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

***Douglas Holtz-Eakin, Director***

September 13, 2005

Honorable Max Baucus
Ranking Member
Committee on Finance
United States Senate
Washington, DC 20510

Dear Senator:

As requested in your letter of August 11, 2005, the Congressional Budget Office has analyzed H.R. 3304, the Growing Real Ownership for Workers Act of 2005, as introduced on July 14, 2005. The legislation would have three main effects:

- It would create individual accounts (called GROW accounts) and reduce traditional Social Security benefits for account holders; the net impact on total retirement benefits would depend on whether an account earned more or less than the Treasury rate of return.
- H.R. 3304 also would defer the exhaustion of the Social Security trust funds, permitting some cohorts to receive greater benefits and raising federal outlays in the future.
- Finally, from 2007 through 2020, the contribution of general funds to individual accounts would raise federal outlays and the unified deficit. In 2007 and all later years, federal debt in the hands of the public would be higher than under current law.

Under the bill, general funds equivalent to the cash surplus in the Old-Age, Survivors, and Disability Insurance (OASDI) program would be distributed each year into an interim fund, and the following year they would be distributed into individual GROW accounts for workers covered by Social Security. CBO projects that from 2007 through 2021, the transfer of funds to GROW accounts would increase federal outlays by more than $1 trillion.

Account holders could draw from the accounts during retirement, but Social Security retirement benefits for those individuals would be reduced, or "offset," by an amount based on the size of the deposits made to the accounts. In general, the withdrawals from the accounts would replace only a portion of Social Security benefits. Before trust fund exhaustion, if returns on the GROW accounts were higher than the returns on Treasury bonds, total retirement benefits would be higher than those currently scheduled, and if returns were lower, total benefits would be lower.

After the Social Security trust funds are exhausted, which CBO projects will occur in 2052 under current law, outlays will be limited to revenues from Social Security payroll taxes and taxation of benefits. Under H.R. 3304, the reduction in traditional retirement benefits would result in lower Social Security outlays from 2012 through 2052. That would delay trust fund exhaustion, and the automatic benefit reductions that exhaustion entails, until 2063, CBO projects. Therefore, the bill would result in higher Social Security outlays from 2053 through 2063. Paying higher benefits with no increase in revenues necessarily results in higher federal deficits during that period.

In addition to this letter, we have attached four supplemental analyses. Attachment 1 is CBO's 10-year cost estimate for the bill. Attachment 2 provides a series of figures and tables that show the effect of H.R. 3304 on the budget, Social Security finances, and benefit and tax levels. As requested in your letter, Attachment 3 provides a brief analysis of the effect of an alternative policy of transferring from the general fund to the Social Security trust funds amounts identical in size and timing to those made to the GROW accounts. Attachment 4 discusses how CBO accounts for the risk and return characteristics of different investments.

In your letter, you requested that CBO address the following specific issues:

*Effect of H.R. 3304 on OASDI outlays*. The bill would reduce OASDI outlays beginning in 2012, when GROW account holders would begin to claim retirement benefits, which would be reduced by the amount of the offsets. From 2053 through 2063, outlays would be higher than under current law, because the delay in the trust fund exhaustion date would allow scheduled benefits, net of offsets, to be paid for that period.

*Effect of H.R. 3304 on OASDI revenues*. The bill would have no effect on Social Security payroll taxes, the primary source of system revenues. Revenues from taxation of benefits would change approximately proportionately with any changes in total benefits, including payouts from GROW accounts. (That effect is too small to show up in Table 1 of this letter.)

*Effect of H.R. 3304 on OASDI balance*. Because the bill would have little effect on OASDI revenues, the effect on the balance would be approximately equal to the effect on outlays.

The effects of H.R. 3304 on annual Social Security outlays, revenues, and balances are displayed in Attachment 2 (in Figures 1 and 6 and in Tables 1 and 3).

*Effect on 75- and 100-year actuarial balance*. Table 1 of this letter shows the 75-year and 100-year OASDI summarized scheduled outlays, revenues, and balances under current law and under H.R. 3304, both as a percentage of gross domestic product (GDP) and as a percentage of taxable payroll. (Summarized revenues are equal to the present value of revenues, including the current trust fund balance, as a percentage of the present value of GDP or taxable payroll for the years in

a given period. Summarized outlays are computed in a similar way. The summarized balance is the difference between summarized revenues and summarized outlays.)

The summarized balance measures show the shortfall between scheduled outlays and scheduled revenues. Most of the tables and figures in this analysis, by contrast, are presented assuming that benefits are automatically reduced upon trust fund exhaustion.

**Table 1. Summarized Revenues, Scheduled Outlays, and Balances for H.R. 3304**

| *Percentage of GDP* | Current Law | | H.R. 3304 | |
|---|---|---|---|---|
| | 75-year | 100-year | 75-year | 100-year |
| Revenues | 5.26 | 5.20 | 5.26 | 5.20 |
| Outlays | 5.66 | 5.77 | 5.50 | 5.63 |
| Balance | -0.40 | -0.56 | -0.24 | -0.43 |
| *Percentage of Taxable Payroll* | Current Law | | H.R. 3304 | |
| | 75-year | 100-year | 75-year | 100-year |
| Revenues | 13.86 | 13.82 | 13.86 | 13.82 |
| Outlays | 14.90 | 15.31 | 14.49 | 14.96 |
| Balance | -1.05 | -1.50 | -0.64 | -1.14 |

Source: Congressional Budget Office

Revenues would be unchanged under H.R. 3304, but scheduled outlays would be lower because of the benefit offsets for GROW account holders.

*Effect on various dates.* Table 2 of this letter shows the effect of the proposal on several dates. The effects on trust fund balances are shown in Figure 3 of Attachment 2.

**Table 2. Dates of Interest for H.R. 3304**

| | Current Law | H.R. 3304 |
|---|---|---|
| Year Outlays First Exceed Revenues | 2020 | 2021 |
| Year Outlays First Exceed Revenues plus Interest | 2033 | 2044 |
| Trust Fund Exhaustion Date | 2052 | 2063 |

Source: Congressional Budget Office

*Effects of intragovernmental transfers.* You also requested information on the effects of transferring from the general fund to the Social Security trust funds amounts identical in size and timing to the deposits made to the GROW accounts, with no other changes to current law. CBO defines the summarized actuarial balance as the difference between dedicated revenues and dedicated outlays, so intragovernmental transfers have no effect on that measure.

To enable comparison of such a transfer with H.R. 3304, Table 3 of this letter shows alternative measures of summarized revenues, scheduled outlays, and balances that include the transfers as revenues. Such intragovernmental transfers would have no effect on scheduled outlays. Relative to current law, they would simply increase revenues and reduce the shortfall.

Relative to H.R. 3304, such intragovernmental transfers would result in both higher receipts to the trust funds and higher scheduled benefits (because there would be no benefit offsets). A comparison with Table 1 above shows that the summarized deficits would be slightly smaller than under H.R. 3304; the difference is because of the additional administrative costs associated with GROW accounts. (Note that, as in Table 1, the outlay measure is based on scheduled outlays.)

**Table 3. Summarized Revenues, Scheduled Outlays, and Balances for General Fund Transfer Policy**

| *Percentage of GDP* | Current Law | | With General Fund Transfers | |
|---|---|---|---|---|
| | 75-year | 100-year | 75-year | 100-year |
| Revenues | 5.26 | 5.20 | 5.42 | 5.34 |
| Outlays | 5.66 | 5.77 | 5.66 | 5.77 |
| Balance | -0.40 | -0.56 | -0.23 | -0.42 |

| *Percentage of Taxable Payroll* | Current Law | | With General Fund Transfers | |
|---|---|---|---|---|
| | 75-year | 100-year | 75-year | 100-year |
| Revenues | 13.86 | 13.82 | 14.28 | 14.19 |
| Outlays | 14.90 | 15.31 | 14.90 | 15.31 |
| Balance | -1.05 | -1.50 | -0.61 | -1.12 |

Source: Congressional Budget Office

In the years in which they were made, such intragovernmental transfers would not affect the unified budget balance, but they would increase Social Security revenues and the size of the trust fund. That would delay trust fund exhaustion until 2063, extending payment of scheduled benefits by 11 years. As a result, both Social Security and total federal outlays would be higher than under current law from 2053 through 2063.

Table 4 of this letter, which is comparable to Table 2 above, shows various dates of interest with such intragovernmental transfers.

**Table 4. Dates of Interest for General Fund Transfer Policy**

| | Current Law | With General Fund Transfers |
|---|---|---|
| Year Outlays First Exceed Revenues | 2020 | 2021 |
| Year Outlays First Exceed Revenues plus Interest | 2033 | 2043 |
| Trust Fund Exhaustion Date | 2052 | 2063 |

Source: Congressional Budget Office

The effects of such transfers on annual Social Security outlays, revenues, and balances are detailed in Figure 1 and in Table 3 of Attachment 3. The effects on trust fund balances are shown in Figure 2 of Attachment 3.

*Effects of H.R. 3304 on the unified (total) federal budget*. The bill would increase total outlays (excluding interest) from 2007 through 2020, reduce outlays from 2021 to 2052, and then increase outlays from 2053 through 2063 (see Figure 2 of Attachment 2). The bill would increase debt held by the public by 20 percent of GDP by 2063 (see Figure 2a of Attachment 2). Debt would continue to accumulate in later years because of the additional interest costs, and by 2105, it would be 33 percent of GDP higher than under current law.

From a total federal budget perspective, the present value of the reductions in Social Security benefit outlays would equal the present value of the deposits into the GROW accounts less administrative costs.

*Administrative costs.* The bill specifies that administrative costs of up to 0.3 percentage points of the account balance may be charged to the GROW accounts. For example, if the account held only Treasury bonds, the net return would be 0.3 percentage points below the Treasury rate. To ensure that total retirement benefits would be unchanged for participants who invested solely in Treasury bonds, the notional account—used to compute the benefit offset—would grow at a rate 0.3 percentage points below the Treasury rate. That adjustment would result in smaller offsets. In effect, the 0.3 percentage point administrative costs would be paid from the Social Security trust funds.

CBO assumes that after accounts were fully implemented, the average administrative cost per account would be equivalent to a cost of $15 in 2007, with increases to account for growth in wages. Total costs would, over the accounts' lifetime, be about 25 percent higher than the amounts authorized to be debited from the GROW accounts. Those additional funds, which are concentrated in the early years of the program, would have to be appropriated from the general fund.

For details on the costs of establishing the system and administering it through 2015, see Attachment 1. For a more general discussion of the factors affecting administrative costs, see

Congressional Budget Office, *Administrative Costs of Private Accounts in Social Security* (March 2004).

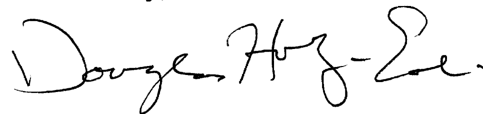
*Comparison of individual benefit levels.* Tables 2 and 4 of Attachment 2 compare first-year Social Security retirement benefits under current law to retirement benefits from Social Security and GROW accounts under H.R. 3304. Benefits would be little changed except for those receiving benefits from 2053 through 2063. Table 2a of Attachment 2 shows the portion of retirement benefits under H.R. 3304 that would come from GROW accounts and from Social Security benefits.

You asked if H.R. 3304 would change the manner in which the Social Security trust funds interacted with the rest of the federal budget. It would not. Primary surpluses in Social Security—the surplus of revenue from payroll taxes and taxation of benefits over outlays for benefits and administrative expenses—would still be available for use for other programs and activities. If the rest of the budget is in deficit, a Social Security surplus reduces the amount of borrowing required from the public. If the rest of the budget is in surplus, the presence of a Social Security surplus increases the amount of debt held by the public that can be retired.

The attached analyses do not reflect any considerations of the potential effects on the U.S. economy that may occur under the bill. Supplemental data, including the underlying data for the figures in this analysis, are available on CBO's web site (www.cbo.gov).

If you would like any additional information on these analyses, we will be pleased to provide it. The CBO staff contact for the analysis is Noah Meyerson.

Sincerely,



Douglas Holtz-Eakin
Director

Attachment 1: Ten-year Cost Estimate
Attachment 2: Analysis of H.R. 3304
Attachment 3: Analysis of General Fund Transfers
Attachment 4: Alternative Investments, Risk, and Return

Identical letters sent to:

Honorable John M. Spratt, Jr.
Ranking Member
House Committee on the Budget

Honorable Charles B. Rangel
Ranking Member
Committee on Ways and Means

cc: Honorable Charles E. Grassley
Chairman
Senate Committee on Finance

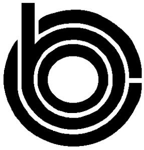
Honorable Jim Nussle
Chairman
House Committee on the Budget

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

Honorable Jim McCrery
Chairman
Subcommittee on Social Security
Committee on Ways and Means

Honorable Judd Gregg
Chairman
Senate Committee on the Budget

Honorable Kent Conrad
Ranking Member
Senate Committee on the Budget



# CONGRESSIONAL BUDGET OFFICE
# COST ESTIMATE

September 13, 2005

## H.R. 3304
### Growing Real Ownership for Workers Act of 2005

*As introduced on July 14, 2005*

## SUMMARY

H.R. 3304, the Growing Real Ownership for Workers (GROW) Act, would create individual retirement accounts for almost 200 million workers over the next decade. The nearly $1 trillion in federal funds transferred to those accounts would equal the surplus, excluding interest, accumulating in the Social Security trust funds over that time, but the money would come from the general funds of the government. While the federal government would administer the GROW program, account holders would make key decisions about investment choices and distributions from the accounts; accordingly, CBO treats the accounts as belonging to the workers. A few owners would begin tapping their accounts late in the period, resulting in small offsets (and resulting budgetary savings) against traditional Social Security benefits. On balance, CBO estimates that H.R. 3304 would increase direct spending by $988 billion over the 2007-2015 period.

H.R. 3304 would permit the government to charge 30 basis points (that is, 0.3 percent of balances) for managing the accounts, and would authorize future appropriations for any administrative costs that exceed those levies. Assuming appropriation of the necessary amounts, CBO estimates the resulting outlays at $8.3 billion over the 2006-2015 period.

Section 4 of the Unfunded Mandates Reform Act excludes from the provisions of that act any provision in a bill that relates to the Old Age, Survivors and Disability Insurance program under title II of the Social Security Act. CBO reviewed title I of H.R. 3304 and determined that it fits within that exclusion. The Joint Committee on Taxation has preliminarily determined that the tax provisions (title II) of H.R. 3304 contain no private- sector or intergovernmental mandates.

## ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of H.R. 3304 is shown in Table 1. For this estimate, CBO assumes enactment in fall 2005. The costs of this legislation fall in budget function 650 (Social Security).

**TABLE 1. ESTIMATED COSTS OF H.R. 3304, THE GROWING REAL OWNERSHIP FOR WORKERS ACT OF 2005**

| | Budget Authority and Outlays, by Fiscal Year, in Billions of Dollars | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| **DIRECT SPENDING** | | | | | | | | | | |
| Payments to interim account | 65.8 | 98.1 | 107.1 | 111.8 | 114.2 | 114.7 | 110.7 | 103.6 | 94.1 | 81.6 |
| Receipts by interim account | -65.8 | -98.1 | -107.1 | -111.8 | -114.2 | -114.7 | -110.7 | -103.6 | -94.1 | -81.6 |
| Transfers to GROW accounts | 0 | 95.3 | 105.8 | 114.2 | 118.6 | 120.6 | 119.9 | 114.9 | 106.8 | 96.0 |
| OASDI benefit offsets [a] | 0 | 0 | 0 | 0 | * | * | -0.2 | -0.6 | -1.4 | -2.5 |
| Total | 0 | 95.3 | 105.8 | 114.2 | 118.6 | 120.6 | 119.8 | 114.3 | 105.4 | 93.5 |
| On-budget | 0 | 95.3 | 105.8 | 114.2 | 118.6 | 120.6 | 119.9 | 114.9 | 106.8 | 96.0 |
| Off-budget | 0 | 0 | 0 | 0 | * | * | -0.2 | -0.6 | -1.4 | -2.5 |
| **SPENDING SUBJECT TO APPROPRIATION** | | | | | | | | | | |
| Administrative costs [b] | 0.5 | 1.7 | 0.5 | 0.2 | 1.4 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 |

NOTE: OASDI=Old-Age Survivors, and Disability.
*=less than $50 million

a. Off-budget
b. Includes startup costs plus that portion of ongoing costs not recouped from maximum 30-basis-point charge on account assets

## BASIS OF ESTIMATE

The budgetary effects of H.R. 3304 are dominated by the nearly $1 trillion in contributions that the government would make to GROW accounts in the 2007-2015 period. Enacting the bill would also increase discretionary spending by about $8 billion over that period, assuming appropriation of the authorized amounts.

### Direct Spending

H.R. 3304 would establish individual accounts for all workers born in 1950 or later who have earnings covered by Social Security after 2005. Total contributions to the accounts would

equal Social Security payroll taxes plus income taxes on benefits minus disbursements from the trust funds—essentially, the program's surplus excluding interest earnings (often called its "cash surplus").[1] The government would divide that aggregate in proportion to the participants' earnings that are subject to Social Security taxes. Workers born in 1950 or later would be automatically enrolled unless they opted out; CBO assumed that all eligible workers would participate. Although the total contribution would equal the Social Security cash surplus, the actual transfer would come from the general fund of the Treasury, not from the Old-Age, Survivors, and Disability Insurance (OASDI) trust funds. Contributions would continue until the Social Security cash surplus disappears, which CBO projects will occur around 2020. The accounts would have no other source of contributions.

For the first two years, accounts could only be invested in marketable Treasury securities. But early in 2009, the newly established GROW Accounts Board would report to the Congress with recommendations for a menu of investment options. CBO assumes those choices would resemble the offerings in the Thrift Savings Plan (TSP), the voluntary savings program for federal employees. The Board's recommendations would take effect automatically in 90 days unless the Congress overturned them. Under H.R. 3304, workers could alter the investment mix in their GROW accounts once a year.

Distributions from GROW accounts could start when the worker qualified for Social Security as a retired worker or spouse age 62 or older, or as a widow(er) age 60 or older. (Contributions to the accounts would also cease then, even if the worker had subsequent earnings.) Generally, owners would have to withdraw money in the form of an inflation-indexed annuity until the combination of that annuity plus traditional Social Security equaled the federal poverty line. Married owners would have to purchase a joint-and-survivor annuity unless both spouses waived that choice. Regardless of the actual form of distribution, H.R. 3304 would reduce the traditional Social Security benefit by an imputed or "notional" annuity—the hypothetical annuity if the owner had always invested in Treasury securities. Thus, besides choosing an investment mix, account owners could—within limits—choose their distribution method; they could also name a beneficiary in case they died before retirement. Furthermore, workers could refuse to participate in the accounts (although CBO assumes hardly any would do so). Based on those features, CBO concludes that the accounts would not be the property of the government but would be individually-owned; therefore, the government's contributions would constitute outlays in the federal budget.[2]

---

1. Disbursements include Social Security benefit payments, administrative costs, and the transfer to the railroad retirement program.

2. Congressional Budget Office, *The Budgetary Treatment of Personal Retirement Accounts*, CBO Paper (March 2000).

Although transfers would start in January 2006, credits would first be assigned to individual GROW owners in 2007. That is because H.R. 3304 accommodates the system of annual wage reporting of the Social Security Administration (SSA) and the Internal Revenue Service (IRS). By law, employers send taxes withheld from workers' paychecks—both income and employment taxes—regularly throughout the year, but not until early in the following year do they submit the W-2 forms that allow employees to file their taxes and the IRS to link earnings to particular workers. Thus, H.R. 3304 specifies that, effective in 2006, the Treasury would track Social Security's cash surplus and make transfers at least once a month from the general fund to an "interim fund." The amounts would remain there until SSA tallies the annual wage reports and thus has enough information to divide the past year's transfer among eligible workers. Recognizing that delay, credits to particular workers' accounts would include interest computed from the previous July, or about a year's worth. CBO regards the interim fund—unlike the GROW accounts themselves—as part of the government; transfers to it would be intrabudgetary transactions. Based on its projections of Social Security finances, CBO estimates $1,002 billion in transfers to the interim account over the 2006-2015 period. The one-year lag in crediting would be largely offset by adding interest to those transfers, resulting in an estimated $992 billion in GROW deposits (see Table 2).

The government would establish GROW accounts on behalf of workers born in 1950 or later—that is, age 56 or younger at the program's start. The oldest accountholders would thus reach age 62—and eligibility for early-retirement benefits—in 2012. Their Social Security benefits would be reduced by the imputed annuities from their GROW accounts. With just a few years' worth of GROW contributions—and with annuities spread over a remaining life expectancy of about 20 years—the resulting offsets during this period would be small. CBO estimates that such offsets would generate $0.2 billion in savings in 2012, growing to $2.5 billion in 2015.

Those benefit offsets would be the only direct effect on Social Security from H.R. 3304. Because transfers to GROW accounts would come from the general fund of the government, Social Security finances would be otherwise unaffected. The program's methods of collecting payroll taxes, investing excess funds in special Treasury securities, and paying benefits would not change, except for the extra step of subtracting a benefit offset for an eligible GROW accountholder. Over the very long run (as discussed in CBO's companion analysis), those benefit offsets mount and permit the program a few more years of scheduled benefit payouts before trust fund exhaustion. That result is made possible by general-fund transfers—not to Social Security directly, but to the individual accounts of eligible workers.

TABLE 2. CBO BASELINE PROJECTIONS OF THE SOCIAL SECURITY TRUST FUND AND RESULTING TRANSFERS TO GROW ACCOUNTS UNDER H.R. 3304

| | By Fiscal Year, in Billions of Dollars | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| **SOCIAL SECURITY TRUST FUNDS** [a] | | | | | | | | | | |
| Income excluding interest | 632.6 | 668.1 | 705.0 | 742.1 | 779.8 | 818.5 | 857.6 | 897.3 | 937.9 | 979.4 |
| Disbursements | 544.9 | 570.1 | 597.9 | 630.3 | 665.6 | 703.9 | 746.9 | 793.6 | 843.8 | 897.8 |
| Surplus excluding interest | 87.7 | 98.1 | 107.1 | 111.8 | 114.2 | 114.7 | 110.7 | 103.6 | 94.1 | 81.6 |
| **RESULTING TRANSFERS UNDER H.R. 3304** | | | | | | | | | | |
| Payments to interim account [b] | 65.8 | 98.1 | 107.1 | 111.8 | 114.2 | 114.7 | 110.7 | 103.6 | 94.1 | 81.6 |
| Receipts by interim account | -65.8 | -98.1 | -107.1 | -111.8 | -114.2 | -114.7 | -110.7 | -103.6 | -94.1 | -81.6 |
| Payments to GROW accounts [c] | 0 | 95.3 | 105.8 | 114.2 | 118.6 | 120.6 | 119.9 | 114.9 | 106.8 | 96.0 |

a. CBO baseline projections, March 2005. See Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2006* (March 2005).

b. H.R. 3304 would be effective in January 2006, when one-fourth of fiscal year 2006 is already past.

c. Transfers to GROW accounts would equal the previous calendar (not fiscal) year's Social Security cash surplus, plus imputed interest from July 1.

## Revenues

Accountholders' withdrawals from GROW accounts would be taxed in the same way as Social Security benefits are. Because CBO assumes that those withdrawals would generate equal and offsetting reductions in Social Security benefits, H.R. 3304 would result in no change in income-tax receipts.

## Spending Subject to Appropriation

GROW accounts would be administered by a seven-member board, appointed by the President in consultation with the Congress; the board would hire an executive director and other staff. H.R. 3304 would authorize such sums as necessary (subject to future appropriation) for startup costs—that is, expenses incurred before any accounts exist. Once accounts are operational, H.R. 3304 would permit the board to charge up to 30 basis points (0.3 percentage points) of assets annually to pay for administrative costs. The bill would authorize future appropriations for any such expenses that exceed the resulting charges.

In a 2001 report, SSA estimated startup costs at $1.2 billion to $2.3 billion for low- and high-service variants, respectively.[3] Choosing the low end of that range—because H.R. 3304 clearly envisions few optional features—and updating for inflation leads CBO to include $1.5 billion for those initial costs.

In analyzing the ongoing administrative costs of the GROW program, CBO sought to identify an appropriate dollar cost per account. Certain tasks involved in running defined-contribution plans or any individual investment account do not vary much with the accounts' size. In key respects, it costs about as much to manage a small account as it does a large one. (That is why many private fund managers require a minimum deposit from new investors.)

CBO's 2004 survey found estimates ranging from $24 to $103 for private defined-contribution plans and their federal counterpart, the TSP.[4] SSA's study implied costs per account ranging from $5 to $19 (in 1999 dollars) for a no-frills system and a high-service plan, respectively.

H.R. 3304 stipulates many features that would clearly limit the administrative costs of GROW accounts. Credits would be posted just once a year, as an adjunct to SSA's usual earnings-processing activities; that contrasts with biweekly crediting under the TSP and similar plans. All investments would be held in Treasury securities until 2009. After that, owners would pick from a limited menu and could reallocate funds once a year. Account holders would receive annual reports on their portfolio, mailed with the statements that SSA sends automatically to most workers.[5]

Even with those features, administrative costs would likely exceed the 30-basis-point target. CBO estimates, for example, that the first credits in 2007 would total $95 billion for 139 million accounts—roughly $700 for the average account. Charging 30 basis points would yield just $2 from such an account.

CBO estimates that administrative costs would average $7 to $8 per account in the program's first three years, before a full investment menu is offered. That figure slightly exceeds SSA's lower estimate, because it incorporates inflation and wage growth since 1999 and also recognizes that the board would be an independent entity, not part of SSA. (As such, it could

---

3. Lawrence E. Hart and others, *SSA's Estimates of Administrative Costs Under A Centralized System of Individual Accounts* (Social Security Administration, January 2001; available on-line at http://www.ssa.gov/policy/docs/research/rr2000-01rev.pdf).

4. Congressional Budget Office, *Administrative Costs of Private Accounts in Social Security*, CBO Study (March 2004).

5. People age 25 and older who have earnings and do not receive Social Security benefits get such a statement, at their last known address, about 3 months before their birthday. People under age 25 do not get such statements except upon request.

face certain overhead expenses that it would not incur as part of a larger agency.) Customer-service tasks in those early years might consist chiefly of processing beneficiary designations, sending initial account statements, and answering the resulting queries. The workload would expand when the board unveiled more investment options in mid-2009. At that point, CBO estimates the average administrative cost would rise to about $17.

Multiplying those unit costs by the number of GROW accounts yields ongoing administrative costs of about $1 billion annually from 2007 through 2009, and $3 billion to $4 billion thereafter. CBO estimates that the 30 basis point charge would bring in amounts that rise from $0.3 billion in 2007 to $3.5 billion in 2015. The remainder would be paid by the government. Overall, the government would pay an estimated $6.8 billion over the ten-year period for ongoing administrative costs not charged to accounts (see Table 3).

**TABLE 3. ESTIMATED ADMINISTRATIVE COSTS SUBJECT TO APPROPRIATION UNDER H.R. 3304**

| | By Fiscal Year, in Billions of Dollars | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Startup costs | 0.5 | 1.0 | * | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ongoing costs: | | | | | | | | | | |
| Total cost | n.a. | 1.0 | 1.1 | 1.2 | 2.8 | 3.0 | 3.2 | 3.4 | 3.6 | 3.9 |
| Minus: 30-basis-point charge | n.a. | -0.3 | -0.6 | -1.0 | -1.3 | -1.8 | -2.2 | -2.6 | -3.1 | -3.5 |
| Remainder (paid by government) | n.a. | 0.7 | 0.5 | 0.2 | 1.4 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 |
| Total administrative costs paid by government | 0.5 | 1.7 | 0.5 | 0.2 | 1.4 | 1.2 | 1.0 | 0.8 | 0.6 | 0.4 |
| **Memorandum:** | | | | | | | | | | |
| Number of accounts (millions) | n.a. | 139 | 148 | 157 | 165 | 171 | 177 | 183 | 187 | 190 |
| Cost per account (dollars) | n.a. | 7.0 | 7.3 | 7.6 | 16.8 | 17.5 | 18.1 | 18.8 | 19.5 | 20.3 |

NOTES: *=less than $50 million; n.a.=not applicable.

## EFFECTS ON ON-BUDGET DIRECT SPENDING AND REVENUES

The Congressional Budget Act labels Social Security "off-budget" and excludes it from the President's budget, the House and Senate budget resolutions, and the requirements of the

Balanced Budget and Emergency Deficit Control Act of 1985. The net changes in governmental receipts and outlays from direct spending—excluding Social Security—over the 2006-2015 period are shown in the following table.

| | By Fiscal Year, in Billions of Dollars | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Changes in Outlays | 0 | 95.3 | 105.8 | 114.2 | 118.6 | 120.6 | 119.9 | 114.9 | 106.8 | 96.0 |
| Changes in Revenues | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

Section 4 of the Unfunded Mandates Reform Act excludes from the provisions of that act any provision in a bill that relates to the Old Age, Survivors and Disability Insurance program under title II of the Social Security Act. CBO reviewed title I of H.R. 3304 and determined that it fits within that exclusion. The Joint Committee on Taxation has preliminarily determined that the tax provisions (title II) of H.R. 3304 contain no private-sector or intergovernmental mandates.

## COMPARISON TO OTHER ESTIMATES

SSA's Office of the Chief Actuary (OCACT) has analyzed the plan that was later introduced as H.R. 3304.[6] Under the actuaries' assumptions—which are consistent with the 2005 Trustees' report—transfers to GROW accounts would be smaller than under CBO's. However, that difference is hard to discern directly from the actuaries' memo, which follows a different format:

- OCACT shows dollar flows by calendar year, not fiscal year.
- The actuaries depict flows in constant 2005 dollars (adjusted for inflation) or in present value terms (2005 dollars, adjusted for interest rates)—not in nominal dollars, as in this CBO analysis.
- The actuaries show contributions as if they went directly to GROW accounts, omitting the lag in crediting contributions and the associated creation of an interim account.

6. The actuaries' analysis is available on-line at www.ssa.gov/OACT/solvency/McCrery_20050715.pdf.

To permit a comparison of the estimates, CBO has put the two agencies' numbers on a similar footing. That comparison shows that CBO's estimate of the amounts transferred to the interim account over the 2006-2015 period is approximately $228 billion higher than the estimate under Trustees' assumptions (see Table 4).

**TABLE 4. COMPARISON OF SOCIAL SECURITY "CASH SURPLUS" UNDER CBO AND TRUSTEES' ASSUMPTIONS**

| | By Fiscal Year, in Billions of Dollars | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2006-2015 |
| **SOCIAL SECURITY TRUSTEES** | | | | | | | | | | | |
| Income [a] | 628 | 660 | 694 | 727 | 766 | 808 | 845 | 885 | 925 | 968 | 7,905 |
| Disbursements | 543 | 567 | 597 | 634 | 672 | 715 | 763 | 815 | 872 | 932 | 7,110 |
| Surplus [a] | 85 | 92 | 96 | 93 | 94 | 93 | 83 | 70 | 53 | 36 | 795 |
| Transfers [b] | 64 | 92 | 96 | 93 | 94 | 93 | 83 | 70 | 53 | 36 | 774 |
| **CONGRESSIONAL BUDGET OFFICE** | | | | | | | | | | | |
| Income [a] | 633 | 668 | 705 | 742 | 780 | 819 | 858 | 897 | 938 | 979 | 8,018 |
| Disbursements | 545 | 570 | 598 | 630 | 666 | 704 | 747 | 794 | 844 | 898 | 6,995 |
| Surplus [a] | 88 | 98 | 107 | 112 | 114 | 115 | 111 | 104 | 94 | 82 | 1,024 |
| Transfers [b] | 66 | 98 | 107 | 112 | 114 | 115 | 111 | 104 | 94 | 82 | 1,002 |
| **DIFFERENCE** | | | | | | | | | | | |
| Income [a] | 5 | 8 | 11 | 16 | 13 | 11 | 12 | 12 | 13 | 11 | 114 |
| Disbursements | 2 | 3 | 1 | -3 | -7 | -11 | -16 | -22 | -28 | -34 | -115 |
| Surplus [a] | 3 | 6 | 11 | 19 | 20 | 21 | 28 | 34 | 41 | 46 | 228 |
| Transfers [b] | 2 | 6 | 11 | 19 | 20 | 21 | 28 | 34 | 41 | 46 | 228 |

SOURCE: Calculated by CBO from its March 2005 baseline and from *The 2005 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (the "Trustees' report"). Through 2014, data from Tables VI.C4, VI.C5, VI.C6 of Trustees' report. For 2015, fiscal year data imputed by CBO from calendar-year estimates at http://www.ssa.gov/OACT/TR/TF05/lrIndex.html.

a. Excluding interest.

b. Because H.R. 3304 would take effect in January 2006, with one-fourth of the fiscal year already past, transfers to the interim account are assumed to equal the 2007-2015 surplus plus three-fourths of the 2006 figure.

Over the 10-year period, half of the difference between the two agencies' estimates stems from differing projections of OASDI income and half from differences in projected disbursements. The gap in trust fund income represents a small fraction (1 percent to 2 percent) of income in all years after 2006, and CBO ascribes that wedge chiefly to various technical differences in estimating methods. The two agencies' assumptions about key

economic variables—labor force growth and the average nominal wage—that underpin revenue growth are very similar. Differences in disbursements stem overwhelmingly from CBO's assumptions about cost-of-living adjustments (COLAs). For most of the period, CBO assumes COLAs of 2.2 percent annually, in contrast with the 2.7 percent to 2.8 percent used by the actuaries. Other differences that affect trust fund disbursements, such as caseload assumptions, have little net impact.

**ESTIMATE PREPARED BY:**

Federal Costs: Kathy Ruffing
Impact on State, Local, and Tribal Governments: Leo Lex
Impact on the Private Sector: Ralph Smith

**ESTIMATE APPROVED BY**:

Robert A. Sunshine
Assistant Director for Budget Analysis

## Attachment 2: Analysis of H.R. 3304

### Bill Description and CBO Assumptions

Beginning in 2006, H.R. 3304 would require the Secretary of the Treasury to make deposits equal to the Social Security cash surplus into an interim fund. Starting in 2007, those funds, plus interest, would be distributed into individual investment accounts—called GROW accounts—for workers born in 1950 or later who have earnings subject to the Social Security payroll tax. The deposit to each account would be made in proportion to the amount of Social Security payroll taxes paid by each individual.

Individuals would be automatically enrolled in the program, but they could choose to opt out. In this analysis, CBO assumes 100 percent participation. Although participation would not be exactly 100 percent, there is no economic incentive to withdraw from the program, so participation is likely to be very high. Moreover, automatic enrollment in 401(k) accounts has yielded very high participation rates for those plans. Initially, account balances would be invested in Treasury bonds, but eventually participants would be allowed to select from additional investment options.

Administrative costs of up to 0.3 percentage points of the account balance could be charged to the GROW accounts. Any additional administrative costs would be appropriated from the general fund.

Upon claiming retirement benefits, a worker would be allowed to draw from his or her GROW account. The balance could be used to purchase an annuity. Some participants could also choose to draw from the accounts directly. To allow for comparison to current Social Security retirement benefits, which are paid monthly, CBO assumes in this analysis that all participants fully annuitize the account balances.

Participants' Social Security benefits would be reduced by the annuitized value of a "notional" account, with a balance equal to the balance of the GROW account had the GROW account been invested solely in Treasury bonds. (Specifically, the notional account would grow at 0.3 percentage points below the Treasury rate, to account for administrative costs charged to the GROW accounts.) Thus, if participants invested their GROW accounts in Treasury bonds, their total retirement benefits would be unchanged.

If a married participant died before claiming retirement benefits, the excess of the GROW account balance over the notional account balance would be transferred to the GROW account of the spouse. GROW account balances of unmarried participants would be transferred to the account holder's estate.

The analysis is based on CBO's current long-term Social Security outlook, as detailed in CBO's *Updated Long-Term Projections for Social Security*, released in March 2005. That report was based on CBO's January 2005 economic assumptions and demographic assumptions from the *2004 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance*

*and Disability Insurance Trust Funds* (March 23, 2004).

Investments on stocks and other non-Treasury securities have higher expected returns, but they are also riskier than Treasury bonds. The first section of this analysis assumes that the trade-off between risk and return is valued as in financial markets. In practice, this means that the GROW accounts are assumed to earn a return equal to the rate of return on Treasury bonds, less administrative charges. (Attachment 4 provides more detail on the subject.) The second section explicitly displays such risk so that the reader may make his or her own judgment about its cost.

## Figure 1

- Figure 1 displays Social Security outlays and revenues as a share of GDP. Revenues include payroll taxes and income taxes on benefits but exclude interest credited to the Social Security trust fund and any general fund transfers. Outlays include Social Security benefits and administrative costs charged to the trust funds. The outlays under H.R. 3304 are shown net of the savings from offsets to Social Security retirement benefits.

- Deposits to GROW accounts are made using general revenues and do not affect this figure.

- In 2012, the oldest holders of GROW accounts would begin to claim retirement benefits. Beginning that year, scheduled outlays would be lower than under current law because of the benefit offsets.

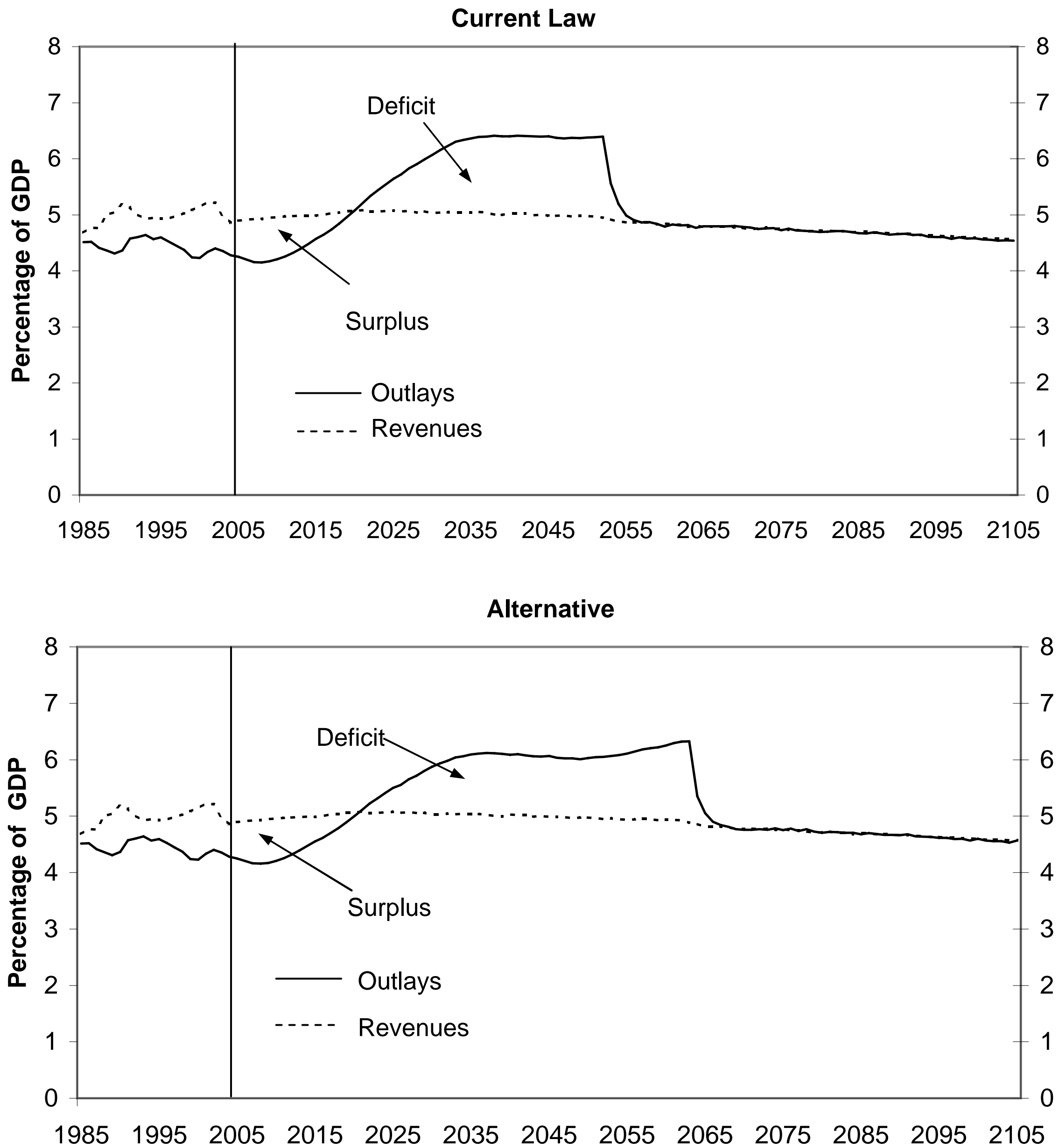
- Under current law, outlays exceed revenues beginning in 2020. Under the bill, due to lower benefit payments at that time, outlays would exceed revenues beginning in 2021.

- Under current law, outlays exceed the sum of revenues and interest credited to the Social Security trust funds beginning in 2033. Under the bill, that would first occur in 2044.

- Under H.R. 3304, the trust fund would be exhausted in 2063 and proposed benefits would no longer be paid as scheduled. That would occur 11 years later than under current law.

Figure 1.

## Social Security Revenues and Outlays as a Share of GDP Under Current Law and H.R. 3304, 1985 to 2105




Source: Congressional Budget Office.

## Figure 2

- The effects on the total federal budget balances as a share of GDP are illustrated in Figure 2. Negative numbers mean the bill increases the deficit (or reduces the surplus). Positive numbers indicate that the bill reduces the deficit (or increases the surplus).

- The dotted line excludes, and the solid line includes, interest effects—the budgetary cost of additional debt held by the public.

- Initially—from 2007 to 2020—the additional outlays to individual accounts result in larger deficits. (The savings from the offsets to Social Security benefits are smaller than the outlays to the accounts.)

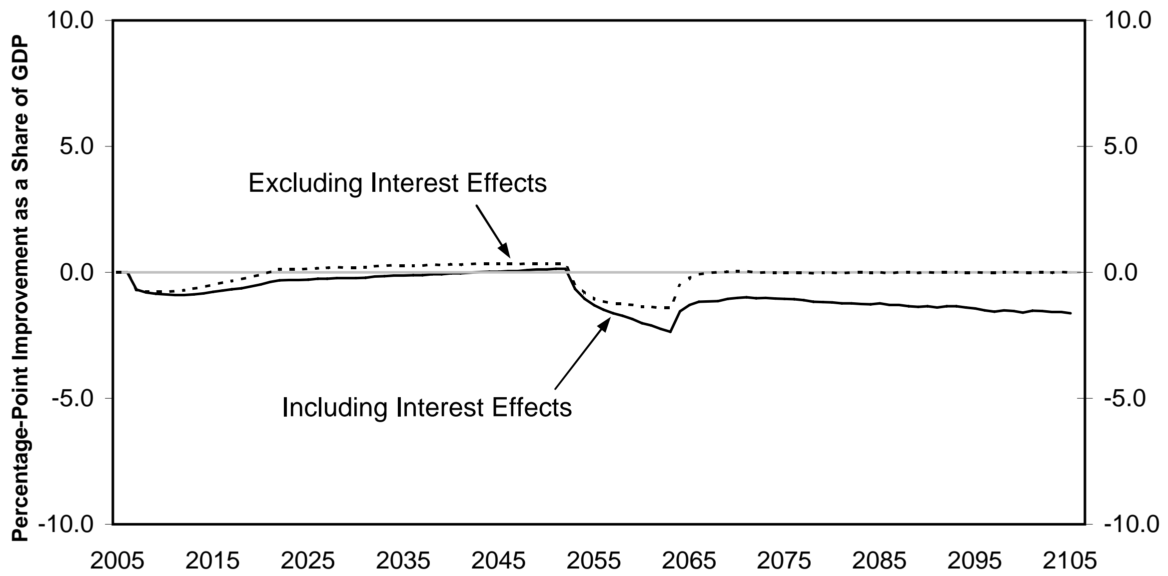
- In 2021, when the deposits to the GROW accounts are very small, and in later years, when no deposits are made, the budget balance would improve as Social Security benefits are lowered relative to current law through the offset to benefits of individual account holders. That would occur through 2052.

- Benefits are assumed to be automatically reduced upon trust fund exhaustion. Under current law, CBO projects exhaustion to occur in 2052. Under the bill, scheduled benefits could be paid through 2063, so from 2053 through 2063, outlays and the deficit would be significantly higher under the bill than under current law.

- Following trust fund exhaustion, outlays would be forced to equal benefits, as is the case under current law. However, the general fund transfers under the bill would increase government debt, so interest costs would continue to grow as a share of GDP even after 2063.

Figure 2.

# Effects of H.R. 3304 on Total Annual Budget Balances as a Share of GDP Relative to Current Law, 2005 to 2105




Source: Congressional Budget Office.

## Figure 2a

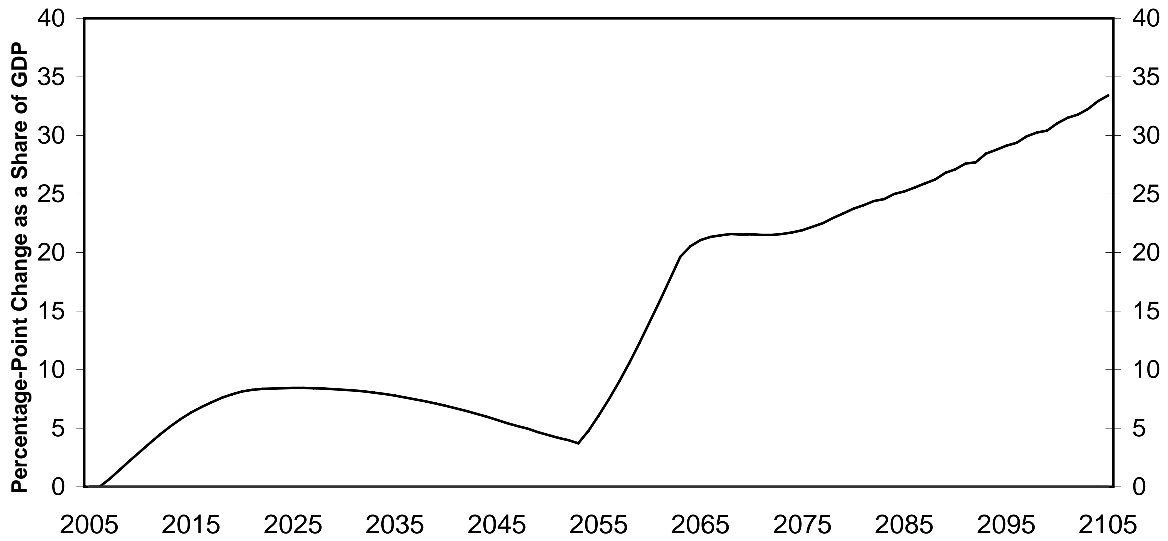
- The effects on the total federal debt held by the public are illustrated in Figure 2.

- Debt held by the public is the sum of past deficits less the sum of past surpluses, including interest. Therefore, the effect on the budget balance including interest shown in Figure 2 is equal to the annual change in debt. Figure 2a shows the sum of those changes, which is equal to the effect of the bill on total debt.

- Debt held by the public would be higher than under current law throughout the projection period. The amount of the increase would initially grow as deposits are made to the GROW accounts and then would shrink because of the offsets to traditional benefits. The amount of the increase would grow most quickly from 2053 through 2063, because scheduled benefits would be paid for 11 years longer than under current law. After 2063, the debt to GDP ratio would grow relative to current law because of increased interest costs.

Figure 2a.

## Effects of H.R. 3304 on Total Debt Held by the Public as a Share of GDP Relative to Current Law, 2005 to 2105




Source: Congressional Budget Office.

## Table 1

- The top panel shows snapshot measures of Social Security finances under current law at 20-year intervals. Following trust fund exhaustion, benefits will automatically be reduced so that annual outlays equal annual revenues. The fourth line shows the size of the automatic benefit reduction.

- Under current law, automatic benefit reductions begin in 2053 (as shown in Figure 1). By 2065, automatic benefit reductions total 1.68 percent of GDP and by 2105 amount to 2.15 percent of GDP.

- The middle panel shows the effects of the bill on Social Security finances.

- The third panel shows measures of Social Security finances under the bill.

- Under the bill, automatic benefit reductions would start in 2064. In 2065, for example, benefit offsets would reduce Social Security benefits, so the required automatic reductions would be smaller than under current law. The benefit offsets would phase out, and in 2085, the automatic reductions, and thus outlays, would be the same as under current law.

- General fund transfers to the GROW accounts would be made between 2007 and 2021 and are not reflected in the table, which shows results only at 20-year intervals. The transfers would not go directly to the Social Security trust funds, but they are included in the analysis because they would provide retirement benefits to Social Security retiree beneficiaries.

Table 1.

## Social Security Finances Under Current Law and H.R. 3304 as a Share of GDP, 2005 to 2105

| | 2005 | 2025 | 2045 | 2065 | 2085 | 2105 |
|---|---|---|---|---|---|---|
| **Social Security Finances Under Current Law** | | | | | | |
| Revenues[a] | 4.90 | 5.07 | 4.99 | 4.78 | 4.70 | 4.57 |
| Outlays[b] | 4.25 | 5.64 | 6.39 | 4.78 | 4.70 | 4.57 |
| Balance[c] | 0.65 | -0.57 | -1.40 | 0.00 | 0.00 | 0.00 |
| Automatic benefit reduction[d] | 0.00 | 0.00 | 0.00 | 1.68 | 1.91 | 2.15 |
| **Effects on Balance plus Automatic Benefit Reduction Under Alternative Provision** | | | | | | |
| Introduce GROW accounts | 0.00 | 0.13 | 0.34 | 0.20 | 0.01 | 0.00 |
| **Social Security Finances Under Alternative** | | | | | | |
| Revenues | 4.90 | 5.07 | 4.99 | 4.82 | 4.70 | 4.57 |
| Outlays | 4.25 | 5.50 | 6.06 | 4.82 | 4.70 | 4.57 |
| Balance | 0.65 | -0.44 | -1.07 | 0.00 | 0.00 | 0.00 |
| Transfers from rest of government | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Automatic benefit reduction | 0.00 | 0.00 | 0.00 | 1.47 | 1.91 | 2.15 |

Source: Congressional Budget Office.

a. Revenues equal payroll taxes and income taxes on benefits as a share of gross domestic product (GDP) in the specified year.
b. Outlays equal Social Security benefits and administrative costs as a share of GDP in the specified year.
c. The balance is the difference between revenues and outlays as a share of GDP in the specified year; may not equal the difference of the previous two rows because of rounding.
d. The reduction in scheduled outlays as a share of GDP that occurs through benefit cuts once the Social Security trust funds are exhausted.

## Figure 3

- The trust fund ratio—a measure of the adequacy of the trust fund—is the ratio of the total trust fund balance at the beginning of the calendar year to total Social Security outlays during that year. After the trust funds are exhausted, outlays are limited to dedicated revenues, holding the ratio at zero.

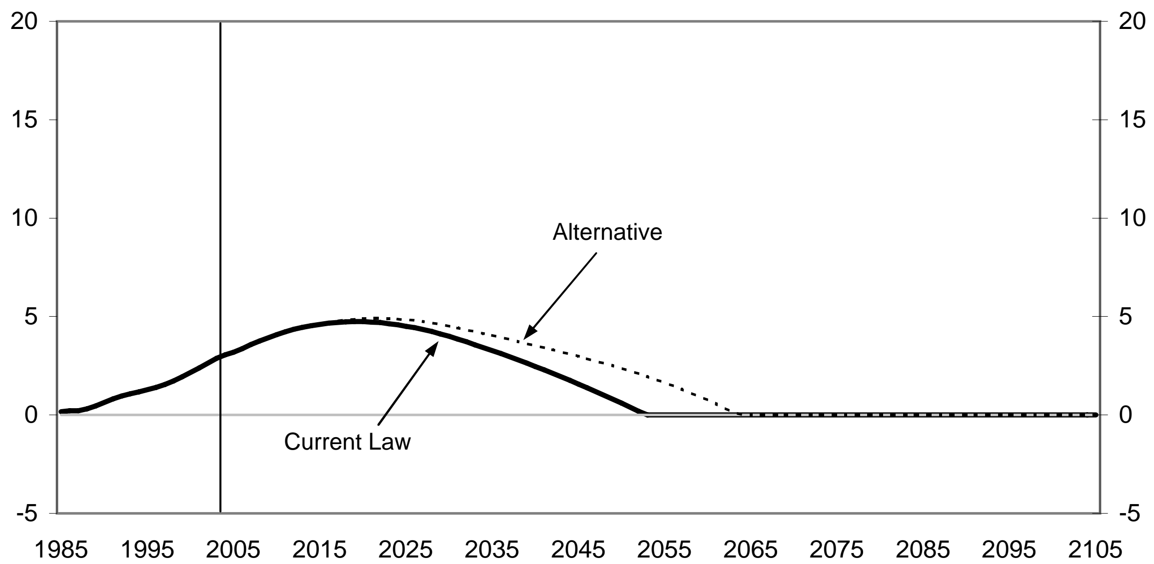
- All trust fund assets are included, regardless of their source. For example, an intragovernmental transfer to the trust fund would increase the trust fund ratio but would have no direct effect on the total federal budget.

- Because the bill would reduce outlays from the trust fund as a result of benefit offsets, the trust fund ratio would be larger than under current law from about 2020 until it falls to zero in 2063.

- Contributions to GROW accounts would have no direct effect on the trust fund ratio, as they are made directly from general revenues.

Figure 3.

## Social Security Trust Fund Ratios Under Current Law and H.R. 3304, 1985 to 2105



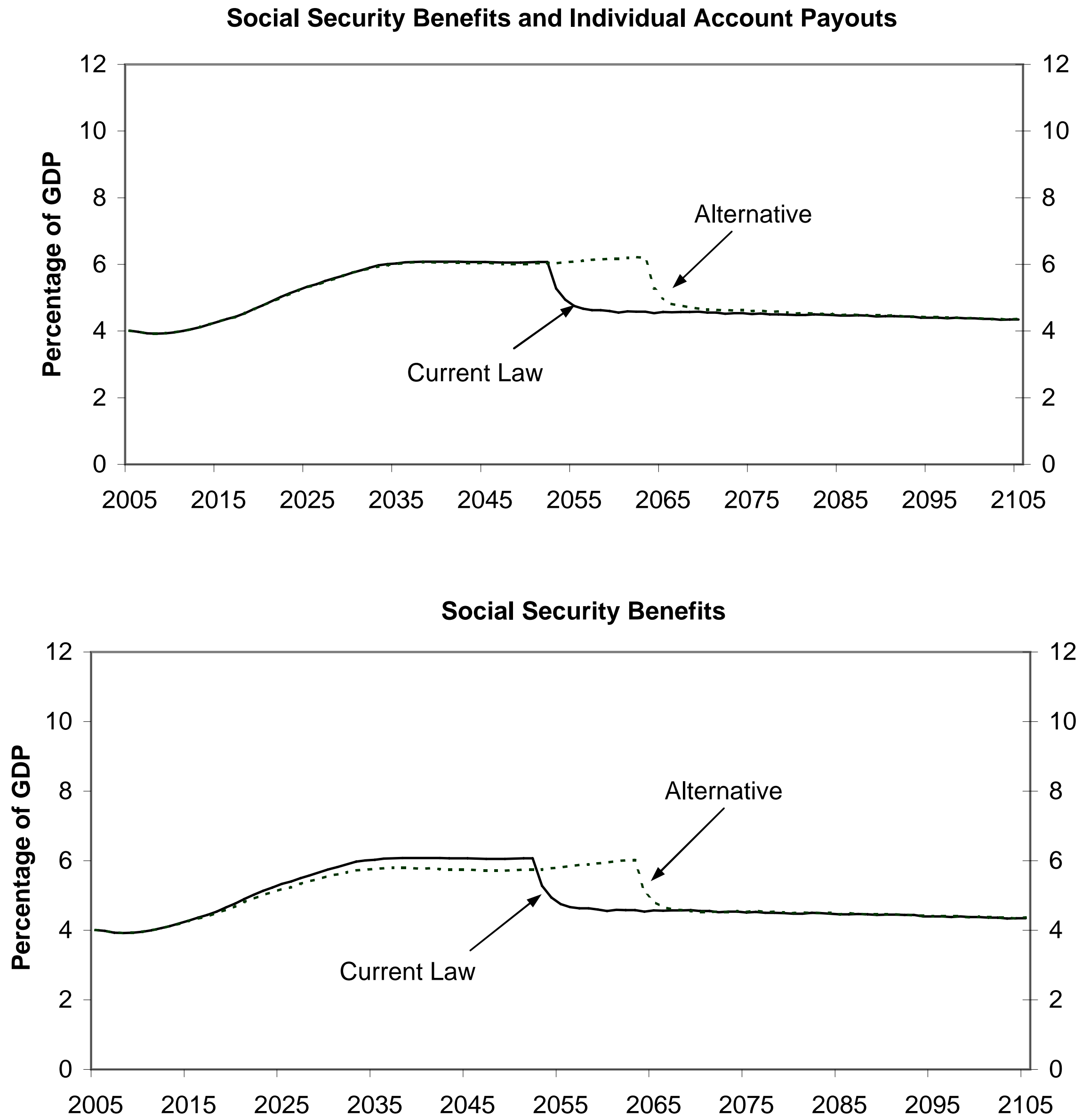

Source: Congressional Budget Office.

## Figure 4

- Figure 4 shows the total amount of traditional Social Security benefits received by beneficiaries.
- Between 2012 and 2052, Social Security benefits under H.R. 3304 would be lower than under current law, but payouts from the individual accounts, included in the top panel, would restore aggregate benefits to the current-law level. Payouts from GROW accounts are computed by assuming that all participants fully annuitize their account balance, and benefit offsets are equal to the annuitized value of the notional accounts.
- Because the GROW accounts are assumed to earn a return equal to the rate of return on Treasury bonds, and H.R. 3304 specifies that the notional accounts grow at the Treasury rate, the balances in the GROW accounts and the notional accounts would be equal. Therefore, the payouts from the accounts are equal to the benefit offsets.
- The payouts from GROW accounts are small relative to Social Security benefits—at most 5 percent of total benefits.
- From 2053 through 2063, Social Security benefits are larger than under current law, because the lower outlays in earlier years delay trust fund exhaustion and the resulting automatic benefit reductions.
- After 2063, Social Security benefits equal revenues, matching current law.

Figure 4.

**Social Security Benefits as a Share of GDP Under Current Law and H.R. 3304, 2005 to 2105**




Source: Congressional Budget Office.

## Table 2

- Table 2 shows first-year benefits (net of income taxes paid on benefits and credited to the Social Security trust funds) for the median retired worker in three lifetime earnings quintiles. This table shows results only for retired workers. For example, the effects of changes to widow(er) or disabled-worker benefits are not shown.

- For ease of comparison, benefits are computed assuming all workers claim at age 65, even though most workers claim at earlier ages. First-year annual benefits are computed for all workers eligible to claim Old-Age Insurance benefits at age 62 who have not yet claimed any other benefit, on the basis only of earnings through age 61. Benefits are adjusted to put them into 2004 dollars.

- Payouts from GROW accounts are computed by setting the rate of return on GROW account balances equal to the rate of return on Treasury bonds.

- The bill would not affect workers born before 1950.

- Workers born in the 1950s through 1970s would experience no net change in benefits because the benefit offsets to their traditional Social Security benefits would be equal to the individual account payouts.

- Benefits for workers in the 1980s through 2000s would be higher than current law, reflecting the lower automatic benefit reductions needed because of the benefit offsets to Social Security benefits for earlier cohorts of workers.

- Trust fund exhaustion is delayed because of the benefit offsets from GROW accounts. In effect, the increased benefits paid to workers born in the 1980s, 1990s, and 2000s would be financed by the general revenues that fund those accounts. That funding is reflected in the final column, which shows the share of benefits that could not be paid without those revenues.

- The percentages in that final column are computed by comparing the amount that retirees would receive without the general fund transfers with the amount that would be provided under the bill. Without the transfers, the accounts would not be funded, and benefits would be exactly equal to current-law benefits.

Table 2.

## First-Year Total Annual Benefits for the Median Retired Worker If Benefits Are Claimed at Age 65 Under Current Law and H.R. 3304, by Birth Cohort and Lifetime Earnings Level

| 10-Year Birth Cohort Starting in Year | Current Law Social Security Benefits | Alternative Social Security Benefits Plus Individual Accounts | Benefits Financed with Intragovernmental Transfers[a] |
|---|---|---|---|
| | Median in Lowest Household Lifetime Earnings Quintile | | |
| 1940 | 7,500 | 7,500 | 0.0% |
| 1950 | 8,300 | 8,300 | 0.0% |
| 1960 | 9,000 | 9,000 | 0.0% |
| 1970 | 9,800 | 9,800 | 0.0% |
| 1980 | 10,200 | 10,600 | 2.5% |
| 1990 | 9,300 | 12,000 | 29.8% |
| 2000 | 10,000 | 10,300 | 2.2% |
| | Median in Middle Household Lifetime Earnings Quintile | | |
| 1940 | 15,500 | 15,500 | 0.0% |
| 1950 | 15,800 | 15,800 | 0.0% |
| 1960 | 16,200 | 16,200 | 0.0% |
| 1970 | 18,600 | 18,600 | 0.0% |
| 1980 | 20,500 | 21,200 | 2.8% |
| 1990 | 18,300 | 23,600 | 29.0% |
| 2000 | 20,000 | 20,700 | 2.8% |
| | Median in Highest Household Lifetime Earnings Quintile | | |
| 1940 | 20,200 | 20,200 | 0.0% |
| 1950 | 22,200 | 22,200 | 0.0% |
| 1960 | 23,300 | 23,300 | 0.0% |
| 1970 | 26,200 | 26,200 | 0.0% |
| 1980 | 29,200 | 30,300 | 2.2% |
| 1990 | 26,200 | 33,700 | 29.3% |
| 2000 | 28,800 | 29,600 | 2.0% |

Source: Congressional Budget Office.

a. This column reflects the effect of transfers made from the general fund to individual (GROW) accounts.

## Table 2a

- The first column shows the same data as in the first column of Table 2.

- Under H.R. 3304, payouts from GROW accounts would account for only a portion of total retirement benefits.

- GROW accounts would be a larger source of benefits for higher-income beneficiaries. For those born in the 1970s, such accounts would make up about 4 percent of benefits for beneficiaries in the lowest household income earnings quintile but about 8 percent of benefits for those in the highest earnings quintile.

Table 2a.

## First-Year Total Annual Social Security Benefits and Individual Account Payouts for the Median Retired Worker If Benefits Are Claimed at Age 65 Under Current Law and H.R. 3304, by Birth Cohort and Lifetime Earnings Level

| 10-Year Birth Cohort Starting in Year | Current Law Social Security Benefits | Alternative Social Security Benefits | Alternative Individual Accounts |
|---|---|---|---|
| | Median in Lowest Household Lifetime Earnings Quintile | | |
| 1940 | 7,500 | 7,500 | 0 |
| 1950 | 8,300 | 8,100 | 200 |
| 1960 | 9,000 | 8,700 | 300 |
| 1970 | 9,800 | 9,400 | 400 |
| 1980 | 10,200 | 10,200 | 400 |
| 1990 | 9,300 | 11,800 | 200 |
| 2000 | 10,000 | 10,300 | 0 |
| | Median in Middle Household Lifetime Earnings Quintile | | |
| 1940 | 15,500 | 15,500 | 0 |
| 1950 | 15,800 | 15,200 | 600 |
| 1960 | 16,200 | 15,300 | 900 |
| 1970 | 18,600 | 17,400 | 1,200 |
| 1980 | 20,500 | 20,300 | 900 |
| 1990 | 18,300 | 23,300 | 300 |
| 2000 | 20,000 | 20,700 | 0 |
| | Median in Highest Household Lifetime Earnings Quintile | | |
| 1940 | 20,200 | 20,200 | 0 |
| 1950 | 22,200 | 21,200 | 1,000 |
| 1960 | 23,300 | 21,600 | 1,700 |
| 1970 | 26,200 | 24,300 | 1,900 |
| 1980 | 29,200 | 28,700 | 1,600 |
| 1990 | 26,200 | 33,300 | 400 |
| 2000 | 28,800 | 29,600 | 0 |

Source: Congressional Budget Office.

## Figure 5

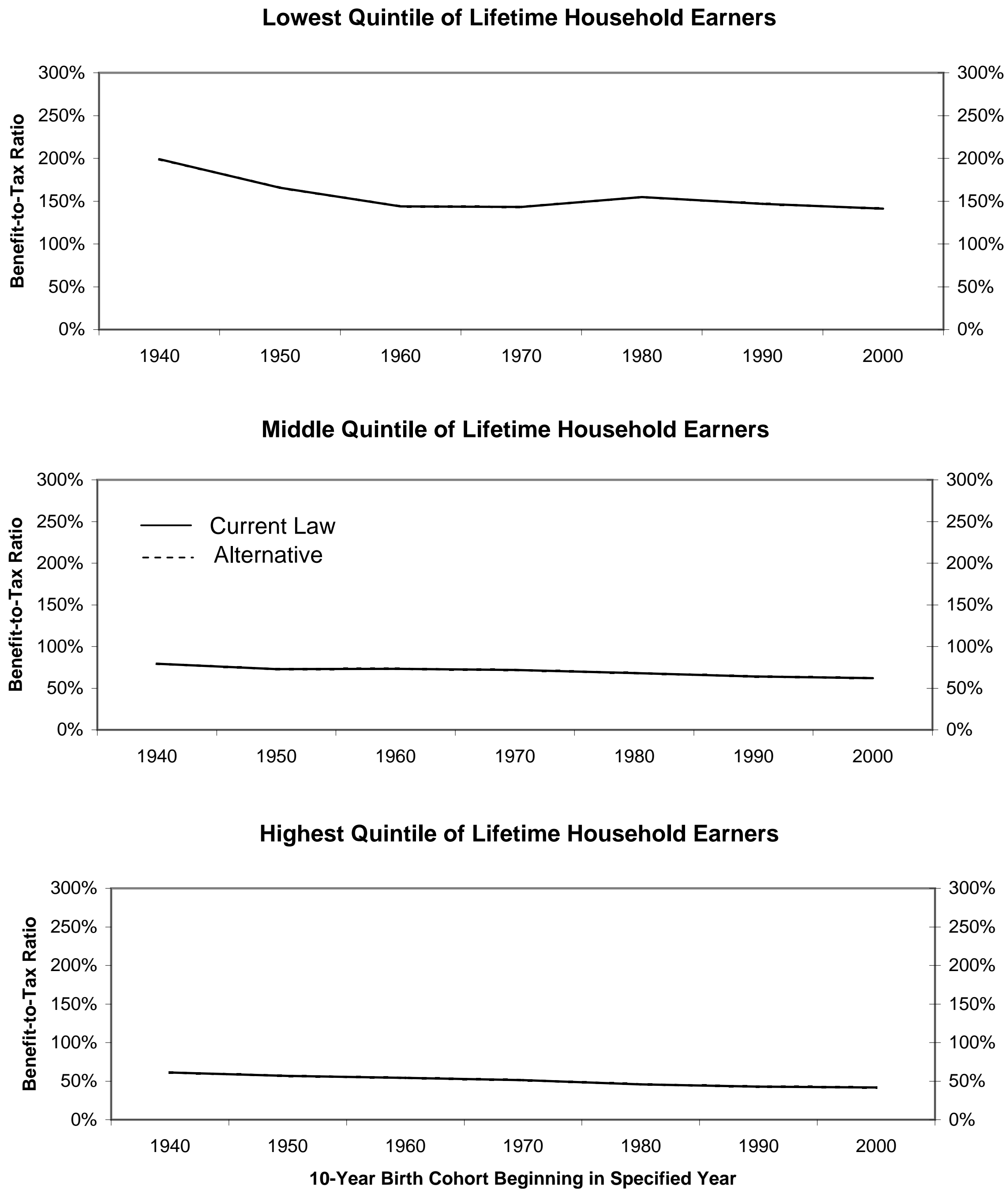
- Figure 5 compares the present value of total payroll taxes (both employer and employee) paid to the present value of total Social Security benefits received (from both Old-Age and Survivors Insurance and Disability Insurance, net of income taxes paid on benefits) over a lifetime for all individuals who live to at least age 45.

- This figure includes only benefits financed by dedicated payroll taxes. GROW accounts are financed with general funds, not dedicated payroll taxes, so GROW account payments and any resultant offsets are not included in benefit calculations for this figure. After trust fund exhaustion, benefits are reduced for all new and current beneficiaries.

- Because GROW account payouts and benefit offsets are not included in the calculations, benefit-to-tax ratios for beneficiaries across all cohorts and household earnings quintiles are unchanged, and the figure shows only a single line.

Figure 5.

**Ratio of Lifetime Dedicated-Tax-Financed Benefits to Lifetime Taxes Under Current Law and H.R. 3304, by Birth Cohort and Lifetime Earnings Level**




Source: Congressional Budget Office.

## Uncertainty Analysis

The preceding analysis presented estimates generated through a simulation in which the demographic and macroeconomic assumptions are set at their most likely values and the financial cost of investment risk is set on the basis of market values, which in practice means that the GROW accounts are assumed to earn a return equal to the rate of return on Treasury bonds.

The following section contains range estimates that are based on 500 stochastic simulations. Those simulations are based on a probability distribution of possible future outcomes for the various demographic and economic inputs used in the projections. The distribution of each assumption is centered at its most likely value, but the variation around those values is based on historical experience.

For the uncertainty analysis, CBO assumes that participants would invest their GROW accounts in the following portfolio:

| Investment | Share of Portfolio | Annual Real Expected Return |
|---|---|---|
| Treasury bonds | 20% | 3.3% |
| Corporate bonds | 30% | 3.8% |
| Equities | 50% | 6.8% |

The weighted average real return of that portfolio is 5.2 percent; individuals are assumed to rebalance the portfolio annually. Charges for administrative costs are assumed to reduce returns by 0.3 percent, resulting in a net expected real annual return of 4.9 percent. Although that portfolio has a higher expected return than Treasury bonds, it also results in higher risk.

In its results, CBO gives its estimate of the 80 percent range of uncertainty. There is an 80 percent chance that the actual outcome will fall in the displayed range, a 10 percent chance it will be higher, and a 10 percent chance it will be lower. In tables, the $10^{th}$ and $90^{th}$ percentiles are presented. By definition, there is a 10 percent chance that the outcome will be below the $10^{th}$ percentile and a 10 percent chance that the outcome will be above the $90^{th}$ percentile.

In some cases, CBO presents the median—or middle—of the range of outcomes in the uncertainty analysis. Those median values and the results in the first section both indicate "typical" results; however, the median results may differ somewhat from the single-simulation results presented above.

## Figure 6

- Figure 6 displays Social Security outlays and revenues as a share of GDP. Revenues include payroll taxes and income taxes on benefits but exclude interest credited to the Social Security trust funds and any general fund transfers. Outlays include Social Security benefits and administrative costs. The outlays under H.R. 3304 are shown net of the savings from offsets to Social Security retirement benefits.

- The uncertainty about Social Security revenues as a share of GDP results primarily from uncertainty about the level of taxable earnings as a share of GDP. For example, if a larger share of compensation is paid in the form of health benefits, then taxable earnings—and thus Social Security revenues—will be a relatively low share of GDP.

- Under current law, it is very likely that the trust funds will become exhausted. After exhaustion, annual outlays will be limited to revenue in that year, and the uncertainty about outlays will be approximately equal to the uncertainty about revenue.

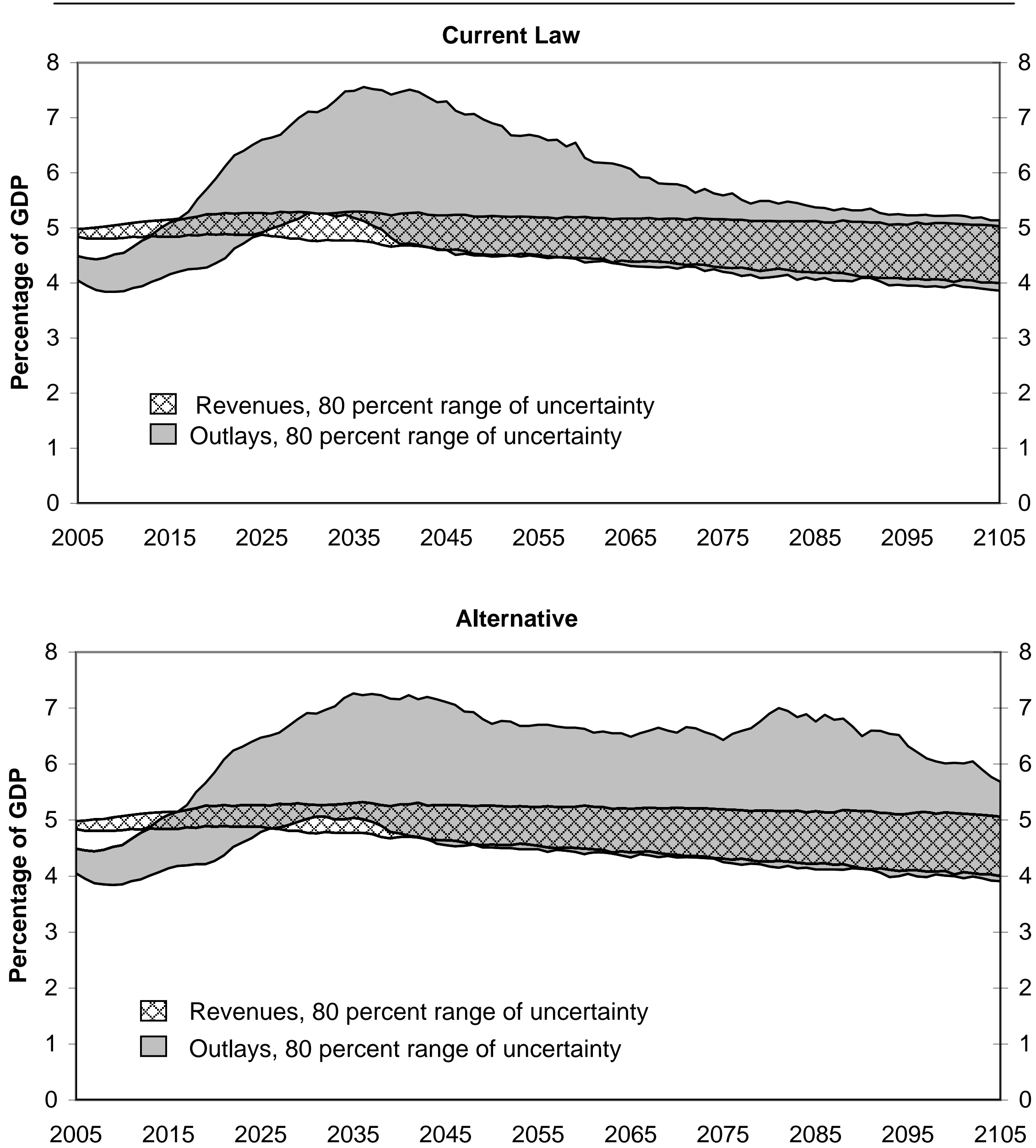
- Deposits to GROW accounts are made using general revenues and do not affect this figure directly. Under H.R. 3304, retirement benefits would initially be reduced for retirees with GROW accounts, who begin to claim retirement benefits in 2012. But under the bill, the trust fund would be exhausted later, enabling higher outlays in the later part of the projection period.

- Under current law, there is an 80 percent chance that outlays will begin to exceed revenues between 2014 and 2026. Under the bill, there is a 80 percent chance that outlays will first exceed revenues between 2015 and 2029.

- There is some probability that benefit offsets would reduce outlays enough that the trust fund would remain solvent throughout the projection period. That would allow annual outlays to always remain larger than revenues. However, even with the offsets under H.R. 3304, there is a 10 percent chance that the trust funds would be exhausted before 2038.

Figure 6.

**Potential Range of Social Security Revenues and Outlays as a Share of GDP Under Current Law and H.R. 3304, 2005 to 2105**




Source: Congressional Budget Office.

## Figure 7

- The effects on the total federal budget balances as a share of GDP are illustrated in Figure 7. Negative numbers mean the bill increases the deficit (or reduces the surplus). Positive numbers indicate that the bill reduces the deficit (or increases the surplus).

- The areas show CBO's projection of the 80 percent range of uncertainty. There is an 80 percent chance that the actual outcome will fall in the displayed range, a 10 percent chance it will be higher, and a 10 percent chance it will be lower.

- The shaded area excludes, and the crosshatched areas includes, interest effects—the budgetary cost of additional debt held by the public.

- Initially—from 2007 to around 2020—the additional outlays to individual accounts result in larger total budget deficits. (The savings from the offsets to Social Security benefits are much smaller than the outlays to the accounts.)

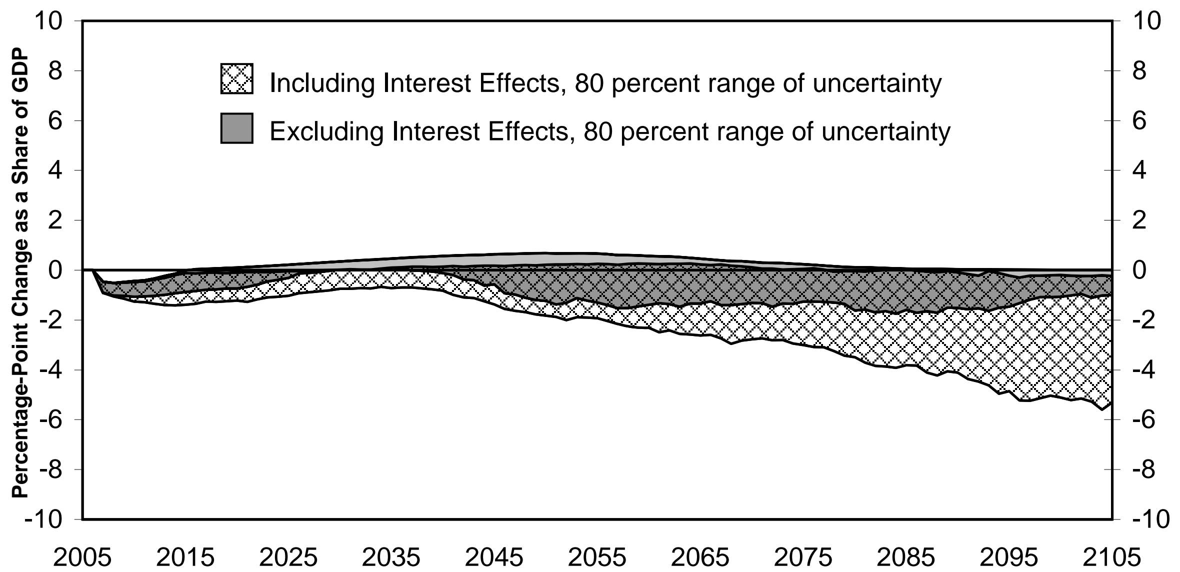
- Until 2055 or so, the budget balance—excluding interest effects—improves as benefits are lowered relative to current law through the individual-account benefit offsets. Including the added interest costs, the budget balance is generally worse over that period.

- Benefits are automatically reduced upon trust fund exhaustion. Under the bill, the trust fund would remain solvent longer than under current law, allowing scheduled benefits to be paid longer. As a result, in years when the trust funds would be exhausted under current law but solvent under H.R. 3304, the deficit would be significantly higher under H.R. 3304.

- The large range of uncertainty of the measure that includes interest effects reflects both uncertainty about the size of the transfers to GROW accounts, which would depend on the size of Social Security surpluses beginning in 2006, and uncertainty about future interest rates.

Figure 7.

**Potential Range of Effects of H.R. 3304 on Total Annual Budget Balances as a Share of GDP Relative to Current Law, 2005 to 2105**




Source: Congressional Budget Office.

## Table 3

- The top three lines show the 10th, 50th, and 90th percentiles of Social Security annual balances under current law at 20-year intervals. Following trust fund exhaustion, benefits will automatically be reduced to reach a balance of zero. The next three lines show the size of possible automatic benefit reductions.

- The range for the balance includes non-zero numbers because there is some probability that the trust fund will not be exhausted, allowing the system to run a deficit. There is also some probability that the system will run a surplus in any given year.

- The bottom section of the table shows the effects of the bill on Social Security finances.

- The bill would reduce Social Security outlays because of the retirement-benefit offsets. Before trust fund exhaustion, those offsets would improve the Social Security balance. They would also delay trust fund exhaustion. In the period when the trust funds would be exhausted under current law but solvent under the bill, the presence of the trust fund would enable the system to run deficits. For example, under current law the 10th percentile of the balance in 2085 is -0.37 percent of GDP, but under the bill it would be -2.03 percent.

- Under the bill, automatic benefit reductions would generally be equal to or smaller than under current law. In the analysis shown in Table 1, they would be identical by 2085, but there is some probability that surpluses could extend beyond 2021, in which case offsets would occur later as well, as shown in Table 3.

- General fund transfers to the GROW accounts would continue as long as Social Security surpluses exist. There is some probability that the surpluses—and thus the transfers—would continue past 2045. As shown in the “Transfers from Rest of Government Under Alternative,” there is a 10 percent chance that transfers will be greater than 0.04 percent of GDP in 2045.

Table 3.

## Potential Range of Social Security Finances Under Current Law and H.R. 3304 as a Share of GDP, 2005 to 2105

| | 2005 | 2025 | 2045 | 2065 | 2085 | 2105 |
|---|---|---|---|---|---|---|
| **Balance Under Current Law**[a] | | | | | | |
| 10th Percentile | 0.45 | -1.52 | -2.29 | -1.18 | -0.37 | -0.20 |
| Median - 50th Percentile | 0.64 | -0.66 | -0.65 | 0.00 | 0.00 | 0.00 |
| 90th Percentile | 0.80 | 0.00 | 0.13 | 0.21 | 0.25 | 0.25 |
| **Automatic Benefit Reductions Under Current Law**[b] | | | | | | |
| 10th Percentile | 0.00 | 0.00 | 2.57 | 3.80 | 4.38 | 5.07 |
| Median - 50th Percentile | 0.00 | 0.00 | 0.00 | 1.60 | 1.99 | 2.36 |
| 90th Percentile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 |
| **Balance Under Alternative** | | | | | | |
| 10th Percentile | 0.45 | -1.39 | -2.12 | -1.58 | -2.03 | -1.37 |
| Median - 50th Percentile | 0.64 | -0.50 | -0.62 | 0.00 | 0.00 | 0.00 |
| 90th Percentile | 0.80 | 0.16 | 0.15 | 0.20 | 0.23 | 0.23 |
| **Transfers from Rest of Government Under Alternative** | | | | | | |
| 10th Percentile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Median - 50th Percentile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90th Percentile | 0.00 | 0.36 | 0.04 | 0.00 | 0.00 | 0.00 |
| **Automatic Benefit Reductions Under Alternative** | | | | | | |
| 10th Percentile | 0.00 | 0.00 | 2.09 | 3.37 | 4.06 | 4.88 |
| Median - 50th Percentile | 0.00 | 0.00 | 0.00 | 0.69 | 1.53 | 2.13 |
| 90th Percentile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Source: Congressional Budget Office.

a. The balance is the difference between revenues and outlays as a share of GDP in the specified year.

b. The reduction in scheduled outlays as a share of GDP that occurs through benefit cuts once the Social Security trust funds are exhausted.

## Figure 8

- The trust fund ratio—a measure of the adequacy of the trust fund—is the ratio of the total trust fund balance at the beginning of the calendar year to total Social Security outlays during that year. After the trust funds are exhausted, outlays are limited to dedicated revenues, holding the ratio at zero.

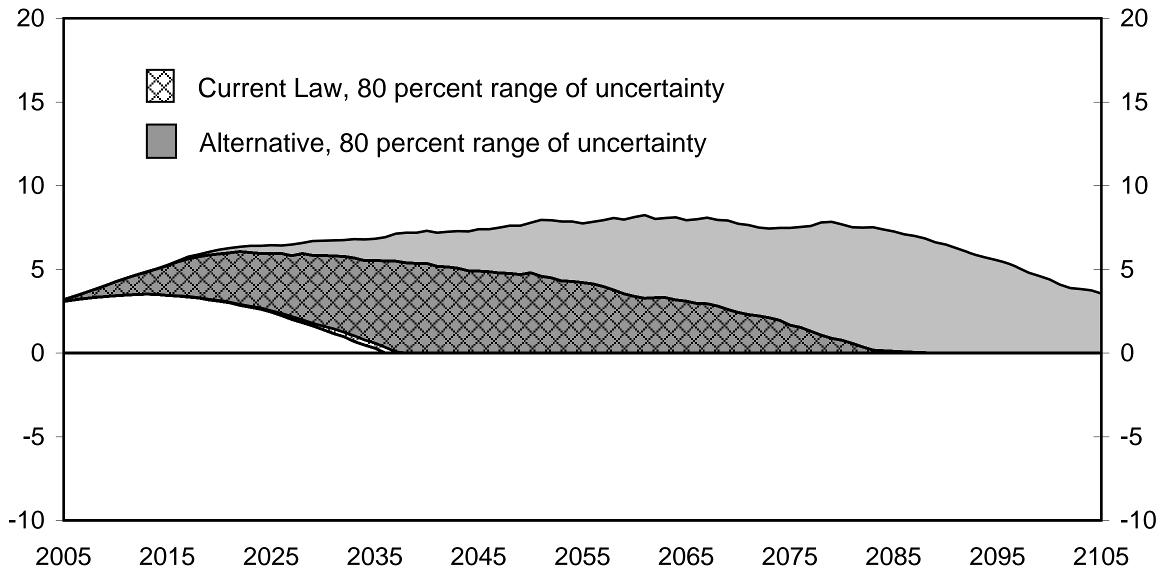
- Because the bill would reduce outlays from the trust fund as a result of benefit offsets, the trust fund ratio would be larger than under current law. The amount of money provided to the GROW accounts depends on the size of the annual Social Security surpluses. If the surpluses are larger than expected, deposits recorded in the GROW accounts and the notional accounts would be larger as well. Also, the offsets depend on the size of the notional accounts, which grow at the Treasury rate. If interest rates are high, the offsets will be large, resulting in lower benefit outlays and higher trust fund balances.

- Contributions to GROW accounts are made directly from general revenues, so they have no effect on the trust fund ratio.

- Under current law, there is more than a 90 percent chance that the trust fund would be exhausted by 2100. Under H.R. 3304, there is about an 80 percent chance that it would be exhausted by then.

Figure 8.

**Potential Range of Social Security Trust Fund Ratios Under Current Law and H.R. 3304, 2005 to 2105**



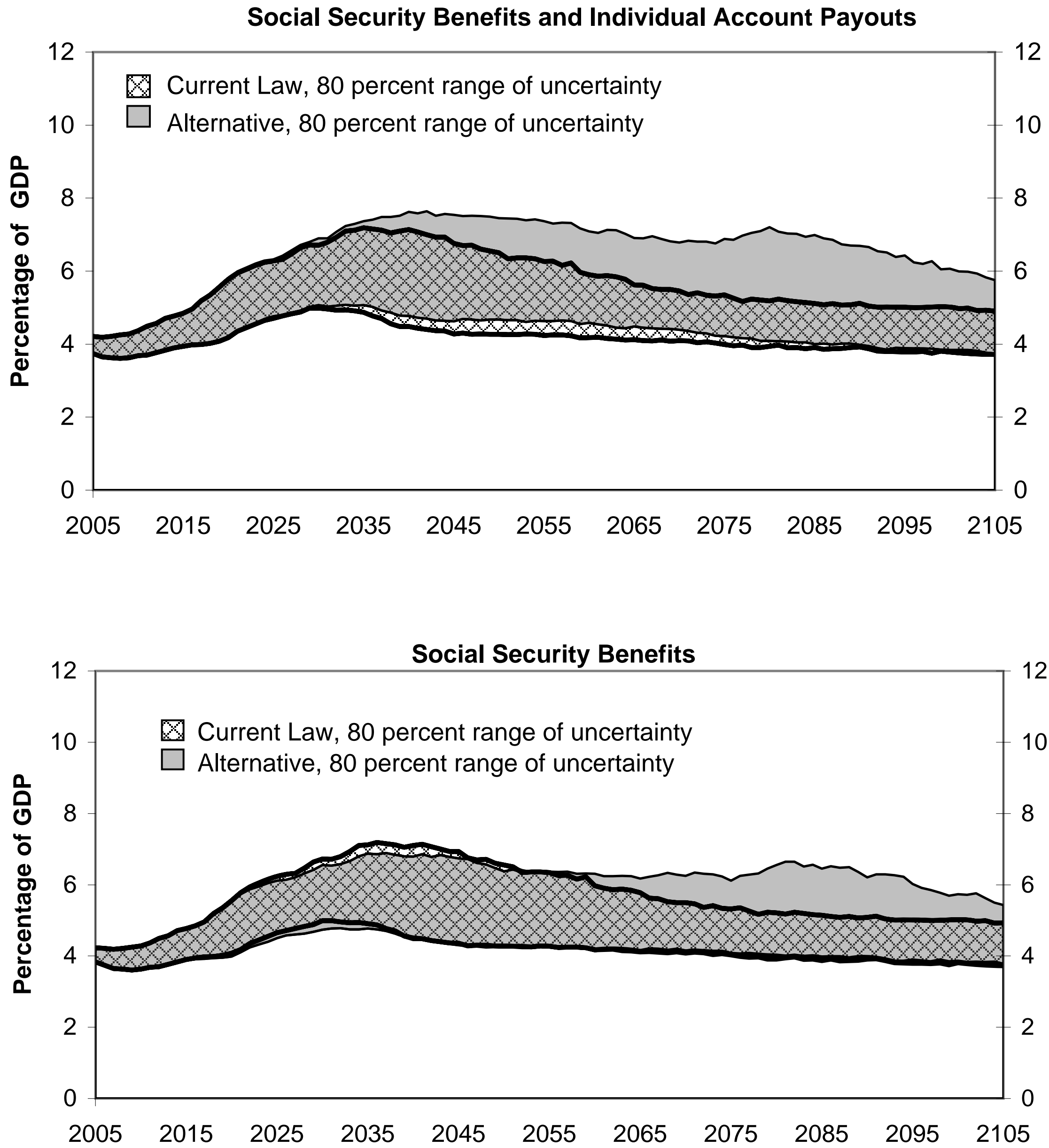

Source: Congressional Budget Office.

## Figure 9

- The bottom panel of Figure 9 shows the total amount of traditional Social Security benefits received by beneficiaries.
- Between 2012 and 2052, Social Security benefits would generally be lower than under current law because of the benefit offsets.
- The top panel includes the sum of Social Security benefits and payouts of annuities purchased with the balance of GROW accounts. Those payouts would be small relative to Social Security benefits. At their peak in 2055, they would fall between 4 percent and 20 percent of total benefits 80 percent of the time.
- There is more uncertainty about the payouts from the GROW accounts because they are assumed to be invested in a mix of stocks and bonds. Stocks have higher expected returns than bonds, but they carry greater risk.
- However, payouts from the individual accounts generally restore aggregate benefits to at least the current-law level. In later years, total benefits are potentially higher than under current law, both because trust fund exhaustion is delayed and because returns on investments made in GROW accounts can be higher than the Treasury rate used to compute the growth of the notional accounts, which in turn are used to compute benefit offsets.

Figure 9.

**Potential Range of Social Security Benefits as a Share of GDP Under the Current Law and H.R. 3304, 2005 to 2105**




Source: Congressional Budget Office.

## Table 4

- Table 4 shows first-year benefits (net of income taxes paid on benefits and credited to the Social Security trust funds) for the median retired worker in three lifetime earnings quintiles. This table shows results only for retired workers. For example, the effects of changes to widow(er) or disabled-worker benefits are not shown.

- For ease of comparison, benefits are computed assuming all workers claim at age 65, even though most workers claim at earlier ages. First-year annual benefits are computed for all workers eligible to claim Old-Age Insurance benefits at age 62 who have not yet claimed any other benefit, only on the basis of earnings through age 61. Benefits are adjusted to put them into 2004 dollars.

- The bill does not affect workers born before 1950.

- Workers born in the 1950s through 1970s generally receive higher benefits. The returns on the investments in the GROW accounts may be higher than the Treasury return, so the individual account payouts are generally greater than benefit offsets to their traditional Social Security benefits. Also, the probability that a member of those cohorts will be subject to automatic benefit reductions because of trust fund exhaustion is lower under H.R. 3304 than under current law.

- The effects are similar for workers born in the 1980s through 2000s, and they are even more likely to be affected by the delay in trust fund exhaustion.

- Trust fund exhaustion is delayed because of the benefit offsets from GROW accounts. In effect, much of the benefits paid to later cohorts is financed by the general revenues that fund those accounts, as shown in the final column of Table 2.

Table 4.

**Potential Range of First-Year Total Annual Benefits for the Median Retired Worker If Benefits Are Claimed at Age 65 Under Current Law and H.R. 3304, by Birth Cohort and Lifetime Earnings Level**

| 10-Year Birth Cohort Starting in Year | Current Law Social Security Benefits | | | Alternative Social Security Benefits Plus Individual Account Payouts | | |
|---|---|---|---|---|---|---|
| | 10th | 50th | 90th | 10th | 50th | 90th |
| | Median in Lowest Household Lifetime Earnings Quintile | | | | | |
| 1940 | 7,100 | 7,500 | 7,800 | 7,100 | 7,500 | 7,800 |
| 1950 | 7,100 | 8,100 | 9,200 | 7,100 | 8,200 | 9,200 |
| 1960 | 7,000 | 8,800 | 10,600 | 7,100 | 8,900 | 10,700 |
| 1970 | 5,700 | 9,300 | 11,900 | 6,300 | 9,700 | 12,400 |
| 1980 | 5,100 | 8,900 | 13,100 | 5,900 | 10,000 | 14,000 |
| 1990 | 5,400 | 8,700 | 14,900 | 6,000 | 10,300 | 16,100 |
| 2000 | 5,300 | 9,000 | 16,500 | 5,600 | 10,100 | 17,700 |
| | Median in Middle Household Lifetime Earnings Quintile | | | | | |
| 1940 | 14,500 | 15,400 | 16,100 | 14,500 | 15,400 | 16,100 |
| 1950 | 13,500 | 15,500 | 17,500 | 13,600 | 15,600 | 17,500 |
| 1960 | 12,600 | 15,700 | 18,900 | 12,900 | 16,100 | 19,300 |
| 1970 | 10,700 | 17,600 | 22,300 | 12,100 | 18,500 | 23,700 |
| 1980 | 10,400 | 17,900 | 26,300 | 12,000 | 20,200 | 29,000 |
| 1990 | 10,700 | 17,300 | 29,500 | 11,800 | 20,600 | 32,100 |
| 2000 | 10,700 | 18,200 | 33,000 | 11,300 | 20,600 | 35,600 |
| | Median in Highest Household Lifetime Earnings Quintile | | | | | |
| 1940 | 18,800 | 20,000 | 20,800 | 18,800 | 20,000 | 20,800 |
| 1950 | 18,900 | 21,700 | 24,600 | 19,000 | 21,800 | 24,600 |
| 1960 | 18,100 | 22,500 | 27,100 | 18,400 | 23,100 | 27,600 |
| 1970 | 14,800 | 24,800 | 31,400 | 16,900 | 26,300 | 33,800 |
| 1980 | 14,700 | 25,400 | 37,600 | 17,200 | 28,800 | 41,800 |
| 1990 | 15,400 | 24,700 | 42,200 | 16,800 | 28,900 | 45,500 |
| 2000 | 15,500 | 26,000 | 46,500 | 16,200 | 29,400 | 50,600 |

Source: Congressional Budget Office.

## Attachment 3: Analysis of General Fund Transfers

The following table and two figures show the effects of transferring from the general fund to the Social Security trust funds amounts identical in size and timing to those made to the GROW accounts. They are comparable to Figure 1, Table 1, and Figure 3 in Attachment 2.

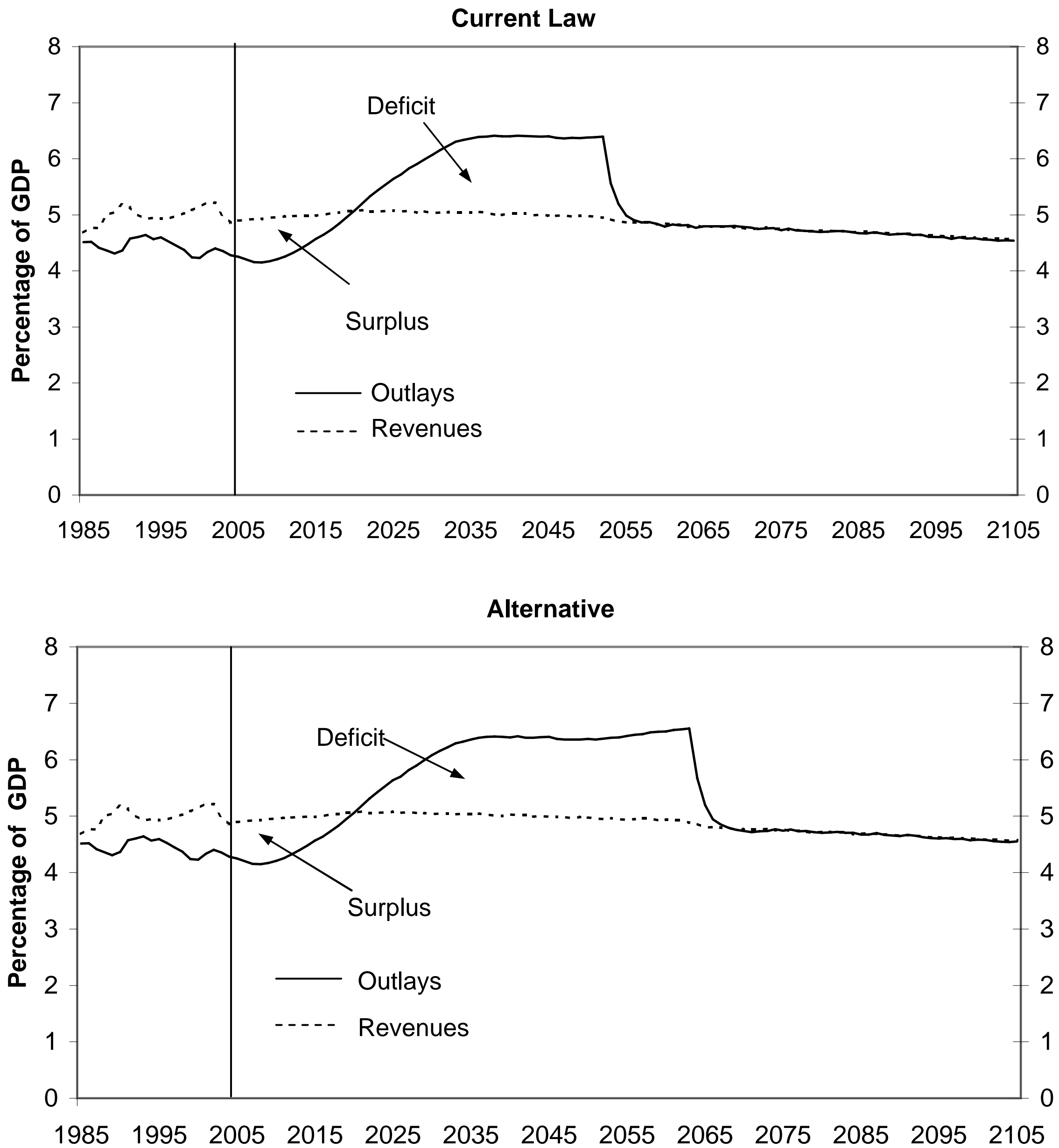
## Figure 1

- Figure 1 displays Social Security outlays and revenues as a share of GDP. Revenues include payroll taxes and income taxes on benefits but exclude interest credited to the Social Security trust fund and general fund transfers. Outlays include Social Security benefits and administrative costs.

- Although the general fund transfers would not affect dedicated revenues, they would increase the size of the trust funds. That would delay trust fund exhaustion from 2052 to 2063, allowing scheduled benefits to be paid for an additional 11 years.

Figure 1.

**Social Security Revenues and Outlays as a Share of GDP Under Current Law and General Fund Transfers Equal to Transfers to GROW Accounts, 1985 to 2105**




Source: Congressional Budget Office.

## Table 1

- The top panel shows snapshot measures of Social Security finances under current law at 20-year intervals. Following trust fund exhaustion, benefits will automatically be reduced so that annual outlays equal annual revenues. The fourth line shows the size of the automatic benefit reduction.

- Under current law, automatic benefit reductions begin in 2053 (as shown in Figure 1). By 2065, automatic benefit reductions total 1.68 percent of GDP and by 2105 amount to 2.15 percent of GDP.

- The second panel shows measures of Social Security finances under the proposal.

- General fund transfers to the Social Security trust funds would be made between 2007 and 2021 and are not reflected in the table, which shows results only at 20-year intervals.

- Outlays would be higher than under current law from 2053 through 2063, but that period is not reflected in this table, which shows results only at 20-year intervals.

Table 1.

## Social Security Finances Under Current Law and General Fund Transfers Equal to Transfers to GROW Accounts as a Share of GDP, 2005 to 2105

| | 2005 | 2025 | 2045 | 2065 | 2085 | 2105 |
|---|---|---|---|---|---|---|
| **Social Security Finances Under Current Law** | | | | | | |
| Revenues[a] | 4.90 | 5.07 | 4.99 | 4.78 | 4.70 | 4.57 |
| Outlays[b] | 4.25 | 5.64 | 6.39 | 4.78 | 4.70 | 4.57 |
| Balance[c] | 0.65 | -0.57 | -1.40 | 0.00 | 0.00 | 0.00 |
| Automatic benefit reduction[d] | 0.00 | 0.00 | 0.00 | 1.68 | 1.91 | 2.15 |
| **Social Security Finances Under Alternative** | | | | | | |
| Revenues | 4.90 | 5.07 | 4.99 | 4.78 | 4.70 | 4.57 |
| Outlays | 4.25 | 5.64 | 6.39 | 4.78 | 4.70 | 4.57 |
| Balance | 0.65 | -0.57 | -1.40 | 0.00 | 0.00 | 0.00 |
| Transfers from rest of government | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Automatic benefit reduction | 0.00 | 0.00 | 0.00 | 1.68 | 1.91 | 2.15 |

Source: Congressional Budget Office.

a. Revenues equal payroll taxes and income taxes on benefits as a share of gross domestic product (GDP) in the specified year.
b. Outlays equal Social Security benefits and administrative costs as a share of GDP in the specified year.
c. The balance is the difference between revenues and outlays as a share of GDP in the specified year; may not equal the difference of the previous two rows because of rounding.
d. The reduction in scheduled outlays as a share of GDP that occurs through benefit cuts once the Social Security trust funds are exhausted.

## Figure 2

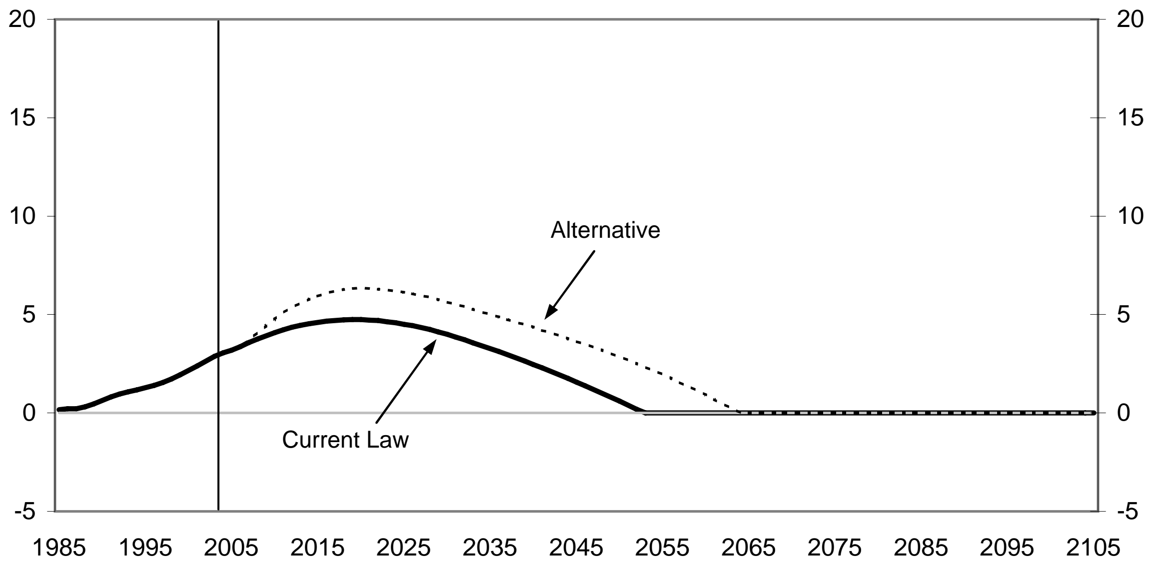
- The trust fund ratio—a measure of the adequacy of the trust fund—is the ratio of the total trust fund balance at the beginning of the calendar year to total Social Security outlays during that year. After the trust funds are exhausted, outlays are limited to dedicated revenues, holding the ratio at zero.

- All trust fund assets are included, regardless of their source. The intragovernmental transfers to the trust fund increase the trust fund ratio, although they have no direct effect on the total federal budget.

- The trust fund ratio is larger than under current law beginning in 2007, when the transfers begin, until it falls to zero in 2063.

Figure 2.

**Social Security Trust Fund Ratios Under Current Law and General Fund Transfers Equal to Transfers to GROW Accounts, 1985 to 2105**




Source: Congressional Budget Office.

## Attachment 4: Alternative Investments, Risk, and Return

Stocks have higher expected returns than bonds, but they also have greater risk. In long-term analyses of proposals to change Social Security, CBO presents two types of analyses. One shows a single set of outcomes and uses market valuations to account for the relative values of return and risk. The other displays a range of outcomes and shows risk and return explicitly.

The use of market valuations to produce risk-adjusted returns informs the debate about trade-offs in Social Security reform, but those returns are not a predictor of accumulations in investment accounts. To see why, note that CBO assumes that over the long term, the average real return on equities will be 6.8 percent. However, equity returns are subject to a great deal of volatility— in CBO's analysis, there is about a 10 percent chance that the return in a given year could be less than -18 percent and a 10 percent chance that it could be more than 37 percent. Assuming that an individual invested $1,000 annually for 45 years, an average return of 6.8 percent would translate into roughly $270,000 in today's dollars. However, at the upper end, there would be a 10 percent chance that the accumulation would be $900,000 or greater, and on the downside, there would be a 10 percent chance that the accumulation after 45 years would be less than $76,000 (see Figure 1). In short, although the average rate of return is 6.8 percent, the investment risk inherent in equities translates into considerable variation in total possible accumulation.

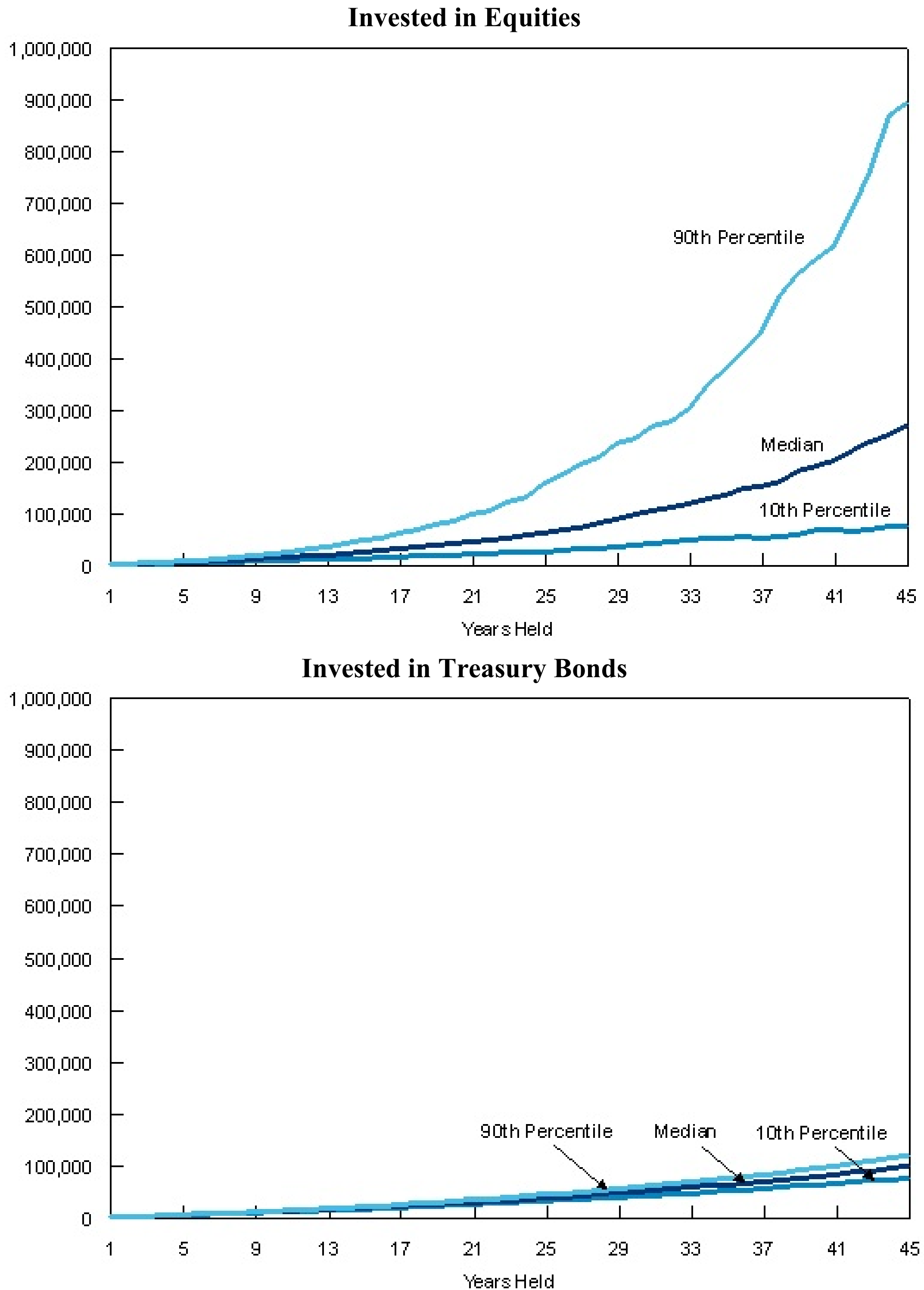
Treasury securities have lower expected returns; CBO assumes that they will yield a 3.3 percent real return annually. On the other hand, they are subject to much less volatility than equities. As a result, a similar comparison of total accumulation over 45 years varies much less (see Figure 1). The median projection is about $98,000, but there is a 10 percent chance of accumulating more than $120,000 and a 10 percent chance of accumulating $75,000 or less.

This information about *outcomes* documents the trade-offs between risk and return that informed investors seek, financial advisers provide, and consultants give their clients. A very different question is "What should I do *now*?" Looking at a range of outcomes does not indicate whether a person would buy equities, put dollars into Treasury securities, or seek a mix. In the context of Social Security, a beneficiary might have to decide to take up a voluntary individual account and effectively make a trade-off between the account and Social Security annuities in the future.

Figure 1.

## Balance of an Account with a $1,000 Annual Investment

(Real dollars)




Source: Congressional Budget Office.

How do people make those kinds of decisions? Every individual will have an internal yardstick for tolerating additional risk to gain additional expected returns. For the purposes of analyzing Social Security—a government program—it is appropriate to use a broad, market-based measure that shows how much compensation individuals demand, in the form of higher returns, to induce them to hold the equities that have higher risk. Or, put another way, people are willing to hold Treasury bonds to avoid exposure to risk that they find undesirable.

Thus, financial markets are useful for providing information about how individuals place value *now* on those alternative futures displayed in the two graphs. One alternative future has a higher return and a wide range of outcomes. The second has essentially a single path into the future. Financial markets tell us how to put those outcomes on a level playing field by noting that the risk-adjusted rate of return, the 3.3 percent future return assumed for Treasury bonds, is the current valuation of both futures—it makes people indifferent between holding equities or holding Treasury bonds.

In sum, risk-adjusted returns do not predict the likely accumulation of accounts in the future. Instead, they are a useful yardstick of value to put trade-offs on a level playing field. For example, they help inform how to trade off traditional annuities and individual accounts in a voluntary setting. They also inform budgetary trade-offs both within Social Security and between Social Security and other government programs.