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

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Summary

Numerous proposals have been suggested calling for creation of personal retirement accounts to replace or supplement the benefits of future Social Security recipients. Some are based on the belief that having workers accumulate assets directly would be a better way to secure future retirement incomes. Others are designed to offset Social Security benefit cuts 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, 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 post-World War II baby boomers retire.

Opponents of personal accounts point to projections of the Social Security trustees, which assume much slower future economic growth than achieved over the past 50 years. They contend that a slower growing economy means a less robust stock market and less favorable results for personal accounts. They argue that many individuals will make unwise investment decisions, the timing of their acquisitions and liquidations may be bad, and they may spend what they otherwise should save.

Given these contrasting assertions, there is considerable confusion over how to evaluate the possible role of personal accounts in reforming Social Security. Certainly the political, economic and social effects will drive the debate. But how much people could expect to accumulate in them relative to any potential Social Security changes will be critical. This report attempts to add some facts to the debate by projecting potential personal account assets at the time of retirement and comparing them to projected lifetime Social Security benefits.

Notable among its findings is that, even under the optimistic investment scenario projected here (a 10% annual return), the oldest baby boomers would not have enough time to build large accounts relative to their Social Security benefits. Workers with average earnings who set aside 3% of pay beginning in the year 2000 and retire at age 65 in 2010 would have an account equal to only 7% of their benefits. Even workers retiring in 2020 would have built only modest accounts — at best, with a 3% set-aside, they would equal 19% 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 for workers retiring in 2030 since they would have had 30 years to build them. A 3% of pay set-aside earning 10% annually could reach a level equal to 41% of an average-wage earner's Social Security benefits. Even with a return only matching the government bond rate (assumed to be 6.4% annually), a 3% set-aside could grow to a level equal to 23% of benefits. For workers retiring in 2050, having 44 years to invest, the accounts would become quite large. A 3% set-aside growing at the government bond rate would reach a level equal to 40% of Social Security benefits; a 3% set-aside with a 10% annual return would reach a level equal to 101% of Social Security benefits.

Contents

List of Tables

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

Introduction

In response to repeated reports that the Social Security system has long-range funding problems and growing public skepticism that the system can be sustained in its current form, numerous proposals have emerged calling for the creation of personal retirement savings accounts to replace or supplement the benefits of future Social Security recipients. Among them are proposals suggested by President Clinton and Presidential candidate George W. Bush.

The Social Security taxes people now pay flow into the government's general treasury and are recorded as income to two federal trust funds. As such, they help to finance the system as a whole. They are not accumulated nor accounted for taxpayer-by-taxpayer and have only an indirect bearing upon the determination of a person's benefits. Instead, Social Security benefits are based on an average of a person's earnings history. The principle under which the program functions is that today's workers pay for the benefits of today's retirees, and future workers will pay for the benefits of future retirees. Some proponents of establishing personal accounts believe that having workers accumulate assets through investment of their individual contributions would be a better way for them to secure their retirement income. Others see the creation of personal accounts as a way to offset future cuts in Social Security benefits that may be needed 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, the asset accumulation in them could exceed the value of future Social Security benefits, particularly since Social Security benefits will likely be curtailed by future changes in the law. As the financing demands of paying federal entitlement benefits to the post-World War II baby boomers rise, the pressure on future Congresses to scale them back will grow. 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 Social Security.

Opponents of the idea say that the past performance of the stock market is unlikely to be repeated in the future. They point to the long-range projections of the Social Security trustees, which assume much slower future growth in the nation's Gross Domestic Product than achieved over the past 50 years (that being the possible result of slower population growth).[1] They contend that a slower growing economy

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[1] Under the Social Security trustees' 2000 intermediate (or "best guess") financial forecast, Gross Domestic Product (GDP) is projected to grow at annual inflation-adjusted rates

(continued...)

means a less robust stock market and 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 spend what they should save. 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.

This report does not take a side on the issue, nor is its purpose to promote or dismiss the concept of personal savings accounts. Rather, its purpose is to illustrate *potential* accumulations in personal savings accounts, given a range of possible contribution amounts and interest rates. Amidst often contrasting and contradictory assertions, there is considerable confusion over how to evaluate the possible role of personal accounts in the debate on Social Security reform. This report is designed to be used as a tool in that debate. Its illustrations *do not* simulate the effect of any single idea or bill. To the extent that a bill proposes Social Security benefit reductions alongside the creation of personal accounts, those reductions would be an equally important factor in evaluating the full impact of the bill. The possible social effects of changes in the Social Security program, as well as potential effects on the economy, the nation's ability to save, the federal budget, and the financing of the system are paramount. However, at the root of any change is the question of how it could affect each worker's future retirement income. Simply stated, if personal accounts are part of (or comprise the entirety of) a Social Security reform plan, what "range" of retirement benefits might one expect to earn from them?[2]

Where Would the Money Come From to Build Personal Accounts?

Perhaps the most significant policy question about establishing personal accounts in the context of Social Security reform is how to fund them. Thus far, three generic approaches have been suggested: (1) carving out a portion of existing Social Security taxes, (2) withholding more from workers' earnings (a so-called "*add on*" approach), or (3) using projected federal budget surpluses.

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[1] (...continued)
dropping from 3.5% in 2000 to 2.1% in 2010 and to ultimate rates of 1.7% to 1.5% for the 2020 and later period. Over the past 50 years, "real" or inflation-adjusted GDP has grown at average annual rates exceeding 3%. For more information, see: *The 2000 Annual Report of the Board of Trustees of the Old Age, Survivors and Disability Insurance Trust Funds*, Washington, U.S. Government Printing Office, 2000.

[2] This report looks only at the question of how personal accounts might replace or supplant Social Security retirement benefits, not its survivor or disability benefits. It deals with the question of how effective alternative means of accumulating resources for retirement might be. 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 accumulate assets*, whereas disability and survivor protection is viewed as dealing with the "risks" of losing one's ability to work or the earnings of a spouse or parent. It is something for which people *buy insurance*. How private insurance could replace or supplement these Social Security protections is certainly relevant but raises different types of policy and operational questions.

The "carve out" approach: 12.4% of a worker's first $76,200 in annual earnings in 2000 is paid in taxes by employees and employers (6.2% by each) to finance the Social Security system.[3] In recent years, the most prominent approach suggested to setting up personal accounts would be to require or allow workers to use part of these taxes to do so. Although not yet proposing or endorsing a specific plan, Presidential candidate George W. Bush has stated that he favors such an approach, one that would be voluntary in nature. The concept was earlier incorporated in one of three alternative plans proffered by the 1994-96 Advisory Council on Social Security.[4] Its sponsors proposed that 5% of pay be carved out of the Social Security tax rate (i.e., 5 percentage points of the tax rate) for the creation of "Personal Security Accounts" (or PSAs).[5] It also is reflected in a number of bills introduced in the 105th and 106th Congresses, ranging from a one percentage point carve out under H.R. 250 (introduced by Representative Sanford) to a 10 percentage point carve out under H.R. 874 (introduced by Representative Porter).

Obviously, if it is projected that the taxes that finance the system are insufficient to pay for future promised benefits, earmarking some of them for the buildup of personal accounts would make this shortfall larger.[6] It would mean that to restore the system to solvency, future tax increases would have to be larger, or benefits would have to be cut deeper. Some proposals address this issue by asking workers to forego or forfeit a part of their Social Security benefits in exchange for the option to build

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[3] An estimated 94% of workers have earnings below the $76,200 threshold; thus, most workers pay the Social Security tax on all of their earnings. Another 2.9% tax rate (1.45% on employee and employer, each) is levied on all earnings (i.e., there is no maximum) to help finance the Medicare Hospital Insurance (HI) trust fund. The combined Social Security and Medicare tax rate that the vast majority of workers and employers pay on all their earnings is 15.3%.

[4] The council was a legislatively mandated body whose primary purpose was to make recommendations to resolve Social Security's long-range financing problem. Its report was issued in January 1997. (See CRS Report 97-81, *Social Security: Recommendations of the 1994-1996 Advisory Council on Social Security*, by Geoffrey Kollmann).

[5] Supported by five of the 13 members of the council, this plan (sometimes referred to as the Schieber/Weaver plan, named for two of its authors, Sylvester Schieber and Carolyn Weaver) also would have increased FICA taxes on workers by 1.52% of pay for 72 years. Hence, it represented a combination of a "carve out" and "add on" approach — on balance the net carve out was to be about 3.5% of pay. The plan also envisioned converting the traditional government-run program into a system that bases benefits on the length of a person's work record, as well as making other changes to restore the program's long-run solvency. The authors contended that the combination of benefits from the new personal accounts (the PSAs) and the scaled-down government system would equal or possibly exceed the benefits payable from the current Social Security system (i.e., assuming the current system were able to pay the benefits prescribed under the benefit computation rules of current law).

[6] Under the Social Security trustees' 2000 intermediate forecast, the Social Security system is projected to have an average 75-year deficit equal to 1.89% 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 $75 billion per year. An immediate and permanent carve out of 2% of earnings, for example, would approximately double the size of the long-range deficit.

personal accounts, the premise being that the larger the amount of taxes they divert, the greater the forfeiture of benefits. In effect, the burden of reduction is placed on those who have made the greatest use of the carve out. The goal of these proposals is not to make the current system's problems worse, but to replace it. With these measures, the key problem is financing the existing Social Security system during the first few decades of the transition. 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.

Withholding more from earnings — the "add on" approach: Some have suggested that instead of carving out funds for personal accounts from existing Social Security taxes, today's workers could be asked to set aside an additional part of their incomes to build them. One faction of the recent advisory council suggested that an additional 1.6% of pay be mandatorily set aside for such.[7] The motive here is not to replace the existing system but to offset some of the benefit reductions that may be needed to restore its solvency with accumulations of private assets.

Earmarking budget surpluses: A third possibility would be to have the government use surplus federal revenues to make deposits into new personal accounts. This approach would envision neither a tax carve out nor an additional amount of withholding from wages, but would be contingent upon budget surpluses not being used for other politically popular purposes (i.e., new spending initiatives, lower taxes, or debt reduction). Such an approach was proposed by President Clinton in his January 1999 State of the Union address, where he suggested the creation of "Universal Savings Accounts." It is also reflected in a plan suggested by Representatives Archer and Shaw and a number of bills introduced in the 105th and 106th Congresses.

This report does not make any assumptions about the source of funding for personal savings accounts — i.e., from carving out part of the existing tax rate, requiring additional withholding, or committing budget surpluses to them. It simply attempts to show how much could be accumulated for retirement if the creation of personal accounts were made a component of any Social Security reform package.

While showing these amounts in dollar terms is informative, it does not indicate the extent to which these accounts could augment or replace Social Security benefits. To provide some perspective on this question, this report shows the value of the accumulated assets as a percent of the projected lifetime value of Social Security benefits under current law.

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[7] 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. As with the PSA plan (see footnote 5), the intent was to give recipients the approximate combined benefits from a constrained Social Security program and individual accounts as they would have received under the Social Security benefit rules of 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 2037. Ongoing tax receipts at that point would be sufficient to finance only 72% 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 2037 and thereafter because the system would not have sufficient resources to pay them in full.

In the context of this funding gap, one might view the analysis herein as attempting to show how much of foregone Social Security benefits one might reasonably expect to replace by creating personal accounts, if Social Security retirement benefits were to be reduced to cover the gap.

Factors Determining How Much Could be Accumulated

How much can be accumulated in any savings account depends on (1) the amounts deposited, (2) how long the account is allowed to grow, and, perhaps most importantly, (3) the rate of return on the investment.[8]

(1) How much could be deposited into new personal accounts? This report projects potential asset accumulations resulting from setting aside 1%, 2%, or 3% of pay for people retiring in the 2010-2050 period. At first glance, these three set-aside levels may seem small in comparison to the 12.4% of pay currently levied for Social Security. However, more than $8 out of $10 in Social Security taxes are needed *now* to pay benefits to current retirees and the surplus of such is not expected to last for more than 15 years. Even if benefit curtailments were enacted to enhance these surpluses, they probably would have to be phased in slowly, thereby having little impact on the amount that could be diverted to personal accounts in the near term. As a result, there is not a large amount of surplus Social Security revenue now, nor projected, to divert for carve out plans.

Alternatively, if an increase in payroll withholding were contemplated (i.e., an "add on" approach), it is not clear how much the public would find acceptable. A hike in mandatory withholding of 3% of pay would be the equivalent of nearly a 40% hike in FICA withholding.[9] In the current political climate, it is possible that any proposed mandatory increase in withholding would be viewed and dismissed as simply a new taxation scheme.

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[8] Another factor not examined in this report is the tax treatment of accumulated savings. Differences in tax rates on contributions versus distributions can affect the net value of personal savings as a replacement for Social Security benefits.

[9] FICA refers to the Federal Insurance Contributions Act. The current FICA tax rate is 7.65% (6.2% being for Social Security and 1.45% being for Medicare's Hospital Insurance program) for wage or salaried workers having earnings up to $76,200 in 2000. A new 3% add-on would raise the total employee deduction to 10.65% of pay — an increase of 39.2% (3/7.65 = 39.2).

While this report shows potential fund accumulations based on set-asides only up to 3% of pay, the reader should note that the impact from even larger set-asides can be calculated by multiplying the impact from a 1% set-aside by the larger amount (for instance, to observe the impact of a 5% set-aside, the amounts in the "1% set-aside" column of the tables in the appendix can be multiplied by 5).

(2) How long could the accounts be assumed to grow? The report looks at the asset accumulations for workers retiring in the 2010-2050 period at age 65. Three different lifetime earnings patterns are assumed: one based on the minimum wage;[10] another based on average wages;[11] and a third based on the maximum level of wages subject to the Social Security tax (i.e., $76,200 in 2000).[12] The projections assume that the workers start careers at age 21 and work steadily on a full-time basis throughout their careers. Thus, for purposes of computing Social Security benefits, they assume a 44-year career at age 65.

For purposes of asset accumulation in the hypothetical personal accounts, the projections assume different periods of accumulation depending on a person's age today, but that the new accounts would take effect no sooner than 2001.[13] Thus, someone retiring at age 65 in 2010 may have a 44-year career for Social Security purposes but would have only 9 years to grow a new personal account; someone retiring in 2020 would have 19 years to do so; someone retiring in 2030 would have 29 years; and so on. In effect, the projections do not show the impact of a full career's worth of investing until 2045.

(3) How large could the rates of return be? The report measures account accumulations using two average rate-of-return scenarios: 6.4% and 10% annually. 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 6.4% per year.[14] These securities are non-marketable "special issue" federal notes and bonds which earn rates of interest equivalent to medium- and long-term federal bonds sold and traded 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 1926 to the

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[10] For this purpose, the minimum wage is assumed to be indexed, growing at the projected rate of average wages in the economy (see next footnote).

[11] Average wages here are those comprising the average-wage indexing series used by the Social Security trustees in making the intermediate projections in their 2000 report.

[12] This maximum level also rises each year at the same rate as the average-wage indexing series.

[13] Based on the assumption that enactment of legislation would not occur earlier than in 2000 and would not be effective earlier than 2001.

[14] Under the Social Security trustees' 2000 intermediate forecast, the nominal annual rate of interest is expected to range from 6.7% in 2000 to 6.3% in 2006 and thereafter (when the latter is compounded semi-annually, it results in an effective rate of 6.399%).

present, *minus* 1 percentage point per year to reflect administrative costs and related management fees.[15]

Table 1. Alternative Rates of Return Assumed in this Report[16]

Scenario	Ultimate annual rate of return	Nature of assumption
Worker would receive a return equal to that projected for Social Security trust funds	**6.4%**[a]	Personal account's investment return would approximate that achieved by a medium to long-term federal government bond fund
Worker would receive a return equal to that of the S&P 500 index from 1926 to the present	**10%**	Personal account's investment return would equal that of an "equity" (common stock) portfolio achieving same past return as that of the S&P 500 index, *minus* 1 percentage point annually

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculations is 6.399%.

In the real world, the assets in personal accounts would not grow steadily as reflected under the alternatives shown here. Moreover, as all mutual fund prospectuses and advertisements point out, past performance of the financial markets or segments thereof is not an indicator of future performance. Finally, individuals will behave differently in making investment decisions. While two people of the same age and having the same earnings record would get the same Social Security benefits, it would be a quirk of fate if, left to their own devices, they achieved the same asset accumulation in their personal accounts. They will suffer or benefit differently from ups and downs in the market; from making poor or favorable investment choices; and if the funds are accessible to them, from possibly consuming some or all of what they saved before retirement. How people will fare in general is a matter of conjecture. For these reasons, two different "rate of return" assumptions have been used. The

[15] The "1 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 considerably larger transaction charges. Thus, costs will vary with the level of services offered to account holders. Perhaps most important, experience in other countries suggests that the extent to which administrative charges cut into the potential rates of return is heavily dependent on the competition that might exist among investment companies vying for new accounts. A number of commentators have pointed out that marketing expenses have been very costly in some countries that have redesigned their Social Security system to include individual investment components (e.g., Great Britain and Chile).

[16] These rates of return are expressed in nominal terms. The corresponding real rates of return are simply the nominal rates reduced by the underlying inflation assumption (3.3% annually under the trustees' intermediate assumptions). Therefore, the real rates of return shown in this report are: **3%** (106.399/103.3=1.03) and **6.5%** (110/103.3=1.065).

report simply attempts to portray the investment outcomes from what may be considered a reasonably wide range of investment performance.[17]

Since the motivation for the creation of personal accounts is to replace Social Security or augment its benefits in the face of possible future cutbacks, the report compares the amounts in the personal accounts at the time of retirement to the projected value of a person's lifetime Social Security benefits (including cost-of-living adjustments). It measures and expresses the value of lifetime Social Security benefits in "present value" terms.[18] 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 lives an average lifetime) if those payments were paid as a lump sum at the time of retirement and that lump sum earned interest over the period of retirement.[19]

The report does not make assumptions about the cost of annuitizing the personal account accumulations — i.e., spreading or paying them out over the period of retirement. Simulating the process of annuitizing on a scale that encompasses every potential retiree in society would be complex and highly speculative. Annuitizing could result in either large or small charges by the annuity providers, depending not only on the potential costs of administration (which possibly could be minimized through tight regulation and limiting marketing practices), but more importantly on the risks of underestimating annuitants' longevity that insurers would envision in promising to make the annuity payments and the resulting surcharges they would levy on the annuity purchaser for assuming those risks. On the other hand, the current rules pertaining to drawing down IRAs without incurring penalty taxes might be a proxy used by many retirees who wish to avoid annuitizing and the costs thereof. They also might avoid these costs by employing a *personalized* method of drawing down the account, involving either an accelerated or delayed liquidation of the assets. Nonetheless, the reader should be conscious of the fact that additional costs might be imbedded in any future plan to establish personal accounts, if annuitizing were made an optional or mandatory feature.[20]

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[17] People also would be expected to make different decisions about their "other" savings as well. For instance, if they had the option or were required to invest in a new Social Security savings account, they might save less in 401(k) accounts or IRAs. Thus, accumulations in new Social Security savings accounts cannot necessarily be seen simply as offsets to foregone Social Security benefits because some portion may be an offset to other savings they would have accumulated otherwise. No adjustment for these possible effects is made in this report.

[18] The report computes Social Security benefits using the intermediate economic and demographic assumptions in the 2000 trustees' report. Under these projections, wages are assumed to grow at an ultimate annual rate of 4.3%, and prices at 3.3%. For computations of present value of benefits, the annual interest rate is 6.399%, and longevity is based on interpolated unisex assumptions for retirements at age 65 and 70.

[19] For a lengthy discussion of annuitization issues, see *Social Security Privatization and the Annuities Market*. CBO. February 1998.

[20] The report similarly does not analyze the impact of building personal accounts taking income taxes into account. Social Security taxes are computed using before-tax earnings of employees (i.e., Social Security taxes are not deductible in computing income taxes; the

(continued...)

Results

This report summarizes the results for workers who entered (or will enter) the workforce over the period from 1970 to 2010. They are assumed to retire in the 2010 to 2050 period. In the context of the current debate, it might be useful to consider these retirees as parts of three successive age groups:

The post-World War II baby boomers — born in the 1946-64 period — who largely entered the workforce from the late 1960s through the mid-1980s. The baby boomers actually might be considered in two parts: early boomers, i.e., those retiring in the 2010-2020 period, and late boomers, those retiring in the 2020-2030 period;

The baby troughers — born from the late 1960s to the late 1970s — who are now largely recent entrants to the workforce. They will retire in or around the 2030s;

The children of the baby boomers (the baby-boom echo) — born in the late 1970s through the 1990s — the oldest of whom are now entering the workforce. They will retire in or around the 2040s.

The baby boomers. The baby boomers will reach age 62 (the youngest age at which Social Security retirement benefits can be paid) in the 2008-2026 period. For those who wait until age 70 to collect benefits, that would occur from 2016 to 2034. Since their hypothetical personal accounts would not be assumed to start until 2001, early baby boomers would have less time to accumulate; later baby boomers would have more. Similarly, those who work to a later age (i.e., to age 65 or 70, instead of 62) also would have more time to build their accounts.

As **Table 2** and the more detailed Appendix tables show, even under the more optimistic investment scenario projected here (a 10% per year rate of return), the earliest baby boomers would not have enough time to accumulate large personal accounts relative to their projected lifetime Social Security benefits.[21] With a 1% of pay set-aside, workers with average earnings, retiring at age 65 in 2010, would have accumulated a fund equal to only 2% of their lifetime Social Security benefits. With a 2% set-aside, the fund would equal only 5% of their benefits, and with a 3% set-aside, only 7%. Even later baby boomers, i.e., those retiring at age 65 in 2020, would have accumulated only modest amounts — 6% of benefits with a 1% of pay set-aside; 13% with a 2% set-aside; and 19% with a 3% set-aside. Thus, the more rapid the

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[20] (...continued)
employers' share, however, is deductible as a business expense), and up to 85% of Social Security benefits may be taxable upon receipt. 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.

[21] The reader should note that the account accumulations shown in **Tables 8 through 10** in the Appendix are expressed in nominal terms, i.e., they have not been adjusted for inflation. If shown in what economists refer to as "real" terms (adjusted for inflation), lower amounts would have been reflected. In effect, the figures in the tables show both the combined effects of inflation and real growth on the account values.

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.

Table 2. Value of Personal Accounts As Percent of Current Law Social Security Benefits for Average-Wage Earners Retiring in the Period From 2010 to 2050

Year of retirement at age 65	Same rate as Social Security trust funds	Same rate as past S&P 500 performance
	6.4%[a]	**10%**
Assuming 1% of pay set aside		
2010	2%	2%
2020	4%	6%
2030	8%	14%
2040	12%	26%
2050	13%	34%
Assuming 2% of pay set aside		
2010	4%	5%
2020	9%	13%
2030	16%	28%
2040	23%	51%
2050	27%	67%
Assuming 3% of pay set aside		
2010	6%	7%
2020	13%	19%
2030	23%	41%
2040	34%	77%
2050	40%	101%

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculations is 6.399%.

Note: See **Tables 8 to 11** in the Appendix for the complete range of results, including those for minimum and high-wage earners.

The baby troughers. The accumulations in personal accounts begin to take on a more notable magnitude with workers retiring in the 2025 to 2030 period. In these cases, workers would have had 25 to 30 years to build their accounts. A 3% of pay set aside, for instance, earning a 10% annual return for 29 years, could grow to an amount equal to 41% of the lifetime value of an average-wage earner's Social Security benefits. Even with rates of return only matching the government bond rate (6.4% per year), a 3% of pay set-aside could render an account accumulation equal to 23% of a worker's Social Security benefits. To put this in a policy context, it might be noted that a proposal raising the age for full Social Security benefit to 70 by

2029,[22] one of a number of proposals often suggested as a means to help alleviate Social Security's financing problems, would reduce current law benefits by 20% for workers retiring between ages 62 and 65. The 29-year accumulation in an account funded with a 3% of pay set-aside, growing at the government bond rate, would more than offset this reduction, and it would be twice as large as the reduction if the account were assumed to achieve a 10% annual return (see **Table 2**).

The children of the baby boomers (the baby-boom echo). The accumulations for workers retiring in the 2045-2050 period, reflecting a full career's worth of investing, would become quite large even with modest investment success. For those retiring at age 65 in 2050, the 44-year build-up from a 1% of pay set-aside growing at the government bond rate (6.4% per year) would reach a level equal to 13% of lifetime Social Security benefits; a 2% set-aside would equal 27%; and a 3% set-aside would equal 40%. With a 10% annual return, the account build-ups range from levels equal to 34% of benefits with a 1% set-aside to 101% with a 3% set-aside.

Effect of delaying retirement. The obvious impact of workers' delaying retirement is that it would give them additional time to build their personal accounts. However, not so obvious is that it also means they would earn larger Social Security benefits. Workers who delay would incur fewer or no *age-related* reductions in their Social Security benefits, and those benefits would reflect general cost-of-living adjustments granted in and after the year they reached 62 as well as potentially higher wage histories. Hence, while their personal accounts would grow to larger levels if they delay retirement, the differences are not substantial when expressed as a percentage of Social Security benefits (see **Table 3**).

Table 3. Value of Personal Accounts As Percent of Current Law Social Security Benefits for Average-Wage Earners — Illustrations of Impact of Delaying Retirement From Age 65 to Age 70

	Same rate as Social Security trust funds	**Same rate as past S&P 500 performance**
	6.4%[a]	**10%**
Assumes 2% of pay set aside		
Example #1:[b]		
For worker retiring at age 65 in 2020:	9%	13%
If he/she waits to retire at age 70 in 2025:	10%	16%
Example #2:		
For worker retiring at age 65 in 2030:	16%	28%
If he/she waits to retire at age 70 in 2035:	18%	32%

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculations is 6.399%.

[22] Assumes age for full Social Security benefits would rise by 2 months per year over the 2000-2029 period.

[b] In the first example above, the balance of the account would have risen from $33,019 in 2020 to $54,279 in 2025 – a 64% rise. The lifetime value of the worker's Social Security benefits would have risen from $374,271 to $551,186 – a 47% rise.

Effect of accumulating personal accounts on the low-wage "tilt" of the Social Security system. The following table shows that personal account accumulations would represent a larger percentage of Social Security benefits for high-wage earners than low-wage earners. This outcome reflects the fact that the current Social Security benefit formula is "tilted" in favor of low-wage earners.[23] 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 so-called "tilt" in the system is deliberate and has existed since the system's inception. It is one of the social features of the program, 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.

This report does not debate the merits of the "tilt" but merely shows that a retirement system based strictly on worker contributions and investment performance — i.e., that does not discriminate in favor of or against workers based on their relative earnings — will produce asset accumulations that represent a larger percentage of Social Security benefits for high-wage earners (see **Table 4**).

[23] Benefits are computed by applying a three-step formula to a worker's "average indexed monthly earnings" (AIME) calculated using as many as 35 years' worth of earnings. For workers reaching age 62 in 2000, monthly benefits are the sum of 90% of the first $531 of AIME, 32% of the next $2,671, and 15% of the remainder. Both the earnings used to compute the worker's AIME and the so-called "bend points" in the benefit formula ("$531" and "$3,202" in 2000) are indexed to reflect growth in average wages in the economy. For retirees, each year's earnings are indexed from the year they were earned to the year the worker reaches age 60. Earnings at age 60 and beyond are included in the calculation at their nominal value.

Table 4. Value of Personal Accounts As Percent of Current Law Social Security Benefits — Differences Between Minimum, Average, and High-Wage Earners

For workers retiring at age 65 who steadily contributed 2% of pay to personal account (accounts assumed to earn 6.4% per year)[a]			
	Relative lifetime earnings level		
Retirement year	**Minimum-wage earner**	**Average-wage earner**	**Maximum-wage earner**
2010	3%	4%	6%
2020	6%	9%	13%
2030	10%	16%	24%
2040	15%	22%	34%
2050	17%	25%	38%

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculations is 6.399%. For results assuming a 10% investment return, see tables in the Appendix.

A key point here is that an across-the-board cut in Social Security benefits (e.g., to help eliminate the system's long-range imbalance), when coupled with building personal accounts, would weigh heaviest on low-wage earners. The accumulations in their personal accounts would not make up for as much of the cut as it would for average and high-wage earners. For instance, using the table above, if the benefit cutback were designed to achieve a 16% general reduction by 2030, it would roughly match the personal account accumulation of average-wage earners, but not that of low-wage earners. The low-wage earners' accumulations would equal only 10% of their Social Security benefits. The accumulations of high-wage earners, on the other hand, would notably exceed the cut – their accumulations would equal 24% of their Social Security benefits.[24]

[24] Examples of possible general reduction measures include raising the age for full Social Security benefits beyond 67 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 histories. One approach that has been suggested to mitigate the impact on low-wage earners is to slow the indexing of the middle and/or top portions of the Social Security benefit formula, or perhaps create a less generous fourth bracket. In this context, a new fourth bracket would use a lower percentage rate than in the current third bracket to convert a worker's earnings into a benefit amount. By so doing, low-wage earners would incur less (or no) reduction in their Social Security benefits. This means of reducing the impact of a benefit cut on low-wage earners could be accomplished with either an increase in the "full" benefit age or a benefit indexing constraint. If included with an increase in the "full" benefit age, part of the needed program savings would be achieved by changing the "full" benefit age and part by reducing benefit indexing for middle and/or higher-wage earners. In this case, the increase in the "full" benefit age could be phased in more slowly or raised less than it otherwise would be to achieve a given level of program savings. See previous footnote for a more complete description of the current benefit formula and the indexing rules.

Table 5. Varying Amounts by Which a Personal Account Could Mitigate a Hypothetical 16% Social Security Cut For Workers Retiring at Age 65 in 2030 — Assuming Personal Account Funded With a 2% of Pay Set Aside, Earning 6.4%[a] Per Year[25]

Earnings pattern	Percent of final year's earnings replaced by benefits		
	Social Security benefits under current law	Social Security benefits assuming 16% cut	Social Security benefits assuming 16% cut *plus* benefits being paid from personal account
Minimum-wage earner	57%	48%	53%
Average-wage earner	37%	31%	36%
Maximum-wage earner	24%	20%	26%

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculation is 6.399%.

It is important to note that the tilt in the combined benefit package (i.e., the lower Social Security benefits coupled with the new personal account benefits) is lessened a little, but not greatly, in the example reflected in **Table 5** (compare the first and third columns in the table). The example assumes that 2% of pay is set aside annually and it earns an annual investment return of 6.4%. With a larger set-aside and/or a greater investment return, the "tilt" would be further reduced. At the same time, if the set-aside or investment return were larger than assumed in these examples, the value of the low-wage earner's combined benefits would come closer or perhaps exceed the value of Social Security benefits payable under current law. If, for instance, in the previous example, the investment return were 10% per year from a 2% set-aside, the combined benefits of minimum, average, and maximum-wage earners would all exceed the Social Security benefits projected under current law (compare third column to first column in **Table 6**).

Hence, while the system's tilt might be lessened from relying on personal accounts, the growth in the low-wage earner's account might be such that the worker is no worse off than if current-law Social Security benefits were sustained.

[25] 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.

Table 6. Varying Amounts by Which a Personal Account Could Exceed a Hypothetical 16% Social Security Cut For Workers Retiring at Age 65 in 2030 — Assuming Personal Account Funded With a 2% of Pay Set Aside, Earning 10% Per Year

Earnings pattern	Percent of final year's earnings replaced by benefits		
	Social Security benefits under current law	Social Security benefits assuming 16% cut	Social Security benefits assuming 16% cut *plus* benefits being paid from personal account
Minimum-wage earner	53%	48%	57%
Average-wage earner	37%	31%	41%
Maximum-wage earner	24%	20%	30%

The impact of a full career's worth of personal account building. Assuming workers begin contributing to personal accounts no sooner than the year 2001, a full career's worth of building a personal account by an age-65 retiree — i.e., 44 or more years' worth — would not be reached until 2045 at the earliest. In effect, the full impact of a proposal to create personal accounts as an alternative or supplement to Social Security could not be achieved by the baby-boom cohorts, most of whom would have retired long before 2035. Hence, the 2000-2035 period would have to be considered a transition.

In this analysis, a full career's worth of contributions and investing is illustrated by the account accumulations for workers retiring in 2050. Examples are shown in **Table 7**. At one end of the spectrum, the table shows that a 1% set-aside growing at the same rate as the Social Security trust funds would yield an asset accumulation at age 65 equal to 13% of the value of an average-wage earner's lifetime Social Security benefits. At the other end of the spectrum, with 10% annual return, the asset accumulation would equal 34% of the lifetime Social Security benefits. With a 3% set-aside, the range would be 40% with a 6.4% annual return to 101% with a 10% annual return. This comparison shows the power of interest compounding over long periods of time and the fairly wide range of investment outcomes that can result.

Table 7. Value of Personal Accounts As Percent of Current Law Social Security Benefits — Illustrations of a "Full" Career's Worth of Contributions

Year of retirement	Value of personal account at retirement as percent of Social Security benefit	
	Personal account grew at:	
	Same rate as Social Security trust funds	Same rate as past S&P 500 performance
	6.4%[a]	**10%**
Average-wage earner, retiring at **age 65** — **1%** of pay set aside		
2050	13%	34%
Average-wage earner, retiring at **age 65** — **2%** of pay set aside		
2050	27%	67%
Average-wage earner, retiring at **age 65** — **3%** of pay set aside		
2050	40%	101%

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculation is 6.399%.

For more detailed results, including those for minimum- and high-wage earners, see tables in the Appendix.

A key observation is that a 3% of pay set-aside invested using a relatively safe investment strategy (i.e., at the government bond rate) would generate an asset accumulation equal to 40% of a retiree's projected lifetime Social Security benefits. If one considers that 3% of pay is equal to only a little more than a quarter of the long-range Social Security tax rate (the portion that goes for Old-Age and Survivors' Insurance is now set in the law at 10.6% of pay) and that, to put the system into financial balance, either the tax rate would have to rise ultimately to nearly 17% of pay or that benefits overall would have to be cut by more than 30%, the personal account would appear to produce a better return than the equivalent taxes paid to the Social Security system – i.e., setting aside a little more than a quarter of the taxes could produce a personal account worth at least 40% of the benefits.[26] 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. It would be higher for minimum-wage earners and much less for high-wage earners.[27]

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[26] The projected cost of the Old-Age and Survivors' Insurance portion of the system, expressed as a percent of taxable payroll, is 16.89% for 2075 (under the intermediate forecast of the 2000 Social Security trustees' report). Note that about two percentage points is attributable to survivor protection. Thus, the long-range tax rate for the retirement portion of the system would have to be more like 15%, not 17%.

[27] It is important to note that the system's return on contributions would be higher for examples in which a worker's dependent spouse and children are paid benefits in addition to the worker's own benefit. The examples provided throughout this report reflect the value of personal account accumulations against only a worker's Social Security benefits. The (continued...)

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 afford annuities as they might result 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 retired worker's dependents regardless of the worker's contributions; it assumes the market risks of annuitization (which the private sector would otherwise charge for) as well as inflation (by affording automatic cost-of-living adjustments); and workers' benefits are not based on their own contributions or those of their age cohorts, but on the immediate costs of the system (i.e., it's a "pay-as-you-go" rather than "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's having lower overall dependency and its workers having a greater sense of economic security 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 reflect the best policy today or in the future. The system was created 65 years ago under very different economic and social circumstances. The point here is only that, while understanding the potential returns from private investments is important, ultimately, it is a value judgment and political matter whether the varying returns that the system provides to today's workers should be made more uniform or considered an acceptable consequence of the system's current design.

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[27] (...continued)
"worker only" case is by far the most representative of future retirees, since a large majority of today's working spouses will earn benefits in their own right and, therefore, will be ineligible for a dependent spouse's benefit.

For Additional Reading

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

CRS Report RL 30138. *Social Security Reform: Bills in the 106th Congress*, by David Koitz.

CRS Report RL 30397. *Social Security Reform: Individual Account Proposals*, by James Storey.

CRS Report RL 30571. *Social Security Reform: The Issue of Individual Versus Collective Investment for Retirement*, by David Koitz.

CRS Report No. 98-961. *Social Security Reform: Projected Contributions and Benefits Under Three Proposals (S. 1792 and S. 2313/H.R. 4256 in the 105th Congress, and a Plan by Robert M. Ball)*, by Geoffrey Kollmann, David Koitz, and Dawn Nuschler.

APPENDIX

Table 8. Projected Social Security Benefits and Accumulations in a Personal Savings Account (*in nominal dollars*) — Retirement at *AGE 65*, with 1% Set Aside During Working Years

Year of retirement at age 65	Present value of Social Security benefits	Value of personal account at retirement – the account	
		Same rate as Social Security trust funds	Same rate as past S&P 500 performance
		6.4%[a]	10%
Minimum-wage earner			
2010	$145,516	$1,502	$1,760
2015	$175,191	$3,032	$3,906
2020	$210,173	$5,349	$7,615
2025	$238,072	$8,793	$13,897
2030	$289,661	$13,840	$24,399
2035	$358,039	$21,157	$41,784
2040	$329,797	$31,669	$70,365
2045	$546,808	$46,664	$117,116
2050	$681,100	$57,533	$144,300
Average-wage earner			
2010	$242,818	$4,635	$5,431
2015	$303,368	$9,358	$12,057
2020	$374,271	$16,509	$23,503
2025	$439,028	$27,140	$42,895
2030	$547,693	$42,720	$75,308
2035	$683,011	$65,303	$128,968
2040	$851,416	$97,749	$217,187
2045	$1,060,874	$144,031	$361,487
2050	$1,321,393	$177,579	$445,392
Maximum-wage earner			
2010	$377,926	$11,278	$13,214
2015	$482,169	$22,759	$29,324
2020	$575,708	$40,143	$57,153
2025	$703,260	$65,978	$104,293
2030	$877,955	$103,846	$183,089
2035	$1,094,808	$158,729	$313,529
2040	$1,362,669	$237,578	$527,974
2045	$1,697,961	$350,046	$878,732
2050	$2,114,553	$431,469	$1,082,371

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculation is 6.399%.

Note: Social Security benefits were calculated under current law rules using the intermediate assumptions of the 2000 Social Security trustees' report (see footnote 18 on page 8).

Table 9. Projected Social Security Benefits and Accumulations in a Personal Savings Account (*in nominal dollars*) — Retirement at *AGE 65*, with 2% Set Aside During Working Years

Year of retirement at age 65	Present value of Social Security benefits	Value of personal account at retirement – the account	
		Same rate as Social Security trust funds	Same rate as past S&P 500 performance
		6.4%[a]	10%
Minimum-wage earner			
2010	$145,516	$3,004	$3,520
2015	$175,191	$6,064	$7,812
2020	$210,173	$10,698	$15,230
2025	$238,072	$17,586	$27,794
2030	$289,661	$27,680	$48,798
2035	$358,039	$42,314	$83,568
2040	$329,797	$63,338	$140,730
2045	$546,808	$93,328	$234,232
2050	$681,100	$115,066	$288,600
Average-wage earner			
2010	$242,818	$9,270	$10,862
2015	$303,368	$18,716	$24,114
2020	$374,271	$33,018	$47,006
2025	$439,028	$54,280	$85,790
2030	$547,693	$85,440	$150,616
2035	$683,011	$130,606	$257,936
2040	$851,416	$195,498	$434,374
2045	$1,060,874	$288,062	$722,974
2050	$1,321,393	$355,158	$890,784
Maximum-wage earner			
2010	$377,926	$22,556	$26,428
2015	$482,169	$45,518	$58,648
2020	$575,708	$80,286	$114,306
2025	$703,260	$131,956	$208,586
2030	$877,955	$207,692	$366,178
2035	$1,094,808	$317,458	$627,058
2040	$1,362,669	$475,156	$1,055,948
2045	$1,697,961	$700,092	$1,757,464
2050	$2,114,553	$862,938	$2,164,742

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculation is 6.399%.

Note: Social Security benefits were calculated under current law rules using the intermediate assumptions of the 2000 Social Security trustees' report (see footnote 18 on page 8).

Table 10. Projected Social Security Benefits and Accumulations in a Personal Savings Account (*in nominal dollars*) — Retirement at *AGE 65*, with 3% Set Aside During Working Years

Year of retirement at age 65	Present value of Social Security benefits	Value of personal account at retirement – the account	
		Same rate as Social Security trust funds	Same rate as past S&P 500 performance
		6.4%[a]	10%
Minimum-wage earner			
2010	$145,516	$4,506	$5,280
2015	$175,191	$9,096	$11,718
2020	$210,173	$16,047	$22,845
2025	$238,072	$26,379	$41,691
2030	$289,661	$41,520	$73,197
2035	$358,039	$63,471	$125,352
2040	$329,797	$95,007	$211,095
2045	$546,808	$139,992	$351,348
2050	$681,100	$172,599	$432,900
Average-wage earner			
2010	$242,818	$13,905	$16,293
2015	$303,368	$28,074	$36,171
2020	$374,271	$49,527	$70,509
2025	$439,028	$81,420	$128,685
2030	$547,693	$128,160	$225,924
2035	$683,011	$195,909	$386,904
2040	$851,416	$293,247	$651,561
2045	$1,060,874	$432,093	$1,084,461
2050	$1,321,393	$532,737	$1,336,176
Maximum-wage earner			
2010	$377,926	$33,834	$39,642
2015	$482,169	$68,277	$87,972
2020	$575,708	$120,429	$171,459
2025	$703,260	$197,934	$312,879
2030	$877,955	$311,538	$549,267
2035	$1,094,808	$476,187	$940,587
2040	$1,362,669	$712,734	$1,583,922
2045	$1,697,961	$1,050,138	$2,636,196
2050	$2,114,553	$1,294,407	$3,247,113

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculation is 6.399%.

Note: Social Security benefits were calculated under current law rules using the intermediate assumptions of the 2000 Social Security trustees' report (see footnote 18 on page 8).

Table 11. Projections of Personal Account Accumulations As Percent of Social Security Benefits — Retirement at *AGE 65*

Year of retirement at age 65	Value of personal account at retirement as % of Social Security benefit					
	Personal account grew at:					
	6.4%[a] – Same rate as Social Security trust funds			10% – Same rate as past S&P 500 performance		
	Amount of set-aside (As % of pay)					
	1%	2%	3%	1%	2%	3%
Minimum-wage earner						
2010	1.0%	2.1%	3.1%	1.2%	2.4%	3.6%
2015	1.7%	3.5%	5.2%	2.2%	4.5%	6.7%
2020	2.5%	5.1%	7.6%	3.6%	7.2%	10.9%
2025	3.7%	7.4%	11.1%	5.8%	11.7%	17.5%
2030	4.8%	9.6%	14.3%	8.4%	16.8%	25.3%
2035	5.9%	11.8%	17.7%	11.7%	23.3%	35.0%
2040	7.2%	14.3%	21.5%	15.9%	31.9%	47.8%
2045	8.5%	17.1%	25.6%	21.4%	42.8%	64.3%
2050	8.5%	16.9%	25.4%	21.2%	42.4%	63.6%
Average-wage earner						
2010	1.9%	3.8%	5.7%	2.2%	4.5%	6.7%
2015	3.1%	6.2%	9.2%	4.0%	7.9%	11.9%
2020	4.4%	8.8%	13.2%	6.3%	12.6%	18.9%
2025	6.2%	12.4%	18.6%	9.8%	19.5%	23.5%
2030	7.8%	15.6%	23.4%	13.8%	27.5%	41.3%
2035	9.6%	19.1%	28.7%	18.9%	37.8%	56.7%
2040	11.5%	23.0%	34.4%	25.5%	51.0%	76.5%
2045	13.6%	27.2%	40.7%	34.1%	68.1%	102.2%
2050	13.4%	26.9%	40.3%	33.7%	67.4%	101.1%
Maximum-wage earner						
2010	3.0%	6.0%	8.9%	3.5%	7.0%	10.5%
2015	4.7%	9.4%	14.2%	6.1%	12.2%	18.2%
2020	6.7%	13.4%	20.1%	9.6%	19.1%	28.7%
2025	9.4%	18.8%	28.1%	14.8%	29.7%	44.5%
2030	11.8%	23.7%	35.5%	20.9%	41.7%	62.6%
2035	14.5%	29.0%	43.5%	28.6%	57.3%	85.9%
2040	17.4%	34.9%	52.3%	38.8%	77.5%	116.3%
2045	20.6%	41.2%	61.9%	51.8%	103.5%	155.3%
2050	20.4%	40.8%	61.2%	51.2%	102.4%	153.6%

[a] Represents ultimate annual rate, compounded semi-annually. Figure of 6.4% is rounded rate; actual rate used in calculation is 6.399%.

Note: Social Security benefits were calculated under current law rules using the intermediate assumptions of the 2000 Social Security trustees' report (see footnote 18 on page 8).