

Tax Considerations in a Universal Pension System (UPS)

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Summary

The inadequacy of the current U.S. public and private pension systems along with the escalating costs of health care may warrant the establishment of a universal pension system (UPS). Such a pension system could cover all workers—full-time and part-time—and require them to contribute at a level that can help provide them with adequate incomes when they retire. The simplest design for a UPS would be to piggyback a system of individual retirement savings accounts onto the existing Social Security withholding system. Other designs would target subsidies to low-income workers to help defray the costs of such a new system on their incomes. UPS pensions would be fully portable, could boost the stock of private savings, and could ease the burden on Social Security to meet presently unrealistic benefit commitments *without* altering the current program—merits which ought to find common ground among both liberals and conservatives.

This paper develops such a universal pension system and estimates its revenue and distributional consequences. More specifically, this paper develops options for a system of individual accounts to which, starting in 2007, each employee or self-employed worker would be required to contribute 3 percent of covered payroll (i.e., 3 percent of up to \$97,500 in 2007). These accounts could be held by the government, invested in a broadly diversified portfolio of stocks, bonds, and government notes, and annuitized on retirement.

The rewards of a UPS would be seen over the long term. Under current law, an average-wage man retiring at age 65 in 2065 will receive social security benefits that replace 34.6 percent of his preretirement wages—provided that action is taken to restore solvency to the Social Security program. Otherwise, Social Security will see a shortfall and be able to replace only 25.4 percent of this worker’s final wages. However, we estimate that a UPS could replace an additional 14.4 percent of final wages for all men retiring at 65 (and 13.3 percent of final wages for all women, 14.4 percent for one-earner couples, and 13.8 percent for two-earner couples). In our example, then, the UPS we describe would raise the total “replacement rate” for average wage men to 49.0 percent of final wages—provided Social Security is fixed—or 39.8 percent if not.¹ Both outcomes are substantially better than what workers can expect under current law, even if they assume the best. This paper also shows that targeted subsidies could raise supplemental retirement benefits for most low- and moderate-income workers even further.

¹ The actual result would be slightly less than this amount since there is an interaction effect between the Social Security program and the Universal Pension System: the contributions to the latter are not taxed by the former, meaning that individuals’ credited payments into Social Security will be slightly less over their careers and their resulting social security benefits will replace slightly less of final wages than they otherwise would.

I. Introduction

A confluence of demographic and economic pressures is challenging the ability of the U.S. retirement system to deliver the standard of living in old age that retirees have come to expect.² The major pressures are various and include increased longevity in retirement, lower birth rates, shorter career spans, unsustainable growth in benefits relative to contributions, the current era of low interest rates, and heightened global competition. Employers have been curtailing benefit promises to workers since the early 1990s, and while lawmakers have yet to bring the mushrooming federal benefits scheduled in law into line with the projected financing available, most believe that some form of benefit cuts is inevitable. Absent a rise in overall contributions to the retirement system, the economic security of future retirees is in question.

Our retirement system can be thought to have four pillars. Each pillar contributes to an overall standard of living for households throughout their retirement. The first pillar, Social Security, will be unable to pay full benefits as scheduled in law without additional financing after 2041. The second pillar, employer-provided pensions, currently covers less than half of U.S. workers, and the extent to which these pensions will replace career wages in the future is uncertain. Meanwhile, private wealth, the third pillar, is being called upon to stretch over longer and longer spans of life spent in retirement. Retiree health care (taking federal and employer benefits together) is the fourth pillar and has the most precarious financing situation of all, raising the prospect that future retirees will have to pay much more out of pocket for their health care.³ If nothing changes, workers and their families will increasingly assume more of the risk *and* direct cost in providing adequately for their own retirement.

In a nutshell, the present retirement system threatens to fall short in providing the aged with security just as we call upon it to do more than it ever has before. A broad recasting of the nation's present social insurance programs is needed to address the breach between the retirement Americans desire and the retirement that current systems can finance. A key element of this greater reform could be the establishment of a universal pension system (UPS), to ensure that all workers are covered by a pension and are able to save more during their working years to provide them with adequate incomes when they retire.⁴ Additionally, this kind of universal pension system could provide needed retirement income for millions of employees of small and medium-size firms that currently do not offer pension plans.

² A number of studies have come to the conclusion that currently working-age families will have trouble continuing their standards of living into retirement. For example, see John Karl Scholz, Ananth Seshadri, and Surachai Khittrakun, "Are Americans Saving Optimally for Retirement?" *Journal of Political Economy*, Vol. 114, pp. 607-643, August 2006; Eric Engen, William Gale, and Cori Uccello, "The Adequacy of Household Savings," CRR WP 2000-01, Chestnut Hill, MA: Center for Retirement Research at Boston College, January 2000; and Alicia Munnell and Mauricio Soto, "What Replacement Rates do Households Actually Experience in Retirement?" CRR WP 2005-10, Chestnut Hill, MA: Center for Retirement Research at Boston College, August 2005.

³ See Richard Johnson and Rudolph Penner, "Will Health Care Costs Erode Retirement Security?" CRR Issue Brief No. 23, Chestnut Hill, MA: Center for Retirement Research, October 2004.

⁴ Note that another part of filling the breach is encouraging individuals to work longer and retire later, allowing them to save more while paying more in income taxes and social security (and UPS) contributions. For the economic and fiscal benefits that having everyone work an additional year can make, see Barbara Butrica, Richard Johnson, Karen Smith, and C. Eugene Steuerle, "Does Work Pay at Older Ages?" Washington, DC: The Urban Institute, 2004.

II. Why a Universal—and Compulsory—Pension System

A universal pension system would enroll all workers in a pension plan and compel workers to contribute every year they work, even if they change jobs. While Social Security covers over 95 percent of the workforce, employer-sponsored retirement plans have typically covered half or fewer of private-sector employees. For example, just 47.1 percent of all wage and salary workers age 21 to 64 were participating in an employment-based retirement plan in 2005, up only slightly from the 46.1 percent participating in 1987.⁵ Even with tax incentives and employer matching contributions, many employees may not save for retirement on a voluntary basis.⁶

Most retirement-related tax benefits go to people at the top of the income distribution (see table 1).⁷ Contributions made to retirement accounts will reduce the present value of income taxes in 2007 by an overall average of \$715 per tax return or 1.39 percent of after-tax income. However, 71 percent of these benefits go to tax filers in the top quintile of cash income, and 89 percent go to filers in the top two quintiles. By contrast, the bottom quintile receives virtually no tax benefit since few people at this income level owe tax or contribute significant amounts to a pension plan.

Beyond a lack of tax benefits, the lack of pension coverage is also an acute issue for low-income workers. For example, while 69.5 percent of workers with annual earnings of \$50,000 or more participated in a plan in 2004, only 18.2 percent of workers earning between \$10,000 and \$15,000 participated that year.⁸ Similarly, while 52.8 percent of full-time workers participated in a pension plan, just 19.4 percent of part-time workers participated.⁹ Furthermore, low-income workers tend to concentrate at smaller firms.¹⁰ Small firms (which are often also newer firms) face greater risk and uncertainty than larger more established firms, and so are less willing to add significantly to their fixed costs by offering pensions. At the same time, their workers may prefer additional cash wages to pension coverage.

The policy conclusions of recent research as well as the formal proposals for pension reform correctly identify and evaluate the many shortcomings of our present patchwork pension system. However, the solutions they propose mainly keep the country within the present policy

⁵ Among other sources, see Craig Copeland, “Employment-Based Retirement and Pension Plan Participation: Geographic Differences and Trends, 2005” (Washington, DC: Employee Benefit Research Institute Issue Brief No. 299, 2006), 20 (figure 15).

⁶ See, for example, Daniel Halperin, “Special Tax Treatment for Employer-Based Retirement Programs: Is It ‘Still’ Viable as a Means of Increasing Retirement Income? Should It Continue?” *Tax Law Review* 49 (1993): 1–52; William Gale, Jeffrey Liebman, Peter Orszag, and Emmanuel Saez, “Saving Incentives for Low- and Middle-Income Families: Evidence from a Field Experiment with H&R Block,” National Bureau of Economic Research Working Paper No. 11680, 2005.

⁷ We measure the value of tax subsidies in terms of the discounted present value of tax savings compared with an equivalent contribution made to a taxable account. See appendix A for more details.

⁸ Craig Copeland, “Employment-Based Retirement and Pension Plan Participation: Geographic Differences and Trends, 2004,” 8–9 (figure 2).

⁹ Similarly, only about 12.4 percent of contingent workers participated in an employer-provided pension plan. See Bureau of Labor Statistics, “Contingent and Alternative Employment Arrangements, February 2005” (Washington, DC: U.S. Department of Labor News Release No. USDL 05-1433, 2005), 4, table 9.

¹⁰ See William Even and David Macpherson, “Improving Pension Coverage at Small Firms,” May 2006.

patchwork, consolidating brands of retirement accounts and reshuffling incentives. For example, recent proposals have called variously for repealing requirements and limits on contributions to qualified pension plans, enhancing pension portability, centralizing pension plan administration and fiduciary responsibility, creating “smart” participation and investment defaults, and realigning tax incentives currently skewed toward the wealthy.¹¹ These are all laudable and sensible efforts. However, because none of these proposals address the voluntary nature of pension participation by employees or employers, and because other tax shelters in the tax code are left in place, the impact on private savings is unclear. Even those that do contribute may just shift around their savings portfolios from taxable to nontaxable accounts in the event of reform without necessarily creating new net savings in the process.

Finally, mandatory savings proposals are not new. In 1981, for example, the President’s Commission on Pension Policy recommended adoption of a mandatory universal pension system.¹² The proposal would have required all employers to contribute at least 3 percent of wages to private pensions for their workers. The proposal drew little interest at the time. Recently, however, there has been renewed interest in mandatory savings proposals.¹³

III. How a Universal Pension System Might Work

One design for a universal pension system (UPS) would be to piggyback (i.e., add on rather than carve out) a system of individual retirement savings accounts onto the existing Social Security withholding system. How big the system should be (3 percent of payroll, 6 percent, more); how to distribute the financing (employee only, employee plus employer, plus subsidies from government); how to tax contributions, investment earnings, and withdrawals; how to arrange account administration (pooled, federally administered or private, individually administered); and what age or condition to set for first account withdrawal are the major design issues. Clearly, a UPS could be set up in a number of ways. In this paper, we describe a UPS design where only employees and the self-employed contribute to an account (with several variants that allow for a federal subsidy to low-income workers).¹⁴ We assume that these individual accounts would

¹¹ For a comprehensive summary of the issues as well as reform options, see the “Conversation on Coverage National Policy Forum,” convened by the Pension Rights Center in Washington, D.C., July 22, 2004; and William Gale and Peter Orszag, “Private Pensions: Issues and Options,” Discussion Paper No. 9, Washington, DC: The Urban-Brookings Tax Policy Center, April 2003.

¹² President’s Commission on Pension Policy, *Coming of Age: Toward a National Retirement Income Policy* (1981).

¹³ See, for example, Jeffrey Liebman, Maya MacGuineas, and Andrew Samwick, “Nonpartisan Social Security Reform Plan” (2005), available at <<http://www.nonpartisanssplan.com./pages/1/index.htm>>; Jonathan Barry Forman, *Making America Work* (Washington, DC: Urban Institute Press, 2006); Jonathan Barry Forman, “Universal Pensions,” *Chapman Law Review* 2 (1999): 95–131, 114–116; World Bank, *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth* (Washington, DC: World Bank, 1994), 74; Estelle James and Dimitri Vittas, “Mandatory Saving Schemes: Are They the Answer to the Old Age Security Problems?,” in Zvi Bodie, Olivia S. Mitchell, and John Turner, eds., *Securing Employer-Based Pensions: An International Perspective* (Pension Research Council, Philadelphia, PA: University of Pennsylvania Press, 1996): 151–182.

¹⁴ Economic theory predicts about the same overall burden on employees, regardless of how the contribution burden is divided between employee and employer. Contributions paid by the employer will come at the price of lower wages paid to the employee. The income tax consequences of splitting the contribution between employee and employer would also be virtually the same, given that we allow the full amount of contributions to be income tax deductible and payroll tax exempt.

operate like traditional IRAs; that is, contributions are deductible, and the earnings accumulate tax-free until retirement, but withdrawals are taxable.

Specifically, we describe a UPS with an annual 3-percent-of-payroll contribution for employees and the self-employed up to the Social Security taxable maximum (\$97,500 in 2007). These contributions would be deductible from both income and payroll taxes, like current employer contributions to employee pension plans.¹⁵ To put this 3 percent contribution rate in perspective, Social Security retirement contributions are 10.6 percent of covered payroll, while Disability is 1.8 percent, and Medicare is 2.9 percent. In each case, employers and employees each pay half. Thus, the UPS would add another tier to the social insurance system roughly a third the size of current Social Security retirement contributions and roughly one-fifth the size of Social Security, Disability, and Medicare combined.

Many avenues exist for arranging how UPS contributions are invested and managed. At one extreme, the federal government could pool all worker contributions into a single private market portfolio (e.g., 60 percent in the Wilshire 5000 and 40 percent in government and corporate bonds) with a government guaranteed return (e.g., 3 percent real), regardless of how the portfolio performed. This would lend a defined benefit feel to a UPS, pooling risk and minimizing administrative costs—but also minimizing worker investment choice and control over UPS accounts. At the other extreme, workers could choose their own portfolio (but with a “smart” default provided), could change investments periodically, and would bear all of the investment risk, like a defined contribution plan. Additionally, while workers would have maximal control over their UPS accounts, administrative costs would be high, reducing annual accruals and the effective real rate of return. Beyond assuming a 3 percent real rate of return on UPS accounts, we do not describe how such accounts would work in practice.

A UPS need *not* replace any element of the current retirement system, e.g., Social Security, DBs, DCs, IRA and Keogh plans or the Saver’s Tax Credit. In the simulations that follow, the UPS is simply added on to the current system. In some variations, though, the UPS would take advantage of a refundable version of the Saver’s Tax Credit to deliver subsidies for low-income contributors.

IV. Methodology

For modeling purposes, we assumed a UPS system would begin operation on January 1, 2007.¹⁶ Starting on that date, every employee or self-employed worker would be required to contribute 3 percent of covered payroll to an individual account. That is, we assumed the UPS would apply to the same wage base as current Social Security payroll taxes. For ease of modeling, we assumed that all workers under age 70 who would normally participate in Social Security—plus all federal, state, local, and non-profit employees—would contribute to a UPS plan.

¹⁵ As noted in subsequent tables, the effect of deducting UPS contributions from Social Security earnings effectively lowers Social Security credited earnings by 3 percent for workers earning below the wage cap and will therefore slightly lower expected social security benefits by a percent or two. However, the deduction of UPS contributions from income taxes results only in a *deferral* of income taxation until retirement.

¹⁶ The particular date the system commences is not crucial to getting a sense of what the proposal would cost annually, its distributional impact, or how it would operate.

Following earlier Urban-Brookings Tax Policy Center work, we conservatively assumed that these individual accounts would earn a 3 percent real rate of return (6 percent nominal rate of return with a 3 percent inflation rate)—about the same as what the Social Security Trustees assume in their 2007 report.¹⁷ We do not explicitly address here whether a UPS would be federally or individually administered, although the choice could have a large impact on system costs. We also assumed 1.1 percent annual, real wage growth in the long term, consistent with the Social Security trustees. To ease estimation, we assume that the taxpayer’s marginal tax rate is the same at retirement as during contribution years¹⁸ and that all amounts contributed plus investment returns will be left in the account until age 65 and then annuitized.¹⁹ There is a one-time annuity conversion fee equal to 0.3 percent of accumulated assets.

We used the Urban–Brookings Tax Policy Microsimulation model (version 0305-3a) to simulate the revenue and distributional implications of the UPS options compared with current law. As is more fully explained on the Tax Policy Center’s web site,²⁰ the tax model computes the change in tax liability for a representative sample of some 200,000 households (taken from the IRS’s Statistics of Income files) in going from current law to a new reform. As more fully explained in appendix A, our methodology for estimating the tax benefits associated with retirement savings provisions utilized present-value measures and assumed implicitly that workers and retirees face the same marginal tax rates. (Note that under this method, a traditional IRA and a Roth IRA would yield identical after-tax benefits for a given worker). One limitation of the tax model is that it does not include estimates of the wealth and tax benefits associated with defined benefit plans—although it does estimate the contributions to and tax benefits from defined contribution plans. In any case, the UPS options we detail do not make any changes to existing defined benefit or defined contribution plans.

We used a different model, the Steuerle-Bakija-Carasso (SBC) Social Security lifetime benefit calculator, to illustrate how much prototypical workers (e.g., a worker who always earned a low wage, the average wage, or a high wage) would accumulate under a UPS system by age 65. The model calculates lifetime tax contributions and benefits for both the current Social Security system (Old Age and Survivors Insurance only, not Disability Insurance) and one with a piggybacked UPS system for cohorts turning 65 in 2005, 2025, 2045, and 2065. Accumulated UPS balances are annuitized and replacement rates are calculated. The capabilities and underlying assumptions of this illustrative model are more fully explained in appendix B.

The tables described in the next section present several sets of calculations for the UPS “base” option and three variants.

¹⁷ See Leonard Burman, William Gale, Matthew Hall, and Peter Orszag, “Distributional Effects of Defined Contribution Plans and Individual Retirement Accounts,” Discussion Paper No. 16, Washington, DC: The Urban–Brookings Tax Policy Center, August 2004, 6–8, 21.

¹⁸ *Ibid.*

¹⁹ An earlier age like 62 (or setting a minimum age for penalty-free withdrawals like 59½ as currently exists for IRAs) is worthy of consideration, especially since lower-income groups tend to have shorter life expectancies. Lawmakers may also wish to allow some amount of death benefits. However, such options would also lessen the UPS accounts’ improvement of overall replacement rates.

²⁰ Please see <http://www.taxpolicycenter.org/numbers/related.cfm> for a detailed documentation of the tax model.

V. Results

We first consider the consequences of immediately adopting a universal pension system that requires each employee or self-employed worker to contribute 3 percent of covered payroll to an individual account. Unlike the current Social Security system, a system of mandatory 3-percent-of-earnings individual accounts would not progressively tilt benefits in favor of workers with low lifetime wages. Consequently, we consider in Part B variants that would provide federal subsidies for low-wage workers.

A. The Basic UPS Option

1. Income Adequacy

Using the SBC model, we looked at the retirement income and replacement rates of Social Security and UPS benefits. (For the reader's convenience the numbers discussed are in boldface in tables 2–7). Table 2 shows projected annual social security benefits in 2007 dollars available to successive birth cohorts of single males, single females, one-earner couples, and two-earner couples in their first year of retirement, by earnings.²¹ For example, a single man with average lifetime earnings who turned 65 in 2025 is scheduled to receive a social security benefit of \$17,476 in his first year of retirement. A single, average-wage man could also expect an individual account benefit of \$2,527 (table 3), for a total retirement income of \$20,003 (see table 4).

Consider what happens to a single man with average earnings who reaches age 65 in 2065, by which point a universal pension system would be mature. He could expect a social security benefit of \$26,575 (from table 2) and \$11,033 (from table 3), for a total retirement income of \$37,608 (from table 4). The additional two lines in table 2 (and in tables 4, 5, and 7) factor in the shortfall in Social Security, assuming an across-the-board cut in retirement benefits. Under this scenario, this same male retiree could expect to receive annual social security benefits of only \$19,518, or about seven thousand dollars less. A fully mature UPS system would thus provide this worker with an additional \$11,033, which would more than fill in the \$7,000 gap created by the reduction in social security benefits.

Another way to value retirement benefits is to measure the fraction of workers' final year wages they would replace. In 2065, for example, that single man's \$26,575 social security benefit would replace 34.6 percent of his final wage (from table 5), and his \$11,033 individual account benefit would replace 14.4 percent (from table 6), for a total replacement rate of 49.0 percent (from table 7). Under a shortfall scenario, however, the replacement rate under Social Security would fall to just 25.4 percent (from table 5); hence the worker's replacement rate after

²¹ Note that the definitions of "low," "average," "high," and "tax max" come from the Social Security Administration. In our model, an average-wage worker is someone who is assumed to work every year from age 22 through age 64, retiring on her 65th birthday, and to earn the average wage in the economy every year (\$40,462 in 2007). A low-wage worker earns 45 percent of the average wage in every year; a high-wage worker earns 160 percent of the average wage in every year; and a tax max wage worker earns right at the Social Security taxable maximum wage (\$97,500 in 2007) in every year. In a one-earner couple, only the male is assumed to have earnings. While these are highly idealized wage earning patterns, they are useful for demonstrating the impact of various Social Security and pension reforms.

including his individual account benefit would be just 39.8 (from table 7), still better than what he could have expected to receive from Social Security alone.²²

Since women have longer life expectancies, a woman who accumulates the exact same individual account balance as a male will have to stretch that balance out across more years of retirement, on average, and so will see a lower annual UPS benefit and overall replacement rate. For example, an average-wage single woman retiring at 65 in 2065 would see a smaller *annual* individual account benefit of just \$10,212 (from table 3).²³

The principal long-run benefit of this UPS design is in the significant additional income available to retirees (see table 6). At maturity, 3 percent accounts would replace (up to the earnings cap) about 14.4 percent of the final wages of all men and 13.3 percent of the final wages of all women, thereby providing significant supplemental income for millions of retirees that could fill the gap left by a shortfall in Social Security or make up for less participation in current employer pension plans.

2. Tax Consequences

We estimated the tax savings that result when individual workers divert 3 percent of their covered earnings into individual accounts. Since we assumed these contributions would be deductible both from income and payroll taxes, virtually all workers wound up owing less taxes. The distribution of those tax savings varied depending upon the taxpayer's marginal tax rate, and tax savings rose disproportionately with income as tax rates increased from \$0 in earnings to the Social Security earnings cap.

If allowing the deduction for contributions were all that we did, however, some low-wage workers would owe more tax/receive less refund or the other way around. Since a UPS would lower taxpayer adjusted gross income (AGI), it would also affect the receipt of credits like the child credit or earned income credit. Therefore, for the purposes of calculating tax credits, we added UPS contributions back into AGI (or whatever is used as the income base for a particular credit's computation) to mitigate the penalty on working families.

i. Distributional Consequences

Not surprisingly, a 3 percent UPS would cut taxes modestly across all income levels (table 8). Similarly, the percentage change in after-tax income would grow from an average of 0.32 percent for those in the lowest quintile up to a maximum cut of 0.93 percent for those in the fourth quintile, and then decline in the top quintile as incomes rise above the Social Security

²² However, these estimates are static and do not correct for the tendency of workers to reduce other forms of savings when confronted by a new, mandatory savings scheme. While these tables only show Social Security and UPS benefits, they omit other sources of retirement savings (e.g., employer pensions, homes, and other financial wealth) which workers might save less in as a result of a UPS. The issue of workers offsetting new savings with dissaving elsewhere is addressed a little later.

²³ We expect that there may be political pressure to equalize annuity benefits for men and women. This equalization could be accomplished, for example, by mandating unisex annuitization or, alternatively, by permitting gender differentiation and affirmatively subsidizing the annual annuities paid to women; however, this paper does not offer any estimates of these possibilities.

earnings cap, finally approaching zero for those in the top 0.1 percent of cash income (those with more than \$1.8 million in income). As mentioned earlier, we estimated the tax benefits associated with retirement savings provisions on a present-value basis and assumed that workers and retirees faced the same marginal tax rates (see appendix A).

All in all, 77.0 percent of the tax benefits would go to those in the top two quintiles (in other words, those with cash incomes above \$48,540), with 27.6 percent of the tax benefits going just to those taxpayers with incomes in the top 10 percent (that is, those with incomes above \$125,263; see column 4). In short, most of the tax benefits of saving through a UPS would go to workers in the upper middle-class and above (see table 8), which is similar—but less pronounced—than the skewed distribution of tax benefits under current IRAs, Keoghs, and DC plans (see table 1).

ii. Revenue Consequences

Our proposed UPS options are not cheap. UPS contributions (plus investment earnings on those contributions) are exempt from both income and payroll taxes. Additionally, some UPS options provide additional subsidies to low-income workers. The baseline for our cost estimates is current tax law and does not include the revenue proposals in the president's 2008 budget or assume the tax cuts enacted between 2001 and 2006 will be extended after December 31, 2010.

The basic UPS (option 1) would cost about \$300 billion over five years and \$690 billion over 10 years (table 9). The UPS base option would have cost \$53 billion if implemented in 2007, with this annual cost rising to \$85 billion by 2016. A second UPS option that matches contributions from low-income workers would cost the Treasury \$732 billion over 10 years. A third UPS option that extends additional relief to low-income contributors in the form of an expanded EITC would cost \$785 billion over the 2007–16 period. Finally, the UPS rebate option would cost the same as option 1, but convey tax benefits in the form of fixed refundable credits to all contributors, for the same 10-year cost of \$690 billion. These options are explained more fully below.

In a given year, \$20 billion of the tax loss might be from payroll taxes. While income tax losses are pure losses, payroll tax losses lead to slight decreases in future social security benefits. In this sense, the projected UPS costs would overstate the total costs to government. The tax loss on UPS account investments, meanwhile, would be relatively small at the outset—a few billion dollars a year—but would grow steadily in the years beyond the ten-year window shown here as the UPS account accumulations grew.

B. UPS Options that Provide Additional Subsidies to Low-Wage Workers

1. UPS with Match

The UPS with match (option 2) would provide qualifying low-wage workers with a refundable version of the current law Saver's Tax Credit, which would entirely *replace* the credit in current law.²⁴ Tax filers could claim the credit on their tax returns—even if they did not owe

²⁴ Since 2002, certain low- and moderate-income individuals have been able to claim a non-refundable tax credit of

any income tax—and the full amount of the credit would be deposited directly in their UPS accounts.²⁵ Specifically, the option would match contributions to virtually all low- and moderate-income workers at a 50, 20, or 10 percent rate, with the higher match rates going to those with lower incomes. For example, a worker with \$10,000 of earnings would be required to contribute \$300 (3 percent of \$10,000) to her UPS account and would receive a \$150 match (50 percent of \$300). Table 10a gives the level of match based on household income and tax filing status while table 10b gives the Saver's Credit rate and bracket schedule. Eligibility for the credit would end for earnings above \$26,000 for singles and \$52,000 for couples in 2007. While a UPS with match would cost more than the basic UPS (table 9), it would have markedly more favorable distributional consequences for workers in the bottom three quintiles (table 11). Tax benefits, both in dollar terms and as a share of after-tax income, would be triple or more for workers in the bottom quintile and almost double in the second quintile under this option relative to the base case (table 8).

Over time, as wages grow faster than inflation while the income limits of the subsidy grow only with inflation, some low-income workers may lose eligibility for the match.

2. UPS with EITC Expansion

The UPS with EITC Expansion (option 3) would increase the phase-in rate of the EITC by 3 percentage points for qualifying households with no children, one child, or two or more children to exactly offset the 3 percent UPS contribution rate. Additionally, the option would raise the maximum EITC credit value by 3 percent. For example, a single head of household participant with two children earning \$10,000 would contribute \$300 to her UPS account, and would receive an EITC of \$4,300, \$300 more than under current law or with the base UPS option. The subsidy design in option 3 defrays the cost of participation in a UPS for low-income workers while the subsidy design in option 2 helps low-income workers save more in a UPS.²⁶

up to \$1,000 for certain qualified retirement savings contributions (I.R.C. § 25B). The credit is equal to a percentage (50, 20, or 10 percent) of up to \$2,000 of contributions. In effect, the credit acts like an employer match: the government matches a portion of the employee's contributions. Although the credit was to sunset in 2007, the Pension Protection Act of 2006 made the Saver's Tax Credit permanent and indexed its parameters to inflation after 2006. To learn more about how the Saver's Tax Credit works and the ramifications of making it refundable, see William Gale, Mark Iwry, and Peter Orszag, "Improving the Saver's Credit," Policy Brief No. 135, Washington, DC: The Brookings Institution, July 2004.

²⁵ Three additional points should be made. First, our simulation of this option assumed the refundable saver's credit was reduced by the amount of outstanding income tax before being deposited in tax filers' UPS accounts. Second, if lawmakers would rather preserve low-wage workers' take-home incomes than further augment their retirement savings, qualifying tax filers could choose to receive the credit as a cash refund. Third, the authors used the Saver's Credit as a vehicle to deliver subsidies to low-income workers out of convenience; lawmakers could employ any number of tax mechanisms to fulfill this same intent. However, to preserve the individual equity of the proposed system and prevent the introduction of any earnings disincentives, a worker earning \$20,000 a year for example must (generally) have a contribution plus subsidy that equals or exceeds the contribution plus subsidy of a worker who earns \$16,000 a year *even while the subsidy phases out* against additional earnings—and the Saver's Credit design usually (but not always) satisfies this requirement (see table 10a).

²⁶ Lawmakers may see the value in combining both functions in a UPS, but at a commensurately higher annual revenue loss.

Like the UPS with match, this option would also cost more than the base option. The UPS with EITC expansion would more generously subsidize the bottom three quintiles than either the base option or the UPS with match option. (See table 12).

3. UPS with Rebate

The UPS with rebate (option 4) would deliver its tax subsidies in the form of fixed, refundable tax credits to participants for the same 10-year revenue loss as the UPS base option. First, UPS contributions and investment earnings would be subject to regular income and payroll taxation. However, each year, individual participants would receive a \$371 tax rebate (\$742 for joint filers where both spouses work) deposited directly into UPS accounts.²⁷ These rebate amounts have no significance beyond setting the cost of option 4 equal to the base option. The rebates would phase in at 10 cents on the dollar on earnings between \$0 and \$3,710 (\$7,240 for joint filers). Unlike most current law tax subsidies for saving that are skewed toward those in high tax brackets, this UPS option would equalize the subsidy across all participants. By doing so, this option would boost the possible accumulations for low-income workers relative to the base option (see table 13) while not saddling these same workers with benefit phase-outs that may discourage marriage or additional work effort.

4. Comparison across UPS Options

How do the different UPS options treat hypothetical low-wage workers—those who earn 45 percent of the average wage over a career (45 percent of \$40,462, or \$18,208, in 2007)? Tables 14–17 detail these results (with the values discussed in boldface).²⁸ The “base option” is the UPS described in option 1. When the system reaches maturity in 2065, a single male low-income worker would receive \$465 more per year (\$5,430 compared to \$4,965; see table 14) under the match option than under the base option and a replacement rate from just the individual account of 15.7 percent (from table 16), compared with 14.4 percent under the base option. Under the rebate option, where the tax benefits are distributed as refundable credits that go to workers’ UPS accounts, this same worker would receive \$9,252 in benefits or a 26.8 percent replacement rate, nearly double what he would receive under the base option.²⁹ For single women workers, the effect is similar: a \$5,026 benefit (table 14) and 14.6 percent replacement rate (table 16) under the match and an \$8,563 benefit and 24.8 percent replacement rate under the rebate. Tables 15 and 17 tabulate total benefits and replacement rates and show that low-wage workers do not fare all that differently under any one option—although the rebate option clearly helps them the most. For each option, one-earner couples would experience the same outcomes as single men while two-earner couples would receive the highest overall benefit levels and replacement rates between those that single men and single women would enjoy.

²⁷ Again, as modeled, participants who owe outstanding income tax would have their rebates reduced by the amount of tax owed.

²⁸ Note that option 3 (UPS with EITC expansion) is not shown, as the tax subsidy that goes to low-income workers is meant to offset their UPS contributions rather than augment their savings.

²⁹ Conversely, a high-income male worker (someone earning 160 percent of the average wage) would receive \$14,813, \$2,839 less under the rebate option than the \$17,652 he would receive under the base option. (Not shown in tables). This is because the tax exclusion under the base option was worth more than the flat rebate.

C. A Behavioral Caveat

The actual tax benefits of a universal pension system are unlikely to favor the upper-middle class as much as suggested in table 8. Also, a UPS would be unlikely to cost quite as much as suggested in panel A of table 9. First, empirical research has shown that savings behavior varies with income: low-wage workers are less likely (and less able) to save, while those at high incomes are able to save a significant percentage of their annual incomes.³⁰ Second, various forms of retirement savings can substitute for each other.³¹ In that regard, if mandatory contributions to individual accounts are a substitute for voluntary savings, then a universal pension system will offset voluntary savings (e.g., to an IRA or DC plan) to some extent—perhaps even as high as dollar for dollar—at least for those higher-income individuals who are already meeting their savings targets.

Assuming particularly that higher-income workers offset their UPS contributions through saving less in other accounts makes the distribution of tax benefits under the various UPS options more progressive. A challenge is that the proportion of dissaving to saving observed in the literature varies widely and is specific to the magnitude and design of the particular saving regime. For simplicity, the first simulation we ran assumed participants lowered other contributions (or “offset”) 50 cents for every dollar of mandatory contribution to a UPS (panel A in each of tables A.1–A.4). The second simulation we ran assumed that participants offset a dollar of other savings for every dollar of UPS contribution (see panel B of tables A.1–A.4).³² The greater the assumed offset, the less the revenue loss is associated with each option and the less new savings is created in the economy. Appendix tables A.1 through A.4 show the distributional effects of our four options assuming 50 percent and 100 percent offsets.

VI. Discussion

The current pension system does not adequately serve low-income workers. Only a small fraction of those workers currently participate in employment-based pension plans or IRAs. It should come as little surprise that Social Security supplied 100 percent of retirement income for 11 percent of elderly couples and 29 percent of elderly singles (in 2004).³³

Unfortunately, Social Security is itself in financial trouble. Benefit cuts may well be a part of any systemic reform. Even without benefit cuts, in the long-run, Social Security will only replace 34.6 percent of the final wages of average single workers, 52 percent of the final wages

³⁰ See, for example, Karen Dynan, Jonathan Skinner, and Stephen Zeldes, “Do the Rich Save More?” *Journal of Political Economy* 112 (No. 2, 2004): 397–444.

³¹ See, for example, Gary Engelhardt and Anil Kumar, “Employer Matching and 401(k) Saving: Evidence from the Health and Retirement Study,” CRR WP 2004-18, Chestnut Hill, MA: Center for Retirement Research at Boston College, May 2004; and Richard Disney, “Household Saving Rates and the Design of Social Security Programmes: Evidence from a Country Panel” (Munich: Center for Economic Studies Working Paper No. 1541, 2005).

³² We use a very simple savings “behavior” decision rule in the model. Since the UPS accounts are tax-advantaged savings vehicles, tax filers are assumed to offset compulsory UPS contributions by contributing less to other tax-advantaged savings vehicles only. We do not simulate workers drawing down assets to offset UPS contributions.

³³ Social Security Administration, *Income of the Aged Chartbook, 2004* (Social Security Administration, 2006), 10. See also Debra Whitman and Patrick Purcell, “Topics in Aging: Income and Poverty Among Older Americans in 2004,” Washington, DC: Congressional Research Service, U.S. Congress, November 2005, 10.

of one-earner couples, and 40 percent of the final wages of two-earner couples in 2065 (see table 5). A system of compulsory, 3-percent-of-earnings individual accounts could provide significant additional retirement income, especially for low- and average-wage earners. For example, our basic UPS would provide an additional 14.4 percent of final wages for men, 13.3 percent of final wages for women, 14.4 percent for one-earner couples, and 13.8 percent for two-earner couples (see table 6). Finally, with targeted matches or grants, even greater retirement income benefits could be provided to most low- and moderate-income workers.

While a 3 percent UPS can be linked to past proposals for a similar type of system, the choice (larger or smaller) depends on what lawmakers ultimately desire. Additionally, provisions that allow for continued contributions to a UPS when workers are on unemployment or taking time out of the labor force to raise children could be considered along with any reform of this nature.

We do not tout a system of individual accounts as a panacea for poverty in old age. While it can certainly help those at the margins, accumulations for workers with low earnings and short or incomplete work histories will be meager at best in absolute terms—particularly for those who start working late in life and so miss out on compounding—even though their effective replacements rates may be high. Alarms sounded over the economic well-being of the most vulnerable in old age should continue to sound.³⁴ However, unmarried heads of household in retirement—who will not enjoy Social Security survivors’ benefits or windfall spousal benefits and whose numbers are projected to rise—would be the principal beneficiaries of a UPS, provided they make enough contributions over their working lives.

A fair question is why not just raise contributions to the current Social Security system rather than create a whole new retirement pillar. The response is that a UPS has the potential to raise national and private savings since contributions would get invested in private markets, whereas Social Security payroll contributions go directly from current workers to current retirees without any contribution to national investment. From a social value standpoint, moreover, a successful UPS could raise household savings broadly across the population, serve the “unbanked,”³⁵ and turn a whole generation of lower- and middle-income workers into more financially literate investors. From a realpolitik standpoint, increases to current payroll tax rates will likely only finance additional current spending.

The annual revenue cost of our proposed system of mandatory individual accounts, beginning at \$40 to \$60 billion a year and rising depending on the option chosen, is formidable.³⁶ Still, it involves considerably smaller sums than those at stake in the 2001–2006 tax cuts³⁷ or those required to fix the alternative minimum tax or the Social Security program.

³⁴ See for example Lawrence Thompson, “Social Security Reform and Benefit Adequacy,” *The Retirement Project*, Brief No. 17, Washington, DC: The Urban Institute, March 2004.

³⁵ According to the 2004 Survey of Consumer Finances, nearly 20 percent of families in the bottom income quintile and nearly 9 percent of families in the second quintile lack any financial assets (even checking accounts). Bucks table 5, panel B. Brian Bucks, Arthur Kennickell, and Kevin Moore, “Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances,” *Federal Reserve Bulletin*, Washington, DC: The U.S. Federal Reserve Board, 2006.

³⁶ Again, we note that about \$20 billion per year is due to foregone payroll taxes in the base option which would

Compulsory contributions may have the unintended consequence of discouraging work (or encouraging the underreporting of earnings). At the very least, additional mandated savings could distort choices between work and leisure,³⁸ particularly in the absence of a subsidy for low-income workers. The key concern, of course, is the additional burden this would place on the poor and to what extent a UPS (that *did not* provide a subsidy to low-income workers) would add to household debt, financial hardship, and reduced work among this population. Finally, a new compulsory savings scheme may hasten the curtailment of current employer DB (and perhaps DC) pension offerings.

A UPS would also place significant, new filing burdens on businesses and government agencies as they seek to register workers and employers and record and reconcile worker account contributions. Furthermore, the more choices (and frequency of making these choices) those workers have regarding the nature of their investments, the greater the administrative cost of the system to workers, funds, and administering agencies.³⁹ However, the implementation of a UPS would be expedited to the extent that it could be built upon the existing Social Security filing and reporting system.

VII. Conclusion

Our current patchwork of public and private pension arrangements has always left the poor with the short stick, and the looming insolvency in Social Security threatens to extend this insecurity to the middle and upper classes. When one also factors in the looming shortfall in Medicare and impending substantial increases in both health insurance premiums and out-of-pocket medical spending, the retirement picture is gloomy for all.

A universal system of 3-percent-of-earnings individual accounts would provide significant, additional retirement resources for American workers—particularly low-income workers without access to employer pension plans. In the long-run, we estimate that such accounts would provide an additional 14.4 percent of final wages for men, 13.3 percent of final wages for women, 14.4 percent for one-earner couples, and 13.8 percent for two-earner couples over and above the benefits from Social Security (solvent or insolvent). UPS options that would steer additional subsidies to low-income workers would produce even better retirement outcomes for this group. A system of universal add-on individual accounts could help bridge the coming divide between the retirement Americans expect and the retirement our increasingly beleaguered programs can finance.

eventually lead to a commensurate decrease in social security benefits (although not Medicare benefits).

³⁷ Estimates of the costs and distributional implications of recent and proposed tax cuts are posted on the Urban-Brookings Tax Policy Center at www.taxpolicycenter.org.

³⁸ See, for example, Daniel Shaviro, “Effective Marginal Tax Rates on Low-income Households,” *Tax Notes*, 1191-1201, August 23, 1999; Harvey Rosen, *Public Finance*, Boston, MA: McGraw-Hill Irwin, 6th ed, 2002, pp. 20-23, 374-376; and Nada Eissa, “Tax Reforms and Labor Supply,” in James Poterba, ed., *Tax Policy and the Economy 10*, Cambridge, MA: MIT Press, 1996, pp. 119-151.

³⁹ See Lawrence Thompson, “Administrative Aspects of Individual Accounts or the Devil is in the Details and He Could Spear You,” Testimony Before the House Budget Committee, U.S. House of Representatives, May 25, 1999.

Table 1
Current Law Tax Benefits for Contributions to DC Pensions and IRAs
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007 ¹

	1	2	3
Cash Income Percentile ²	Average Tax Benefit in Dollars	Percent Change in After-Tax Income ³	Share of Total Federal Tax Change
Lowest Quintile	9	0.11	0.3
Second Quintile	102	0.53	2.9
Middle Quintile	279	0.88	7.8
Fourth Quintile	639	1.22	17.9
Top Quintile	2,548	1.72	71.2
All	715	1.39	100.0
Addendum			
Top 10 Percent	3,632	1.7	50.8
Top 5 Percent	4,677	1.5	32.7
Top 1 Percent	5,915	0.7	8.3
Top 0.5 Percent	6,519	0.5	4.6
Top 0.1 Percent	7,534	0.2	1.1

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

(1) Shows distribution of the present value of current law lifetime tax benefits for new contributions made in 2007.

(2) Tax units with negative cash income are excluded from the lowest quintile but are included in the totals. Includes both filing and non-filing units. Tax units that are dependents of other taxpayers are excluded from the analysis. For a description of cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>.

(3) After-tax income is cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); and estate tax.

Table 2: OASI BENEFIT IN FIRST YEAR OF RETIREMENT

Year Cohort Turns 65	Single Male				Single Female				One-Earner Couple				Two-Earner Couple			
	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low-Low	Avg-Avg	High-High	Max-Max
2005	9,443	15,567	20,490	23,551	9,443	15,567	20,490	23,551	14,165	23,350	30,735	35,326	19,538	32,207	42,393	48,726
2025	10,600	17,476	23,156	28,028	10,600	17,476	23,149	28,014	15,900	26,214	34,734	42,042	24,461	40,329	53,429	64,663
2045	13,006	21,371	28,455	34,541	13,002	21,363	28,451	34,533	19,510	32,057	42,683	51,811	30,010	49,309	65,662	79,701
2065	16,160	26,575	35,340	42,857	16,158	26,571	35,338	42,852	24,240	39,863	53,010	64,285	37,290	61,322	81,551	98,895
Shortfall																
2045	9,898	16,264	21,655	26,286	9,895	16,258	21,652	26,280	14,847	24,396	32,483	39,429	26,425	43,418	57,816	70,178
2065	11,869	19,518	25,955	31,476	11,867	19,515	25,954	31,473	17,803	29,277	38,933	47,214	32,339	53,181	70,723	85,765

In 2007 dollars. Assumes survival to age 65. Since IA contributions are deductible from Social Security, participants are credited with slightly lower Social Security earnings (and therefore, benefits) than they would otherwise have, e.g., an average earning non-participant retiring in 2065 would receive a benefit of \$26,183, compared to \$25,831 shown above. "Shortfall" shows the Social Security benefits that will be paid if nothing is done to restore the program's solvency: benefits reduced to 75-76% of what they would otherwise be.

Table 3: INDIVIDUAL ACCOUNT BENEFIT IN FIRST YEAR OF RETIREMENT

Year Cohort Turns 65	Single Male				Single Female				One-Earner Couple				Two-Earner Couple			
	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low-Low	Avg-Avg	High-High	Max-Max
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2025	1,137	2,527	4,043	6,166	1,037	2,305	3,688	5,624	1,137	2,527	4,043	6,166	2,174	4,832	7,731	11,789
2045	3,488	7,752	12,403	18,936	3,207	7,126	11,402	17,409	3,488	7,752	12,403	18,936	6,695	14,878	23,805	36,345
2065	4,965	11,033	17,652	26,998	4,595	10,212	16,339	24,989	4,965	11,033	17,652	26,998	9,560	21,244	33,991	51,988

In 2007 dollars. Assumes survival to age 65. Individual accounts assumed to earn a 3% real rate of return.

Table 4: TOTAL (OASI + IA) BENEFIT IN FIRST YEAR OF RETIREMENT

Year Cohort Turns 65	Single Male				Single Female				One-Earner Couple				Two-Earner Couple			
	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low-Low	Avg-Avg	High-High	Max-Max
2005	9,443	15,567	20,490	23,551	9,443	15,567	20,490	23,551	14,165	23,350	30,735	35,326	19,538	32,207	42,393	48,726
2025	11,737	20,003	27,199	34,194	11,637	19,781	26,837	33,638	17,037	28,741	38,777	48,207	26,635	45,161	61,160	76,453
2045	16,495	29,123	40,858	53,477	16,209	28,490	39,853	51,942	22,998	39,808	55,086	70,748	36,705	64,187	89,466	116,046
2065	21,125	37,608	52,992	69,855	20,753	36,782	51,676	67,841	29,205	50,896	70,662	91,283	46,850	82,567	115,542	150,882
Shortfall																
2045	13,386	24,015	34,058	45,223	13,102	23,384	33,054	43,689	18,335	32,147	44,885	58,366	33,120	58,296	81,621	106,523
2065	16,833	30,551	43,607	58,474	16,462	29,726	42,292	56,462	22,768	40,310	56,585	74,212	41,899	74,425	104,714	137,752

In 2007 dollars. Assumes survival to age 65. Individual accounts assumed to earn a 3% real rate of return.

"Shortfall" shows the Social Security benefits that will be paid if nothing is done to restore the program's solvency: benefits reduced to 75-76% of what they would otherwise be.

Table 5: OASI REPLACEMENT RATES: (PIA AS A PERCENT OF FINAL WAGE)

Year Cohort Turns 65	Single Male				Single Female				One-Earner Couple				Two-Earner Couple			
	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low-Low	Avg-Avg	High-High	Max-Max
2005	54.2	40.2	33.1	23.8	54.2	40.2	33.1	23.8	81.3	60.3	49.6	35.7	56.0	41.6	34.2	24.6
2025	47.2	35.0	29.0	22.9	47.2	35.0	29.0	22.9	70.8	52.5	43.5	34.4	54.4	40.4	33.4	26.5
2045	46.6	34.5	28.7	22.8	46.6	34.5	28.7	22.8	70.0	51.7	43.1	34.2	53.8	39.8	33.1	26.3
2065	46.8	34.6	28.8	22.8	46.8	34.6	28.8	22.8	70.2	52.0	43.2	34.2	54.0	40.0	33.2	26.3
Shortfall																
2045	35.5	26.2	21.8	17.3	35.5	26.2	21.8	17.3	53.2	39.4	32.8	26.0	47.4	35.0	29.2	23.2
2065	34.4	25.4	21.1	16.8	34.4	25.4	21.1	16.8	51.6	38.2	31.7	25.1	46.8	34.7	28.8	22.8

"Shortfall" shows the Social Security benefits that will be paid if nothing is done to restore the program's solvency: benefits reduced to 75-76% of what they would otherwise be.

Table 6: INDIVIDUAL ACCOUNT REPLACEMENT RATES ONLY: (IA AS A PERCENT OF FINAL WAGE)

Year Cohort Turns 65	Single Male				Single Female				One-Earner Couple				Two-Earner Couple			
	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low-Low	Avg-Avg	High-High	Max-Max
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	5.1	5.1	5.1	5.0	4.6	4.6	4.6	4.6	5.1	5.1	5.1	5.0	4.8	4.8	4.8	4.8
2045	12.5	12.5	12.5	12.5	11.5	11.5	11.5	11.5	12.5	12.5	12.5	12.5	12.0	12.0	12.0	12.0
2065	14.4	14.4	14.4	14.4	13.3	13.3	13.3	13.3	14.4	14.4	14.4	14.4	13.8	13.8	13.8	13.8

Individual accounts assumed to earn a 3% real rate of return.

Table 7: TOTAL (OASI + IA) REPLACEMENT RATES: (PIA + IA AS A PERCENT OF FINAL WAGE)

Year Cohort Turns 65	Single Male				Single Female				One-Earner Couple				Two-Earner Couple			
	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low	Avg	High	Tax Max	Low-Low	Avg-Avg	High-High	Max-Max
2005	54.2	40.2	33.1	23.8	54.2	40.2	33.1	23.8	81.3	60.3	49.6	35.7	56.0	41.6	34.2	24.6
2025	52.2	40.1	34.0	28.0	51.8	39.6	33.6	27.5	75.8	57.6	48.5	39.5	59.3	45.2	38.3	31.3
2045	59.2	47.0	41.2	35.3	58.1	46.0	40.2	34.3	82.5	64.2	55.6	46.7	65.8	51.8	45.1	38.3
2065	61.2	49.0	43.2	37.2	60.1	47.9	42.1	36.1	84.6	66.3	57.6	48.6	67.9	53.8	47.1	40.2
Shortfall																
2045	48.0	38.8	34.4	29.8	47.0	37.7	33.3	28.8	65.8	51.9	45.3	38.5	59.4	47.0	41.2	35.1
2065	48.8	39.8	35.5	31.1	47.7	38.7	34.5	30.1	65.9	52.5	46.1	39.5	60.7	48.5	42.7	36.7

"Shortfall" shows the Social Security benefits that will be paid if nothing is done to restore the program's solvency: benefits reduced to 75-76% of what they would otherwise be.

Table 8
Option #1: UPS Base Option¹
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007²

Cash Income Percentile ³	1	2	3
	Average Tax Benefit in Dollars	Percent Change in After-Tax Income ⁴	Share of Total Federal Tax Change
Lowest Quintile	25	0.32	1.4
Second Quintile	113	0.59	6.3
Middle Quintile	273	0.86	15.2
Fourth Quintile	490	0.93	27.3
Top Quintile	892	0.60	49.7
All	359	0.70	100.0
Addendum			
Top 10 Percent	990	0.5	27.6
Top 5 Percent	1,007	0.3	14.0
Top 1 Percent	827	0.1	2.3
Top 0.5 Percent	845	0.1	1.2
Top 0.1 Percent	900	0.0	0.3

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

(1) *UPS Base Option* provisions include exempting contributions (3% of taxable social security base) from payroll and income taxes, exempting accounts from taxation until retirement, and then taxing distributions as ordinary income.

(2) Shows distribution of the present value of lifetime tax benefits for new contributions made in 2007. Baseline is current law.

(3) Tax units with negative cash income are excluded from the lowest quintile but are included in the totals. Includes both filing and non-filing units. Tax units that are dependents of other taxpayers are excluded from the analysis. For a description of cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>.

(4) After-tax income is cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); and estate tax.

Table 9
Revenue Effects of Four Options for a Universal Pension System (UPS), Current Law Baseline, 2007-16¹

	Calendar Year (in \$billions nominal)										2007-11	2007-16
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	Total
PANEL A. No Savings Offset²												
1. UPS ³	-53.2	-56.5	-59.7	-63.0	-67.4	-70.8	-74.3	-77.9	-81.6	-85.4	-299.7	-689.7
2. UPS with Match ⁴	-58.9	-62.0	-65.0	-68.1	-71.3	-74.5	-77.9	-81.2	-84.7	-88.4	-325.3	-732.1
3. UPS with EITC Expansion ⁵	-61.9	-65.4	-68.9	-72.3	-76.5	-80.2	-83.9	-87.8	-91.8	-95.8	-345.1	-784.6
4. UPS with Rebate ⁶	-60.0	-62.0	-64.0	-66.0	-67.9	-69.9	-71.9	-74.0	-76.1	-78.2	-319.9	-689.9
PANEL B. Savings Offset (50%)⁷												
1. UPS ³	-46.0	-48.8	-51.6	-54.4	-58.9	-61.9	-64.9	-68.0	-71.2	-74.5	-259.7	-600.1
2. UPS with Match ⁴	-51.8	-54.5	-57.0	-59.6	-63.1	-65.9	-68.7	-71.7	-74.6	-77.7	-285.9	-644.6
3. UPS with EITC Expansion ⁵	-54.7	-57.8	-60.7	-63.7	-68.0	-71.3	-74.5	-78.0	-81.4	-84.9	-305.0	-695.0
4. UPS with Rebate ⁶	-52.7	-54.2	-55.7	-57.2	-59.2	-60.8	-62.3	-63.9	-65.5	-67.2	-279.0	-598.7
PANEL C. Savings Offset (100%)⁷												
1. UPS ³	-38.6	-40.9	-43.2	-45.5	-49.8	-52.4	-54.9	-57.6	-60.1	-62.8	-218.1	-505.9
2. UPS with Match ⁴	-44.6	-46.8	-48.8	-50.9	-54.4	-56.8	-59.1	-61.6	-64.0	-66.5	-245.7	-553.8
3. UPS with EITC Expansion ⁵	-47.3	-49.9	-52.3	-54.8	-58.9	-61.8	-64.5	-67.5	-70.3	-73.3	-263.3	-600.6
4. UPS with Rebate ⁶	-45.2	-46.2	-47.2	-48.2	-50.0	-51.2	-52.1	-53.3	-54.3	-55.4	-236.7	-503.0
Memo: Current Retirement Subsidies⁸	102.4	108.9	115.2	121.8	128.0	133.4	140.5	146.6	153.4	160.7	576.4	1,311.0

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3A)

(1) All options are assumed to take effect starting in 2007 and extend through the 10-year window to 2016. Assumes current law, i.e., EGTRRA and JGTRRA expire at the end of 2010. All dollar figures specified in option descriptions assumed to be in 2007 levels. A fully-refundable Saver's Credit is used for the "Match" option.

(2) Assumes tax filers do not change their savings habits or alter their contributions to other savings accounts in response to the new UPS.

(3) Provisions include exempting contributions (3% of taxable social security base) from payroll and income taxes, exempting accounts from taxation until retirement, and then taxing distributions as ordinary income.

(4) Provisions include exempting contributions (3% of taxable social security base) from payroll and income taxes, exempting accounts from taxation until retirement, taxing distributions as ordinary income, matching contributions of low income filers with a refundable credit with the same parameters as the existing saver's credit. Note that this provision repeals the Saver's Tax Credit and the revenue numbers are net of repeal.

(5) Provisions include exempting contributions (3% of taxable social security base) from income (but not payroll) taxes, exempting accounts from taxation until retirement, taxing distributions as ordinary income, and increasing the phase-in credit rate for the EITC by 3 percentage points for all eligible filers.

(6) Provisions include mandatory contributions (3% of taxable social security base) that are not exempt from income or payroll taxes, not exempting accounts from taxation until retirement, taxing distributions as ordinary income, but rebating annually into retirement accounts \$371 to individual workers and \$742 to two-earner couples.

(7) Assumes tax filers seek to offset UPS contributions—either 50 cents per dollar or dollar for dollar—by reducing contributions to other, similarly tax-advantaged vehicles.

(8) Current law retirement subsidies. Includes DC plans, IRAs, Roth IRAs, Keoghs, and the Saver's Credit. Does not include employer DB plans.

**Table 10a. Value of a Refundable Saver's Credit on a 3%-of-Wages Contribution
For Workers at Different Incomes, 2007**

Wages	Credit Value by Filer Type			Value of 3% UPS Contribution plus Credit Subsidy		
	Single	Head of Household	Joint	Single	Head of Household	Joint
\$5,000	\$75	\$75	\$75	\$225	\$225	\$225
\$10,000	\$150	\$150	\$150	\$450	\$450	\$450
\$15,500	\$233	\$233	\$233	\$698	\$698	\$698
\$17,000	\$102	\$255	\$255	\$612	\$765	\$765
\$20,000	\$60	\$300	\$300	\$660	\$900	\$900
\$23,250	\$70	\$349	\$349	\$767	\$1,046	\$1,046
\$25,500	\$77	\$153	\$383	\$842	\$918	\$1,148
\$26,000	\$78	\$78	\$390	\$858	\$858	\$1,170
\$31,000	\$0	\$93	\$465	\$930	\$1,023	\$1,395
\$34,000	\$0	\$102	\$204	\$1,020	\$1,122	\$1,224
\$39,000	\$0	\$117	\$117	\$1,170	\$1,287	\$1,287
\$40,000	\$0	\$0	\$120	\$1,200	\$1,200	\$1,320
\$52,000	\$0	\$0	\$156	\$1,560	\$1,560	\$1,716
\$55,000	\$0	\$0	\$0	\$1,650	\$1,650	\$1,650

Source: Author's calculations.

Table 10b. Saver's Credit Schedule, 2007

Credit Rate	AGI Range by Filer Type			Tax Credit for a \$1,000 contribution
	Single	Head of Household	Joint	
50%	0 - \$15,500	0 - \$23,250	0 - \$31,000	\$500
20%	\$15,501 - \$17,000	\$23,251 - \$25,500	\$31,001 - \$34,000	\$200
10%	\$17,001 - \$26,000	\$25,501 - \$39,000	\$34,001 - \$52,000	\$100

Sources: Profit Sharing/401(k) Council of America; and William Gale, Mark Iwry, and Peter Orszag, "Improve the Saver's Credit," Policy Brief No. 135, Washington, DC: The Brookings Institution, July 2004.

Note: The Saver's Credit was made permanent by the Pension Protection Act of 2006 with its parameters annually indexed to inflation after 2007. The authors would take the additional step of making the credit fully refundable. Source: William Gale, Mark Iwry, and Peter Orszag, "Improving the Saver's Credit," Policy Brief No. 135, Washington, DC: The Brookings Institution, July 2004.

Table 11
Option #2: UPS with Match¹
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007²

	1	2	3
Cash Income Percentile ³	Average Tax Benefit in Dollars	Percent Change in After-Tax Income ⁴	Share of Total Federal Tax Change
Lowest Quintile	85	1.06	4.2
Second Quintile	203	1.05	10.3
Middle Quintile	311	0.98	15.7
Fourth Quintile	489	0.93	24.6
Top Quintile	895	0.61	45.1
All	397	0.77	100.0
Addendum			
Top 10 Percent	992	0.5	25.0
Top 5 Percent	1,008	0.3	12.7
Top 1 Percent	829	0.1	2.1
Top 0.5 Percent	847	0.1	1.1
Top 0.1 Percent	902	0.0	0.2

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

(1) *UPS with Match* provisions include exempting contributions (3% of taxable social security base) from payroll and income taxes, exempting accounts from taxation until retirement, taxing distributions as ordinary income, matching contributions of low income filers with a refundable credit with the same parameters as the existing saver's credit. Note that this provision repeals the Savers' Tax Credit and the tax benefit numbers are net of repeal.

(2) Shows distribution of the present value of lifetime tax benefits for new contributions made in 2007. Baseline is current law.

(3) Tax units with negative cash income are excluded from the lowest quintile but are included in the totals. Includes both filing and non-filing units. Tax units that are dependents of other taxpayers are excluded from the analysis. For a description of cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>.

(4) After-tax income is cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); and estate tax.

Table 12
Option #3: UPS with Expanded EITC¹
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007²

Cash Income Percentile ³	1	2	3
	Average Tax Benefit in Dollars	Percent Change in After-Tax Income ⁴	Share of Total Federal Tax Change
Lowest Quintile	87	1.09	4.1
Second Quintile	236	1.22	11.3
Middle Quintile	380	1.19	18.2
Fourth Quintile	494	0.94	23.6
Top Quintile	893	0.60	42.8
All	418	0.81	100.0
Addendum			
Top 10 Percent	990	0.5	23.7
Top 5 Percent	1,007	0.3	12.1
Top 1 Percent	827	0.1	2.0
Top 0.5 Percent	845	0.1	1.0
Top 0.1 Percent	900	0.0	0.2

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

(1) *UPS with Expanded EITC* provisions include exempting contributions (3% of taxable social security base) from income (but not payroll) taxes, exempting accounts from taxation until retirement, taxing distributions as ordinary income, and increasing the phase-in credit rate for the EITC by 3 percentage points for all eligible filers.

(2) Shows distribution of the present value of lifetime tax benefits for new contributions made in 2007. Baseline is current law.

(3) Tax units with negative cash income are excluded from the lowest quintile but are included in the totals. Includes both filing and non-filing units. Tax units that are dependents of other taxpayers are excluded from the analysis. For a description of cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>.

(4) After-tax income is cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); and estate tax.

Table 13
Option #4: UPS with Rebate
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007¹

	1	2	3
Cash Income Percentile ³	Average Tax Benefit in Dollars	Percent Change in After-Tax Income ⁵	Share of Total Federal Tax Change
Lowest Quintile	186	2.33	9.4
Second Quintile	287	1.48	14.8
Middle Quintile	376	1.18	19.4
Fourth Quintile	488	0.93	25.2
Top Quintile	601	0.41	31.0
All	387	0.75	100.0
Addendum			
Top 10 Percent	613	0.3	15.8
Top 5 Percent	602	0.2	7.8
Top 1 Percent	569	0.1	1.5
Top 0.5 Percent	560	0.0	0.7
Top 0.1 Percent	564	0.0	0.2

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

(1) *UPS with Rebate* provisions include mandatory contributions (3% of taxable social security base) that are not exempt from income or payroll taxes, not exempting accounts from taxation until retirement, taxing distributions as ordinary income, but rebating annually into retirement accounts \$371 to individual workers and \$742 to two-earner couples.

(2) Shows distribution of the present value of lifetime tax benefits for new contributions made in 2007. Baseline is current law.

(3) Tax units with negative cash income are excluded from the lowest quintile but are included in the totals. Includes both filing and non-filing units. Tax units that are dependents of other taxpayers are excluded from the analysis. For a description of cash income, see <http://www.taxpolicycenter.org/TaxModel/income.cfm>.

(4) After-tax income is cash income less: individual income tax net of refundable credits; corporate income tax; payroll taxes (Social Security and Medicare); and estate tax.

Table 14: INDIVIDUAL ACCOUNT BENEFIT IN FIRST YEAR OF RETIREMENT

Year Cohort Turns 65	Single Male (Low)			Single Female (Low)			One-Earner Couple (Low)			Two-Earner Couple (Low-Low)		
	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate
2005	-	-	-	-	-	-	-	-	-	-	-	-
2025	1,137	1,365	1,849	1,037	1,245	1,686	1,137	1,365	1,849	2,174	2,609	3,535
2045	3,488	4,092	5,684	3,207	3,762	5,225	3,488	4,092	5,684	6,695	7,853	10,909
2065	4,965	5,430	9,252	4,595	5,026	8,563	4,965	5,430	9,252	9,560	10,455	17,815

Assumes survival to age 65. Individual accounts assumed to earn a 3% real rate of return.

Table 15: TOTAL (OASI + IA) BENEFIT IN FIRST YEAR OF RETIREMENT

Year Cohort Turns 65	Single Male (Low)			Single Female (Low)			One-Earner Couple (Low)			Two-Earner Couple (Low-Low)		
	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate
2005	9,443	9,443	9,443	9,443	9,443	9,443	14,165	14,165	14,165	19,538	19,538	19,538
2025	11,737	11,964	12,449	11,637	11,844	12,286	17,037	17,264	17,748	26,635	27,070	27,996
2045	16,495	17,098	18,690	16,209	16,764	18,228	22,998	23,602	25,193	36,705	37,864	40,919
2065	21,125	21,590	25,412	20,753	21,183	24,721	29,205	29,670	33,492	46,850	47,745	55,105

In 2007 dollars. Assumes survival to age 65. Assumes that full OASI benefits as scheduled in law will be paid. Individual accounts assumed to earn a 3% real rate of return.

Table 16: INDIVIDUAL ACCOUNT REPLACEMENT RATES ONLY: (IA AS A PERCENT OF FINAL WAGE)

Year Cohort Turns 65	Single Male (Low)			Single Female (Low)			One-Earner Couple (Low)			Two-Earner Couple (Low-Low)		
	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	5.1	6.1	8.2	4.6	5.5	7.5	5.1	6.1	8.2	4.8	5.8	7.9
2045	12.5	14.7	20.4	11.5	13.5	18.7	12.5	14.7	20.4	12.0	14.1	19.6
2065	14.4	15.7	26.8	13.3	14.6	24.8	14.4	15.7	26.8	13.8	15.1	25.8

Assumes survival to age 65. Individual accounts assumed to earn a 3% real rate of return.

Table 17: TOTAL (OASI + IA) REPLACEMENT RATES: (PIA + IA AS A PERCENT OF FINAL WAGE)

Year Cohort Turns 65	Single Male (Low)			Single Female (Low)			One-Earner Couple (Low)			Two-Earner Couple (Low-Low)		
	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate	Base	Match	Rebate
2005	54.2	54.2	54.2	54.2	54.2	54.2	81.3	81.3	81.3	56.0	56.0	56.0
2025	52.2	53.3	55.4	51.8	52.7	54.7	75.8	76.8	79.0	59.3	60.2	62.3
2045	59.2	61.3	67.0	58.1	60.1	65.4	82.5	84.6	90.4	65.8	67.9	73.4
2065	61.2	62.5	73.6	60.1	61.4	71.6	84.6	85.9	97.0	67.9	69.1	79.8

Assumes survival to age 65. Assumes that full OASI benefits as scheduled in law will be paid. Individual accounts assumed to earn a 3% real rate of return.

Appendix A. Estimating the Tax Savings Associated with the Current Retirement System

Looking simply at changes in annual tax liability is not a very helpful way of measuring the tax benefits of different retirement savings options. This approach can make economically equivalent tax breaks appear very different.⁴⁰ For example, traditional IRAs or 401(k)s provide an up-front deduction and tax-free earnings during the accumulation phase, but withdrawals are taxable. On the other hand, Roth IRAs or 401(k)s provide no up-front deduction, but earnings and withdrawals are tax-free. Unfortunately, even though the expected present value of lifetime taxes paid on these two types of accounts is equivalent (for an equal after-tax contribution for taxpayers whose tax rates do not change), the standard approach for estimating tax expenditures would show a much larger tax expenditure for the traditional IRA (or 401(k)) than for the Roth IRA (or 401(k)).

Our methodology for estimating the tax benefits associated with retirement savings provisions utilizes the present-value method. Following earlier Tax Policy Center work,⁴¹ we define the benefit received by a tax filing unit in a given year as the present value of the tax benefits associated with their own contributions in that year to IRAs plus their own and their employer's contributions in that year to defined contribution pensions. Thus, a taxpayer with a positive balance in a 401(k) in 2007 but no employer or employee contributions in 2007 would not be attributed any benefit from the 401(k) in 2007. The benefit from the 401(k) balances would be attributed to the years when contributions were made.

To undertake these calculations, we assume that the taxpayer's marginal tax rate does not change over time and that amounts contributed will be left in the tax-free account until age 65, after which they will be withdrawn in equal installments over the remaining life expectancy (17 years for men and 20 years for women).

We measure the value of tax subsidies in terms of the discounted present value of tax savings compared with an equivalent contribution made to a taxable account. For example, for a \$2,000 contribution made to a traditional IRA by a taxpayer in the 25 percent tax bracket, the actual net-of-tax cost of the contribution is \$1,500 (\$2,000 minus the \$500 in tax savings). Assuming a 6 percent nominal rate of return (and discount rate) on both accounts, that the tax bracket does not change, and that the taxpayer holds the account for 20 years and then withdraws it in equal installments over the next 10, he or she would pay taxes over a lifetime equal to \$435.74 in present value. Put differently, the IRA would finance an after-tax benefit that is worth \$435.74 more in present value than a taxable account (that is, one where the returns are taxable at the 25 percent tax rate for this example) financed with the same initial after-tax investment. Thus, in this case, the tax subsidy would be worth about 22 percent of the initial contribution. While we use IRAs in this example, we apply this methodology to comparable forms of retirement saving.

⁴⁰ This explanation follows Burman et al., "Distributional Effects of Defined Contribution Plans and Individual Retirement Accounts," 6–8.

⁴¹ *Ibid.*, 7–8.

Appendix B. A Lifetime Social Security Benefits Calculator: Assumptions and Methods

C. Eugene Steuerle, Jon M. Bakija, and Adam Carasso of the Urban Institute designed a lifetime social security benefit and tax calculator.⁴² The calculator (called the SBC model) computes the lifetime value of social security benefits and taxes for stylized workers. It uses the Social Security Administration's typical worker profiles ("low", "average", "high" and "taxable maximum") and the Social Security Trustees' 2007 intermediate economic and demographic assumptions. Additionally, it assumes that individuals begin employment on their 22nd birthday and work full-time every year until retiring on their 65th birthday, that couples have been married a minimum of ten years and both spouses are the same age, and that there are no child beneficiaries.

The calculator computes the actuarial present value of lifetime taxes and benefits, adjusting all possible benefit and tax payments for inflation, interest, and probability of occurrence. It adjusts for inflation by converting all dollar amounts into 2007 dollars using the CPI-W. It adjusts for interest by calculating the present value of lifetime taxes and benefits at age 65 using a 3 percent real discount rate. Tax payments are "invested" at a 3 percent rate while benefit payments are discounted at this same rate, to age 65. This makes lifetime tax and benefit values comparable among different workers in the same birth cohort and across birth cohorts.

Finally, the SBC model adjusts Social Security and UPS benefits for mortality after age 65. The annual benefit amounts are calculated by multiplying the present value of each possible benefit payment by the probability that someone will be alive to receive that payment, given that he or she has already survived to age 65. For example, a woman alive at age 65 in 1970 had about an 80 percent chance of surviving to age 75, so the value of a benefit at age 75 is multiplied by 0.8. Survivors' benefits are similarly weighted according to probability of occurrence. This procedure expresses the total value of social security benefits as the lump sum needed to purchase an equivalent annuity from a private insurance company at age 65.

UPS account balances are assessed a one-time 0.3 percent annuity conversion fee at age 65. UPS benefit payments to couples assume the widow(er) receives two-thirds of the worker's total benefit.

⁴² See C. Eugene Steuerle and Adam Carasso, "The USA TODAY Lifetime Social Security and Medicare Benefits Calculator: Assumptions and Methods," Washington, DC: The Urban Institute, 2004.

Table A1

PANEL A. 50% Offset¹
Option #1: UPS Base Option
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
	Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change
Lowest Quintile	25	0.31	1.6
Second Quintile	106	0.55	6.9
Middle Quintile	250	0.78	16.1
Fourth Quintile	431	0.82	27.8
Top Quintile	741	0.50	47.7
All	311	0.60	100.0
Addendum			
Top 10 Percent	813	0.4	26.2
Top 5 Percent	849	0.3	13.7
Top 1 Percent	779	0.1	2.5
Top 0.5 Percent	804	0.1	1.3
Top 0.1 Percent	875	0.0	0.3

PANEL B. 100% Offset¹
Option #1: UPS Base Option
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
	Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change
Lowest Quintile	25	0.31	1.9
Second Quintile	98	0.51	7.5
Middle Quintile	225	0.71	17.2
Fourth Quintile	372	0.71	28.5
Top Quintile	584	0.40	44.8
All	261	0.51	100.0
Addendum			
Top 10 Percent	629	0.3	24.1
Top 5 Percent	680	0.2	13.0
Top 1 Percent	726	0.1	2.8
Top 0.5 Percent	758	0.1	1.5
Top 0.1 Percent	847	0.0	0.3

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

See notes to Table 8 for more information.

(1) Assumes tax filers seek to offset UPS contributions—either 50 cents per dollar or dollar for dollar—by reducing contributions to other, similarly tax-advantaged vehicles.

Table A2

PANEL A. 50% Offset¹
Option #2: UPS with Match
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change	
Lowest Quintile	85	1.06	4.7
Second Quintile	198	1.02	11.3
Middle Quintile	289	0.91	16.5
Fourth Quintile	431	0.82	24.7
Top Quintile	743	0.50	42.5
All	350	0.68	100.0
Addendum			
Top 10 Percent	815	0.4	23.3
Top 5 Percent	850	0.3	12.2
Top 1 Percent	781	0.1	2.2
Top 0.5 Percent	806	0.1	1.2
Top 0.1 Percent	877	0.0	0.3

PANEL B. 100% Offset¹
Option #2: UPS with Match
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change	
Lowest Quintile	84	1.06	5.5
Second Quintile	193	1.00	12.8
Middle Quintile	267	0.84	17.7
Fourth Quintile	374	0.71	24.8
Top Quintile	587	0.40	38.9
All	301	0.58	100.0
Addendum			
Top 10 Percent	630	0.3	20.9
Top 5 Percent	681	0.2	11.3
Top 1 Percent	728	0.1	2.4
Top 0.5 Percent	760	0.1	1.3
Top 0.1 Percent	849	0.0	0.3

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

See notes to Table 11 for more information.

(1) Assumes tax filers seek to offset UPS contributions—either 50 cents per dollar or dollar for dollar—by reducing contributions to other, similarly tax-advantaged vehicles.

Table A3

PANEL A. 50% Offset¹
Option #3: UPS with Expanded EITC
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change	
Lowest Quintile	87	1.09	4.6
Second Quintile	228	1.18	12.4
Middle Quintile	356	1.12	19.3
Fourth Quintile	434	0.83	23.5
Top Quintile	741	0.50	40.1
All	369	0.72	100.0
Addendum			
Top 10 Percent	813	0.4	22.0
Top 5 Percent	849	0.3	11.5
Top 1 Percent	779	0.1	2.1
Top 0.5 Percent	804	0.1	1.1
Top 0.1 Percent	875	0.0	0.2

PANEL B. 100% Offset¹
Option #3: UPS with Expanded EITC
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change	
Lowest Quintile	86	1.08	5.3
Second Quintile	220	1.14	13.8
Middle Quintile	331	1.04	20.7
Fourth Quintile	375	0.71	23.5
Top Quintile	584	0.40	36.6
All	319	0.62	100.0
Addendum			
Top 10 Percent	629	0.3	19.7
Top 5 Percent	680	0.2	10.7
Top 1 Percent	726	0.1	2.3
Top 0.5 Percent	758	0.1	1.2
Top 0.1 Percent	847	0.0	0.3

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

See notes to Table 12 for more information.

(1) Assumes tax filers seek to offset UPS contributions—either 50 cents per dollar or dollar for dollar—by reducing contributions to other, similarly tax-advantaged vehicles.

Table A4

PANEL A. 50% Offset¹
Option #4: UPS with Rebate
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
	Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change
Lowest Quintile	186	2.33	10.8
Second Quintile	278	1.44	16.5
Middle Quintile	350	1.10	20.7
Fourth Quintile	428	0.82	25.4
Top Quintile	448	0.30	26.5
All	338	0.65	100.0
Addendum			
Top 10 Percent	434	0.2	12.9
Top 5 Percent	443	0.1	6.6
Top 1 Percent	521	0.1	1.5
Top 0.5 Percent	518	0.0	0.8
Top 0.1 Percent	539	0.0	0.2

PANEL B. 100% Offset¹
Option #4: UPS with Rebate
Distribution of Federal Tax Benefits by Cash Income Percentile, 2007

Cash Income Percentile	1	2	3
	Average Tax Benefit in Dollars	Percent Change in After-Tax Income	Share of Total Federal Tax Change
Lowest Quintile	185	2.32	12.7
Second Quintile	269	1.39	18.7
Middle Quintile	322	1.01	22.4
Fourth Quintile	369	0.70	25.7
Top Quintile	291	0.20	20.3
All	287	0.56	100.0
Addendum			
Top 10 Percent	249	0.1	8.7
Top 5 Percent	273	0.1	4.8
Top 1 Percent	468	0.1	1.6
Top 0.5 Percent	473	0.0	0.8
Top 0.1 Percent	510	0.0	0.2

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0305-3a).

See notes to Table 13 for more information.

(1) Assumes tax filers seek to offset UPS contributions—either 50 cents per dollar or dollar for dollar—by reducing contributions to other, similarly tax-advantaged vehicles.