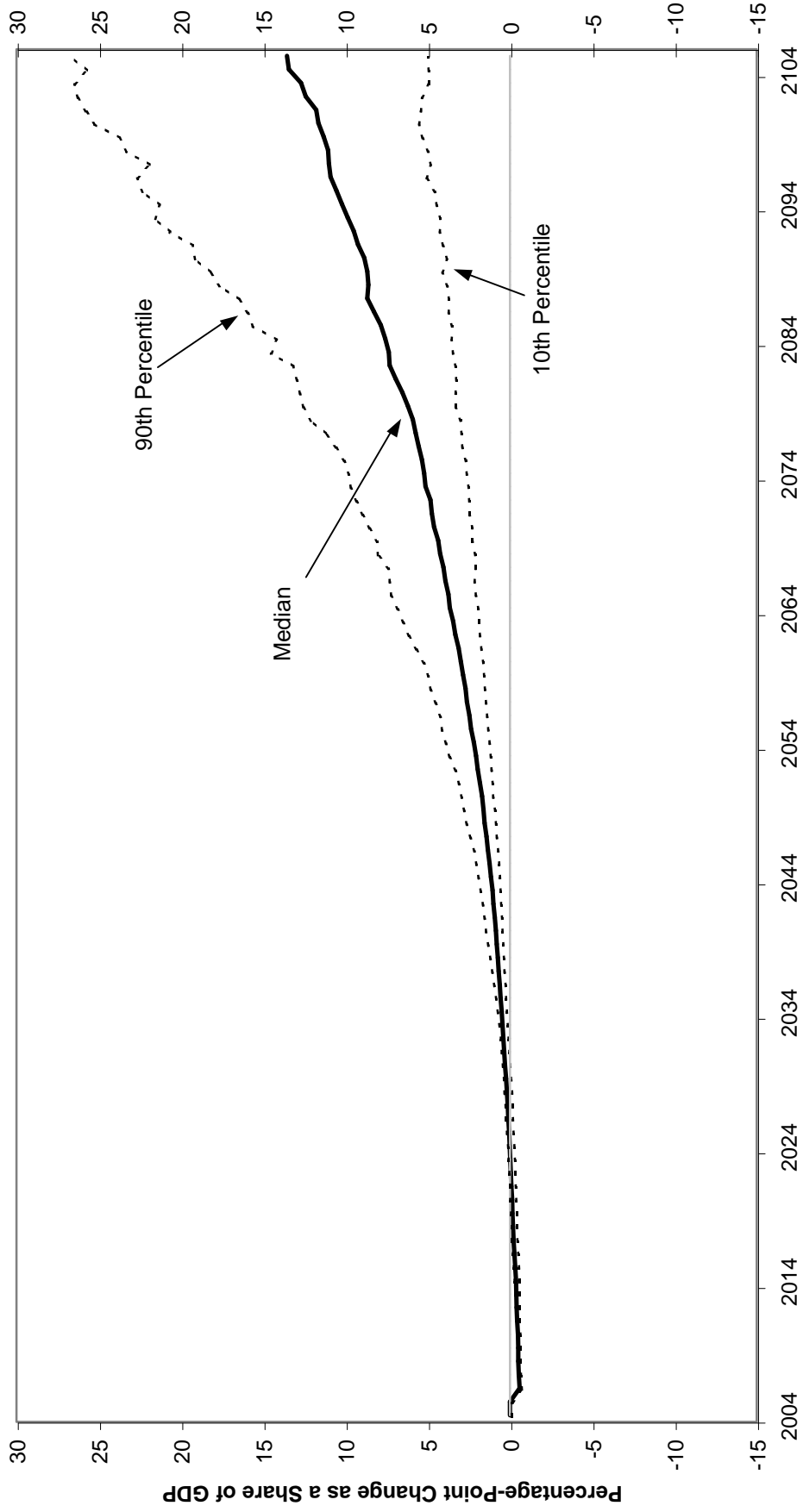
/8 Excludes any effects from transferring revenue from the general fund or the Medicare trust funds into the OASDI trust funds.

/9 Does not include funds diverted to individual accounts.

/10 Measures the specified transfers from the general fund, including diversion of income taxes on benefits from the Medicare trust fund, as a share of GDP.

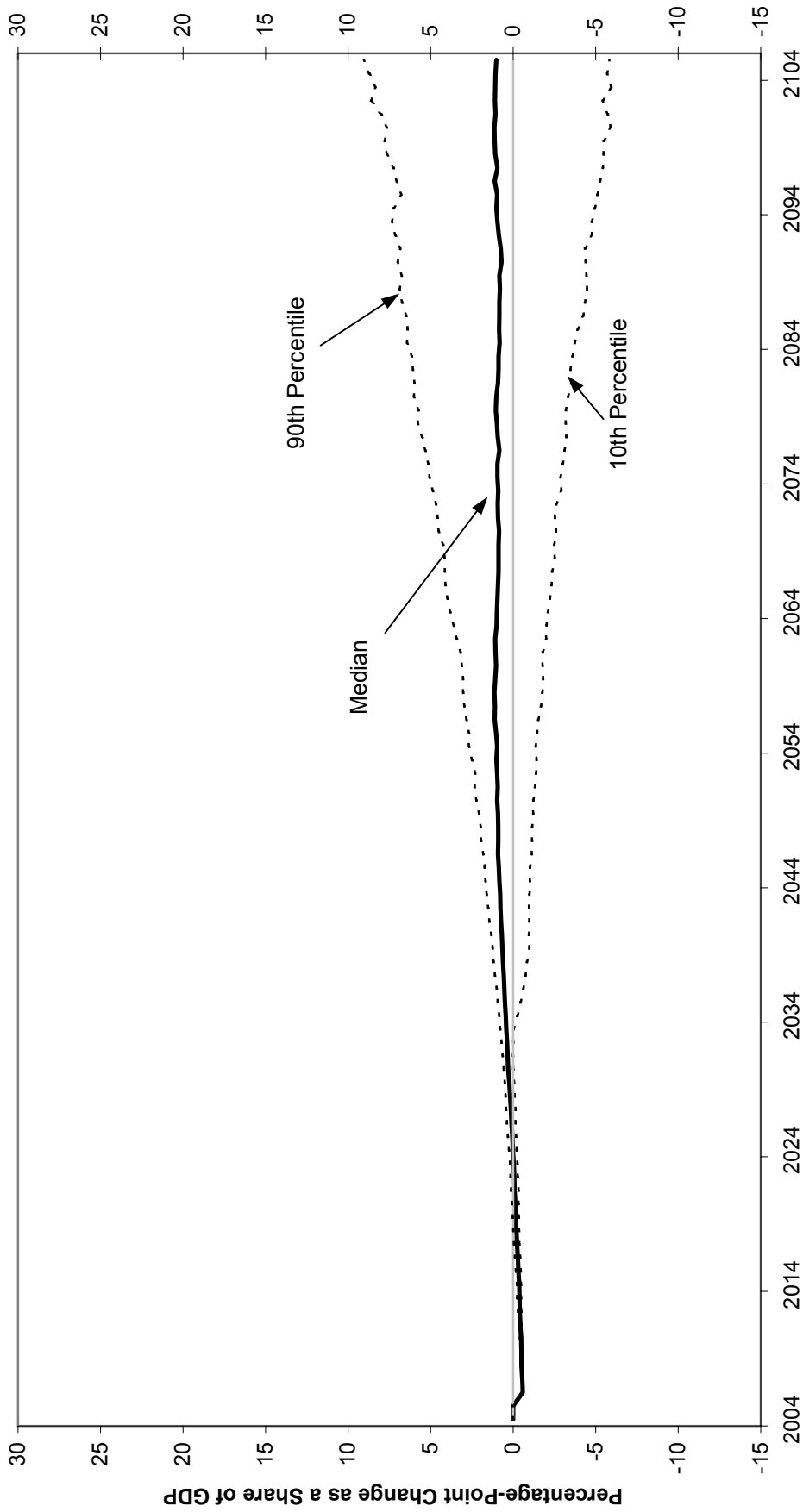
/11 10th, 50th, and 90th percentile values are based on 500 stochastic simulations for current law and for H.R. 3821. Percentiles are derived by ranking each simulation's outcome from worst to best regarding system finances. Actual outcomes have an 80 percent chance of falling between the 10th and 90th percentiles. Individual accounts are assumed to be invested 50% in equities with an expected 6.8% return, 30% in corporate bonds with an expected 3.8% return, and 20% in Treasury bonds with an expected 3.3% return.

**Figure 2A.**  
**Effects on Total Budget Balances as a Share of GDP**  
**Changing to H.R. 3821 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 H.R. 3821 from Current Law, 2004-2105 (Trust-Fund-Financed Benefits)**



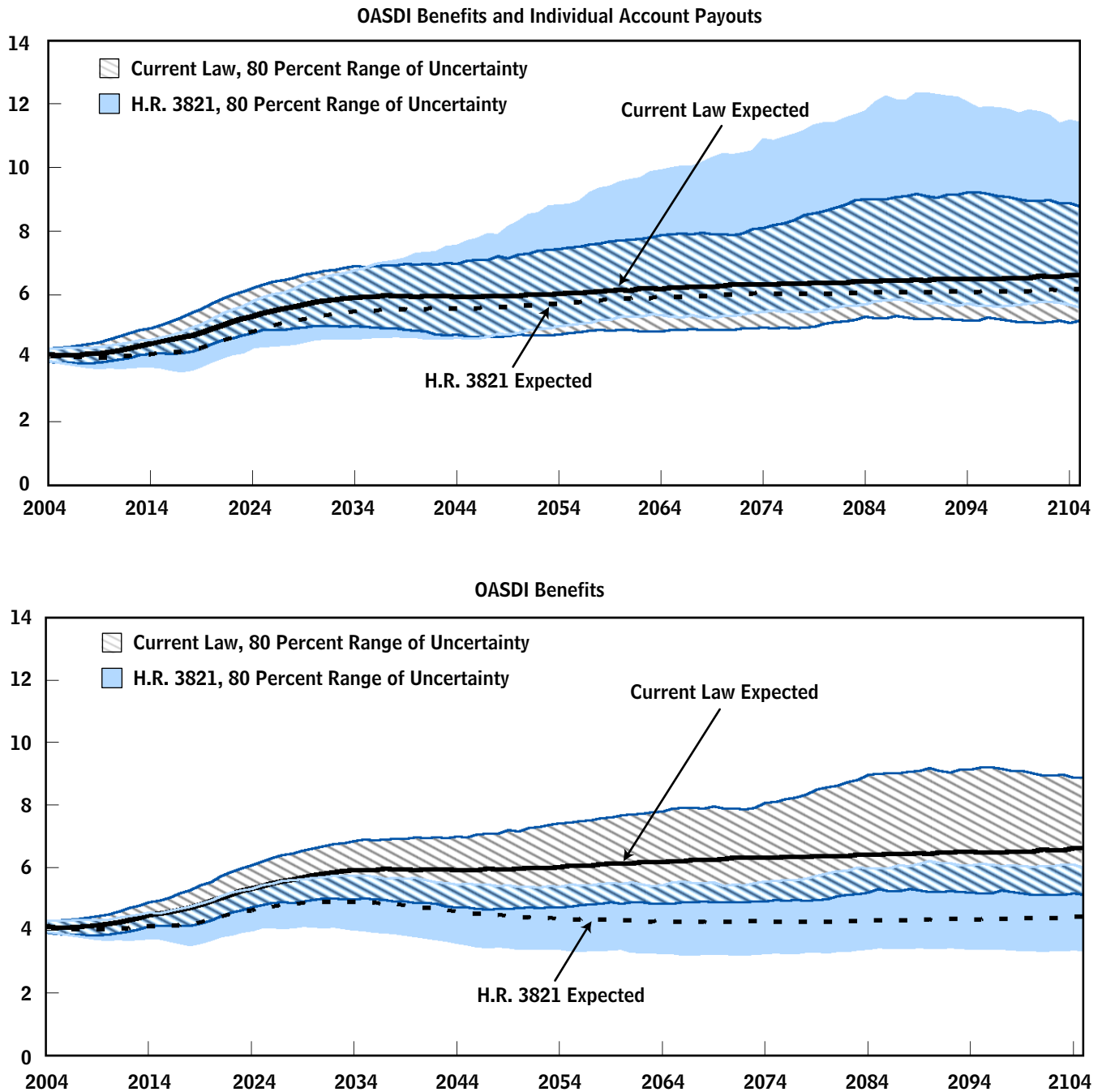
Source: Congressional Budget Office.

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. 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 3A.**

## Potential Range of Benefits as a Share of GDP Under Current Law and H.R. 3821, 2004 to 2105 (Scheduled Benefits)

(Percentage of GDP)



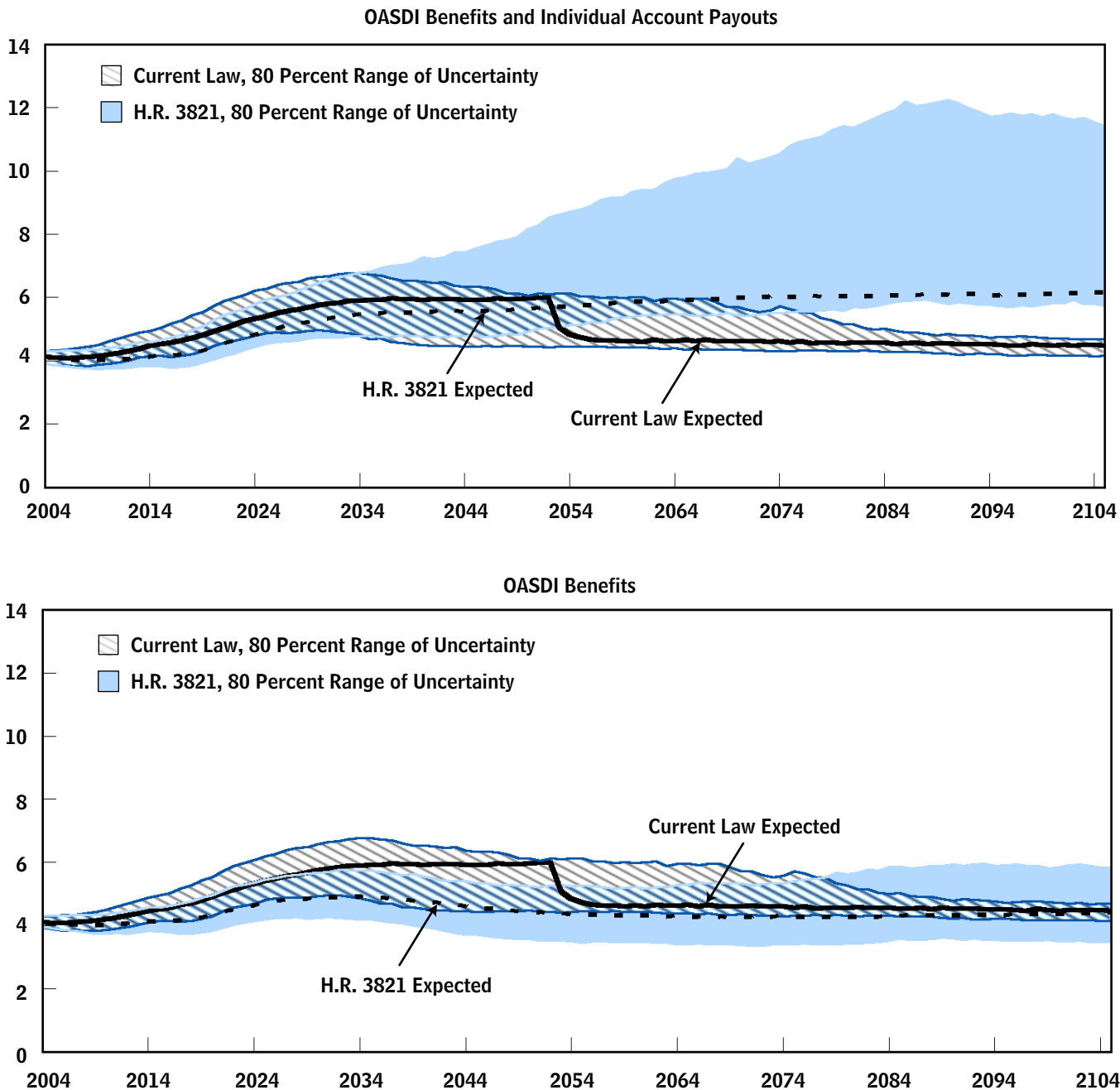
Source: Congressional Budget Office.

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 H.R. 3821. 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 H.R. 3821, 2004 to 2105 (Trust-Fund-Financed Benefits)

(Percentage of GDP)



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 H.R. 3821. 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		H.R. 3821		
	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	7,000	7,000	na
1950	8,200	8,200	8,100	8,100	na
1960	8,500	8,500	9,200	9,200	na
1970	9,500	9,500	10,600	10,600	na
1980	10,200	9,800	12,000	12,000	na
1990	11,500	9,000	13,800	13,800	na
2000	13,000	9,800	15,700	15,700	na
Median in Middle Household Earnings Quintile					
1940	14,900	14,900	13,900	13,900	na
1950	15,200	15,300	13,000	13,000	na
1960	15,500	15,500	13,200	13,200	na
1970	17,700	17,700	14,200	14,200	na
1980	20,500	19,700	16,200	16,200	na
1990	23,300	18,100	18,400	18,400	na
2000	26,400	19,900	20,700	20,700	na
Median in Highest Household Earnings Quintile					
1940	19,900	19,900	18,300	18,300	na
1950	21,600	21,600	17,000	17,000	na
1960	22,400	22,400	17,600	17,600	na
1970	25,200	25,200	19,200	19,200	na
1980	29,500	28,400	21,300	21,300	na
1990	33,200	25,900	23,000	23,000	na
2000	37,600	28,400	25,700	25,700	na

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 revenues 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 H.R. 3821 are not reduced.

/2 No general fund transfers are necessary to finance benefits under H.R. 3821

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		H.R. 3821		
	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	68.0	68.0	na
1950	69.5	69.5	65.2	65.2	na
1960	65.2	65.2	65.3	65.3	na
1970	65.8	65.8	65.5	65.5	na
1980	69.9	66.3	75.5	75.5	na
1990	70.8	54.7	75.8	75.8	na
2000	69.7	52.2	75.3	75.3	na
Median in Middle Household Earnings Quintile					
1940	42.9	42.9	40.6	40.6	na
1950	43.0	43.0	36.6	36.6	na
1960	41.0	41.0	34.9	34.9	na
1970	40.5	40.5	32.0	32.0	na
1980	39.8	38.7	30.8	30.8	na
1990	39.5	30.8	30.6	30.6	na
2000	39.6	29.8	30.1	30.1	na
Median in Highest Household Earnings Quintile					
1940	28.5	28.5	26.2	26.2	na
1950	27.8	27.8	21.9	21.9	na
1960	26.3	26.3	20.6	20.6	na
1970	25.4	25.3	19.2	19.2	na
1980	22.9	22.0	16.4	16.4	na
1990	22.6	17.6	15.4	15.4	na
2000	22.8	17.2	15.4	15.4	na

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 revenues 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 H.R. 3821 are not reduced.

/2 No general fund transfers are necessary to finance benefits under H.R. 3821

Table 4.

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

10-Year Birth Cohort Starting in Year	Current Law		H.R. 3821		Benefits Financed with General Fund Transfers /2
	Scheduled Benefits	Trust-Fund- Financed Benefits /1	Proposed Benefits + IA	Trust-Fund- Financed Benefits + IA	
	A	B	A	B	
	Median in Lowest Household Earnings Quintile				
1940	60,200	60,200	56,500	56,500	na
1950	66,200	66,100	66,400	66,400	na
1960	71,100	70,800	78,800	78,800	na
1970	78,600	76,900	94,900	94,900	na
1980	85,100	73,700	114,700	114,700	na
1990	100,000	75,000	135,900	135,900	na
2000	119,100	87,200	158,900	158,900	na
	Median in Middle Household Earnings Quintile				
1940	138,800	138,800	126,300	126,300	na
1950	148,200	148,100	131,400	131,400	na
1960	160,800	159,500	148,500	148,500	na
1970	187,100	178,400	172,400	172,400	na
1980	223,500	187,200	206,200	206,200	na
1990	264,200	199,800	242,300	242,300	na
2000	302,500	217,300	278,500	278,500	na
	Median in Highest Household Earnings Quintile				
1940	209,200	209,200	190,600	190,600	na
1950	235,200	235,200	200,600	200,600	na
1960	250,000	248,300	231,400	231,400	na
1970	295,900	279,100	275,200	275,200	na
1980	352,200	293,800	325,300	325,300	na
1990	407,400	306,200	363,500	363,500	na
2000	465,800	339,800	412,200	412,200	na

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.

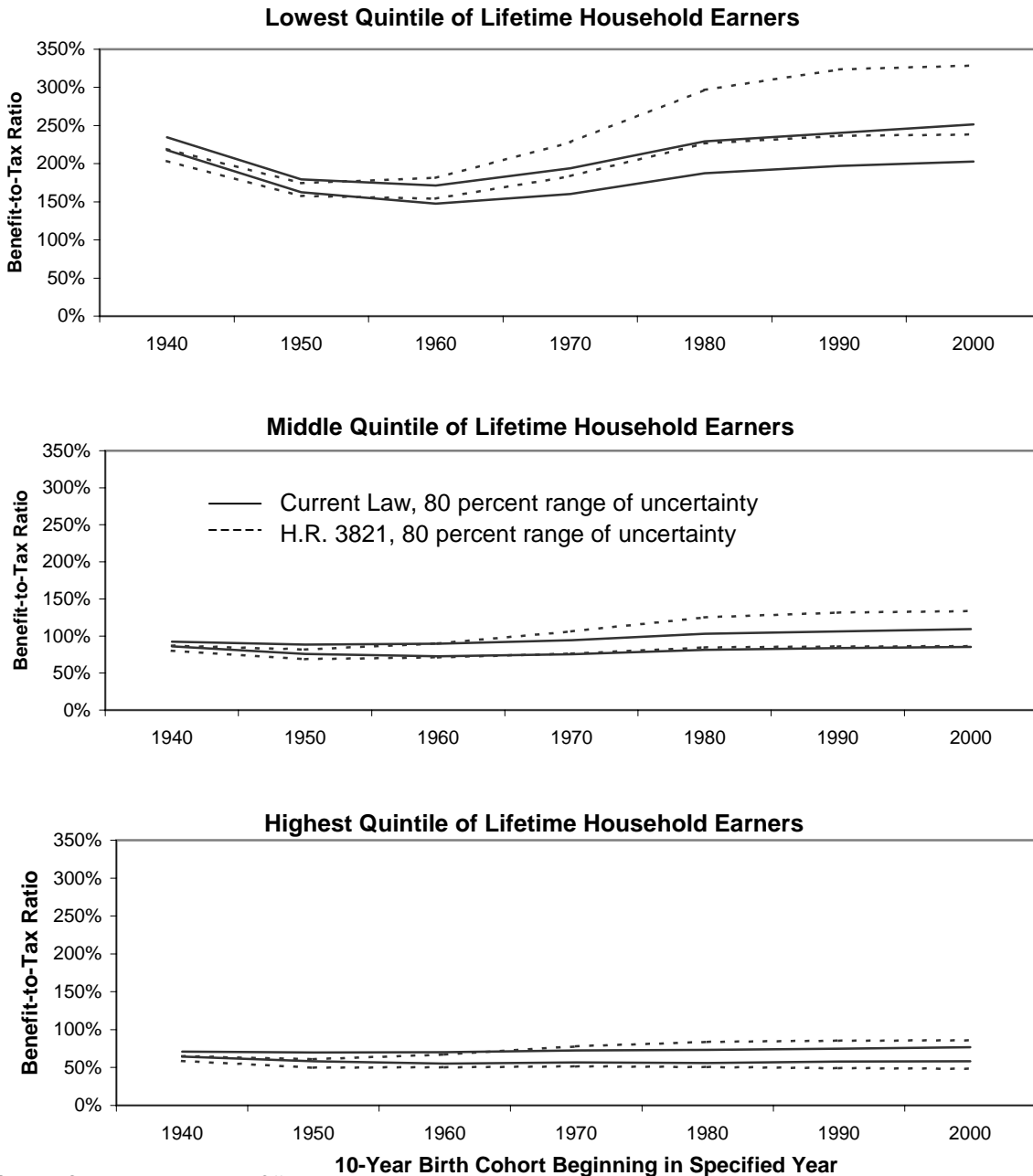
/1 The trust-fund-financed baseline subjects all beneficiaries to an across-the-board cut in benefits each year such that total projected benefits equal projected revenues once the Social Security trust funds have been exhausted, including any specified transfers into the trust funds. Current-law trust-fund-financed benefits are reduced starting in 2053; trust-fund-financed benefits under H.R. 3821 are not reduced.

/2 No general fund transfers are necessary to finance benefits under H.R. 3821



**Figure 4A.**

**Potential Range of the Ratio of Lifetime Benefits to Lifetime Taxes  
by Birth Cohort and Earnings Level Under Current Law and H.R. 3821  
(Scheduled Benefits)**

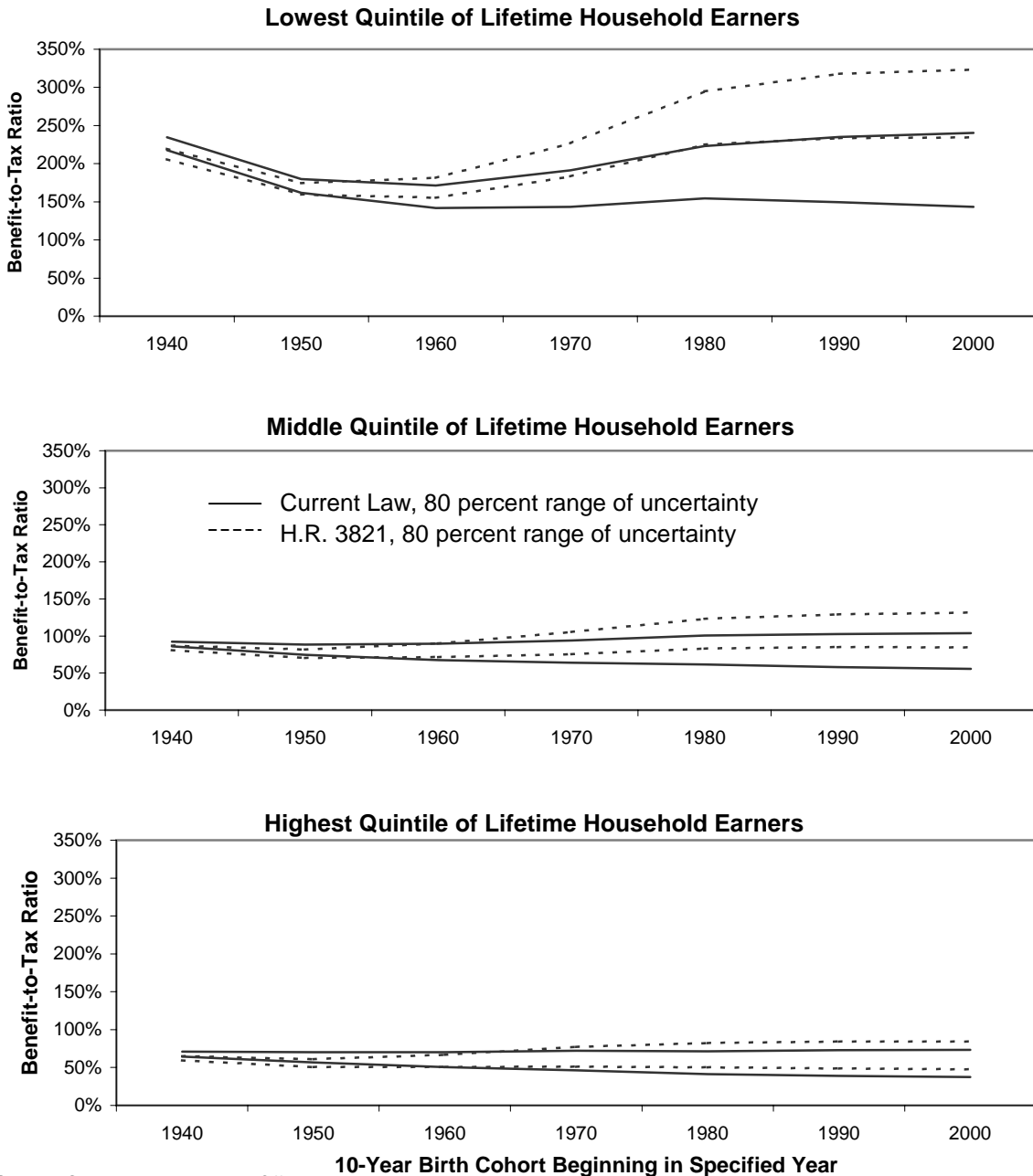


Source: Congressional Budget Office.

Notes: Results are based on 500 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 and individual account payouts net of income taxes. 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.

**Figure 4B.**

**Potential Range of the Ratio of Lifetime Benefits to Lifetime Taxes  
by Birth Cohort and Earnings Level Under Current Law and H.R. 3821  
(Trust-Fund-Financed Benefits)**

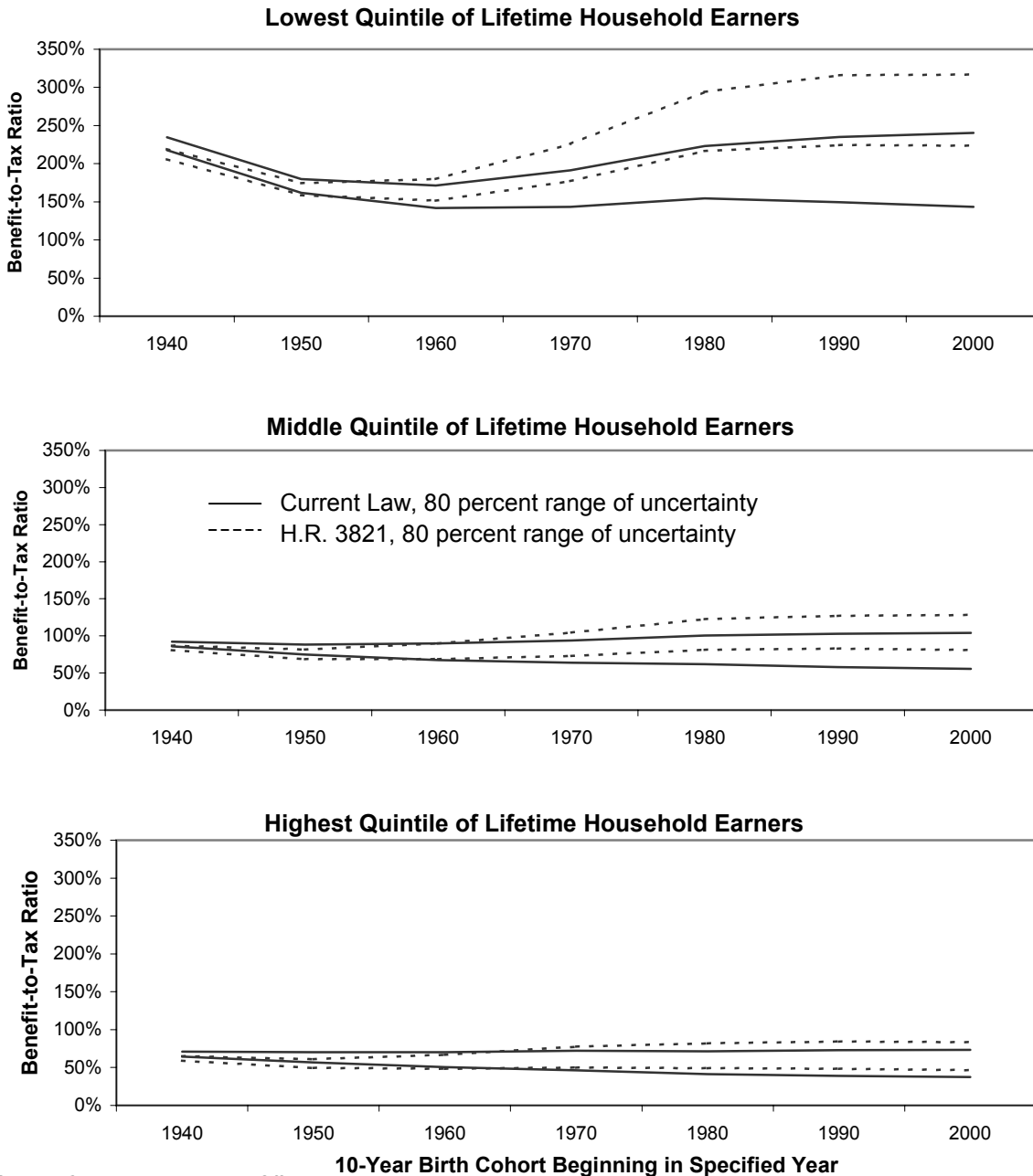


Source: Congressional Budget Office.

Notes: Results are based on 500 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 trust-fund-financed benefits and individual account payouts net of income taxes. 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.

**Figure 4C.**

**Potential Range of the Ratio of Lifetime Benefits to Lifetime Taxes  
by Birth Cohort and Earnings Level Under Current Law and H.R. 3821  
(Dedicated-Tax-Financed Benefits)**



Source: Congressional Budget Office.

Notes: Results are based on 500 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 dedicated-tax-financed benefits and individual account payouts net of income taxes. 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.