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Social Security Reform: President Bush's Individual Account Proposal

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Summary

The Old-Age, Survivors, and Disability Insurance (OASDI) program, commonly referred to as Social Security, is facing a long-term financial deficit. In response to this challenge, President Bush has made Social Security reform the key focus of his domestic social policy agenda during his second term. On February 2, the President issued a document, "Strengthening Social Security for the 21st Century," which lays out the specifications for a system of voluntary individual accounts to be phased-in as part of a reformed Social Security system. Administration officials concede that the individual accounts themselves do not alleviate the solvency problem. The individual account proposal would likely make the solvency problem worse over the next 75 years. The President has not yet specified how the additional shortfall due to the individual accounts will be financed. The President has stated that these accounts are just one piece of a comprehensive Social Security reform package and that additional measures will be needed to achieve long-term solvency. At the time of this report's publication, the President has not specified what these additional measures might be.

Under the President's individual account proposal, individuals born prior to 1950 would experience no change in their Social Security benefits. Individuals born in 1950 and later would have the option to participate in Social Security individual accounts (IAs). Workers who choose to participate in IAs may not opt-out of the IA system. Workers would be allowed to divert up to 4% of their payroll taxes to IAs, subject to a dollar limit that increases over time. But on average people would have to earn at least 3.3% per year after inflation to break even. This occurs because, in addition to administrative costs, their traditional benefits would be reduced or "offset" by the amount of their contributions, plus 3% a year in interest. The proposal does not include a "minimum benefit" guarantee to ensure that participants would receive a total benefit at least equal to the poverty threshold.

Analyzing the President's IA proposal using assumptions on investment returns and administrative costs provided by the Social Security Administration, we find that the total of the reduced Social Security benefit *plus* the annuity that would be available using the actual IA balance would exceed Social Security current-law promised benefits if the account earns the 4.6% annual real rate of return projected by the Social Security actuaries. However, if the account earns the 2.7% risk-adjusted annual real rate of return projected by the actuaries, workers would face a slight reduction in overall Social Security income relative to current law. Younger workers and those with higher lifetime earnings would benefit the most from IAs. Younger workers would be able to contribute to their IA throughout their careers and would have higher contributions as a result of continued wage growth. Higher earners would benefit from being able to accrue larger account balances as the dollar cap on contributions increases over time.

These findings are subject to change if additional provisions are specified at a later date. This report will be updated as additional details become available.

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The Old-Age, Survivors, and Disability Insurance (OASDI) program, commonly referred to as Social Security, is facing a long-term financial deficit. In 2041, the Social Security Trust Funds will be depleted and tax revenues will be sufficient to cover approximately 74% of benefits promised at that time.

Given this challenge, President Bush has made Social Security reform the key focus of his domestic social policy agenda. On February 2, the President issued a document, "Strengthening Social Security for the 21st Century," which lays out the specifications for a system of voluntary individual accounts funded out of the current payroll tax to be phased-in as part of a reformed Social Security system. Administration officials concede that the individual accounts themselves do not alleviate the solvency problem.[1] These accounts would likely worsen the solvency problem over the next 75 years. The President has not yet specified how the additional shortfall due to the individual accounts will be financed. The intent of these accounts is (1) to offset at least a portion of the anticipated benefit reductions or tax increases that will be necessary to achieve solvency; (2) to make the Social Security system a better deal for younger workers, who are most likely to be affected by these changes; and (3) to provide a benefit that each worker would individually own that the government could not take away. The President has stated that these accounts are just one piece of a comprehensive Social Security reform package and that additional measures will be needed to achieve long-term solvency.[2] At the time of this report's publication, these additional measures have not yet been specified. Thus, this report focuses solely on the individual account component of the President's Social Security reform proposal.

The President's Social Security Individual Account Proposal

Individual Account Contributions. Under the President's proposal, individuals born prior to 1950 would experience no change in their Social Security benefits. Individuals born in 1950 and later would have the option to participate in Social Security individual accounts (IAs). Workers born in years 1950 through 1965 could first participate in 2009. Workers born in years 1966 through 1978 could first participate in 2010. Workers born in years 1979 and later could first participate in 2011. Those who choose to participate would be able to divert up to 4% of their

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[1] White House Background Press Briefing on Social Security, Feb. 2, 2005.

[2] President George W. Bush, State of the Union Address, Feb. 2, 2005.

Social Security covered wages into an individual account.[3] The actual maximum dollar amount of contributions would be gradually increased, such that low-earners would be able to immediately contribute a full 4% of earnings to their IA, while higher earners would initially have their contributions capped. In the first year of account availability, 2009, the cap on contributions would be $1,000. According to the Social Security actuaries, this cap would increase by $100 each year and then be increased by the growth in the national average wage.[4] For example, in 2010, the contribution limit would be equal to $1,100 increased by the growth in average wages between 2007 and 2008, or $1,145. The actuarial memorandum only covers the years through 2015, and the contribution limit rises using this method each year until then. Although it is not specified in the actuarial memorandum, the February 2, document implies that this dollar contribution limit would continue to rise after 2015, but that contributions would never exceed 4% of covered wages.

Individuals who do not choose to participate in the IA system would continue to draw benefits from the traditional Social Security system; however, these benefits are likely to be reduced to achieve long-term solvency. Individuals who choose to participate in the IA system would not be permitted to discontinue their participation, would be subject to benefit reductions based on their participation in the IA, and would also be subject to benefit reductions to achieve long-term solvency.

Account Administration and Investment. Individual account contributions would be collected and records maintained by a central administrator. Private investment managers would be chosen through a competitive bidding process to manage pooled account contributions. The central administrator would be responsible for addressing participant questions and issuing periodic account statements. The Social Security Administration's actuaries estimate that the ongoing administrative costs for a centralized system with limited choice of fund investment would be roughly 0.3 percentage points (or 30 basis points).[5]

Individuals who opt-in to the IA system would choose from a few broad-based investment funds: a government bond fund; an investment-grade corporate bond index fund; a small-cap stock index fund; a large-cap stock index fund; and, an international stock index fund.[6] In addition, workers could choose a government

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[3] In 2005, Social Security covered wages are capped at $90,000. This cap is indexed annually to increases in the national average wage.

[4] Social Security Administration Memorandum to Charles P. Blahous, Special Assistant to the President for Economic Policy, National Economic Council from Stephen C. Goss, Chief Actuary, "Preliminary Estimated Financial Effects of a Proposal to Phase In Personal Accounts — INFORMATION," Feb. 3, 2005.

[5] Some have argued that this assumption may understate the true administrative costs of such a system. The actuaries did not provide an estimate of the costs associated with annuitization.

[6] An index fund is a fund composed of securities intended to replicate the movement of a specific securities index (e.g., the Dow Jones, Standard & Poors 500, etc.). Index funds are considered to be passive investments since the portfolio manager does not have to decide among various securities for investment. Rather, the manager knows the securities that make

(continued...)

bond fund with a guaranteed rate of return above inflation. Workers could also select a "life-cycle portfolio" that would automatically adjust the level of risk and return of the investments by gradually reducing the portion of the portfolio invested in stocks and increasing the proportion invested in bonds as the worker aged in an attempt to avoid sudden losses closer to retirement. This portfolio would be the default choice for workers reaching age 47, although the worker could opt-out if the worker and his or her spouse signed a waiver stating that they are aware of the risks. Workers would be able to adjust their allocations among these funds annually.

Life-cycle portfolios reduce the probability of a sudden loss of capital due to a decline in equity values, but they do not eliminate this risk. Furthermore, with the switch to heavier investment in bonds rather than stocks comes a reduced expected rate of return in the account balance. The rate of return one earns closer to retirement has a greater effect on the overall account balance than the rate of return earned at the start of a working career because that interest rate is applied to every dollar held in the account at that point in time, not just the account a few years into one's career. Shifting the asset allocation to favor bonds does reduce the down-side risk, but it also limits the up-side gains.[7]

In the scenario described in the President's proposal, the life-cycle portfolio would specify an asset allocation shift based on a worker's planned year of retirement. Thus, all workers retiring in a given year have the same portfolio of stocks and bonds. The primary appeal of these "targeted retirement date" life-cycle portfolios is the minimal involvement required by the investor. Once the individual joins the fund, the assets are on auto-pilot and the individual does not need to decide when or how to adjust the portfolio. However, this 'one size fits all' approach may not be ideal for those who have investments outside the Social Security IA system as it could undermine the intended overall asset allocation for that worker's age. For example, a worker who already has a great deal invested in bonds in a 401(k) plan may not want the automatic shift towards bonds specified by a life-cycle portfolio because it could place too great a portion of his or her assets in fixed income securities. This approach may also not be ideal for those with different tolerance for risk. For example, the asset allocation specified for someone at age 35 might be 80%

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[6] (...continued)
up the index and their relative importance to the overall index and seeks to match it. Because the management of the investment is less active, the expenses and transaction costs are low. The advantage of index funds is that, since most funds do not beat the index anyway, the investor has a greater chance of at least matching industry averages. The limitation of the index fund is that it must purchase all of the securities in the index even if the market indicates that a particular security in the index is going to lose value. (Taken from p. 501, "How the U.S. Securities Industry Works," by Hal McIntyre).

[7] Robert J. Shiller of Yale University recently conducted a computer simulation using financial data going back to 1871. He found that people enrolled in life-cycle accounts would have lost money 32% of the time under the President's IA proposal because the rate of return earned is less than the 3% real rate of return required to break even in the proposal. For additional information please see Robert J. Shiller's study, "The Life-Cycle Personal Accounts Proposal for Social Security: An Evaluation," Yale ICF Working Paper No. 05-06, Apr. 2005, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract_id=703221].

in stock and 20% in bonds. However, some individuals may be risk averse and prefer a portfolio with 70% stock and 30% bonds.

Offset to Social Security Defined Benefit Based on Hypothetical Individual Account. If a worker chooses to participate in an IA, in exchange for the reduction in contributions to the defined benefit Social Security system, he or she would accept a future Social Security benefit reduction. The benefit reduction would apply to the Social Security retirement, spousal or aged widow(er) benefit that would otherwise be paid to him or her.[8] This future benefit reduction is equal to the contributions made to the worker's individual account plus 3% per year in interest. For each *actual* account that a worker contributes to and receives upon retirement, there is also a *hypothetical* "shadow" account that exists only as an accounting mechanism. The "shadow" account records all of the contributions made to the actual account and grows them at a fixed annual real rate of return (the rate one would earn after adjusting for inflation) of 3%, essentially equal to what the Social Security Administration actuaries project these contributions would have earned had they continued to be paid into the Social Security system and invested in Treasury bonds in the Trust Funds.[9] Thus, the 3.0% offset is intended to reflect the portion of the Social Security benefit the worker chooses to forgo and replace with individual account proceeds by diverting a portion of his or her payroll tax away from the Social Security system.

Table 1 provides an example of how this would work. In this example, Mary works and contributes to her individual account for 10 years, between 2021 and 2031. Each year, Mary contributes an amount equal to 4% of her Social Security covered wages to her individual account. For example, she earns $15,000 in 2021 and therefore contributes $600 to her IA, where we assume it grows at a 4.6% annual real rate of return and results in an end of year account balance of $622. When she makes her $600 contribution to her actual IA, the "shadow" IA reflects this same contribution amount, but grows it at a fixed 3.0% annual real rate of return so that at the end of the first year her "shadow" IA records a balance of $617. This same process continues every year until she retires in 2031. At that point, her actual IA balance is $15,648 and her "shadow" IA balance is $14,327. Upon retirement, the account balance of this hypothetical "shadow account" is converted into a hypothetical CPI-indexed monthly annuity.[10] This hypothetical annuity would be used to reduce, or offset, the Social Security defined benefit.

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[8] According to the Social Security actuarial memorandum, disability benefits would not be reduced.

[9] Unlike the actual individual account, which is reduced on an annual basis by 0.3% of assets and results in an "expected" net 4.6% annual rate of return or a "risk-adjusted" 2.7% rate of return, the "shadow" account is not reduced for any administrative fees. See the Methodology section for additional detail.

[10] An annuity is an insurance instrument that provides a stream of periodic payments in return for an up front payment called the "premium." In this case, the premium would be the individual's account balance at retirement.

Table 1. Mary's Actual and "Shadow" Individual Accounts

Year	Annual wage (nominal)	Actual account contributions (nominal)	Shadow account contributions (nominal)	Actual account balance (assuming 4.6% real rate of return)	Shadow account balance (fixed 3.0% real rate of return)
2021	$15,000	$600	$600	$622	$617
2022	$17,500	$700	$700	$1,395	$1,374
2023	$20,000	$800	$800	$2,329	$2,278
2024	$22,500	$900	$900	$3,438	$3,338
2025	$25,000	$1,000	$1,000	$4,734	$4,564
2026	$27,500	$1,100	$1,100	$6,231	$5,964
2027	$30,000	$1,200	$1,200	$7,944	$7,550
2028	$32,500	$1,300	$1,300	$9,891	$9,332
2029	$35,000	$1,400	$1,400	$12,087	$11,321
2030	$37,500	$1,500	$1,500	$14,552	$13,531
Account balance in 2031				$15,648	$14,327

Source: Created by CRS.

Continuing the example above in **Table 2**, based on Mary's 10-year work history, Mary could expect to receive a Social Security defined benefit equal to about $654 per month in 2031. Mary's "shadow" account would produce a CPI-indexed annuity of $82 per month. This "shadow" annuity is used to reduce, or offset, Mary's Social Security benefit, leaving her with a Social Security defined benefit of $572. Assuming that Mary chooses to annuitize her entire actual IA balance, Mary's actual IA would produce a CPI-indexed annuity of $89 per month. The annuity from the actual IA plus her reduced Social Security defined benefit would provide Mary a combined Social Security income of $662.

Table 2. How Mary's "Shadow" Account Offsets Her Social Security Defined Benefit and How Her Actual Account Contributes to Her Social Security Income in 2031

Mary's current-law Social Security defined monthly benefit	$654
Minus "shadow" account monthly annuity (based on fixed 3.0% annual real rate of return)	- $82
Equals remaining Social Security defined monthly benefit	= $572
Plus actual account monthly annuity (assuming 4.6% annual real rate of return)	+ $89
Equals combined Social Security monthly income	= $662

Source: Created by CRS.
Note: Example assumes current law provisions remain in place through 2031 and that Mary chooses to annuitize her entire IA balance.

Individual Account Distributions. Workers would not be permitted to have access to their IA balances prior to retirement. Upon retirement, the receipt of aged widow(er) benefits, or conversion from disabled worker to retirement benefits, the IA accumulation would be available to the beneficiary. Individuals may be required to purchase an annuity or take in phased withdrawals a portion of the IA balance. The portion required to be annuitized or taken in phased withdrawals would be equal to the dollar amount needed to provide the worker with a total monthly benefit equal to at least 100% of the federal poverty threshold when combined with the reduced Social Security defined benefit. For example, looking back at **Table 2**, Mary's reduced Social Security defined benefit would be equal to $572 (in 2005 dollars). In 2031, the year of Mary's retirement, the monthly poverty level is projected to be equal to $766 (in 2005 dollars). Thus, Mary would be required to annuitize or take in phased withdrawals whatever portion of her IA is needed to provide a monthly stream of income equal to $194 ($766 - $572).

The annuity purchased or phased withdrawals taken would be required to be CPI-indexed so that the annual amounts increase with inflation and, thus, retain purchasing power. If after the purchase of this annuity or estimation of phased withdrawals the worker still has a balance in his or her IA, the remainder may be withdrawn as a lump-sum or left as an inheritance. There would be no "minimum benefit" guarantee to ensure that participants would receive a total benefit at least equal to the poverty threshold.[11]

Under the system of phased withdrawals, also referred to as programmed withdrawals or "self-annuitization," the worker's account balance is divided in such a way as to allow the worker to withdraw an equal amount each month (indexed to inflation) until the retiree dies or until the IA funds are depleted. This amount is calculated taking into account projected future inflation, interest rates and life expectancy. It has not yet been specified who will take the role of calculating the size of these withdrawals. The advantage of phased withdrawals as opposed to an annuity is that a worker who does not expect to live to projected life expectancy could withdraw whatever portion of their IA assets are needed to stay above poverty and, upon death, the remaining balance would be available to pass along as an inheritance.[12]

When a worker purchases a CPI-indexed annuity, risks of higher than expected inflation, lower than expected interest rates, and of living longer than an individual's projected life expectancy are borne by the insurance company. When a worker opts to take phased withdrawals, these risks are borne by the worker. Thus, if inflation

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[11] The plan does not specify whether the poverty threshold to be used is for the single worker, for all individuals who are expected to receive benefits off of the worker's record, or all household members.

[12] Not all individual accounts are likely to have large enough balances to provide a monthly withdrawal amount that, when combined with the reduced Social Security defined benefit, is able to provide a combined Social Security income equal to 100% of the federal poverty threshold, whether provided in the form of an annuity or as a phased withdrawal. The current-law Social Security program also does not guarantee a benefit amount equal to 100% of the federal poverty threshold.

grows faster than originally expected, the amount of money that the worker must withdraw to remain above poverty would increase, leading the worker to deplete his or her IA assets faster than planned. Under phased withdrawals, the worker retains the responsibility for investing the individual account assets in such a way as to ensure a rate of return that would maintain an account balance sufficient to provide the appropriate level of withdrawals until the expected date of death. If the worker fails to invest in such a way as to ensure the rate of return needed to maintain an account balance until they die, then the withdrawal amounts would eventually exceed the balance remaining in the IA, leading the worker to have insufficient resources to remain above poverty. Under a phased withdrawal system, the worker also faces the risk that they will live beyond the date of life expectancy that was used to calculate the phased withdrawal amounts. The date of life expectancy is, by definition, the average remaining number of years prior to death. Thus, on average, about 50% of those opting for phased withdrawals will die prior to running out of IA funds and 50% will live longer than expected and run out of IA funds. In this case, the worker would have received larger withdrawal amounts than could be sustained with the IA balance at retirement and the worker would risk running out of funds prior to death. Phased withdrawals do not guarantee that those with IA balances projected to be sufficient at retirement (when the monthly phased withdrawal amount is calculated) will avoid falling into poverty.

If a worker decides not to use inflation-indexed phased withdrawals of a portion of his or her IA to maintain above poverty level retirement income, he or she would be required to purchase a CPI-indexed annuity to achieve this goal. Although the President's plan requires the purchase of CPI-indexed annuities, there is currently a very limited market for these annuities in the United States. Although the Treasury has issued Treasury Inflation Protection Securities (TIPS) since 1997, the demand for inflation-indexed annuities remains small, possibly because many workers feel that they already have some form of inflation protection from current-law Social Security benefits. If, however, these types of annuities were to be mandatory and accompanied by the required reduction in Social Security benefits for IA participants, the experience in the United Kingdom indicates that it is likely that such a market would develop.[13]

Analysis of the President's IA Proposal

Although the President's IA proposal would worsen Social Security solvency within the next 75 years, in the long-run, the shadow accounts and the resulting offsets in Social Security defined benefits would reduce benefit costs to the current-law program. Because of the short-run costs, and barring other benefit reductions or tax increases, the IA proposal is likely to increase publicly held debt and increase the unified budget deficit. Under the President's IA proposal, younger workers and higher earners who can contribute to the IA for longer periods of time or contribute larger amounts to the IA would have larger IA balances and annuities than those who contribute over fewer years or contribute fewer dollars. As a result of the larger IA

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[13] Brown, Jeffrey, Olivia Mitchell and James Poterba, *The Role of Real Annuities and Indexed Bonds in an Individual Accounts Retirement Program*, National Bureau of Economic Research, Working Paper no. 7005, Mar. 1999.

balances, younger workers and higher earners would have a lower Social Security defined benefit. Whether a worker does better under the individual account proposal depends on whether he or she is able to obtain a higher annual rate of return (net of administrative expenses) than the 3.0% real rate of return used to calculate the shadow account.

While we know the individual accounts are likely to make the solvency problem worse, the President has not yet specified how this additional shortfall will be financed. It could be financed through (1) increased government borrowing (to be paid off eventually through general revenues); (2) increased payroll taxes or other tax increases; or (3) additional benefit reductions. We have provided estimates of combined Social Security income under two scenarios: one where we assume that trust fund revenues are found and the trust fund can provide "scheduled" current law Social Security benefits, and one where we assume that trust fund revenues are not found and the current-law benefit is reduced to a "payable" level based on estimated current-law revenues. However, because the Social Security Administration actuaries were not provided with the plan specifications needed to produce a 75-year analysis of how the President's IA proposal would affect solvency, we do not know the size of the annual benefit reductions that would be required to maintain trust fund solvency under a payable baseline. Therefore, the results below do not take into account the benefit reductions *on top of* those required under current-law and under the "shadow" account offset that would be necessary under the President's IA proposal to achieve solvency. Thus, this analysis tends to overstate the combined Social Security income that would be available under the IA proposal compared to a current-law payable baseline. However, the total Social Security income possible for a scaled average-wage worker using the 'expected' 4.6% annual real rate of return would be 31% higher than current-law payable benefits for younger cohorts.[14] Thus, if the additional benefit reductions required to achieve solvency under the IA plan reduce benefits by less than 31%, scaled average-wage workers under the IA plan would still come out ahead. One important limitation of using these assumed constant annual interest rates is that historical rates of return have not followed such a pattern. Interest rate fluctuations over time and where these fluctuations occur in a worker's career can have a large effect on the estimated account balances of workers under an IA system.

Effect on Social Security Solvency. Administration officials acknowledge that the proposed individual accounts alone do not improve the Social Security solvency problem. In the short-run, these individual accounts are likely to make the solvency problem worse. The President's plan permits individuals to contribute up to 4 percentage points (up to a dollar contribution limit) of the current 12.4% payroll tax into individual accounts, thus diverting current revenues away form the traditional Social Security system. By itself, this step would worsen the Social Security solvency problem because these dollars are taken from the Social Security surpluses and therefore the Trust Funds don't accrue the same balances that they otherwise would have and they also earn less interest on these reduced balances. Not including the lost interest earnings, the cost to the Trust Funds between 2005 and

[14] For details on "scaled" wage workers, please refer to the Methodology section.

2015 would be approximately $541 billion in constant 2004 dollars.[15] By the end of 2015, the IA proposal would increase publicly-held debt by $587 billion in 2004 dollars. The second piece of the President's IA proposal, the reduction in Social Security benefits based on the "shadow" account, has the effect of offsetting the cost of the IA proposal and potentially improving the solvency problem in the long run. However, because this reduction only takes place upon a worker's retirement, but the contributions to the IA begin almost immediately and continue up to the worker's year of retirement, the savings from the benefit offset takes many years to counter the loss of revenue to the Trust Funds from the IA itself. Between 2005 and 2015, these offsets reduce Social Security benefits by only $3 billion constant 2004 dollars. The Social Security actuaries estimate that the year in which Social Security costs exceed Social Security tax revenue would be 2012 under the President's proposal instead of 2017 under current law.

If, as indicated in the actuarial memorandum, disability recipients are not subject to the "shadow" account offset (presumably because disabled workers would not have access to their accounts until their disability benefits convert to aged retirement benefits at the full retirement age), then the Trust Funds would be made worse off because they would still have the burden of paying full Social Security benefit amounts to disability recipients (who are by definition under the retirement age) even though these individuals may have participated in the IA system, thereby reducing the revenues available to pay these benefits. The actuarial memorandum implies that disabled individuals would be subject to the offset upon conversion from disability benefits to retirement benefits at the full retirement age, reducing the cost of their benefit payments from that point on.

The actual effect of the President's proposal on solvency is dependent upon the number of individuals who participate in the system of individual accounts and upon their level of earnings. The Social Security actuaries assume that approximately two-thirds of all eligible workers will opt-in to the account system. The actuaries do not attempt to predict what types of workers (e.g., high wage, low wage, etc.,) would participate in the IA system, but instead rely on estimates of the aggregate dollar amounts that would likely be diverted from current payroll taxes. The larger the number of individuals who participate in the accounts, the greater the dollar amount diverted away from the current Social Security system, and the greater the up-front negative impact on Social Security solvency. Of course, the greater the number of individuals who choose to participate in the IA system, the greater the eventual reduction in benefits promised to these individuals under the current Social Security system and the greater the potential long-term enhancement to Social Security solvency.

The Social Security actuaries, who estimate the effect of Social Security reform proposals on solvency, were unable to produce the standard 75-year estimate of the effect of the President's proposal because they were only given specifications through

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[15] Social Security Administration Memorandum to Charles P. Blahous, Special Assistant to the President for Economic Policy, National Economic Council from Stephen C. Goss, Chief Actuary, "Preliminary Estimated Financial Effects of a Proposal to Phase In Personal Accounts — INFORMATION," Feb. 3, 2005.

2015. However, based on a similar individual account structure introduced by Senator Lindsey Graham as part of a larger reform proposal in the 108th Congress (S. 1878) and analyzed by the Social Security actuaries, it seems likely that over a 75-year period the President's individual account proposal would not pay for itself through benefit offsets, nor reduce the existing solvency problem.[16] In present value terms, Senator Graham's individual account proposal alone would have added $2.7 trillion in constant 2004 dollars to the $4.0 trillion current-law Social Security shortfall.[17]

Some individual account proposals, such as that introduced by Representative Shaw (H.R.750 in the 109th Congress), use the actual individual account to provide revenue to the Social Security Trust Fund to pay Social Security benefits. The individual is still responsible for investing the IA assets, but instead of reducing the Social Security benefit based on contributions to the IA, the actual IA is handed over to the government for use in paying for the individual's Social Security benefits. The Social Security benefit payments are fixed, but the rate of return earned by each individual worker on his or her account, and thus the account balance, is *subject to fluctuation*. Thus, the Trust Fund is subject to the risk that the individual accounts will not be invested in a way that produces sufficient revenue to pay for an individual's lifetime benefits. Alternatively, the President's proposal provides the Trust Funds with a *guaranteed* source of revenue in the form of reduced benefit costs, which is equal to the individual's IA contributions grown at a real annual 3% interest rate. Therefore, the Trust Funds are not subject to any investment risk. With the lower "traditional" Social Security benefits, the President's proposal also lowers the impact on the Trust Funds from the costs of unexpected increases in inflation or longevity. Individuals are responsible for purchasing an annuity (in which case these risks are shifted to the insurance company that sold the annuity) or making phased withdrawals (in which case these risks are borne by the individual).

Effect on the Unified Budget. The unified budget (the combined on- and off-budget) could be affected by this proposal in two ways. First, if the government relies on general revenues to reimburse Social Security for the loss of revenue due to the diversion of funds for the IA, the Treasury would need to either increase tax revenues, reduce other government spending, or increase government debt. According to the Office of Management and Budget, the President's IA proposal will require transition financing of $664 billion over the next 10 years, or $754 billion

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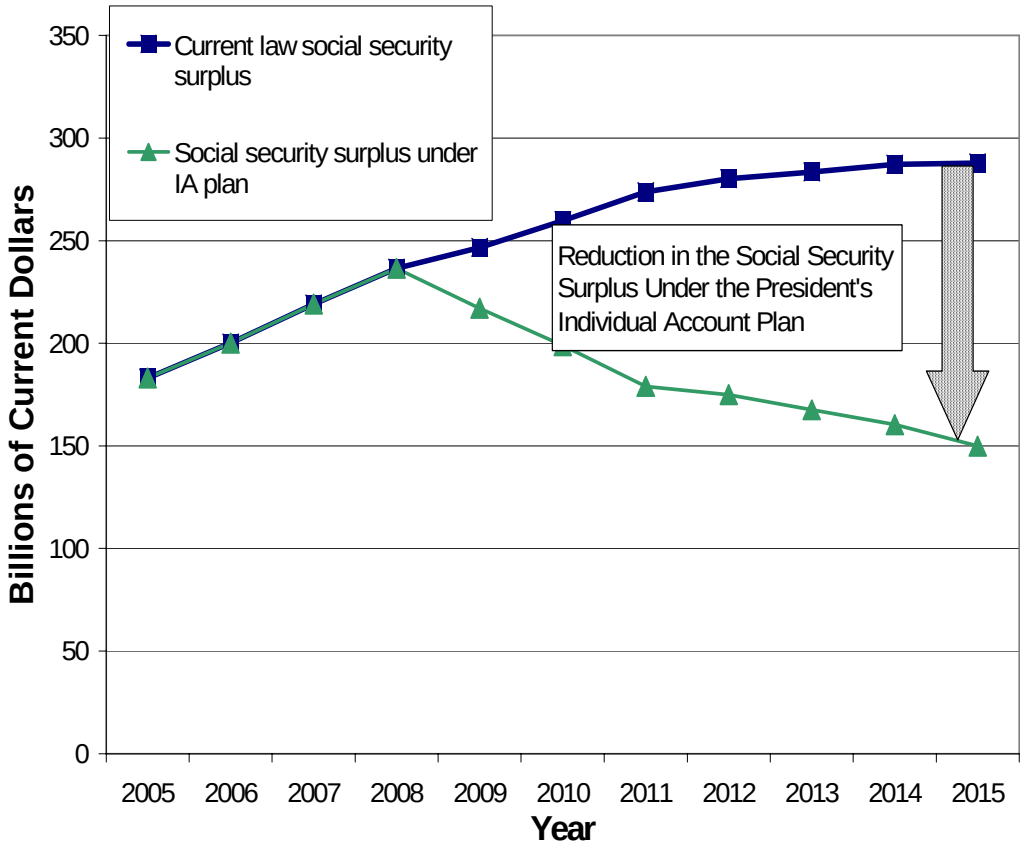
[16] The default option under Sen. Graham's plan was an individual account funded by a carve-out equal to 4% of the current payroll tax, with contributions capped at $1,300 in 2006 and increased with the percent increase in the national average wage thereafter. The benefit offset was calculated using account contributions grown at a real annual interest rate of 2.7%.

[17] The Congressional Research Service (CRS) calculation based on Social Security Administration Memorandum from Chris Chaplain and Alice H. Wade to Stephen C. Goss on the "Estimated OASDI Financial Effects of 'Social Security Solvency and Modernization Act of 2003' introduced by Senator Lindsey Graham — INFORMATION," Nov. 18, 2003. For details on how CRS calculated this estimate, please refer to CRS Report RS22010, *Social Security: 'Transition Costs'*, by Laura Haltzel.

including interest if additional debt is issued to cover these costs.[18] Second, as **Figure 1** below illustrates, diverting Social Security revenues into individual accounts reduces the Social Security surplus, thereby reducing the off-budget surplus. Social Security surplus dollars are not held by the Social Security Trust Funds.

Figure 1. Effect of the President's Individual Account Proposal on Projected Social Security Surpluses (Billions of current dollars)



Source: Congressional Research Service (CRS) Calculations based on the 2004 Social Security Trustees Report, Table VI.F.9 and the Feb. 3, 2005 Social Security Actuarial Memorandum to Charles Blahous, Table 1.b.2.

Note: The 2004 Social Security Trustees Report is used because this was the basis for the estimates provided in the Social Security memorandum to Charles Blahous.

Rather, according to law, surplus receipts are credited to the Social Security Trust Funds in the form of special-issue non-marketable Treasury bonds. The actual surplus dollars are held by the U.S. Treasury where they become part of the general revenue pool and can be used to increase spending, reduce taxes, or reduce the

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[18] "Strengthening Social Security for the 21st Century," White House, Feb. 2005, available at [http://www.whitehouse.gov/infocus/social-security/200501/strengthening-socialsecurity.html]. For additional information on transition costs, see CRS Report RS22010, *Social Security: Transition 'Costs'*, by Laura Haltzel.

government debt.[19] In recent years, Social Security surpluses have been used to offset increased spending or reduced taxes since the rest of the government's budget (on-budget) has been in deficit. Thus, any reduction in the Social Security surplus (off-budget) would, barring other changes, lead to an increased unified budget deficit.

Effect on Combined Social Security Income. Based on the assumptions and methodology described below, we find that the total of the reduced Social Security defined benefit *plus* the annuity that would be available using the actual IA balance would exceed Social Security current-law promised benefits if the account earns the 4.6% annual real rate of return projected by the Social Security actuaries. However, if the account earns the 2.7% risk-adjusted annual real rate of return projected by the actuaries, workers would face a slight reduction in overall Social Security income relative to current law.[20] Younger workers and those with higher lifetime earnings would benefit the most from IAs. Younger workers would be able to contribute to their IA throughout their careers and would have higher contributions as a result of continued wage growth. Higher earners would benefit from being able to accrue larger account balances as the dollar limit on contributions increases over time until it reaches the full 4% of covered wages.

How an individual worker would fare under the IA proposal would depend entirely upon how the actual rate of return earned by the worker's IA compared to the fixed "benefit offset" rate of 3%. The worker would bear all of the investment risk. If a worker's actual account attained an annual real rate of return greater than 3%, the balance of the actual account would be higher than that of the "shadow" account. Thus, while the Social Security benefit would be reduced by the annuity based on the "shadow" account, an annuity from the actual account would be larger and would more than offset the reduction to the defined benefit. Therefore, the combined actual individual account annuity plus the Social Security benefit reduced by the "shadow" account would be larger than what the worker is scheduled to receive under current law. On the other hand, if a worker's actual account attained an annual real rate of interest lower than 3%, the balance of the actual account would be lower than that of the shadow account. Thus, while the Social Security benefit would be reduced by the annuity based on the "shadow" account, an annuity from the actual account would be smaller and would not offset the reduction to the worker's Social Security benefit. Therefore, the combined actual IA annuity plus the Social Security benefit reduced by the "shadow" account would be smaller than what the worker is promised to

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[19] For additional information on how Social Security financing works, please refer to CRS Report 94-593, *Social Security: Where Do Surplus Taxes Go and How Are They Used?*, by Geoffrey Kollmann.

[20] The higher rate of return one expects to earn from investing in stocks is due to the higher risk such an investment carries. The difference between the rate of return on stocks and the rate of return on government bonds is known as the "risk premium," the amount of compensation the market demands for taking on the additional risk of investing in stocks relative to the lower risk of investing in government bonds. In this case, because stocks are assumed to earn a real rate of return of 6.5% while government bonds are assumed to earn a real rate of return of 3% the risk premium is 3.5 percentage points. Thus, the "risk-adjusted" rate of return used in this analysis represents the stock rate of return adjusted downward by this risk premium. This rate of return omits any expected return over that of government bonds.

receive under current law. Because the hypothetical account rate of return (3.0%) is not reduced by administrative fees while the actual risk-adjusted rate of return is reduced by administrative fees (to 2.7%), the hypothetical account balance will exceed that of the risk-adjusted actual account in every case where the worker invests exclusively in government bonds as a way to "opt-out" of the IA system.

According to the actuarial memorandum, disability beneficiaries would not be subject to the offset and would not have access to their IA until conversion from disability benefits to aged retirement benefits at the full retirement age. The memorandum also indicates that the offset applies to all aged retirement benefits. If disability recipients were subject to the offset upon conversion, then these workers would experience a sudden change in the composition of their benefit from one of a guaranteed benefit to one that is partially guaranteed and partially dependent on the proceeds from the IA.

Limitations of This Analysis. According to the 2004 Trustees Report (the source of the assumptions used for this analysis), under current law, Social Security will be unable to fully pay promised benefits after 2042.[21] We have provided estimates of combined Social Security income under two scenarios: one where we assume that trust fund revenues are found and the trust fund can provide "scheduled" current law Social Security benefits, and one where we assume that trust fund revenues are not found and the current-law benefit is reduced to a "payable" level based on estimated current-law revenues. In the "scheduled" benefits scenario, the benefit estimates for both the current-law benefit and the Social Security benefit under the President's IA assume the use of yet unidentified sources of revenue. A comparison of the 'payable' baseline to the scheduled baseline shows to what degree the current-law scheduled benefits are overstated compared to current-law revenue sources. Because the individual accounts would actually make the Social Security solvency problem worse in the short run, to achieve solvency without revenue increases the President's proposal would require *larger* benefit reductions than those that would be required to achieve solvency under current law *unless* the entire transition cost were financed through increased debt or higher taxes. However, because the Social Security Administration actuaries were not provided with the plan specifications needed to produce a 75-year analysis of how the President's IA proposal would affect solvency, we do not know the size of the annual benefit reductions that would be required to maintain trust fund solvency. Thus, a serious limitation of the "payable" analysis is that it *overstates* the value of the total Social Security income available under the IA plan because it fails to take into account the *additional* solvency-driven reductions (on top of the "shadow account" offset) to the Social Security defined benefit that forms the base of Social Security combined income.

Figure 2 shows that the total Social Security income possible for a scaled average-wage worker using the assumed 4.6% annual real rate of return would be

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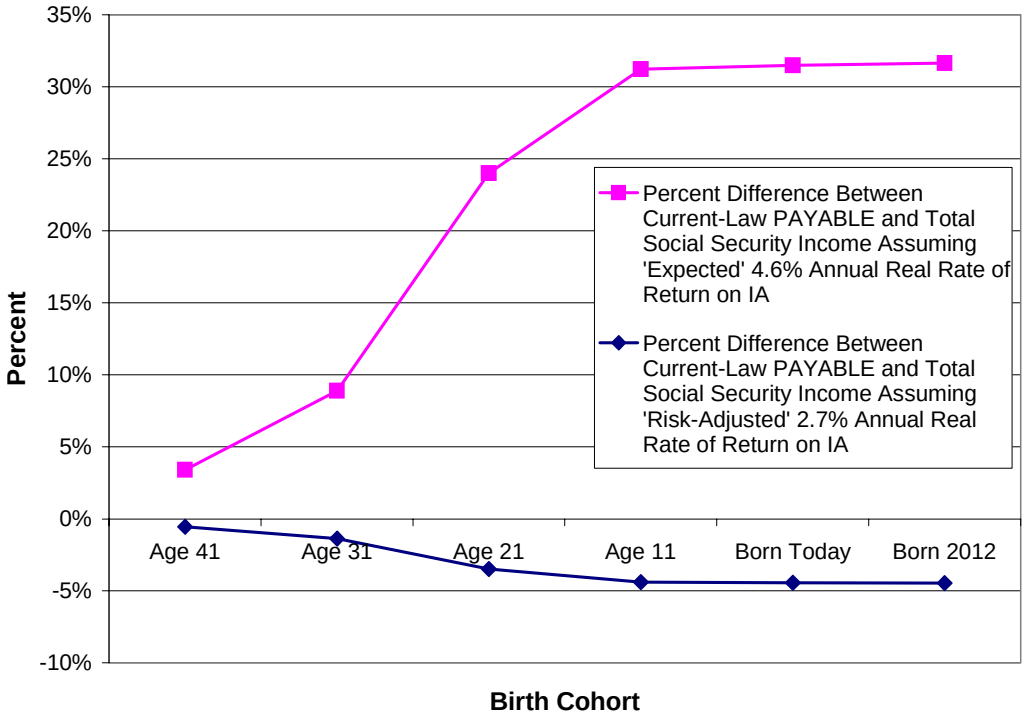
[21] The 2005 Social Security Trustees Report indicates that the year of exhaustion of the OASDI Trust Funds in 2041. To maintain consistency with the underlying assumptions used in this analysis, we have continued using 2042 as the date of exhaustion for the "payable" baseline estimates.

31% higher than current-law payable benefits for younger cohorts. Thus, if the additional benefit reductions required to achieve solvency under the IA plan reduce benefits by less than 31%, scaled average-wage workers who achieve the "expected" 4.6% annual rate of return under the IA plan would still come out ahead. However, if the ultimate benefit reductions are greater than 31%, workers would have higher benefits under current-law. **Figure 2** also shows that the total Social Security income possible for a scaled average-wage worker using the risk-adjusted 2.7% annual real rate of return would be about 4% lower than current-law payable benefits for younger cohorts. Thus, any additional benefit reductions required to achieve solvency under the IA plan would make these scaled average-wage workers worse off than under current-law.

Figure 2. Percent Difference Between Current-Law Payable Social Security Benefits and Total Social Security Income (Reduced Current-Law Payable Social Security Benefits Plus the Individual Account Annuity)



Source: Congressional Research Service estimates.

Although we do not yet know how the additional shortfall due to the IAs will be financed, we know that it would require at least the same solvency-driven reductions that would be required under a "do-nothing" scenario where only those benefits that can be paid with incoming tax revenues would be paid. In this analysis, these estimates are presented as "payable" benefits. According to the 2004 Trustees Report (the source of the assumptions used for this analysis), under current law,

Social Security will be unable to fully pay promised benefits after 2042.[22] At that time, payroll tax revenues and revenues from the income taxation of Social Security benefits are projected to be sufficient to pay approximately 74% of scheduled benefits and a gradually declining percentage thereafter. Thus, under current law a benefit reduction of approximately 26% would be required in 2042, with gradually increasing reductions thereafter. In the examples presented below, only the worker age 21 today would have any change in Social Security benefits under the payable baseline as this worker's year of retirement (2051) occurs after the Trust Funds have been depleted and annual Social Security revenues are sufficient to pay only 74% of promised benefits. Thus, under the payable baseline, the 21-year-old's Social Security promised benefits are reduced by 26%.

For a series of hypothetical workers that vary by age and earnings history, the following section provides estimates of

- the worker's actual and "shadow" individual account balances; current-law promised Social Security benefits;
- benefit offsets based on the "shadow account" annuities; reduced promised Social Security benefits;
- the total reduced Social Security/IA benefit relative to the Social Security benefit promised under current law;
- the total reduced Social Security/IA benefit relative to the Social Security benefit payable under current law;
- required annuitization or phased withdrawal levels with reduced Social Security promised benefits;
- maximum amounts available at retirement as lump-sum or inheritance amounts with reduced Social Security promised benefits once the required annuitization or phased withdrawals have been deducted;
- required annuitization or phased withdrawal levels with reduced Social Security payable benefits;
- and, maximum amounts available at retirement as lump-sum or inheritance amounts with reduced Social Security payable benefits once the required annuitization or phased withdrawals have been deducted.

Because account balances and benefit reductions will differ by age and lifetime earnings, we provide estimates for hypothetical low, average and high-wage earners born in various years (i.e., of various birth cohorts).

Analysis by Birth Cohort. Assuming a 4.6% annual real rate of return, younger birth cohorts participating in the IA system would receive a larger total Social Security income (comprised of the reduced Social Security benefit *plus* the IA annuity) compared to older cohorts of similar earnings levels (e.g., scaled low-wage

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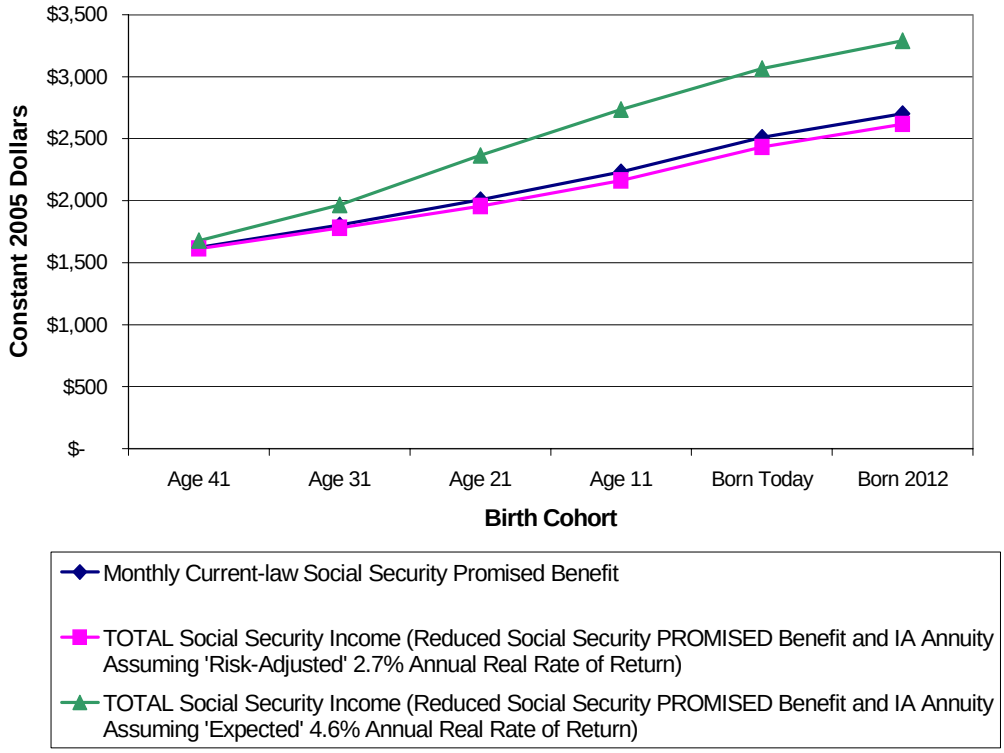
[22] The 2005 Social Security Trustees Report indicates that the year of exhaustion of the OASDI Trust Funds in 2041. To maintain consistency with the underlying assumptions used in the Social Security actuarial analysis of the President's IA proposal, we have continued using 2042 as the date of exhaustion for the "payable" baseline estimates.

worker). **Figure 3** shows combined Social Security income for scaled average-wage workers of different birth cohorts.

Figure 3. Total Social Security Income for Scaled Average-Wage Worker, by Birth Cohort



Source: Congressional Research Service estimates.

Younger workers will have higher individual account balances than will older workers of similar earnings levels. As is evident from **Table 3**, those workers who, as a result of their age, are able to contribute to their IA throughout their careers have much larger account balances upon retirement than do those who contribute at the same earnings level, but over fewer years. For example, upon retirement, the "expected" individual account balance of the average worker age 41 today is only 27% of that of the average worker age 21 today. Based on the assumptions used in this analysis, the increased account balance for younger generations is due to three variables: (1) the rise in real wages for individuals of similar earnings levels, and thus real contributions to the accounts; (2) the higher value of interest accumulated due to these higher wages; and, (3) the increasing number of years of contributions to the accounts and the effect of more years of interest (up to the point where each future cohort would have contributed to the IA for each of their 44 work years, the 1990 birth cohort). First, under the assumptions used by the Social Security actuaries, each future generation will earn real wages (i.e., an increase in earnings that is greater than the increase in inflation) larger than those of the generation before it.[23] Thus, the real

[23] The Social Security actuaries assume long-term average real wage growth of 3.9% per (continued...)

contributions to the IA of each future generation will also be larger than those of the current generation. Second, these larger real contributions create a larger real account base for investment. Even with the same annual real rate of return applied (e.g., 4.6%) to the IA between different generations, the dollar value of the interest is higher with the higher real account base. Third, the 41-year-old worker participates in the account for only 22 years (2009-2030) while the 21-year-old participates for 40 years (2011-2050). The younger worker's greater of number of years participating in the IA leads both to greater aggregate contributions and greater interest earnings as a result of the increased years of investment of those contributions.

Because younger workers will have both larger actual accounts as well as larger "shadow" accounts, younger workers face a larger offset to their Social Security promised benefits relative to older workers. **Table 4** illustrates that depending on age, the "shadow" account annuity reduces Social Security promised benefits by between 17% and 41% for the scaled average-wage worker.

The effect of the benefit offset in reducing the Social Security benefit is larger for younger cohorts whose Social Security benefits could be reduced to achieve long-term solvency. **Table 5** provides the same information as for **Table 4**, but for a baseline of current-law Social Security *payable* benefits instead of *promised* benefits. Only the worker age 21 today would have any change in Social Security benefits under the payable baseline as this worker's year of retirement (2051) occurs after the Trust Funds have been depleted and annual Social Security revenues are sufficient to pay only 74% of promised benefits. Thus, under the payable baseline, Social Security promised benefits are reduced by 26%. Because the Social Security benefit is lower under the payable baseline, but the "shadow" account offset remains the same, the percent reduction in Social Security benefits is larger than under the promised baseline. Thus, in the long-run, workers would receive an increasingly smaller portion of their Social Security defined benefit.

Younger workers would experience the largest percent increase in total Social Security income if a 4.6% annual real rate of return is achieved. **Table 6** demonstrates that the total of the reduced Social Security benefit *plus* the annuity that would be available using the actual IA balance would exceed Social Security current-law promised benefits if the account earns the "expected" 4.6% annual real rate of return. Depending on age, the percent increase in combined Social Security income is estimated to be between 3% and 18% for the scaled average-wage worker. The percent increase in the total benefit amount is larger for younger workers who contribute to the IA for their entire careers and thus have more years for the difference in interest rates between the hypothetical account and the actual account to work in their favor. If, on the other hand, the account is only able to achieve a 2.7% annual real rate of return (the annual real annual rate of 3.0% minus 0.3% administrative costs), then the total of the reduced Social Security benefit plus the annuity would be less than that promised under current-law. The advantages for younger workers would be removed under this "risk-adjusted" interest rate as there

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[23] (...continued)
year.

is no percentage point difference to be utilized to enhance the longer IA participant's account balance.

Younger workers would experience an even larger percent increase in combined Social Security income when compared to what would be possible under a current-law payable scenario. **Table 7** provides the same information as **Table 6**, but for a benefits payable baseline. Again, the only worker that would be affected by the payable baseline is the worker age 21 today. Because the current-law payable benefit would be lower than the current-law promised benefit, the same dollar amount from the IA annuity (assuming a 4.6% annual real rate of return), would lead to a larger percent increase in combined Social Security income for this worker.

Analysis by Earnings Level. Assuming a 4.6% annual real rate of return, higher-wage workers would experience a greater percent increase in combined Social Security income than lower-wage workers. **Figure 4** below demonstrates the levels of current-law promised benefits, the combined Social Security income assuming an annual real rate of return of 4.6%, and the combined Social Security income assuming an annual real rate of return of 2.7% for a worker age 21 today with three different lifetime earnings levels.

Figure 4. Effect of the President's IA Proposal on Combined Social Security Income, by Earnings Level for Worker Age 21 Today

Source: Congressional Research Service estimates.

Note: Compares benefit amounts assuming funding is located to pay Social Security promised benefits.

IA participants with higher earnings over their lifetime will have larger account balances when they retire than those of lower earners. Those with higher wages are able to contribute larger dollar amounts to their IAs leading to larger account balances. For example, in **Table 3** the scaled low-wage earner age 41 today has only 44% of the account balance of the scaled high-wage earner age 41 today. Even though these workers contribute to the IA over the same number of years, and even though the high-wage earner is subject to the contribution cap for 15 years out of the 22 spent participating in the IA, 4% of the high-wage worker's salary is larger than 4% of the low-wage worker's salary. The disparity in account balances between individuals with different earnings levels increases over time as the cap on IA contributions rises to the point where the hypothetical high-wage worker could contribute a full 4% of wages to the IA. By the time a worker age 21 today retires, the account balance of a low-wage worker equals only 34% of that of a high-wage worker of the same age.

Because of their larger account accumulations, higher earners would face a larger percent reduction in their Social Security scheduled benefits as a result of the benefit offset. **Table 4** illustrates that depending on earnings level, the "shadow" account annuity reduces Social Security promised benefits by between 31% and 43% for a worker age 21 today. Low earners face smaller percent reductions to their Social Security promised benefits than do higher earners because the underlying Social Security benefit structure is progressive (i.e., it replaces a larger percentage of wages of low-wage workers compared to high-wage workers). Thus, a flat percentage of each workers wages (4%), grown at a flat percentage rate each year (3%) to arrive at the "shadow" offset, still maintains the progressive benefit structure by allowing low-wage workers to keep a larger percentage of their Social Security benefit (e.g., 69% for the age 21-year-old) than high-wage workers (e.g., 57% for the age 21-year-old).

Higher earners (scaled high and scaled average wage workers) would experience the largest percent increase in total Social Security income if a 4.6% annual real rate of return is achieved. **Table 6** demonstrates that the total of the reduced Social Security benefit *plus* the annuity that would be available using the actual IA balance would exceed Social Security current-law promised benefits if the account earns the "expected" 4.6% annual real rate of return. Depending on earnings level, the percent increase in combined Social Security income is estimated to be between 13% and 18% for a worker age 21 today. Under the 4.6% rate of return scenario, the percent benefit increase would be larger for scaled high-wage workers than for scaled low-wage workers. This difference would occur because the 4% of earnings that high earners would be able to contribute to their IAs has a larger dollar value and would be able to take advantage of the 1.6 percentage point difference between the 4.6% rate of return on the IA and the 3.0% rate of return used to calculate the IA benefit offset. If, on the other hand, the account is only able to achieve a 2.7% annual real rate of return (the annual real annual rate of 3.0% minus 0.3% administrative costs), then the total of the reduced Social Security benefit plus the annuity would be less than that promised under current-law. The advantages for higher earners would be removed under this "risk-adjusted" interest rate as there is no percentage point difference to be utilized to enhance the higher earner's account balance.

As **Table 8** illustrates, the reduced Social Security promised benefit is still large enough compared to the monthly aged poverty thresholds to allow each hypothetical worker the option of withdrawing the entire IA balance as a lump-sum at retirement, rather than being required to purchase an annuity or take programmed withdrawals, or passing it on as an inheritance. If, however, additional benefit reductions are eventually introduced as part of a comprehensive Social Security proposal, some portion of the IA balance would probably need to be annuitized or taken as a phased withdrawal in order to achieve a combined monthly stream of income equal to the federal poverty threshold. This outcome is best demonstrated in **Table 9**, which takes into account the effect of a reduction in promised benefits for the 21 year old to provide only those benefits payable at retirement. In this case, the low-wage and average-wage worker's payable benefits fall below the poverty threshold after being reduced by the "shadow" account annuity. As a result, this worker would be required to annuitize or take in programmed withdrawals enough of the individual account to guarantee a combined Social Security income equal to 100% of the federal poverty threshold. Once this portion of the individual account has been annuitized or set aside for programmed withdrawals, the worker would have the option to take the remainder of the account balance as a lump sum or pass it along as inheritance. The high-wage 21-year-old worker would not be required to annuitize or set aside for programmed withdrawals any portion of his or her account balance because even the 26% reduction in Social Security benefits under the payable baseline leaves this worker with a large enough Social Security benefit to remain above the federal poverty threshold. Thus, if benefit reductions are the primary method of achieving long-term solvency, lower- and average-wage workers would be less able to increase family wealth under the President's IA plan than would high-wage workers.

Methodology

All individual account estimates are based on the proposal specifications outlined above. To estimate the account balances of the actual and hypothetical "shadow" accounts for those retiring many years in the future, we assume that the IA contribution limit continues to increase over the full work history of each worker according to the method outlined in the actuarial memorandum. If further details emerge that alter this contribution rate, these estimates would need to be recalculated accordingly. We estimate the account balances for the actual IA, which the worker will receive in full, using both the "expected" annual real rate of return specified by the Social Security actuaries (4.9%) as well as the "low-yield" or "risk-adjusted" annual real rate of return specified by the actuaries (3.0%), both reduced by the estimated administrative fee of 30 basis points per year. Thus the annual real rate of return net of administrative costs is 4.6% and 2.7%, respectively. The hypothetical account balance is estimated using the 3.0% rate of return specified in the proposal. This account balance is used to calculate the offset to the Social Security defined benefit. Because the hypothetical account rate of return is not reduced by administrative fees while the actual risk-adjusted rate of return is reduced by administrative fees, the hypothetical account balance will exceed that of the risk-adjusted actual account in every case. To calculate the CPI-indexed annuity for both the actual and hypothetical "shadow" accounts, we rely on annuity factors provided to us by the Social Security Administration.

One important limitation of using these assumed constant annual interest rates is that historical rates of return have not followed such a pattern. Interest rate fluctuations over time and where these fluctuations occur in a worker's career can have a large effect on the estimated account balances of workers under an IA system. For example, a negative rate of return in the years prior to an individual's retirement can significantly reduce the value of the assets in the IA. Similarly, the rate of return prevalent at the time of retirement can alter the monthly annuity payment that a worker would receive based on the same dollar amount in the individual account. The higher the interest rate assumed when calculating the annuity amount, the greater the assumed earnings on the assets used to fund the annuity, and the larger the annuity payment to the worker. For example, based CRS analysis, at an interest rate of 6.0%, a 68-year-old person who purchased a level, single-life annuity for $200,000 would receive income from the annuity of $1,852 per month. At an interest rate of 4.0%, the same sum of money would buy a level, single-life annuity worth $1,584 per month, a difference of $268 in monthly income.

Some have argued that the establishment of individual accounts, as well as the tax increases, benefit reductions or government borrowing needed to achieve solvency, may affect the macroeconomy and, thus, affect the interest rates that individuals could expect to obtain on their IAs. These estimates do not incorporate any such potential macroeconomic feedbacks.

We estimate the effect of the proposal both on workers who would contribute to the IA for their entire career as well as those whose careers would be split between the current-law system and the IA system. To estimate the effect of the IA proposal on a worker age 21 today, we assume that the worker is born in 1984, begins work at age 21 in 2005, and retires at the full retirement age of 67 in 2051. As a result, this worker spends 40 years of his or her 46 year work history contributing to the IAs and reflects what the system could provide to a worker once the plan is fully phased-in. To estimate the effect of the IA proposal on a worker age 31 today, we assume that the worker is born in 1974, begins work at age 21 in 1995, and retires at the full retirement age of 67 in 2041. As a result, although this worker also has a career of 46 years, only 30 of them are spent contributing to the IA. Finally, to estimate the effect of the IA proposal on a worker age 41 today, we assume that the worker is born in 1964, begins work at age 21 in 1985, and retires at the full retirement age of 67 in 2031. Thus, this worker also has a career of 46 years, but only 22 of them are spent contributing to the IA.

We provide account balance estimates for scaled low-wage workers, scaled-average wage workers, and scaled high-wage workers, as defined by the Social Security Office of the Chief Actuary.[24] It is assumed that these workers follow typical lifetime earnings patterns that would produce a Social Security benefit equivalent to that of workers with career earnings of either: (1) a "low"wage (45%

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[24] Social Security Administration, Office of the Actuary, *Internal Rates of Return Under the OASDI Program for Hypothetical Workers*, Actuarial Note No. 144, June 2001. The pattern in these "scaled" earnings histories shows relatively low earnings at the beginning of the career, fairly rapid growth through the middle of the career, and a gradual tapering off of earnings at the end of the career.

of a wage equal to Social Security's "average wage series"); (2) an "average wage"(a wage equal to Social Security's "average wage series"); or, (3) a "high" wage (160% of a wage equal to Social Security's "average wage series"). For example, based on projections in the 2004 Social Security Trustees Report, a worker retiring in 2005 would have had *career average earnings* of $15,776 for a scaled "low" earner, career average earnings of $35,057 for a scaled "average" earner, and career average earnings of $56,091 for a scaled "high" earner.[25] These scenarios are for illustration only and are not meant to fully represent every possible scenario that actual workers may experience. For example, by relying on stylized workers, we have assumed no gaps in employment. If present, these gaps would reduce both the Social Security benefit and the IA balance of these workers. However, because under a system of individual accounts the earlier contributions are made the more interest they accrue, the timing of gaps in employment has a greater effect on individual account balances than they would on the traditional Social Security benefit level. Although the plan does not require annuitization, but allows individuals to take programmed withdrawals from their IAs, we have followed the Social Security Administration's practice of assuming universal annuitization as it is not clear which type of worker might opt for programmed withdrawals. Because we are using hypothetical workers with no spouses or other dependents, the annuity levels calculated for both the actual and hypothetical accounts are based on the purchase of a unisex CPI-indexed single-life annuity assuming an inflation rate of 2.8% per year and a nominal interest rate of 5.884% per year. Furthermore, the poverty level estimates for the year of retirement are also based on a single-person household. The aged poverty level in 2004 was $9,060. This level was indexed to the year of retirement using the CPI. Unless otherwise specified, all assumptions are based on the 2004 Social Security Trustees Report. Unless otherwise specified, all dollar amounts are presented in real 2005 dollars.

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[25] Career average earnings levels are defined for retired workers as the highest 35 years of earnings, indexed for growth in average wages to the year prior to benefit entitlement. This concept is similar to that of the AIME, except that career average earnings for these scaled workers are indexed to the year prior to entitlement instead of two years prior to eligibility and earnings are averaged on an annual rather than a monthly basis. Thus, the indexing year for the 2005 retiree is 2004, and the 2004 average wage index is the basis for the career average earnings levels for each hypothetical worker.

Table 3. Estimated Account Balances in Year of Retirement for Actual and "Shadow" Account Under the President's 2005 Social Security Personal Account Proposal, by Type of Hypothetical Worker

(Constant 2005 dollars)

Individual Account	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41 today	Age 31 today	Age 21 today	Age 41 today	Age 31 today	Age 21 today	Age 41 today	Age 31 today	Age 21 today
Actual Account Balance (Using "Expected" 4.6% Annual Real Rate of Return)	$28,149	$54,441	$90,173	$52,798	$111,257	$198,541	$64,148	$139,246	$268,788
Actual Account Balance (Using "Low-Yield"/ "Risk Adjusted" 2.7% Annual Real Rate of Return)	$22,184	$38,885	$58,710	$42,427	$80,617	$129,568	$52,624	$103,782	$180,723
"Shadow" Account Balance (Accrues at Specified 3.0% Annual Real Rate of Return)	$23,022	$40,960	$62,700	$43,895	$84,732	$138,328	$54,266	$108,590	$192,046

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement at age 67 is 2051. For the worker age 31, the year of retirement at age 67 is 2041. For the worker age 41, the year of retirement at age 67 is 2031.

Table 4. Current-Law *Promised* Social Security Benefit, Estimated "Shadow" Annuity Amount in Year of Retirement, and Reduced *Promised* Social Security Benefit, by Type of Hypothetical Worker

(Constant 2005 dollars)

	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41 today	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**
Monthly Current-Law Promised Social Security Benefit	$983	$1,093	$1,216	$1,623	$1,805	$2,008	$2,144	$2,384	$2,652
"Shadow" Monthly Annuity at Retirement (First year, increasing with CPI each year of life expectancy)	$142	$248	$371	$271	$512	$820	$336	$657	$1,138
Remaining Monthly Social Security Promised Benefit After Reduction by "Shadow" Annuity	$840	$846	$844	$1,352	$1,293	$1,189	$1,808	$1,728	$1,515
Percent Change in Current-Law Social Security Promised Benefit Due to "Shadow" Account Offset	- 14%	- 23%	- 31%	- 17%	- 23%	- 41%	- 16%	- 28%	- 43%

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement at age 67 is 2051. For the worker age 31, the year of retirement at age 67 is 2041. For the worker age 41, the year of retirement at age 67 is 2031.

Table 5. Current-Law *Payable* Social Security Benefit, Estimated "Shadow" Annuity Amount in Year of Retirement, and Reduced *Payable* Social Security Benefit, by Type of Hypothetical Worker

(Constant 2005 dollars)

	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41 today	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**
Monthly Current-Law Payable Social Security Benefit	$983	$1,093	$900	$1,623	$1,805	$1,486	$2,144	$2,384	**$1,963**
"Shadow" Monthly Annuity at Retirement (First year, increasing with CPI each year of life expectancy)	$142	$248	$371	$271	$512	$820	$336	$657	$1,138
Remaining Monthly Social Security Payable Benefit After Reduction by "Shadow" Annuity	$840	$846	$528	$1,352	$1,293	$667	$1,808	$1,728	$825
Percent Change in Current-Law Social Security Payable Benefit Due to "Shadow" Account Offset	- 14%	- 23%	**- 41%**	- 17%	- 23%	**- 55%**	- 16%	- 28%	**- 58%**

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement at age 67 is 2051. For the worker age 31, the year of retirement at age 67 is 2041. For the worker age 41, the year of retirement at age 67 is 2031. Only the worker age 21 today would have any change in current-law Social Security benefits under a payable baseline (shown in bold) as this worker's year of retirement occurs at a point where annual Social Security revenues are sufficient to pay only 74% of promised benefits. These results do not take into account the *additional* benefit reductions (on top of those due to the benefit offset and reductions to achieve solvency under current law) that would be necessary under the individual account plan in order to achieve solvency under a payable baseline. Thus, these results tend to overstate the benefit levels that would be payable under the President's IA proposal. Please refer to accompanying memorandum for detailed description of methodology used.

Table 6. Combined Social Security Benefit For Expected and Risk-Adjusted Account Balances Under President's Individual Account Proposal Compared to Current-Law *Promised* Benefit, by Type of Hypothetical Worker

(Constant 2005 Dollars)

	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41	Age 31	Age 21	Age 41	Age 31	Age 21	Age 41	Age 31	Age 21
Current-Law Monthly Social Security PROMISED Benefit	$983	$1,093	$1,216	$1,623	$1,805	$2,008	$2,144	$2,384	$2,652
Remaining Monthly Social Security PROMISED Benefit After Reduction by "Shadow" Annuity	$840	$846	$844	$1,352	$1,293	$1,189	$1,808	$1,728	$1,515
Annuity Available Using "Expected"Actual IA Balance (Using 4.6% annual rate of return)	$174	$329	$534	$326	$673	$1,176	$397	$842	$1,593
TOTAL (Reduced Social Security PROMISED Benefit and IA Annuity)	$1,014	$1,175	$1,379	$1,678	$1,966	$2,365	$2,205	$2,570	$3,107
Percent Increase or Decrease in Total Social Security Income (Total reduced PROMISED benefit plus IA annuity relative to current law PROMISED benefit)	3%	7%	13%	3%	9%	18%	3%	8%	17%
Annuity Available Using Risk-Adjusted Actual IA Balance (Using 2.7% Annual Real Rate of Return)	$137	$235	$348	$262	$488	$768	$325	$628	$1,071
TOTAL Reduced Social Security PROMISED Benefit and Risk-Adjusted IA Annuity	$977	$1,081	$1,192	$1,614	$1,781	$1,957	$2,134	$2,355	$2,585
Percent Increase or Decrease in Total Social Security Income (Total reduced PROMISED benefit plus Risk-Adjusted IA annuity relative to current law PROMISED benefit)	- 1%	- 1%	- 2%	- 1%	- 1%	- 3%	0%	- 1%	- 3%

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement is 2051. For the worker age 31, the year of retirement is 2041. For the worker age 41, the year of retirement is 2031. Thus, only the 21-year old would be subject to benefit reductions under a 'payable' baseline as this worker retires after the 2042 date when Social Security can only pay the portion of promised benefits equal to what can be paid annually out of revenues generated by payroll taxes and the income taxation of Social Security benefits. Please refer to accompanying memorandum for detailed description of methodology used.

Table 7. Combined Social Security Benefit For Expected and Risk-Adjusted Account Balances Under President's Individual Account Proposal Compared to Current-Law *Payable* Benefit, by Type of Hypothetical Worker

(Constant 2005 dollars)

	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41 today	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**
Current-Law Monthly Social Security PAYABLE Benefit	$983	$1,093	**$900**	$1,623	$1,805	**$1,486**	$2,144	$2,384	**$1,963**
Remaining Monthly Social Security PAYABLE Benefit After Reduction by "Shadow" Annuity	$840	$846	$528	$1,352	$1,293	**$667**	$1,808	$1,728	**$825**
Annuity Available Using "Expected"Actual IA Balance (Using 4.6% annual rate of return)	$174	$329	$534	$326	$673	$1,176	$397	$842	$1,593
TOTAL (Reduced Social Security PAYABLE Benefit and IA Annuity)	$1,014	$1,175	$1,063	$1,678	$1,966	$1,843	$2,205	$2,570	**$2,417**
Percent Increase or Decrease in Total Social Security Income (Total reduced PAYABLE benefit plus IA annuity relative to current law PAYABLE benefit)	3%	7%	**18%**	3%	9%	**24%**	3%	8%	**23%**
Annuity Available Using Risk-Adjusted Actual IA Balance (Using 2.7% Annual Real Rate of Return)	$137	$235	$348	$262	$488	$768	$325	$628	$1,071
TOTAL Reduced Social Security PAYABLE Benefit and Risk-Adjusted IA Annuity	$977	$1,081	**$876**	$1,614	$1,781	**$1,434**	$2,13	$2,355	**$1,896**
Percent Increase or Decrease in Total Social Security Income (Total reduced PAYABLE benefit plus IA annuity relative to current law PAYABLE benefit)	-1%	-1%	**-3%**	- 1%	- 1%	**- 3%**	0%	- 1%	**- 3%**

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement is 2051. For the worker age 31, the year of retirement is 2041. For the worker age 41, the year of retirement is 2031. Thus, only the 21-year-old would be subject to benefit reductions under a 'payable' baseline as this worker retires after the 2042 date when Social Security can only pay the portion of promised benefits equal to what can be paid annually out of revenues generated by payroll taxes and the income taxation of Social Security benefits. These results do not take into account the *additional* benefit reductions (on top of those due to the benefit offset and reductions to achieve solvency under current law) that would be necessary under the individual account plan in order to achieve solvency under a payable baseline. Thus, these results tend to overstate the benefit levels that would be payable under the President's IA proposal. Please refer to accompanying memorandum for detailed description of methodology used.

Table 8. Poverty Thresholds in Year of Retirement, Reduced Social Security *Promised* Benefit, Required Annuitization Levels, and Remaining Individual Account Balance, by Type of Hypothetical Worker

(Constant 2005 dollars)

	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41 today	Age 31 today	Age 21 today	Age 41 today	Age 31 today	Age 21 today	Age 41 today	Age 31 today	Age 21 today
Monthly Aged Poverty Threshold in Year of Retirement	$766	$766	$766	$766	$766	$766	$766	$766	$766
Remaining Monthly Social Security PROMISED Benefit After Reduction by "Shadow" Annuity	$840	$846	$844	$1,352	$1,293	$1,189	$1,808	$1,728	$1,515
Monthly Annuity Amount Needed to Achieve 100% Poverty Level When Combined With Reduced Social Security PROMISED Benefit	$0	$0	$0	$0	$0	$0	$0	$0	$0
Portion of Actual IA Required to be Annuitized to Achieve 100% of Poverty	$0	$0	$0	$0	$0	$0	$0	$0	$0
Remaining Actual IA Balance (Using "Expected" 4.6% Annual Real Rate of Return)	$28,149	$54,441	$90,173	$52,798	$111,257	$198,541	$64,148	$139,246	$268,788
Remaining Actual IA Balance (Using "Low-Yield"/ "Risk Adjusted" 2.7% Annual Real Rate of Return)	$22,184	$38,885	$58,710	$42,427	$80,617	$129,568	$52,624	$103,782	$180,723

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement at age 67 is 2051. For the worker age 31, the year of retirement at age 67 is 2041. For the worker age 41, the year of retirement at age 67 is 2031. Please refer to accompanying memorandum for detailed description of methodology used.

Table 9. Poverty Thresholds in Year of Retirement, Reduced Social Security *Payable* Benefit, Required Annuitization Levels and Remaining Individual Account Balance, by Type of Hypothetical Worker

(Constant 2005 dollars)

	Scaled Low Earner			Scaled Average Earner			Scaled High Earner		
	Age 41 today	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**	**Age 41 today**	**Age 31 today**	**Age 21 today**
Monthly Aged Poverty Threshold in Year of Retirement	$766	$766	$766	$766	$766	$766	$766	$766	$766
Remaining Monthly Social Security PAYABLE Benefit After Reduction by "Shadow" Annuity	$840	$846	**$528**	$1,352	$1,293	**$667**	$1,808	$1,728	**$825**
Monthly Annuity Amount Needed to Achieve 100% Poverty Level When Combined With Reduced Social Security PAYABLE Benefit	$0	$0	**$238**	$0	$0	**$100**	$0	$0	$0
Portion of Actual IA Required to be Annuitized to Achieve 100% of Poverty	$0	$0	**$40,185**	$0	$0	**$16,822**	$0	$0	$0
Remaining Actual IA Balance (Using "Expected" 4.6% Annual Real Rate of Return)	$28,149	$54,441	**$49,989**	$52,798	$111,257	**$181,719**	$64,148	$139,246	$268,788
Remaining Actual IA Balance (Using Risk-Adjusted 2.7% Annual Real Rate of Return)	$22,184	$38,885	**$18,525**	$42,427	$80,617	**$112,747**	$52,624	$103,782	$180,723

Source: Estimates by the Congressional Research Service.

Note: For the worker age 21 today, the year of retirement is 2051. For the worker age 31, the year of retirement is 2041. For the worker age 41, the year of retirement is 2031. Thus, only the 21-year-old would be subject to benefit reductions under a 'payable' baseline as this worker retires after the 2042 date when Social Security can only pay the portion of promised benefits equal to what can be paid annually out of revenues generated by payroll taxes and the income taxation of Social Security benefits. As a result of the lower Social Security benefit, the effect of the reduction from the "shadow" annuity is to reduce the Social Security benefit to the level where it falls below the poverty threshold for the scaled low-earner, forcing this worker to annuitize a portion of his or her actual individual account balance to reach poverty threshold. These results do not take into account the *additional* benefit reductions (on top of those due to the benefit offset and reductions to achieve solvency under current law) that would be necessary under the individual account plan in order to achieve solvency under a payable baseline. If additional benefit reductions were required under the individual account scenario, workers would be required to annuitize a larger portion of their individual accounts to reach the poverty threshold. Thus, these results tend to overstate the benefit levels that would be payable under the President's IA proposal. Please refer to accompanying memorandum for detailed description of methodology used