

An hourglass-shaped graphic with a globe inside. The top bulb is dark blue, and the bottom bulb is light blue. The globe is a darker shade of blue. The hourglass is centered on the page.

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February 2, 2009

Congressional Research Service

Report 98-195

*Social Security Reform: How Much of a Role Could Personal Retirement Accounts Play?*

Geoffrey Kollmann, Domestic Social Policy Division

Updated May 15, 2002

**Abstract.** Numerous proposals have been made calling for creation of individual retirement accounts to replace or supplement future Social Security benefits. Some believe that having workers accumulate assets based on their own contributions would be a better way to secure future retirement incomes. Others see the creation of private accounts as a way to offset cuts in Social Security that may be needed to restore the system to a sound financial footing. Much of the debate is fueled by the perception that per dollar of contributions, individual accounts invested in the private sector would exceed the value of future Social Security benefits, particularly since those benefits will likely need to be curtailed as the post World War II baby boomers retire.

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# Report for Congress

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## **Social Security Reform: How Much of a Role Could Personal Retirement Accounts Play?**

**Updated May 15, 2002**

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# Social Security Reform: How Much of a Role Could Personal Retirement Accounts Play?

## Summary

Numerous proposals have called for creation of personal retirement accounts to replace or supplement the benefits of future Social Security recipients. Some are based on the belief that a better way to provide retirement income would be to have workers accumulate assets directly. Others are designed to offset Social Security benefit cuts that might be made to restore the system to sound financial footing. Much of the debate is fueled by the perception that, per dollar of contributions, personal accounts invested in the private sector would exceed the value of future Social Security benefits, particularly since those benefits will likely need to be curtailed as Social Security's future costs rise.

Opponents argue that personal accounts will place many individuals at risk because they might make unwise investment decisions, the timing of their acquisitions and liquidations may be unfortunate, or they may spend what they otherwise should save. They also contend that the rates of return on stocks are likely to be lower in the future to compensate for the runup in the stock market over the past two decades that were characterized by price/earnings ratios that were far higher than their historical average.

Given these contrasting assertions, there is considerable confusion over how to evaluate the possible role of personal accounts in reforming Social Security. A critical part of the debate is how much a personal account could provide relative to future Social Security benefits. This report provides illustrations by projecting potential personal account assets at the time of retirement and comparing them to projected lifetime Social Security benefits under current law.

Because any investment benefits from compound growth over many years, the illustrations show that even under the more optimistic of the two investment scenarios (a 10% annual return), older workers (i.e., the baby boom) would not have enough time to build large accounts relative to their Social Security benefits. For workers who retire at age 62 in 2010, those with average earnings who set aside 2% of pay beginning in 2003 would have an account equal to only 3% of their benefits. Age-62 workers retiring in 2020 would have built only modest accounts, equaling 13% of their benefits. Thus, the more rapid the phase-in to a constrained or alternative Social Security system, the more difficult it would be for many baby boomers to make up for foregone Social Security benefits.

The accounts become more significant the longer the period of time in which to grow. For workers retiring at age 62 in 2030, a 2% of pay contribution rate earning 10% could reach a level equal to 29% of an average-wage earner's Social Security benefits. With a return matching the government bond rate (assumed to be 6.09% annually), a 2% contribution rate could grow to a level equal to 16% of benefits. For aged 62 workers retiring in 2050, having 41 years to invest, the accounts would become substantial. A 2% contribution rate growing at 6.09% would reach a level equal to 24% of Social Security benefits; a 10% annual return would produce an account equal to 55% of Social Security benefits.

# Contents

Introduction .....	1
How Would Personal Accounts be Funded? .....	2
Factors Determining the Value of the Personal Account .....	4
Amounts Deposited .....	4
Investment Period .....	5
Rate of Return .....	6
Results .....	8
Analysis .....	9
Personal Accounts in the Transition Period .....	9
The Baby Boomers .....	9
The Baby Troughers .....	9
The Children of the Baby Boomers (the Baby-Boom Echo) .....	10
Effect of Personal Accounts on the Low-Wage “Tilt” of the Social Security System .....	10
Effect of Delaying Retirement .....	13
Effect of Contributing to a Personal Account Over a Full Career .....	13
For Additional Reading .....	15

## List of Tables

Table 1. Projections of Personal Account Accumulations As Percent of Social Security Benefits — Retirement at Age 62 .....	8
Table 2. Replacement Rates Assuming a Uniform 15% Cut in Social Security Benefits For Workers Retiring at Age 62 in 2030 — With a Personal Account Funded With 2% of Pay .....	12
Table 3. Value of Personal Accounts As Percent of Current Law Social Security Benefits for Average-Wage Earners Contributing 2% of Pay — Illustrations of Effect of Delaying Retirement From Age 62 to Age 70 .....	13

# Social Security Reform: How Much of a Role Could Personal Retirement Accounts Play?<sup>1</sup>

## Introduction

In response to repeated reports that the Social Security system has long-range funding problems,<sup>2</sup> and growing public skepticism about whether the system can be sustained in its current form, numerous proposals have called for the creation of personal retirement savings accounts to replace or supplement the benefits of future Social Security recipients. Among the proposals are ones suggested by Presidents Clinton and George W. Bush. Also, all three options proposed by President Bush's Commission to Strengthen Social Security feature individual accounts.

The Social Security taxes workers pay flow into the government's general treasury and are recorded as income to the Social Security trust funds. They are not accredited to individual taxpayers to accumulate and later be used to pay for the individual's benefits. Instead, most of the Social Security taxes paid by current workers pay for the benefits of current retirees, and future workers will pay for the benefits of future retirees. Some proponents of establishing personal accounts believe that a better way for workers to secure their retirement income would be to have them accumulate assets through investment of their individual contributions. Others propose personal accounts as a way to offset cuts in Social Security benefits that might be made in order to restore the system to sound financial footing.

Much of the support for creating personal accounts is fueled by the perception that, per dollar of contributions, their accumulated assets would exceed the value of future Social Security benefits, particularly if future Social Security benefits are curtailed. As the financing demands of paying benefits to future retirees rise, the pressure will grow on future Congresses to consider scaling them back. Proponents of creating personal accounts argue that such accounts would establish contractually binding claims for future retirees (i.e., not alterable by Congress) and that the stock market potentially could bring much greater returns than are possible from the current Social Security system.

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<sup>1</sup>This is a revision of a report originally created by former CRS analyst David Koitz

<sup>2</sup>Under the Social Security Trustees' 2002 intermediate forecast, Social Security is projected to have an average 75-year deficit equal to 1.87% of taxable payroll under current law. This amount is equal to about 14% of the average income of the system over the period. In terms of today's taxable payroll, this would be equivalent to \$80 billion per year.

Opponents of personal accounts say that the past performance of the stock market is unlikely to be repeated in the future. They contend that the rate of return on stocks may be lower in the future to compensate for the runup in the stock market over the past two decades that was characterized by price/earnings ratios far higher than in the past. A return to historical averages in price/earnings ratios would require a period of downward adjustment in the market, during which there could be less favorable results for personal accounts. Moreover, they argue that many individuals will make unwise investment decisions, the timing of their acquisitions and liquidations may be bad, and they may exhaust their accounts prematurely. They argue that Social Security is a better mechanism to assure workers' future retirement income and to minimize "old age dependency" for society as a whole.

The aim of this report is not to promote or dismiss the concept of personal savings accounts. Rather, its purpose is to illustrate *potential* accumulations in personal savings accounts using two different rates of return that span the range of likely future returns on investments, and thus to provide a tool that could be used to evaluate the possible role of personal accounts. These illustrations do not simulate the effect of any single idea or bill. They simply address the question: "If personal accounts are part of a Social Security reform plan, what range of retirement benefits<sup>3</sup> might one expect to receive from them?"

## How Would Personal Accounts be Funded?

Perhaps the most significant policy question about establishing personal accounts is how they would be financed. So far, three generic approaches have been suggested: (1) diverting, or "carving out" a portion of existing Social Security taxes, (2) "adding on" to the Social Security program by requiring workers to contribute a portion of their earnings, or (3) "adding on" by using federal general revenues.

*The "carve out" approach:* 12.4% of a worker's first \$84,900 in annual earnings in 2002 is paid in taxes by employees and employers (6.2% by each) to finance the Social Security system. In recent years, most proposals that create personal accounts require or allow workers to use part of these taxes to do so. Although he has not as yet proposed or endorsed a specific plan, President Bush has stated that he favors allowing workers to choose, on a voluntary basis, to divert part of their payroll taxes into personal accounts. In 2001 he appointed a commission to recommend ways to restore Social Security's long-range solvency. All of the Commission's members were on record as favoring some sort of personal accounts as part of Social Security reform. Their report, issued in December 2001, featured

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<sup>3</sup>This report examines the role of personal accounts on retirement benefits, not on survivor or disability benefits. While a number of recent proposals would create personal accounts to replace or supplement all forms of Social Security benefits, others are directed exclusively toward the system's retirement benefits. The nature of the system's protections vary; receipt of retirement benefits is viewed as something for which people *plan and save for*, whereas disability and survivor protection is viewed as an unforeseen event for which people can buy insurance. It has been posited that private insurance could provide these Social Security protections, but that would raise other policy and operational questions.

three reform alternatives, all of which included voluntary personal accounts. Two of the plans featured diversions of payroll taxes. This approach also has been reflected in a number of bills introduced in the 105<sup>th</sup>, 106<sup>th</sup> and 107<sup>th</sup> Congresses, with deposits in personal accounts ranging from 1.0 to 12.4 percentage points.

Obviously, if it is projected that the taxes that finance the system are insufficient to pay for future promised benefits, diverting part of them to fund personal accounts would make this shortfall larger.<sup>4</sup> Thus, to restore the system's solvency would require larger future tax increases or benefit reductions. Some proposals address this issue by placing larger reductions in Social Security benefits on workers who participate in personal accounts. The goal of these proposals is not to make the current system's problems worse, but to replace it, in part or in whole. With these measures, the key problem is financing the existing Social Security program during the transition to the new system. The larger the amount of foregone tax revenues, the less money there is to meet current expenditures. The commitments to people currently receiving benefits or nearing retirement would have to be met, so to some extent the amount of the potential tax carve out is constrained, at least in the early years of such a proposal, by the need to keep the existing system going.

*“Add on” by withholding more from earnings:* Some have suggested that instead of diverting Social Security taxes to fund personal accounts, they could be funded by allowing or requiring today's workers to set aside an additional part of their earnings. One faction of the 1994-1996 Social Security Advisory Council suggested that workers pay an additional 1.6% of pay to fund personal accounts.<sup>5</sup> The goal was not to replace the existing system but to offset with private assets some of the benefit reductions needed to restore its solvency. The third alternative plan of the Bush Commission combines both the carve out and additional withholding from earnings approaches. Under this plan, workers would be allowed to contribute an additional 1% of their pay to a personal retirement account and receive a 2.5% matching contribution (up to \$1,000 annually) from their payroll taxes.

*“Add on” by using general revenues:* A third possibility would be to have the government use general revenues to make deposits into new personal accounts. This approach would be neither a tax carve out nor an additional amount of withholding from wages. Instead, it would be contingent upon diverting budget resources from other purposes (i.e., new spending initiatives, tax cuts, or debt reduction). Such an approach was proposed by President Clinton in his 1999 State of the Union address, in which he suggested the creation of “Universal Savings Accounts.” It is also reflected in some bills introduced in recent Congresses.

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<sup>4</sup>An immediate and permanent carve out of 2% of earnings, for example, would more than double the size of the long-range deficit.

<sup>5</sup>This “add on” approach was a part of the so-called “Individual Accounts” (or IA) plan sponsored by Advisory Council Chairman Edward Gramlich and member Marc Twinney. The plan included other measures to raise the income of the Social Security system and reduce its expenditures. The intent was to give recipients a combination of benefits from a constrained Social Security program and individual accounts approximately equal to what they would receive from Social Security under the benefit rules of current law.

This report does not make any assumptions about what the source of funding for personal savings accounts would be. It simply shows how much might be accumulated for retirement in personal accounts and represents this value as a percent of the projected lifetime value of Social Security benefits under current law.

It should be kept in mind that under the Social Security Trustees' latest "best guess" assumptions (i.e., their intermediate forecast), the system's benefits would not be payable in future decades at the levels prescribed by current law. Under the Trustees' assumptions, which underpin the analysis of this report, the trust funds are projected to be depleted in 2041. Ongoing tax receipts at that point would be sufficient to finance only 73% of benefit commitments. Hence, the Social Security benefits projected in this report should be seen only as a baseline for the analysis. They are "hypothetical" in 2041 and thereafter because the system would not have sufficient resources to pay them in full.

## **Factors Determining the Value of the Personal Account**

The eventual value a savings account depends on (1) amounts deposited, (2) the length of time the account grows, and (3) the rate of return the account earns.

### **Amounts Deposited**

As mentioned earlier, proposals that feature personal accounts specify contribution rates ranging from 1% to 12.4% of pay. Illustrating the effect of all these rates would lead to a voluminous array of outcomes. However, for a couple of reasons it could be posited that the upper range of contribution rates is unlikely. First, more than \$8 out of \$10 in Social Security taxes are currently needed to pay Social Security benefits. These taxes are expected to exceed expenditures for only 15 more years. Even if benefit cuts were enacted to enhance these surpluses, they probably would have to be phased in slowly. As a result, there would not be a large amount of surplus Social Security revenue to divert for carve out plans. Second, if payroll withholding were increased, it is not clear how acceptable it would be to the public. A hike in mandatory withholding of 3% of pay would be the equivalent of nearly a 40% increase in FICA withholding.<sup>6</sup> In addition, a proposed mandatory increase in withholding might be viewed and criticized as simply a new taxation scheme.

Given these circumstances, for illustrative purposes this report uses a contribution rate ranging from 1% to 3% of pay. The effect of larger contribution rates can be calculated by multiplying the result from a 1% contribution rate by the

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<sup>6</sup>FICA refers to the Federal Insurance Contributions Act. The current FICA tax rate is 7.65% (6.2% for Social Security and 1.45% for Medicare's Hospital Insurance program) for wage or salaried workers having earnings up to \$84,900 in 2002. A 3% add-on would raise the total employee deduction to 10.65% of pay — an increase of 39.2% ( $3/7.65 = 39.2$ ).



larger rate (for example, to observe the effect of a 5% contribution rate, the results shown under a 1% contribution rate should be multiplied by 5).

The other factor affecting the amount contributed is the *level* of a worker's pay. Clearly, a set percentage of a high-paid worker's earnings will be a larger dollar amount than that of a low-paid worker. Three different workers are illustrated. It is assumed that they follow typical lifetime earnings patterns that would produce a Social Security benefit equivalent to that of single workers with career earnings of either: (1) the federal minimum wage<sup>7</sup> (2) an "average wage" (a wage equal to Social Security's "average wage series"); or (3) the maximum wage creditable under Social Security. Also, the *pattern* of a worker's pay can affect the eventual value of a personal account. Typically, many workers start work in entry level jobs with relatively low wages and earn higher wages as they advance in their careers. Because of the power of compound growth, contributions made early in a career have a disproportionate effect on the eventual value of the account. Everything else held equal, the lower contributions made early in a career would result in smaller account balances than if the lifetime earnings were averaged over the career. In recognition of these concerns, the "average-wage" worker illustrated in this report has yearly earnings that are "scaled" in accordance with a recent publication of the Social Security Administration (SSA) that adjusts work histories to take into account typical career patterns.<sup>8</sup> Consistent with the data in the SSA document, the minimum and average-wage workers are assumed to begin work at age 21 and the maximum wage earner is assumed to begin work at age 22. All three earners work every year until retiring at age 62 (the age at which most workers retire today). For purposes of computing Social Security benefits and personal account accumulations, this assumption results in a 41-year work career for workers earning minimum or average wages, and a 40-year career for workers earning the maximum wage.

## Investment Period

The report looks at the asset accumulations for workers retiring at age 62 in 2010-2050. The projections assume that the new accounts would take effect no sooner than 2003.<sup>9</sup> Thus, someone retiring at age 62 in 2010 may have a 40 or 41-year career for Social Security purposes but would have only seven years to grow a new personal account; someone retiring in 2020 would have 17 years to do so; someone retiring in 2030 would have 27 years; and so on. In effect, the projections would not show the effect of a full career's worth of investing until 2043 or 2044.

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<sup>7</sup>For future years, the minimum wage is assumed to increase at the same rate as average wages in the economy.

<sup>8</sup>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.

<sup>9</sup>Assuming the legislation is enacted in 2002.

## Rate of Return

In analyses of personal accounts, this factor is usually the most contentious. Proponents of individual accounts point out that historically the stock market has outperformed other investments and maintain that, if workers' Social Security taxes had instead been invested in a broad stock portfolio, they would have provided much higher benefits than are provided by Social Security. Critics of the stock market approach point out that it carries greater risk, that over time the market's performance has been inconsistent, and that therefore if personal accounts are to be a replacement of or a supplement to Social Security – the nation's primary means of providing basic retirement income – they should be tied to safer and more predictable financial instruments (e.g., bonds). Also, some economists argue that, if the returns from investing in stocks are adjusted to account for risk, they would be little different from those for long-term bonds.

To accommodate these two views, this report measures account accumulations using *two* average annual rate-of-return scenarios: **6.09% and 10%**.<sup>10</sup> The first scenario represents the same rate of return projected for the securities held by the Social Security trust funds, which the Trustees assume will ultimately be 6.09% per year.<sup>11</sup> These are federal securities that earn rates of interest equivalent to medium- and long-term federal bonds bought and sold in the financial markets. The second scenario (10% annual rate of return) represents the approximate growth rate of the Standard and Poor's (S&P) 500 stock market index (including reinvested dividends) over the period from 1927 through 2001, *minus* one percentage point per year to reflect administrative costs and related management fees.<sup>12</sup>

Because the return from stocks, and to a lesser degree from bonds, is volatile, the assets in personal accounts generally would fluctuate rather than grow steadily. The degree of variability would increase if individuals were to have the choice of investing the assets of their personal accounts in individual stocks rather than broad index funds. Furthermore, many proposals require that part or all of the payments from personal accounts be in the form of an annuity, i.e., spreading them out over the

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<sup>10</sup>These rates of return are expressed in nominal terms. The corresponding real rates of return are the nominal rates reduced by the underlying inflation assumption (3.0% annually under the Trustees' intermediate assumptions). Therefore, the real rates of return shown in this report are: **3%** ( $106.09/103.0 = 1.03$ ) and **6.8%** ( $110/103.0 = 1.068$ ).

<sup>11</sup>Under the Trustees' 2002 intermediate forecast, the nominal annual rate of interest is expected to range from 4.9% in 2002, to 6.4% in 2005, and to 6.0% in 2008 and thereafter. When the latter rate is compounded semiannually, the result is an effective rate of 6.09%.

<sup>12</sup>The "one percentage point" adjustment is a crude proxy for these fees (e.g., for the costs of buying and selling securities, marketing, and account maintenance). "Index fund" investments might have costs of a fraction of a percent, whereas actively traded, personally-directed accounts might have much larger transaction charges. Thus, costs will vary with the level of services offered to account holders. Also, it is likely that collecting contributions from all the nation's employers, including many "Mom and Pop" operations, and maintaining records for all the nation's workers, including potentially very small accounts, would drive up administrative costs of Social Security individual accounts considerably.

period of retirement. The amount of the monthly payment from the annuity usually is a function of the rate of interest prevailing at the time of retirement. As these rates also fluctuate, the value of the personal account would be subject to further volatility.<sup>13</sup>

Because personal accounts are proposed as a way to replace Social Security or to augment its benefits in the face of possible cutbacks, this report compares the amounts in the personal account at the time of retirement to the projected value of a person's lifetime Social Security benefits (including cost-of-living adjustments) under current law. It measures and expresses the value of lifetime Social Security benefits in "present value" terms.<sup>14</sup> By doing so, it shows in a single figure the amount of benefits that an individual would receive over the course of his or her retirement years (assuming the person experiences the average mortality of his or her age cohort), if those payments were paid as a lump sum at the time of retirement and that lump sum earned a constant real rate of interest over the period of retirement.

The report does not include the possible effects of income taxes on Social Security benefits and personal accounts. Social Security taxes are computed using before-tax earnings of employees, i.e., Social Security taxes are not deductible in computing income taxes (the employers' share, however, is deductible as a business expense). Because Social Security benefits are taxable only for recipients whose income exceeds certain levels, the degree of taxation is highly variable (from zero up to 85% of Social Security benefits may be taxable). While recognizing that income tax effects can alter the results, to simplify the analysis, no assumptions are made about the income tax treatment of either (1) Social Security taxes and benefits or (2) the contributions to and payments from the hypothetical personal accounts summarized in this report.

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<sup>13</sup>For illustrations of how the values of personal accounts could fluctuate because of changes in economic and market conditions, see CRS Report RL31324, *Social Security Reform: The Effect of Economic Variability on Individual Accounts and Their Annuities*, by Geoffrey Kollmann, Dawn Nuschler, and Patrick Purcell. These illustrations show that if economic and market conditions in the past were to recur in the future, under some circumstances the proportion of Social Security benefits replaced by personal accounts could be four times higher than that occurring under other circumstances. (This figure applies to workers who contributed to personal accounts throughout a 41-year career. The volatility for workers who would contribute for a shorter amount of time would be greater. For example, for workers who would contribute to a personal account for only 20 years, under some circumstances the proportion of Social Security benefits replaced by personal accounts could be seven times higher than that occurring under other circumstances.)

<sup>14</sup>The report computes Social Security benefits using the intermediate economic and demographic assumptions in the 2002 Trustees' report. Under these projections, wages are assumed to grow at an ultimate annual rate of 4.1% and prices at 3.0%. For computations of present value of benefits, the annual interest rate is 6.09%, and the probability of survival in each year is based on interpolated unisex mortality assumptions for retirements at age 62 and 70.

## Results

The following table illustrates the proportion of Social Security benefits promised under current law that would be replaced by personal accounts for workers retiring at age 62 under several scenarios. The variables in the scenarios are the year of retirement, the level of earnings, the percentage of pay contributed to a personal account, and the account's rate of return. Note that the percent of the Social Security benefit replaced is directly proportional to the contribution rate (the proportion replaced at 2% and 3% is exactly two and three times higher, respectively, than that replaced at 1%).

**Table 1. Projections of Personal Account Accumulations As Percent of Social Security Benefits — Retirement at Age 62**

Year of retirement at age 62	Value of personal account at retirement as percentage of Social Security benefit					
	Personal account grows at:					
	6.09% <sup>a</sup> — Same rate as Social Security trust funds			10% — Same rate as past S&P 500 performance		
	Contribution rate (as percent of pay)					
	1%	2%	3%	1%	2%	3%
<b>Minimum-wage earner</b>						
2010	0.8%	1.7%	2.5%	1.0%	1.9%	2.9%
2020	2.4%	4.9%	7.3%	3.4%	6.9%	10.3%
2030	4.5%	9.1%	13.6%	8.0%	16.0%	24.0%
2040	6.9%	13.8%	20.7%	15.7%	31.3%	47.0%
2050	7.9%	15.7%	23.6%	19.7%	39.5%	59.2%
<b>Average-wage earner</b>						
2010	1.5%	2.9%	4.4%	1.7%	3.3%	5.0%
2020	4.5%	9.0%	13.5%	6.4%	12.8%	19.3%
2030	8.0%	16.0%	24.0%	14.3%	28.5%	42.8%
2040	11.1%	22.3%	33.4%	24.5%	49.0%	73.5%
2050	11.8%	23.5%	35.3%	27.4%	54.8%	82.2%
<b>Maximum-wage earner</b>						
2010	2.5%	5.0%	7.5%	2.8%	5.7%	8.5%
2020	6.6%	13.3%	19.9%	9.3%	18.6%	27.9%
2030	11.6%	23.3%	34.9%	20.6%	41.1%	61.7%
2040	17.3%	34.6%	51.9%	39.2%	78.5%	117.7%
2050	18.9%	37.9%	56.8%	46.4%	92.7%	139.1%

**Note:** Social Security benefits were calculated under current-law rules using the intermediate assumptions of the 2002 Social Security Trustees' report (see footnote 14).

## Analysis

### Personal Accounts in the Transition Period

Because it is assumed that contributions to personal accounts would begin no sooner than 2003, the full effect of a proposal to create personal accounts as an alternative or supplement to Social Security would not be achieved until 2043 and 2044 (when the first cohorts that could have contributed throughout their entire career would become eligible for Social Security retirement benefits). Hence, the 2003-2043 period would have to be considered a transition. In the context of the current debate, it might be useful to consider retirees in this period as parts of three successive age groups:

*The baby boomers* — born in the 1946-1964 period;

*The baby troughers* — born from the late 1960s to the late 1970s;

*The children of the baby boomers (the baby-boom echo)* — born in the late 1970s through the 1980s.

**The Baby Boomers.** The baby boomers will reach age 62 in the 2008-2026 period. Those who wait until age 70 to collect benefits will retire from 2016 to 2034. Since their hypothetical personal accounts are assumed to start no earlier than 2003, older baby boomers would have less time to accumulate assets in their personal accounts than would younger baby boomers. Those who work to later ages (e.g., to age 65 or 70) would have more time to build their accounts.

As **Table 1** shows, even under the more optimistic investment scenario (a 10% rate of return), the oldest baby boomers would not have enough time to accumulate large personal accounts relative to their projected lifetime Social Security benefits. With a 2% of pay contribution rate, workers with average earnings retiring at age 62 in 2010 would have accumulated a fund equal to only 3.3% of their lifetime Social Security benefits (with a 1% contribution rate, the fund would equal 1.7% of their benefits, and with a 3% contribution rate, 5.0%). Even later baby boomers, i.e., those retiring at age 62 in 2020, would have accumulated only modest amounts — 6.4% of benefits with a 1% of pay contribution rate; 12.8% with a 2% contribution rate; and 19.3% with a 3% contribution rate. Thus, the more rapid the phase-in to a constrained or alternative Social Security system, the more difficult it would be for many baby boomers to make up for foregone Social Security benefits.

**The Baby Troughers.** By 2030, workers would have had 27 years to build their personal accounts, and they should be more substantial. A 2% of pay set-aside, for instance, earning a 10% annual return, could grow to an amount equal to 28.5% of the lifetime value of an average-wage earner's Social Security benefits. Even with rates of return matching the government bond rate (6.09% per year), a 2% of pay contribution rate could produce an account accumulation equal to 16.0% of a worker's Social Security benefits. Put into a policy context, it might be noted that this would more than compensate for the magnitude of the cut (14% for workers retiring at age 62) associated with a proposal raising the age for full Social Security

benefit to 70 by 2029,<sup>15</sup> one of a number of proposals often suggested as a means to help alleviate Social Security's financing problems. Minimum-wage earners, who generally have the least proportion of their Social Security benefit replaced by personal accounts, could have a cut of this size approximately offset if they contributed 3% of their pay to an account earning 6.09%, or if they contributed 2% of pay to an account earning 10%.

**The Children of the Baby Boomers (the Baby-Boom Echo).** The accounts for workers retiring in the 2043-2050 period, reflecting a full career's worth of investing, would become quite substantial even with modest investment success. For those retiring at age 62 in 2050 who earned average wages, the 41-year accumulation resulting from contributing 1% of pay to an account growing at the government bond rate (6.09% per year) would reach a level equal to 11.8% of lifetime Social Security benefits; a 2% contribution rate would equal 23.5%; and a 3% contribution rate would equal 35.3%. With a 10% annual return, the account build-ups range from levels equal to 27.4% of benefits with a 1% contribution rate to 82.2% with a 3% contribution rate.

## Effect of Personal Accounts on the Low-Wage "Tilt" of the Social Security System

**Table 1** also shows that personal account accumulations would represent a larger percentage of Social Security benefits for high-wage earners than low-wage earners. For example, if the contribution rate to a personal account is 2% of pay and the rate of return is 10%, the value of the account for a worker earning the maximum wage retiring at age 62 in 2050 would be 92.7% of benefits, whereas for a worker earning the minimum wage it would be 39.5%. This outcome reflects the "tilt" in the Social Security benefit formula in favor of low-wage earners.<sup>16</sup> Although Social Security benefits are not based on a worker's taxes, a comparison of taxes paid to benefits received will show that lower-wage earners receive a higher return on their taxes than higher-wage earners. Similarly, when benefits in the first year of retirement are compared to a worker's final earnings, lower-wage earners have a larger percentage of their earnings replaced by benefits. This design is deliberate and has existed since the program's inception. It is one of its social features, reflecting the view that Social Security should provide a means through which low-wage workers can sustain at least a "minimal" standard of living in retirement without resorting to welfare.

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<sup>15</sup>The proposal would raise the age for full Social Security benefits by 2 months per year over the 2000-2029 period.

<sup>16</sup>Benefits are computed by applying a formula to an average of a person's earnings from work subject to the Social Security tax. The formula applies three progressive factors — 90%, 32%, and 15% — to three different levels, or brackets, of average monthly covered earnings (these earnings brackets change each year to reflect changes in national wage levels). The formula is designed so that workers with low average career earnings receive a benefit that is a larger proportion of their earnings than do workers with high average career earnings.

However, everything else held equal, the value of a personal account is directly proportional to the level of a person's earnings. Thus, for a given rate of contributions and rate of return, a personal account would represent a larger percentage of Social Security benefits for high-wage earners.

This means that, if Social Security's long-range imbalance were addressed by an across-the-board cut in benefits coupled with the creation of personal accounts, lower-wage earners could appear disadvantaged. For example, **Table 1** shows that, if benefits were cut across the board by 15% by 2030, under the 2% contribution rate and 6.09% rate of return scenario the reduction would match almost exactly the value of the personal account of average-wage earners (16%), but not that of minimum-wage earners, whose personal accounts would equal only 9.1% of their Social Security benefits. The value of the personal account of high-wage earners, on the other hand, would significantly exceed the cut in benefits — the value of their personal accounts would equal 23.3% of their Social Security benefits.<sup>17</sup>

Said another way, when the reduced Social Security benefits and the new personal account are combined, the result reduces the degree of the tilt in favor of lower-paid workers, as illustrated in **Table 2** below.

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<sup>17</sup>Examples of possible general reduction measures include raising the age for full Social Security benefits beyond 67, reducing cost-of-living adjustments, and slowing the "indexing" embedded in the Social Security benefit computation rules. These approaches tend to reduce benefits by an equal percentage regardless of the level of a worker's underlying earnings history. One approach that has been suggested to mitigate the lessening of the tilt for low-wage earners is to increase the progressivity of the benefit formula. Also, some proposals that create personal accounts attempt to reduce the perceived advantage that higher-paid workers would have by limiting the amount they could contribute to the accounts, or, conversely, by augmenting the amount that lower-paid workers could contribute to the accounts.

**Table 2. Replacement Rates Assuming a Uniform 15% Cut in Social Security Benefits For Workers Retiring at Age 62 in 2030 — With a Personal Account Funded With 2% of Pay<sup>18</sup>**

Earnings pattern	Percent of final year's earnings replaced by benefits		
	Social Security benefits under current law	Social Security benefits assuming uniform 15% cut	Social Security benefits assuming uniform 15% cut plus benefits from personal account
<i>Account Earning 6.09% per Year</i>			
Minimum-wage earner	41%	35%	39%
Average-wage earner	28%	24%	28%
Maximum-wage earner	20%	17%	21%
<i>Account Earning 10% per Year</i>			
Minimum-wage earner	41%	35%	42%
Average-wage earner	28%	24%	32%
Maximum-wage earner	20%	17%	25%

**Note:** Social Security benefits were calculated under current-law rules using the intermediate assumptions of the 2002 Social Security Trustees' report (see footnote 14).

**Table 2** shows that, at a rate of return of 6.09%, the reduction in total benefits is slightly more than offset by the personal account for the maximum wage-earner, almost exactly offset for the average wage-earner, but only partially offset for the minimum wage-earner. On the other hand, the table shows that under the higher rate of return scenario, the combined benefits of minimum, average, and maximum-wage earners would all exceed the Social Security benefits projected under current law (compare fourth column to second column). Hence, while the system's tilt might be lessened from relying on personal accounts, the growth in the minimum-wage earner's account might be such that the worker is no worse off than if current-law Social Security benefits were sustained.

<sup>18</sup>This table assumes that some underlying mechanism is established for annuitizing the personal account accumulations or, in some other way, paying benefits periodically from these accounts.



## Effect of Delaying Retirement

The obvious effect of workers' delaying retirement is that their personal accounts could be larger because they could make additional contributions and there would be more time for the accounts to grow. However, another effect is that they would earn larger Social Security benefits. Workers who delay retirement would incur fewer or no *age-related* reductions in their Social Security benefits and, if they retired after they attained the full retirement age, their benefits would be augmented by delayed retirement credits. Hence, while their personal accounts would grow to larger levels if they delayed retirement, there would be little change in their value expressed as a percentage of Social Security benefits. In fact, because of increasing longevity (which raises the value of lifetime Social Security benefits), by 2058 under the 6.09% rate-of-return scenario the relative value of a personal account for a worker who retired at age 70 would be slightly lower than if he or she had retired at age 62 (see **Table 3**).

**Table 3. Value of Personal Accounts As Percent of Current Law Social Security Benefits for Average-Wage Earners Contributing 2% of Pay — Illustrations of Effect of Delaying Retirement From Age 62 to Age 70**

	Same rate of return as Social Security trust funds	Same rate of return as past S&P 500 performance
	6.09%	10%
<i>Example #1:</i>		
For worker retiring at age 62 in 2020	9%	13%
If retirement delayed to age 70 in 2028	10%	18%
<i>Example #2:</i>		
For worker retiring at age 62 in 2050	24%	55%
If retirement delayed to age 70 in 2058	23%	66%

**Note:** Social Security benefits were calculated under current-law rules using the intermediate assumptions of the 2002 Social Security Trustees' report (see footnote 14).

## Effect of Contributing to a Personal Account Over a Full Career

A full career's worth of contributions and investing for an average-wage earner is illustrated in **Table 1** by the account accumulations for workers retiring in 2050. The table shows that a 2% contribution rate growing at the same rate as the Social Security trust funds would yield an asset accumulation at age 62 equal to 23.5% of the value of lifetime Social Security benefits. With a 10% annual return, the asset accumulation would equal 54.8% of the lifetime Social Security benefits.

A key observation is that 2% of pay is equal to less than one-fifth of the long-range cost (10.47% of pay) of retired worker benefits, yet, if invested using a relatively safe investment strategy (i.e., at the government bond rate) it would generate an asset accumulation equal to 23.5% of a retiree's projected lifetime Social Security benefits. This result implies that the personal account would produce a better return than the equivalent taxes paid to the Social Security system, i.e., setting aside less than one-fifth of the taxes could produce a personal account worth almost a quarter of the benefits. Said another way, the inherent rate of return in the current Social Security system for a worker with a steady average-wage record would appear to be less than the government bond rate. Because of the tilt in the Social Security benefit discussed earlier, this inherent rate of return would be relatively higher for low-wage earners and relatively lower for high-wage earners.

While some consider this to be a “fundamental” flaw in the system, others do not. In its current form, Social Security is considered to be “social insurance.” As such, its purpose is not simply to provide annuities similar to those from a private retirement savings plan. It also attempts to “insure” society against wide-scale dependency among the aged. It has a “tilted” benefit formula favoring low-wage earners; it pays benefits to a worker's dependents with no corresponding increase in the worker's contributions; it assumes the market risks of annuitization (which the private sector would otherwise charge for) as well as the risks of inflation (by providing automatic cost-of-living adjustments); and workers' benefits are not strictly based on their own contributions or those of their age cohorts but are defined in law. In a fundamental sense, the level of benefits is directly related to the income of the system (i.e., it's a “pay-as-you-go” rather than a “fully-funded” system). In effect, part of a worker's Social Security withholding is a “social” tax — it reflects a progressive philosophy — and in this context, it would be reasonable to expect high-wage earners, and perhaps average earners, to have less of a return on their taxes than low-wage earners. The advantages to society of giving a measure of economic independence to its elderly and a greater sense of economic security to its workers would be seen as intangibles that are not reflected in a strict taxes-to-benefits analysis.

This is not to suggest that the system's current design and its varying returns on taxes at different income levels necessarily reflect the best policy today or in the future. The system was created 67 years ago under very different economic and social circumstances. The point is that, while understanding the potential returns from private investments is important, ultimately it is a value judgment and a political matter whether the social features that the system provides to today's workers should be maintained.

## For Additional Reading

For more information on congressional and other proposals that would allow or require personal savings accounts, see:

- IB98048, *Social Security Reform*, by Geoffrey Kollmann and Dawn Nuschler.
- CRS Report RL31324, *Social Security Reform: The Effect of Economic Variability on Individual Accounts and Their Annuities*, by Geoffrey Kollmann, Dawn Nuschler, and Patrick Purcell.
- CRS Report RL30397, *Social Security Reform: Individual Account Proposals*, by James Storey.
- CRS Report RL31086, *Social Security Reform: What Happens to Future Benefit Levels Under Various Reform Options*, by David Koitz, Geoffrey Kollmann, and Dawn Nuschler.
- CRS Report 98-961, *Social Security Reform: Projected Contributions and Benefits Under Three Proposals (S. 1792 and S. 2313/H.R. 4256 in the 105<sup>th</sup> Congress, and a Plan by Robert M. Ball)*, by Geoffrey Kollmann, David Koitz, and Dawn Nuschler.
- CRS Report RL30571, *Social Security Reform: The Issue of Individual Versus Collective Investment for Retirement*, by David Koitz