

Reducing Benefits and Subsidizing Individual Accounts:

**An Analysis of the Plans Proposed by the President's
Commission to Strengthen Social Security**

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Executive Summary

The President's Commission to Strengthen Social Security proposed three plans for reforming Social Security. All of them would create individual accounts financed by diverting funds from the Social Security Trust Fund. One of the three Commission proposals (Model 1) would not restore long-term balance to Social Security. This analysis focuses on the other two proposals — Models 2 and 3 — which would restore long-term balance.¹

Models 2 and 3 contain a number of elements and are quite complicated. To understand the plans, we describe their overall financing first and then examine their proposed changes to Social Security benefits (which we refer to as “traditional benefits”), the individual accounts that the plans would establish, and the combined effect on retirement income from the changes in traditional Social Security benefits and the individual accounts.

To assess the plans and their expected effects, our paper draws heavily upon a detailed analysis of the plans prepared by the Office of the Chief Actuary at the Social Security Administration. A full explanation of our analysis, methodology, and sources is provided in a technical paper that serves as a companion to this analysis, “An Assessment of the Proposals from the President's Commission to Strengthen Social Security,” available online at <http://www.brookings.edu/es>.

The Financing Structure of the Commission Plans

Models 2 and 3 have three basic components:

- changes in traditional benefits;
- the diversion of Social Security revenue into voluntary individual accounts; and
- the transfer of revenue from the rest of the budget to Social Security to offset the adverse effects of the individual accounts on the Social Security Trust Fund.

To understand how the plans work, it is important to distinguish the first component (the traditional benefit reductions) from the second two components (the individual accounts and the revenue transfers associated with them).

One key issue that has been little understood is *how* Models 2 and 3 restore long-term solvency to Social Security. Traditional benefit reductions — the first component of the plans

¹ The views expressed in this paper are the authors alone and do not necessarily represent those of the staff, trustees, or officers of the institutions with which the authors are affiliated. For a more detailed examination of the Commission's proposals, see the authors' companion paper: Peter A. Diamond and Peter R. Orszag, “An Assessment of the Proposals from the President's Commission to Strengthen Social Security,” The Brookings Institution, June 2002.

— play a crucial role in restoring long-term balance to Social Security in both Models 2 and 3. Indeed, in the absence of their individual account components, Models 2 and 3 restore long-term balance either solely through Social Security benefit reductions (as in the case of Model 2) or through a combination of benefit reductions and new revenues assumed to be provided to Social Security from elsewhere in the budget (as in the case of Model 3). Under both Models 2 and 3, these benefit reductions would apply to all beneficiaries, including disabled beneficiaries and those who do not opt for individual accounts.

The second component of the plans establishes voluntary individual accounts to replace part of the scaled-back Social Security system that remains after implementation of these benefit reductions. Those who opt for the individual accounts would accept further reductions in their traditional Social Security benefits in return for the ability to divert part of their payroll taxes to their individual accounts.

The individual accounts themselves do *not* help in restoring Social Security solvency. Instead, as the Commission’s Report itself acknowledges, the individual accounts themselves would *worsen* Social Security’s balance over the next 75 years.² Moreover, the individual accounts would have an adverse effect on Social Security’s financial condition on a permanent basis, rather than just during a “transition period.”

- The individual accounts would have this effect for a basic reason: the Commission chose to *subsidize* these accounts with revenue from the Social Security Trust Fund. The Commission designed its plans so that the amounts that would be diverted from Social Security to the individual accounts, plus the interest the Trust Fund would lose because it no longer would hold the diverted funds, would *exceed* the amounts by which the Social Security benefits of those opting for the accounts would later be reduced. Since the amounts shifted from Social Security to individual accounts would exceed the amounts by which the Trust Fund’s benefit obligations would be lessened by the accounts, the result would be a permanent worsening of the Trust Fund’s financial condition.
- In the past, some proponents of individual accounts have presented such accounts as a painless way to restore Social Security solvency without either benefit reductions or payroll tax increases (a claim that careful analysts, including members of the Commission itself, have long said is not correct). Under the Commission’s plans, the opposite is true. The individual accounts, themselves, would worsen the long-term balance in Social Security.

To overcome the adverse impact that the individual accounts would have on Social Security financing and prevent Social Security from falling back into imbalance over the next 75 years, the Commission proposals include a third component: the infusion of substantial amounts of revenue into Social Security from the rest of the budget. This enables the Commission proposals, taken as a whole, still to restore long-term balance. Both Models 2 and 3 assume transfers from the rest of the budget of sufficient magnitude to offset the losses the Trust Fund would incur as a result of the individual accounts. (In the case of Model 3, these transfers are in addition to the transfers from the rest of the budget needed under Model 3 to restore long-term balance even before the individual-accounts element of the model is added.)

² President’s Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 127.

Financing Problems

Models 2 and 3 are dependent upon large, multi-trillion dollar transfers from the rest of the budget. The Commission report provides no indication, however, of where these transferred funds would come from. The failure to identify the source of the revenue transfers represents a serious gap in the financing of the plans, since budget forecasts from the Congressional Budget Office, the General Accounting Office, and other budget analysts show little or no budget surplus outside Social Security in either the short term or the long term. To the contrary, as the baby boom generation retires and health care costs continue to rise, the budget outside Social Security is projected to go substantially into deficit. This means there are no available sums to transfer without causing even larger deficits outside Social Security. The proposed transfers thus effectively constitute a large “magic asterisk” that serves to mask the adverse financial impact of the individual accounts on Social Security solvency.

The assumed, unspecified general revenue transfers would be very large.

- Calculations based on the actuaries’ analysis suggest that under Model 2, if all eligible workers participated in the individual accounts (which would be to their advantage given the subsidies provided to the accounts, as explained below), the general revenue transfers would amount to 1.2 percent of payroll over the next 75 years. The entire Social Security shortfall over the next 75 years, as estimated by the Social Security actuaries and trustees, is 1.9 percent of payroll. Thus, the required general revenue transfer under Model 2 would equal nearly two-thirds of the entire projected Social Security shortfall over the next 75 years.
- The general revenue transfers under Model 2 would amount to more than \$2 trillion in present value. (Present value is the amount today that, with interest, would exactly cover the future transfers.)
- The general revenue transfers are even larger under Model 3 than under Model 2 (if the same number of workers participated in the accounts under the two Models).

A further financing problem stems from the treatment of disabled Social Security beneficiaries under the Commission plans. As noted earlier, in the absence of their individual account components, the plans would restore long-term Social Security solvency either largely or entirely through benefit reductions that would apply to all beneficiaries, including the disabled. The disabled would have limited ability, however, to mitigate the effects of these benefit reductions by securing income from individual accounts.³ The treatment of disabled beneficiaries under the plans therefore is draconian (see table on page 11 for the precise benefit reductions applying to the disabled). The Commission itself somewhat disavowed this aspect of its proposals, suggesting that a subsequent commission or other body that specializes in disability policy might revise how its plans apply to the disabled.⁴ Despite

³ The limited ability of the disabled to rely on their individual accounts to offset the traditional benefit reductions would arise for two reasons. First, their individual accounts often would be meager, since those who become disabled before retirement age may have relatively few years of work during which they could make contributions to their accounts. Second, under the Commission proposals, disabled beneficiaries (like all other beneficiaries) would not be allowed access to their individual accounts until they reached retirement age.

⁴ The Commission Report states: “DI beneficiaries may not have their full adult lives in which to accumulate a retirement account, so this is a rationale for maintaining their traditional benefits. However, if benefits were changed for OASI but not DI, this might lead to an increase in DI applicants. The Commission urges the

this disavowal, however, the Commission plans count *all* of the savings from the reductions in Social Security disability benefits and rely on these savings to restore long-term balance to Social Security. Without these large cuts in disability benefits, neither Model 2 nor Model 3 would restore long-term solvency (unless even larger general revenue transfers were made than those already required under the plans).

Revenue Transfers under Models 2 and 3 Assuming All Eligible Workers Participate in the Accounts		
	Model 2	Model 3
Total cost of transfers as a percentage of payroll over 75 years		
<i>As specified by Commission (without protection for the disabled)</i>	1.23%	1.51%
<i>Including protection for the disabled</i>	1.53%	1.68%
Total cost of transfers in present value (2001 dollars)		
<i>Without protection for the disabled</i>	\$2.2 trillion	\$2.8 trillion
<i>Including protection for the disabled</i>	\$2.8 trillion	\$3.1 trillion

Source: Memorandum from the Office of the Chief Actuary; President’s Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 94; and authors’ calculations

If the reductions in disability benefits were somehow eliminated and the savings from these benefit reductions replaced by further transfers of general revenues from the rest of the budget, the revenue transfers under Model 2 would amount to almost \$3 trillion in present value.

- This sum is almost as large as the entire publicly held debt.
- Such transfers, amounting to 1.5 percent of taxable payroll, would equal more than three-fourths of what would be required to eliminate all of the deficit in Social Security over the next 75 years with no other changes to the system and no reductions in benefits.

Impact on Benefits

With this background on the financing structure of the Commission’s plans, we turn now to the impact of the Commission proposals on beneficiaries. We look first at the effects on traditional Social Security benefits themselves and then examine the combined effect on traditional Social Security benefits and the income that would be received from the individual accounts. We use the term “traditional Social Security benefits” to refer to the benefits

Congress to consider the full range of options available for addressing these concerns. In the absence of fully developed proposals, the calculations carried out for the commission and included in this report assume that defined benefits will be changed in similar ways for the two programs. *This should not be taken as a Commission recommendation for policy implementation.*” *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 149 (italics in original).

provided by the traditional Social Security system and the term “combined benefits” to refer to the combination of traditional benefits and the income from individual accounts.⁵

The Baseline for Evaluating Changes in Benefits

We compare both traditional Social Security benefits and combined benefits under the Commission’s proposals to the Social Security benefits that are scheduled under current law. As is well known, the projected cost of the scheduled benefits under current law exceeds the projected revenue available to Social Security. Nevertheless, we believe that comparing the Commission plans to scheduled benefits is the clearest way of describing the proposed changes, since the workings of current law are readily understood. This type of comparison is the standard method that has long been used to evaluate the effects of Social Security changes on Social Security benefits. For example, both the Greenspan Commission in the 1980s and the bipartisan, Congressionally chartered Advisory Council on Social Security in the 1990s employed this approach despite projected long-term deficits in Social Security at the time.

In addition, using scheduled benefits as the benchmark in evaluating proposed benefit changes is helpful because a reduction from scheduled benefits represents a reduction in the percentage of a worker’s pre-retirement earnings that Social Security (or combined benefits from Social Security and individual accounts) will replace. The current Social Security benefit structure is designed to keep the percentage of a worker’s pre-retirement earnings that Social Security replaces roughly constant over time; as a result, a reduction in scheduled benefits causes a reduction in the percentage of earnings that Social Security replaces. In debates over Social Security changes, it is critical to identify changes in the percentage of wages that retirement benefits would replace, since these “replacement rates” affect how people’s standards of living are altered when they retire. Finally, no other reasonable standard of comparison is readily available for measuring changes in benefits.⁶ Moreover, by focusing on a single baseline, we avoid the confusion that can arise from statements that are based upon comparisons to one baseline but are readily interpreted as referring to another baseline.

The comparisons we provide here to scheduled benefits are not meant to imply that reforms to the current system are not necessary. To the contrary, some combination of a reduction in benefits, an increase in revenue, and an increase in the rate of return earned on the reserves of the Social Security Trust Fund is required to bring the system back into balance. Since it is unlikely that a reform plan would restore long-term solvency solely through payroll tax increases, transfers from the rest of the budget, and/or the investment of Social Security reserves in financial instruments that yield a higher rate of return than Treasury bonds, restoring long-term balance to Social Security will likely involve some

⁵ Note that traditional benefits and combined benefits are identical for workers who choose not to contribute to the accounts. The basic changes in traditional benefits that would result from the Commission plans represent the overall effect the plans would have on workers who elect not to participate in the individual accounts.

⁶ Some have suggested that benefit comparisons use as a benchmark the Social Security benefits that would be paid if policymakers took no action for nearly four decades until the Social Security Trust Fund was exhausted and then allowed the shortfall after the exhaustion date to be closed entirely through Social Security benefit cuts. As Federal Reserve Chairman Alan Greenspan recently observed, however, there is virtually no chance that policymakers would allow this to happen. (Alan Greenspan, “Saving for Retirement,” Remarks before the 2002 National Summit on Retirement Savings, U.S. Department of Labor, Washington, D.C., February 28, 2002.) We discuss this issue further in the main text below.

reduction in “replacement rates.” A fundamental issue is whether the balance among the possible elements of a reform plan is appropriate.

Retirement Benefits

Both Model 2 and Model 3 achieve long-term balance in Social Security without their individual account components, doing so entirely (under Model 2) and primarily (under Model 3) through reducing Social Security benefits. This section describes the effects of these changes on beneficiaries in more detail.

Model 2 reduces Social Security benefits by altering the rules for determining the benefit levels that beneficiaries receive. Under current law, the Social Security benefit level set for workers when they retire is determined under a formula that is designed to ensure these benefit levels keep pace over the years with overall wage growth in the U.S. economy. As a result, each succeeding generation of workers enjoys higher Social Security benefits that reflect the higher average wages that generation has earned. Model 2 would alter this system so that over the years, the Social Security benefit level established for workers when they retire would keep pace only with inflation, rather than average wage growth. (This is one version of changing from “wage indexing” to “price indexing.”) The effect of this change, which would affect benefits for people who become eligible for Social Security in 2009 or any year after that, would be to institute reductions in Social Security benefits that grow steadily larger over time and eventually become quite dramatic.

- As a result of this change, a worker aged 35 today who retires at age 65 would have his or her traditional Social Security benefits reduced by 17 percent under Model 2, compared to the benefits the worker would receive under the benefit structure in current law. For a baby born in 2001 who retires at age 65, traditional Social Security benefits would be reduced by 41 percent.
- The result of these benefit reductions would be a substantial decline from one generation to the next in “replacement rates” — that is, in the percentage of a worker’s pre-retirement earnings that Social Security benefits replace. By contrast, under the current Social Security system, replacement rates remain roughly constant from one generation to the next.

For example, for a two-earner couple with average earnings that retires at age 65 in any year after 2025, Social Security is scheduled to replace about 36 percent of former earnings. Under Model 2, Social Security benefits would replace only 30 percent of former earnings for such a couple that is age 35 today and just 22 percent for a (future) couple composed of two babies born in 2001. The role of Social Security in allowing the elderly to maintain their standard of living in retirement would decline rather sharply over time.

Under Model 3, revenue transferred from the rest of the budget is assumed to fill one-third of the projected long-term deficit in Social Security, even before the individual accounts component of the plan is added, with reductions in traditional Social Security benefits closing the other two-thirds of the deficit. Although it is unclear how such transfers from the rest of the budget would be financed, the assumption that this revenue will be transferred reduces the size of the benefit reductions needed under this model. The benefit reductions in Model 3 are thus less severe than under Model 2.

Effect of Changing to Price Indexing under Model 2				
Age on January 1, 2002	Year in which the worker attains age 65	Benefit change due to change to price indexing under Model 2 (change from benefits scheduled under current law)	Replacement rate under current law scheduled benefits*	Replacement rate under Model 2*
55	2011	-0.0%	39.4%	39.4%
45	2021	-9.0%	38.5%	35.0%
35	2031	-17.4%	36.6%	30.2%
25	2041	-25.0%	36.6%	27.5%
15	2051	-31.8%	36.6%	25.0%
5	2061	-38.1%	36.6%	22.7%
0	2066	-41.0%	36.6%	21.6%

Source: Authors' calculations based on 2001 Trustees' assumptions

* Replacement rates show Social Security benefits as a percent of previous wages for two-earner couples with medium earnings. The decline in replacement rates over the next couple of decades under current law occurs because of the scheduled increase in Social Security's "normal retirement age," which is scheduled to rise to age 67 by 2025.

- Benefits for a current 35-year old who retires at age 67 would fall by 10 percent under Model 3, compared to the benefits scheduled under current law. Benefits for a baby born in 2001 who retires at age 67 would fall by 24 percent.
- Model 3 would further reduce Social Security benefits for workers who claim benefits before the "normal retirement age" (which will reach 67 in 2025), as roughly two-thirds of workers currently do. Benefits for a current 35-year old who retires at age 62 (the most common retirement age) would fall by 19 percent under Model 3, compared to the benefits scheduled under current law. Benefits for a baby born in 2001 who retires at age 62 would fall by 32 percent.

Effect of Major Benefit Reduction Proposals under Model 3		
Age on January 1, 2002	Benefit change for those retiring at normal retirement age (change from benefits scheduled under current law)	Benefit change for those retiring at age 62 (change from benefits scheduled under current law)
55	-0.0%	-0.0%
45	-4.9%	-14.4%
35	-9.5%	-18.6%
25	-14.0%	-22.6%
15	-18.2%	-26.4%
5	-22.2%	-30.0%
0	-24.1%	-31.7%

Source: Authors' calculations based on 2001 Trustees' assumptions. Note: Figures do not include additional benefit changes for workers with low earnings over a long career and for workers with high earnings.

Disability Benefits

As noted above, both Models 2 and 3 would significantly reduce benefits for the disabled. For example, for those who begin to receive disability benefits in 2075, Social Security benefits would be reduced 29 percent under Model 3 and 48 percent under Model 2. These reductions in disability benefits would disproportionately affect minority and poor workers, since the proportion of workers who are disabled is significantly higher among African-Americans and the poor than among the rest of the population.

Reductions in Social Security Disability Benefits under Models 2 and 3		
Year worker begins to receive disability benefits	Benefit change under Model 2 (change from benefits scheduled under current law)	Benefit change under Model 3 (change from benefits scheduled under current law)
2010	-1.8%	-1.0%
2020	-10.7%	-5.8%
2030	-18.9%	-10.4%
2040	-26.4%	-14.8%
2050	-33.1%	-19.0%
2060	-39.3%	-22.9%
2070	-44.9%	-26.7%
2075	-47.5%	-28.5%

Source: 2001 Trustees Report and authors' calculations. Note: Figures for Model 3 do not include additional benefit changes for disabled workers with high earnings.

The same reductions in benefits would apply to the young children of deceased workers.⁷ The reductions in benefits for young children also would disproportionately harm minorities: African-American children currently constitute 15 percent of Americans under age 18 but more than 22 percent of the children who receive Social Security survivor benefits.

Benefit Improvements

Finally, the Commission recognized the special difficulties that both workers with low lifetime earnings and surviving spouses who receive low benefits can experience. Model 2 and Model 3 include some modest benefits improvements for such people. In particular, the plans would mitigate the benefit reductions for workers with low earnings who worked and had earnings in at least 20 years; it would do so by providing a new "low earner" benefit. The plans would also mitigate the benefit reductions for the widows and widowers of retired workers. Under current law, a surviving spouse receives a Social Security benefit equal to between 50 percent and 67 percent of the total benefits the couple was receiving before the other spouse's death. Models 2 and 3 would raise the survivor's benefit to at least 75 percent of the previous total benefits of the couple, so long as doing so did not increase the benefit that a widow or widower received to a higher level than the average benefit for retired workers. These changes are beneficial but are relatively modest compared to the overall benefit reductions imposed under Models 2 and 3. Low-income workers and surviving spouses would eventually still be subject to overall benefit reductions.

Individual Accounts

After restoring long-term balance to Social Security by reducing traditional Social Security benefits substantially (and thereby lessening Social Security's role in supporting relative standards of living among the elderly), Models 2 and 3 create a system of voluntary individual accounts to replace part of the scaled-back Social Security program. If a worker chooses to contribute to an individual account, funds would be diverted from the Social Security Trust Fund into the worker's account. These funds would accumulate during the worker's career and be available to the worker upon retirement.

⁷ Any individual accounts would be of little or no use to such young children for two reasons. First, if the parent dies young, the accounts would be relatively small. Second, the accounts could not be drawn upon to support the surviving family until the surviving spouse retired (if there were a surviving spouse).

Since the revenue diverted to the individual accounts would reduce the financing available to Social Security, a worker choosing the individual account option would — under all three Models — owe a “debt” to the Social Security Trust Fund. Upon retirement, the debt would be repaid by reducing the worker’s traditional Social Security benefits.⁸ This reduction would be in addition to the benefit reductions described above, which would apply to all beneficiaries, including those who do not opt for individual accounts.

Under both Models 2 and 3, the amounts that ultimately would be paid back to Social Security through further reductions in Social Security benefits would be significantly smaller than the amounts that would be diverted from the Social Security Trust Fund to the individual accounts plus the interest the Trust Fund would have earned on these funds if they had remained in the Trust Fund. Since the amount paid back to Social Security would be less than the amount the Trust Fund would lose, the individual accounts would make Social Security’s financing gap larger. The individual accounts also would create a cash flow problem for the Trust Fund, since revenues would be diverted from the Trust Fund many years before the corresponding “debts” would be repaid to the Trust Fund.

To offset the deleterious effect of the individual accounts on Social Security financing, both Models 2 and 3 call for substantial infusions of general revenue from the rest of the budget. In other words, general revenue would finance the subsidies to the individual accounts (along with covering the cash-flow problems created by the accounts). The use of general revenue for this purpose means that the ultimate burden of the subsidies would fall on taxpayers as a whole. Under Models 2 and 3, the rest of the American public would be required to subsidize those who choose to participate in the individual accounts. Moreover, a lower earner choosing to divert revenue into an account would receive a smaller subsidy than would a higher earner, so that the subsidies represent a regressive feature of the Commission plans.

Combined Benefit Levels

Even with their substantial general revenue transfers, Models 2 and 3 would result in significant reductions in combined benefits for many workers. The combination of Social Security benefits and expected income from the individual accounts would be less for these workers than the Social Security benefits scheduled to be paid under the current benefit structure.

- For example, the actuaries’ analysis shows that under Model 2, a medium-earning two-earner couple claiming benefits at age 65 in 2075 would receive an expected combined benefit — including the annuity from an individual account — that is about 20 percent below the benefit the couple would receive under the current Social Security benefit structure.
- Given the extremely large infusion of revenue from the rest of the budget under Model 2 — an infusion that is equal to nearly two-thirds of the entire projected Social Security financing shortfall — a 20 percent reduction in combined benefits must be regarded as a substantial benefit reduction.

⁸ If a worker dies *before* retirement, the surviving spouse would inherit *both* the worker’s individual account and the worker’s debt to the Social Security Trust Fund for the contributions diverted into the account. Similarly, in the event of divorce, *both* the individual account and the accumulated debt would be shared with the former spouse. The debt would then be repaid out of the future retirement benefits of the divorcee or surviving spouse.

- Under Model 3, the expected combined benefit for a medium-earning two-earner couple claiming benefits at age 62 in 2072 would be 10 percent below what the couple would receive under the current benefit formula. This reduction occurs despite the substantial general revenue infusion under Model 3, and despite the additional contribution of one percent of earnings (on top of the existing payroll tax) that workers would be required to pay to participate in the accounts under Model 3.

Risk

It should be noted that these estimates of the expected combined benefits from Social Security and the individual accounts under Models 2 and 3 assume a specific rate of return on stocks and bonds. The rate of return that is assumed is the same as the rate that the actuaries used in their analysis and the Commission also used. The *actual* benefit from the individual account would, of course, depend upon the actual performance of the stock market and the investment choices that workers made.

Investing in the stock market carries risks; stock returns vary significantly from year to year. Most individuals, however, are averse to risk. A financial instrument for which the *average* expected return is higher than for another type of financial investment, but which carries a substantial risk of providing a lower or negative return, is likely to be less attractive to many people than a financial instrument that has a somewhat lower average expected rate of return but entails much less risk of losses. As a result, almost all economists recognize that, in evaluating the returns under various types of investments, it is important to adjust for risk. A “risk adjustment” attempts to evaluate different assets on an “apples to apples” basis by subtracting a penalty from the expected return on riskier assets to reflect the higher risk they carry. Using a simplified but broadly used approach to risk adjustment — an approach the Office of Management and Budget recently used in an analogous situation⁹ — the combined benefits under Model 2 for the average-earning couple that retires in 2075 are estimated to fall about 40 percent below the Social Security benefits scheduled under the current benefit structure. The difference between the 40 percent reduction for this couple, estimated on a risk-adjusted basis, and the 20 percent reduction for this couple noted above reflects the risks inherent in investing in the stock market. Similarly, under Model 3, the risk-adjusted combined benefits for a medium-earning couple retiring at age 62 in 2072 are roughly 18 percent below benefits scheduled under the current benefit formula.

In addition to “stock market risk,” the Commission proposals carry a second type of risk. As noted, these plans rely heavily on general revenue transfers without indicating where the transferred funds would be found. Given the forecasts of long-term deficits outside Social Security, there is a real possibility that the assumed transfers would not materialize. To the extent that assumed funding turned out not to be available, Social Security benefits could have to be reduced to a still-greater degree to adapt the system to the available level of funds. In the absence of a major shift in the budget outlook, the Commission proposals thus carry substantial risk that beneficiaries would be subject to deeper reductions in their Social Security benefits than the reductions reported above.

⁹ Office of Management and Budget, *Budget Systems and Concepts*, Fiscal Year 2003, pages 15-16.

I. Introduction

Social Security is running short-term surpluses but faces a projected long-term deficit. That deficit and a desire by some to introduce individual accounts have sparked interest in reform over the past several years. Indeed, Social Security figured prominently in the 2000 presidential campaign. Following the election, President Bush appointed a commission to restore “financial soundness” to Social Security while introducing voluntary individual accounts. After deliberating for approximately eight months, the Commission issued a final report in December 2001 that contained three different proposals.

One of the three Commission proposals (Model 1) would not restore long-term balance to Social Security and is therefore not considered further here. The other two proposals substantially reduce traditional Social Security benefits in order to improve the system’s long-term balance. Both models restore actuarial balance in the absence of individual accounts. Model 2 does this solely through benefit reductions. Model 3 proposes to cover roughly one-third of the projected actuarial deficit from new dedicated revenues and reduces benefits to close the other two-thirds of the deficit. The Commission does not recommend a source for these dedicated revenues or indicate where they would come from.

The models also create individual accounts that, by themselves, would push Social Security back into deficit. A key reason is that the amounts diverted from the Social Security Trust Fund to finance the accounts (plus forgone interest) exceed the amount by which Social Security’s benefit obligations eventually would be reduced by the accounts. The Commission’s Report argues that “Personal accounts can also contribute towards the fiscal sustainability of the Social Security system.”¹⁰ As we demonstrate in this paper, however, the accounts created in Models 2 and 3 do not do so. Instead, the individual accounts created under Models 2 and 3 have an ongoing cost to Social Security. In addition to worsening the long-term balance in Social Security in this way, the individual accounts create a cash-flow problem since revenues are diverted away from Social Security decades before benefits are reduced as a result. This further worsens the actuarial balance over the traditional 75-year projection horizon.

To deal with the deterioration in Social Security’s finances generated by the individual accounts, both Model 2 and Model 3 call for significant infusions of general revenue into Social Security for decades. Given the dramatic deterioration in the nation’s fiscal outlook, it is unclear how the general revenue infusions would be financed. Projections by the Congressional Budget Office, the General Accounting Office, and independent budget analysts show substantial deficits outside Social Security in both the short term and the long

¹⁰ President’s Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 11.

term.¹¹ In this context, simply assuming the availability of large general revenue transfers, without specifying other changes in the Federal budget to accommodate such transfers, is problematic.

While the Commission was willing to assume substantial general revenue infusions to subsidize individual accounts, it did not use general revenue or other means to protect the disabled or young children of deceased workers from the reductions in traditional Social Security benefits called for under Models 2 and 3. Under Model 2, for example, a worker becoming disabled in 2040 would have disability benefits reduced by more than 25 percent relative to current law. Many disabled workers would have little opportunity to accumulate substantial balances in their individual accounts to offset these benefit reductions because their disability would have forced them out of the workforce and cut off their flow of contributions. Moreover, under the Commission plans, they would not have access to any individual account balances they might possess until they reached retirement age. Despite the fact that disabled beneficiaries are, on average, relatively poor and consist disproportionately of members of minority groups, the Commission chose not to provide funding to avoid such benefit reductions.

The Commission recognized this issue and suggested that Congress consider alternatives to their reductions in Social Security disability benefits, but provided no revenue that could be used to do so. Instead, the Commission counted all of the savings from the large reductions in disability benefits to reach its goal of restoring long-term balance to Social Security. Without the savings from these benefit cuts, none of the Commission's plans restore long-term solvency to Social Security (without even larger general revenue infusions than are already assumed under the plans). Protecting the disabled from the benefit reductions to which they would be subject under Model 2 would require revenue equal to about one-sixth of the projected long-term Social Security deficit under current law.¹²

To examine the effects of the Commission's proposals in more detail, Section I of this paper analyzes the proposed changes that the proposals would make in the determination and financing of traditional Social Security benefits. Examining the changes in Social Security benefits is important as a building block to understanding the overall effects of the proposals and is crucially important in understanding the effects for workers who choose not to contribute to the individual accounts. Section II then examines the structure of the individual accounts proposed by the Commission. Section III presents the combined effects of the individual accounts and the proposed changes in Social Security benefits in terms of cash flows, the long-term balance within Social Security, and the combined benefits that workers with different levels of earnings would receive. Section IV offers some conclusions.

¹¹ Congressional Budget Office, *The Long-Term Budget Outlook*, October 2000; General Accounting Office, "Long-Term Fiscal Issues," GAO-02-467T, February 27, 2002; and Alan J. Auerbach, William G. Gale, and Peter R. Orszag, "The Budget Outlook and Options for Fiscal Policy," The Brookings Institution, April 2002.

¹² Protecting the disabled would require revenue of about 0.3 percent of payroll over the next 75 years; the Social Security financing shortfall amounts to 1.9 percent of payroll over the same period.

II. Changes in Scheduled Benefits

The Commission referred to its three proposals as “reform models.” The first proposal contains an individual account plan without any changes in the traditional Social Security system. It would not restore long-term balance to Social Security and is therefore not considered further in this paper. The second and third proposals contain changes in the Social Security system that would by themselves restore long-term balance to the program. The plans would also create voluntary individual accounts to replace part of the scaled-back Social Security system.

In assessing the Commission plans, we compare the benefits that would be provided under the plans to the benefits scheduled under current law. The projected cost of the scheduled benefits under current law exceeds the projected revenue available to Social Security. Some combination of reduction in benefits, increase in revenue, or increase in the rate of return earned on the Social Security Trust Fund will be required to bring the system back into balance.¹³ The comparisons to scheduled benefits are not intended to imply that reforms to the current system are not necessary. The box on pages 14-15 discusses this issue in more detail.

Retirement benefits

Model 2 reduces traditional Social Security benefits by changing the system for determining benefits at retirement. In particular, for everyone younger than 55 on January 1, 2002, Model 2 would alter the formula for determining a worker’s benefits at retirement in a way that results in lower benefits than under the formula in current law.

By applying the details of the proposed change to the intermediate cost assumptions from the 2001 Social Security Trustees Report, which were the assumptions the actuaries used to evaluate the Commission plans, we see that a worker who is 35 years old today and retires at age 65 in 2031 would have his or her benefits reduced by 17.4 percent, compared to the benefits scheduled under current law (see Table 1). Benefits for a baby born in 2001 who retires at age 65 in 2066 would be reduced by 41.0 percent relative to the scheduled benefit level.

Model 2 achieves these benefit reductions by adjusting a key component of the Social Security benefit formula by the change in *prices* each year in the economy, rather than, as under current law, by the change in *average wages* in the economy each year. (Under current

¹³ Other ways of contributing to actuarial balance include reducing administrative costs (since they are less than one percent of benefits, however, little can be saved here, and any savings might result in poorer service for beneficiaries), expanding coverage (more than five million state and local workers are not covered by Social Security), and increasing immigration.

The Baseline for Benefit Comparisons

In describing proposed benefit changes to Social Security, the first step is to define an appropriate benchmark against which the proposed benefits can be compared. There are many possible benchmarks, and the choice of the benchmark affects how the nature of the proposed changes is communicated to, and understood by, the public.

One possible baseline is “scheduled benefits” — the benefits scheduled to be paid under the current Social Security benefit formula. As is well known, the projected cost of the scheduled benefits under current law exceeds the projected revenue available to Social Security. Nonetheless, comparing the proposed benefit levels to scheduled benefits is the clearest way of describing the proposed changes, since the workings of current law are readily understood and since this type of comparison is the standard method used to evaluate the effects of Social Security changes on Social Security benefits. For example, both the Greenspan Commission in the 1980s and the bipartisan, Congressionally chartered Advisory Council on Social Security in the 1990s employed this approach despite projected long-term deficits in Social Security at the time.

In addition, using scheduled benefits as the benchmark in evaluating proposed benefit changes is helpful because a reduction from scheduled benefits represents a reduction in the percentage of a worker’s pre-retirement earnings that Social Security (or combined benefits from Social Security and individual accounts) will replace. The current Social Security benefit structure is designed to keep the percentage of a worker’s pre-retirement earnings that Social Security replaces roughly constant over time; as a result, a reduction in scheduled benefits causes a reduction in the percentage of earnings that Social Security replaces. In debates over Social Security changes, it is critical to identify changes in the percentage of wages that retirement benefits would replace, since these “replacement rates” affect how people’s standards of living are altered when they retire. Finally, no other reasonable standard of comparison is readily available for measuring changes in benefits.

For example, the Commission proposed an alternative baseline of “payable benefits.” It defined this baseline as the benefits that could be financed by projected revenues under current law, assuming there would be no effort to address the long-term imbalance in Social Security until the Trust Fund was exhausted. It then assumes no provision of additional revenue to Social Security after the Trust Fund exhaustion date, so that benefits would be cut each year to equal available revenues.

There are two problems with this alternative baseline beyond its complexity. First, the payable benefit baseline is highly implausible politically. As Chairman Greenspan recently emphasized, a pattern of no action for nearly four decades followed by a closing of the imbalance that emerges when the Social Security Trust Fund is exhausted entirely through sharp benefit cuts — which is what the “payable benefits” baseline assumes — simply will not be allowed to occur.¹⁴

law, once an individual retires and begins receiving Social Security benefits, benefits are adjusted each year by the change in prices in the economy. But the initial benefit level that an individual receives at retirement is determined by a formula that includes an adjustment each year to keep pace with average wage growth in the economy. Model 2 would alter how initial benefit levels are determined, so that over the years they would keep pace only with increases in prices rather than increases in average wages. Model 2 would alter the Social Security benefit formula by changing from “wage indexing” to one form of what is known as “price indexing.”)

¹⁴ Alan Greenspan, “Saving for Retirement,” Remarks before the 2002 National Summit on Retirement Savings, the Department of Labor, Washington, D.C., February 28, 2002.

The Baseline for Benefit Comparisons (continued)

Second, the Commission argues against use of the “scheduled benefit” baseline because “confusion occasionally arises when comparisons are made between two different plans that employ different levels of tax revenue. For example, scheduled benefits for the current system could be provided only if significant tax increases are enacted. It is not an equal comparison to assume these tax revenues will materialize for the current system, but not for a specific personal account system.”¹⁵ The problem here is that the Commission’s plans themselves involve substantial amounts of general revenue transfers. The “payable benefits” baseline, by contrast, involves *no* general revenue transfers and assumes only the revenue available to Social Security under current law. Thus, the Commission’s comparison of the benefits under its plans to the “payable benefits” baseline violates its own warning against comparing plans with different levels of assumed tax revenue. Indeed, if one wanted to compare plans to a baseline with the same level of assumed general revenue, Models 2 and 3 would be more appropriately compared to the “scheduled benefit” baseline than the “payable benefit” baseline, because the general revenue transfers under Models 2 and 3 are much closer to the level of transfers required to finance scheduled benefits than to the lack of any general revenue transfers that the “payable benefits” baseline assumes.

One possibility given the tradeoffs between the baselines would be to use more than one benchmark for evaluating the proposed benefit levels. The Commission uses three baselines – the two just described as well as a baseline that simply reflects the benefit levels provided today, as adjusted for inflation in future years. The problem with multiple baselines is that they are more likely to confuse than illuminate the debate. By using a single baseline, we assess both changes in benefit levels and the fiscal implications of the proposals relative to the same standard. This removes the temptation to use selectively one or another of multiple baselines, in order to make the proposals appear more or less attractive than comparisons to a single baseline would suggest.¹⁶

Our use of the “scheduled benefits” baseline is not meant to imply that reforms to the current system are not necessary. To the contrary, some combination of a reduction in benefits and an increase in revenues is necessary to bring the system back into balance, even if there is an increase in the rate of return earned on the reserves of the Social Security Trust Fund. Since it is unlikely that a reform plan would restore long-term solvency solely on the revenue side, restoring long-term balance to Social Security will likely involve some reduction in “replacement rates.” The fundamental issue is whether the balance among the various potential elements of a reform plan is appropriate.

The proposed shift to price indexing will reduce benefits by the difference between wage growth and price growth in years after 2009, when this change in the benefit formula would go into effect. Since the projected difference between those two growth rates is about one percent per year under the assumptions used to evaluate the Commission plans, a worker’s benefits would be reduced by about one percentage point for each year between 2009 and the year in which the worker retires.

¹⁵ President’s Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 35.

¹⁶ For example, pages 19 through 23 of the Commission Report compare the proposed combined benefit levels under Models 1 through 3 to benefit levels for current retirees (not to scheduled benefits for future retirees) while comparing budgetary implications of the proposals to that with scheduled benefits (not benefit levels for current retirees).

Table 1

Effect of “Price Indexing” under Model 2		
Age on January 1, 2002	Year in which the worker attains age 65	Benefit change from “price indexing” as proposed under Model 2 (change from benefits scheduled under current law)
55	2011	-0.0%
45	2021	-9.0%
35	2031	-17.4%
25	2041	-25.0%
15	2051	-31.8%
5	2061	-38.1%
0	2066	-41.0%

Source: 2001 Trustees Report and authors’ calculations.

The proposed change would represent a fundamental shift in the concept behind Social Security. Under current law, the benefit system is designed to maintain a constant “replacement rate” across generations: that is, to ensure that the percentage of wages that Social Security replaces when workers retire remains roughly constant from one generation to the next. The current system is able to achieve this goal by adjusting the formula used to determine benefits at retirement by the growth in average wages in the economy each year. Thus, the initial level of benefits remains constant in relation to wages in the economy. Since the initial level of benefits keeps pace with average wage growth, the ratio of initial benefits to pre-retirement wages remains constant over time for successive generations of workers.

A constant “replacement rate” across generations may seem like an abstract concept, but it serves the crucial purpose of allowing beneficiaries to share in the general increase in the standard-of-living that society as a whole experiences from one generation to the next. A focus on replacement rates also recognizes the psychological phenomenon by which families become accustomed to a given standard of living; substantial declines in income during retirement can pose difficult problems for families and individuals.

Model 2 would replace the current system for determining benefits at retirement with a system under which benefits would replace an *ever-smaller* share of previous wages. As noted, the formula for determining benefits would be adjusted each year from 2009 on to reflect the increase in consumer prices in the economy, rather than the increase in average wages.¹⁷ Since prices tend to grow more slowly than wages, the shift would reduce Social Security replacement rates over time: Social Security benefits would replace a smaller proportion of prior wages for each succeeding generation of retirees.

Under current law, for example, Social Security is scheduled to replace slightly more than 36 percent of former earnings for a two-earner couple each with average earnings retiring at age 65 in 2025 or thereafter. Under Model 2, according to calculations based on figures produced by the Office of the Chief Actuary of the Social Security Administration, the replacement rate would fall to 30 percent by 2032 and 20 percent by 2075.¹⁸ Table 2 shows

¹⁷ For a more precise description of the proposed change, see our technical companion paper.

¹⁸ The “replacement rate” is calculated with regard to the wages the couple earned before beginning to draw Social Security benefits. The figures cited here are computed by comparing the benefit levels from page 75 of the actuaries’ memorandum analyzing the Commission plans to the projected wage level in the relevant year as

the figures based on a worker's age in 2002: As it shows, the replacement rate under Model 2 would become steadily smaller over time. The role of the Social Security system in allowing the elderly to maintain their standard of living in retirement would decline sharply in future decades under this proposal.

Table 2

Effect of Price Indexing under Model 2 on Replacement Rates for Two-Earner Couple with Medium Earnings			
Age on January 1, 2002	Year in which the worker attains age 65	Replacement rate under current law*	Replacement rate under Model 2*
55	2011	39.4%	39.4%
45	2021	38.5%	35.0%
35	2031	36.6%	30.2%
25	2041	36.6%	27.5%
15	2051	36.6%	25.0%
5	2061	36.6%	22.7%
0	2066	36.6%	21.6%

Source: 2001 Trustees Report and authors' calculations.

* Replacement rates show Social Security benefits as a percentage of previous wages. Under current law, the replacement rates decline modestly between now and 2025 because of the scheduled increase during this period in the "normal retirement age" – that is, the age at which an individual can receive full Social Security benefits. As a result of changes to Social Security enacted in 1983, the normal retirement age is gradually increasing from age 65 to age 67. It reaches age 67 for those workers turning 65 in 2025

These benefit reductions are so substantial that they are sufficient, by themselves, to *more than* eliminate the long-term deficit in Social Security. Model 2 uses the extra resources made available in this way to finance modest increases in benefits for workers who earned low wages throughout a long career, as well as for elderly widows and widowers with below-average Social Security benefits. Eventually, the benefit protections provided to such people would be outweighed, however, by the ongoing reductions in basic benefits from the shift to "price indexing," so that traditional Social Security benefits even for these sub-groups of beneficiaries would decline relative to the benefits they are scheduled to receive under the current benefit formula. These details are described in our companion paper.

Turning now to Model 3, we note that the proposal would eliminate two-thirds of the projected long-term deficit in Social Security through benefit reductions, and would close the remaining one-third with new dedicated revenue transfers to Social Security. The Commission does not indicate where the revenue for these transfers would be found; the infusion of these revenues is simply assumed, despite the substantial deficits projected outside Social Security for the foreseeable future.¹⁹ The assumed availability of revenue transfers mitigates the need to rely more heavily on benefit cuts to restore long-term balance to Social Security. The benefit reductions are thus less severe than under Model 2.

shown in the 2001 Trustees Report. The actuaries' analysis of the Commission's plans is based on the assumptions in the 2001 Trustees Report.

¹⁹ The timing of the new revenues matches the projection of the revenues that would be generated for Social Security if the level up to which an individual's earnings are subject to the Social Security payroll tax were increased above current law and the portion of the revenue from the partial income taxation of Social Security benefits that currently accrues to Medicare were shifted to Social Security. Such proposals, however, were not recommended by the Commission.

The primary mechanism used to reduce benefits in Model 3 is tied to improvements in life expectancy. The logic is that if workers live longer, they will receive their monthly Social Security benefits for a longer period of time, which will raise their *lifetime* benefits. Model 3 attempts to avoid the increase in lifetime benefits that would result from longer lives by reducing *monthly* Social Security benefits in line with increases in life expectancy. (The purpose is to balance the reduction in the monthly benefit against the increase in the number of months that an average worker would be expected to receive that benefit as a result of improvements in life expectancy. For example, assume that life expectancy for the average retiree increases by 20 percent. If monthly Social Security benefits are reduced by 20 percent, expected *lifetime* benefits would be essentially unaffected.²⁰)

Table 3

Effects of Major Benefit Reduction Proposals under Model 3		
Age on January 1, 2002	Benefit change for those retiring at normal retirement age (change from benefits scheduled under current law)	Benefit change for those retiring at age 62 (change from benefits scheduled under current law)
55	-0.0%	-0.0%
45	-4.9%	-14.4%
35	-9.5%	-18.6%
25	-14.0%	-22.6%
15	-18.2%	-26.4%
5	-22.2%	-30.0%
0	-24.1%	-31.7%

Source: Authors' calculations. Note: These figures do not reflect the changes for long-career low earners or high earners under Model 3.

The implications of such reductions are shown in Table 3. Under this provision of Model 3, the monthly Social Security benefit that a worker who is 35 years old today would receive when he or she retires would be 9.5 percent below the level that would be provided under the current Social Security benefit structure (see the middle column in Table 3). A baby born in 2001 would experience a 24.1 percent reduction in monthly benefits relative to the scheduled level.

Model 3 includes a further reduction in benefits for workers who claim their benefits before the “normal retirement age,” which is the age at which full Social Security benefits can be received. (The normal retirement age is increasing gradually under current law from 65 to 67. It will reach 67 for those who turn 65 in 2025.) Most beneficiaries claim their benefits before the normal retirement age: In 1999, some 69 percent of men and 73 percent of women claimed Social Security benefits before the normal retirement age. Under Model 3, a worker who is 35 today would experience a 9.5 percent benefit reduction if he or she waited to claim benefits until age 67 (which, under current law, would be the “normal retirement age” at the time this worker would retire), but an 18.6 percent benefit reduction if he or she claimed benefits at age 62 (the earliest age at which retirement benefits can be claimed and the most common age for the start of benefits).

Model 3 also reduces benefits for high earners and (like Model 2) provides modest benefit increases for low earners with long careers and surviving spouses who receive low

²⁰ In reality, the calculations required to produce an equivalent expected lifetime benefit are more complicated, and require an adjustment for interest and the use of mortality tables rather than a single life expectancy figure.

Social Security benefits. The details of these provisions are described in our companion paper.

Disability and young survivor benefits

The same Social Security benefit formula that is used for retirement benefits is also used for disability benefits and benefits for young survivors (that is, the young children of deceased workers). As a result, the switch from wage indexing to price indexing proposed under Model 2 would result in disability benefit reductions of the same magnitude as the reduction in retirement benefits. A worker who becomes disabled in 2020 would have his or her disability benefits reduced by 10.7 percent; a worker who becomes disabled in 2040 would experience a 26.4 percent reduction in disability benefits; and a worker who becomes disabled in 2075 would have his or her disability benefits reduced by 47.5 percent (see Table 4). Under Model 3, the benefits of a worker becoming disabled in 2075 would decline by 29 percent (see Table 4). The same reductions in benefits would apply to the young children of deceased workers.

Many disabled workers would have little opportunity, however, to accumulate substantial balances in their individual accounts to offset these benefit reductions, because of interruptions in their careers as a result of their disability. Workers who are disabled are very unlikely to be in the workforce; they thus would lack the earnings from which to make contributions to their individual accounts. In any case, under the Commission plans, they would not be allowed access to any individual account balances prior to reaching retirement age.²¹

Table 4

Effect of Major Provisions in Models 2 and 3 on Disability Benefits		
Year worker begins to receive disability benefits	Benefit reduction Model 2 (reduction from benefits scheduled under current law)	Benefit reduction under Model 3 (reduction from benefits scheduled under current law)
2010	-1.8%	-1.0%
2020	-10.7%	-5.8%
2030	-18.9%	-10.4%
2040	-26.4%	-14.8%
2050	-33.1%	-19.0%
2060	-39.3%	-22.9%
2070	-44.9%	-26.7%
2075	-47.5%	-28.5%

Source: 2001 Trustees Report and authors' calculations. Note: Figures for Model 3 do not include additional benefit changes for disabled workers with high earnings.

Since, on average, disabled beneficiaries are poorly off financially, the proposed changes represent a large reduction in benefits for a needy group. In addition, minorities have higher rates of disability, on average, than the rest of the population and thus disproportionately benefit from the disability benefits that Social Security provides. Social Security data show, for example, that the percentage of black workers aged 50-59 who

²¹ In the case of a young worker who has children and dies before retirement, the accounts would similarly be small. Moreover, the accounts could not be drawn upon to support the surviving family until the surviving spouse retired (if there were a surviving spouse).

became disabled in 1997 was nearly double the percentage of all workers in that age group who became disabled. Blacks account for 13 percent of working-age Americans, but 17 percent of disabled worker beneficiaries. Thus, the reductions in disability benefits would disproportionately harm minorities. (The reductions in survivor benefits also would disproportionately harm minorities: African-American children currently constitute 15 percent of Americans under age 18 but more than 22 percent of the children who receive Social Security survivor benefits.)

The Commission was aware of these problems. It stated that some other group needed to examine disability benefits and that “the calculations carried out for the commission and included in this report assume that defined benefits will be changed in similar ways for the two programs. *This should not be taken as a Commission recommendation for policy implementation.*”²² Nonetheless, the Commission dedicated no revenue to mitigating any of the reductions in disability benefits that would result from its plans. Furthermore, the Commission counted all of the savings from the dramatic reductions in benefits for the disabled as part of its solution to restoring long-term balance to Social Security. Without these large savings, none of the Commission’s plans would achieve long-term balance (unless even more revenue were transferred from the rest of the budget).

To avert the reductions in disability benefits that are part of Model 2 would require additional revenue equal to roughly 0.3 percent of payroll over the next 75 years. This amount is equal to roughly one-sixth of the deficit projected in Social Security over this period under current law.²³ It may be noted that the revenue required to insulate the disabled from the benefit cuts under Model 2 is less than the revenue the Commission devoted to subsidizing the individual accounts under that model. (These subsidies are discussed below.) Similarly, averting the reductions in disability benefits that result from the adjustment for life expectancy in Model 3 would require revenue of roughly 0.2 percent of payroll over the next 75 years.

Summary

Both Model 2 and Model 3 involve substantial reductions in Social Security retirement and disability benefits. In Model 2, these reductions are sufficiently large to more than eliminate the long-term deficit in Social Security. In Model 3, the benefit reductions are large enough to eliminate about two-thirds of the long-term deficit in Social Security; the other third of the shortfall is covered by assumed, unspecified sources of revenue. In other words, both Model 2 and Model 3 achieve long-term balance in Social Security *without* their individual account components. They do so entirely (Model 2) or mostly (Model 3) by reducing Social Security benefits.

²² *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 149 (italics in original).

²³ This estimate does not include the cost of protecting young survivors from the reductions, nor does it include the cost of protecting the disabled after their conversion to retirement benefits at the normal retirement age. See our technical companion paper for more details.

III. Introduction of Individual Accounts

Under the Commission proposals, workers would be given the option of having part of their payroll taxes deposited into individual accounts. The individual account system would involve two components: the assets of the individual account, which would come from a worker's deposits and the accumulated earnings on them, and a "liability account" (explained below). If a worker chose to participate in the individual account system, a portion of his or her payroll taxes would be diverted into an individual account. These amounts would accumulate in the account during the worker's career and be available to the worker upon retirement. But since the revenue diverted to this account would reduce the financing available to the traditional Social Security system, a "liability account" would also be created. This liability account is designed to track the debt owed back to Social Security because of the diverted funds. Upon retirement, the debt would be repaid by reducing the worker's traditional Social Security benefit. Moreover, if a worker dies before retirement, the surviving spouse would inherit *both* the asset account and the liability account.²⁴

Individual accounts

The size of the permitted contributions into individual accounts differs across the Models. Model 2 allows a diversion of 4 percent of earnings into the individual account, up to a limit of \$1,000 per year (with the \$1,000 limit indexed annually to reflect average wage growth in the economy). Model 3 would allow a diversion of 2.5 percent of taxable earnings into an individual account, again up to an indexed level of \$1,000. Under Model 3, a worker setting up an account would also be required to make an additional deposit equal to one percent of his or her taxable earnings (i.e., earnings that are subject to the Social Security payroll tax).²⁵

The design of the individual accounts would allow workers to choose from a limited menu of alternative investment options. A worker would not be allowed access to account balances before retirement. Upon retirement, the balance in the individual account could be used to purchase an annuity (that is, the accumulated balance could be exchanged for a monthly payment that would last as long as the worker or his or her spouse was alive). Alternatively, instead of being used to purchase an annuity, some or all of the accumulated

²⁴ Similarly, in the event of divorce, the accumulations during marriage in *both* the asset and liability accounts would be shared with the former spouse. Since the asset account might not have secured a higher rate of return than the interest rate that was charged on the liability account, a divorcee or surviving spouse could receive a liability account that was larger than the asset account.

²⁵ The Report anticipates that general revenues would be used to subsidize the additional deposits of low earners. The details of the subsidy, however, are not specified and the estimated cost to the Treasury of these subsidies is not included in the Commission's overall analysis.

balance could be taken as a lump sum and/or as monthly withdrawals, provided that both spouses agree and that the withdrawals are of sufficient size to keep the worker and spouse out of poverty. (Note that if all of an account were annuitized upon retirement, none of the balance would be bequeathable to heirs. Conversely, to the extent that some of an account were designated to be bequeathed, the monthly benefits that could be paid during the retirement of a worker and his or her spouse would be reduced.)

In projecting how much would accumulate in the accounts, the Commission assumed that Treasury bonds would have a 3 percent average real yield (that is, they would yield, on average, 3 percent more than the inflation rate per year), corporate bonds would have a 3.5 percent real yield, and stocks a 6.5 percent gross real yield. Based on historical experience and expected demographic developments, these figures are reasonable. The Commission also assumed an annual administrative charge of 30 basis points – or 0.3 percent of the value of the assets in an account. This level of administrative charge appears optimistic (i.e., it appears unrealistically low). It ignores the cost of setting up the accounts, the cost of providing significant financial education in connection with the accounts, the option (allowed by the Commission) of additional investment options for larger accounts, and the possibility that the restrictions on asset choices (which reduce administrative costs) would be relaxed over time. If the administrative costs were higher, the balances in the accounts would be smaller than the Commission projected.

Individual Liability Accounts

Since the revenue that was contributed to an individual account would be diverted from the Social Security Trust Fund, the Commission would also create a “liability account” to track the amounts owed back to Social Security by workers who elect to contribute to individual accounts. Upon retirement, this liability account would be “repaid” by reducing a worker’s traditional Social Security benefit.

The Social Security Administration (SSA) would keep records of the amount of payroll tax revenue that each worker diverted to an individual account. These amounts would be entered as balances in the worker’s “liability account.” Each year, SSA would update the results on the amount diverted and would charge interest on the balance in the liability account. Upon retirement, the balance would be paid off by reducing traditional Social Security benefits. In particular, SSA would convert the accumulated balance in the “liability account” into an equivalent amount per month. The debt to Social Security would then be repaid by subtracting that computed monthly payment from the worker’s Social Security benefit.²⁶

Both Model 2 and Model 3 *subsidize* the individual accounts by charging an interest rate on the liability accounts (i.e., on the amounts diverted from the Trust Fund) that is projected to be lower than the return the Trust Fund earns on its reserves. *Since the interest rate charged on the amounts diverted from the Trust Fund would be lower than the interest rate the Trust Fund would have earned on those funds if they had not been diverted, the*

²⁶ In the event of a worker’s death before retirement, both the asset and the liability accounts are inherited by the worker’s spouse. The debt in the liability account is paid back from the benefits of the surviving spouse. Similarly, in the event of divorce before retirement, part of the debt is paid out of the benefits of the worker’s former spouse.

individual accounts cause deterioration in Social Security's financial status. (Stated another way, the Trust Fund earns the interest rate paid on Treasury bonds on a dollar that is *not* diverted into an individual account; but on a dollar that is diverted into an individual account, the Trust Fund earns only the interest rate charged on the liability account, which is a lower rate. An example of this loss to the Trust Fund is provided in the box below.) Charging an interest rate on the liability accounts that is below the interest rate the Trust Fund earns on its reserves represents a subsidy to individuals who establish the individual accounts. The subsidy comes from the Social Security Trust Fund, the financial condition of which is made worse by having to pay the subsidy.²⁷

To see the magnitude of the subsidies, consider the example of an average worker who makes nearly the maximum allowable contribution to an individual account under Model 2 and claims benefits at age 62 (the typical age at which beneficiaries currently claim their benefits) in 2072. To measure the subsidy, we compare the debt that would be repaid to Social Security if a 3 percent interest rate were changed on the liability account to the debt repayment that would actually occur under Model 2.²⁸ Three percent is the real interest rate that the Social Security Trust Fund earns on its reserves. By using such an interest rate in this computation, we can see how much debt would be repaid to Social Security if Social Security were not required to subsidize the individual accounts. Table 5 presents the results.

At a 3 percent interest rate on the liability accounts, the diversion of revenue would trigger an annual repayment to Social Security when the worker retires of \$6,499 (in 2001

Subsidizing the Individual Accounts Through a Low Interest Rate on the Liability Accounts

By charging an interest rate on the liability accounts that is lower than the rate the Trust Fund earns on its balances, Models 2 and 3 impose costs on the Social Security system and subsidize the individual accounts. To see this, imagine \$100 that is diverted from the Trust Fund into an individual account under Model 2.

The \$100 diverted into the individual account would trigger an entry of \$100 in the worker's liability account. Model 2 charges an interest rate on the liability accounts of 2 percent per year (after inflation). If the worker were 40 years away from retirement, the interest charges would cause the \$100 entry to grow to \$221 (in constant dollars) by the end of the worker's career.

If the \$100 had been retained by the Trust Fund, however, it would have grown to \$326 by the time the worker retired. The difference between the amount in the liability account (\$221) and the amount that would have accrued in the Trust Fund (\$326) represents a subsidy to the individual account and a loss to the Trust Fund. Such a subsidy arises whenever the interest rate on the liability account is below the interest rate the Trust Fund earns on its reserves.*

* The subsidies to the accounts are actually larger than shown here, because the lower interest rate on the liability accounts is also used to transform the accumulated balances in those accounts into annuity values. See our companion paper for further discussion of this issue.

²⁷ There is a small further subsidy because the individual account, but not the liability account, is inherited by heirs if a worker dies before retirement without a surviving spouse.

²⁸ To undertake these calculations, we built a small model that incorporates the details of Model 2 and the assumptions used by the actuaries to evaluate the Commission's models. The model is able to replicate the published results of the actuaries. We then used the model to evaluate changes to variables such as the interest rate charged on the liability account. Our companion technical paper describes the assumptions in more detail.

dollars). In other words, the worker’s annual Social Security benefits would be \$6,499 lower than would otherwise be the case. However, at the 2 percent interest rate that the liability accounts actually would be charged under Model 2, the projected annual repayment to Social Security would be only \$4,612. The difference between these two amounts — \$1,887 per year — is the subsidy given to the average worker after retirement and the amount by which the Trust Fund is shortchanged by the transaction.²⁹

Table 5

Subsidization of Individual Accounts under Model 2			
In 2001 dollars	Annual benefits for each of a two-earner couple, claiming at age 62 in 2072		
	Low earner (\$15,875 in 2002)	Medium earner (\$35,277 in 2002)	High earner (\$56,443 in 2002)
Debt that would be repaid to Social Security each year if Social Security did not subsidize the individual accounts	\$3,952	\$6,499	\$6,759
- Debt repaid under Model 2	\$2,833	\$4,612	\$4,768
= <i>Subsidy per year under Model 2</i>	<i>\$1,120</i>	<i>\$1,887</i>	<i>\$1,991</i>

Source: Authors’ calculations

A worker who makes smaller contributions to an individual account receives less of a subsidy. Thus, low-wage workers would receive less of a subsidy than higher earners. As shown in Table 5, a high earner receives \$871 *more* in subsidies each year than does a low earner. The subsidies to individual accounts under Models 2 and 3 thus represent regressive feature of the Commission’s plans, subsidizing medium and high earners more than low earners and doing so at the Trust Fund’s expense.

²⁹ The subsidies under Model 3 would be smaller, since the interest rate charged on the liability accounts under this Model would be higher than under Model 2. This interest rate would still be lower, however, than the interest rate the Trust Fund earns on its reserves.

IV. Combined Effect of Traditional Social Security Benefit Changes and Individual Accounts

Effects on Social Security financing and government debt

As a result of the subsidies provided to individual accounts under Models 2 and 3, the effect of the individual account option, by itself, would be to worsen Social Security's long-term actuarial balance, and to do so on an ongoing, or permanent, basis. In addition, the fact that substantial revenues would be diverted from the Social Security Trust Fund to individual accounts long before the Trust Fund would receive the associated "debt repayments" from the liability accounts — since the "debts" would not be repaid until workers retired and their traditional Social Security benefits were reduced — would further worsen the actuarial balance over the usual 75-year projection period.

Consider Model 2. If all eligible workers chose to contribute to the individual accounts created under Model 2, the cost of the revenues diverted from the Social Security Trust Fund would amount to 2.2 percent of taxable payroll over the next 75 years. The accompanying reduction in Social Security benefit payments for those who opted for the individual accounts would amount to 1.1 percent of payroll over the 75-year period. Thus, the individual accounts would cause deterioration in Social Security's 75-year balance by 1.1 percent of payroll. (In other words, the Trust Fund would lose an amount equal to 2.2 percent of payroll from the diverted payroll taxes, while saving an amount equal to 1.1 percent of payroll from the associated reductions in benefits.) The amount by which the individual accounts would worsen the shortfall in Social Security — 1.1 percent of payroll over the next 75 years — is more than half the entire Social Security deficit under current law.

To cover the Trust Fund losses that the individual accounts would create, Model 2 would transfer substantial amounts from the general budget to Social Security. The transfers would amount to 1.2 percent of payroll under Model 2 (see Table 6). These transfers reflect the financing difficulties the individual accounts would create, since Social Security would be in actuarial balance under Model 2 *without* such accounts (due to the large reductions in traditional Social Security benefits it contains for all beneficiaries, including those who do not opt for the individual accounts), but is in need of large general revenue transfers once the individual accounts are added.

The ultimate impact of the accounts on Social Security's financing is thus a 1.1 percent of payroll net *cost* caused by the accounts, combined with an additional injection of 1.2 percent of payroll from general revenue transfers. The actuarial balance improves by 0.15 percent of payroll, but only because of the large general revenue infusions. The present value of the transfers amounts to more than \$2.2 trillion.

Table 6

75-Year Actuarial Effects of Individual Accounts under Model 2		
	Assumed participation rate in individual accounts	
	67 percent	100 percent
<i>Actuarial balance with no individual accounts</i>	0.01	0.01
+ Impact of individual accounts	-0.72	-1.08
<i>Actuarial balance with individual accounts but no general revenue transfers</i>	-0.71	-1.07
+ General revenue transfers	0.84	1.23
= <i>Actuarial balance</i>	0.13	0.16

Source: Memorandum from the Office of the Chief Actuary; President's Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 94; and authors' calculations.

The results for Model 3 are similar. The individual accounts, including the diverted revenue and the associated reductions in Social Security benefits for those opting for the accounts, would cause a deterioration in the 75-year actuarial balance of 0.4 percent of payroll if two-thirds of eligible workers opted for the accounts and 0.7 percent of payroll if all workers did so. Here, also, large amounts of general revenue are assumed to be transferred to Social Security to cover the shortfall created by the individual accounts. As with Model 2, the plan restores long-term actuarial balance to Social Security only because substantial general revenue transfers are assumed (see Table 7).

Table 7

75-Year Actuarial Effects of Individual Accounts under Model 3		
	Assumed participation rate in individual accounts	
	67 percent	100 percent
<i>Actuarial balance with no individual accounts</i>	0.07	0.07
+ Impact of individual accounts	-0.44	-0.65
<i>Actuarial balance with individual accounts but no general revenue transfers beyond the dedicated revenue in the base plan</i>	-0.36	-0.58
+ General revenue transfers in addition to dedicated revenue in base plan	0.38	0.65
= <i>Actuarial balance</i>	0.02	0.07

Source: Memorandum from the Office of the Chief Actuary; President's Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 94; and authors' calculations

The impact of the individual accounts on Social Security actuarial balance thus is clearly negative in Models 2 and 3.³⁰ This result contradicts various assertions in the Commission's Report. For example, the Report claims that "every dollar invested in a personal account reduces the cost of future Social Security payments by one dollar, plus the offset rate of interest that is proposed for each plan (ranging from 2 percent to 3.5 percent after inflation)...So long as the personal account earns a return higher than the offset rate,

³⁰ The 75-year actuarial figures do not reflect the full long-term impact of the individual accounts because they exclude the accumulated balances in the liability accounts at the end of the 75-year projection period. In our companion paper, we show that the actuarial impact of the individual accounts (exclusive of general revenue transfers) is still negative once this ending liability adjustment is made. The presence of a net cost even after adjusting for the ending liability balances is not surprising, since the interest rate on the liability accounts under both Model 2 and Model 3 is below the interest rate the Trust Fund earns on its reserves. See our companion technical paper for more details.

both Social Security and the individual come out ahead.”³¹ The final sentence is simply incorrect — Social Security comes out behind under Models 2 and 3, not ahead. The sentence is inaccurate because it ignores the interest earnings that the Social Security Trust Fund would have received on the diverted funds if the funds had not been shifted out of Social Security and into the individual accounts. Models 2 and 3 are purposefully designed so that the Social Security Trust Fund would be expected to lose more in diverted revenue from the individual accounts than it would gain from reduced benefit obligations — that is, the Models are designed to subsidize the individual accounts at the expense of the Trust Fund.

Table 8

Revenue Transfers under Models 2 and 3		
Percent of taxable payroll, 2001-2075, assuming all eligible workers contribute to individual accounts	Model 2	Model 3
General revenue transfers under Model 3 to restore solvency <i>before</i> the individual accounts are added	NA	0.63
General revenue subsidies to assist low-income workers in making the additional contributions required to participate in the individual accounts under Model 3	NA	0.23
General revenue transfers to make up for the losses the Trust Fund incurs as a result of the individual accounts	1.23	0.65
General revenue transfers required if the disabled are to be insulated from benefit reductions prior to retirement	0.30	0.17
Total cost of transfers as a percentage of payroll over 75 years		
<i>As specified by Commission (without protection for the disabled)</i>	1.23	1.51
<i>Including protection for the disabled</i>	1.53	1.68
Total cost of transfers in present value (2001 dollars)		
<i>Without protection for the disabled</i>	\$2.2 trillion	\$2.8 trillion
<i>Including protection for the disabled</i>	\$2.8 trillion	\$3.1 trillion

Source: Memorandum from the Office of the Chief Actuary; President’s Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 94; and authors’ calculations

Furthermore, although the Trust Fund is “made whole” only through the assumed infusion of very large sums of general revenue, the Commission Report does not explain where the transferred funds would come from. Table 8 shows the total revenue transfers that would be entailed under Models 2 and 3, assuming all eligible workers participate in the individual accounts.³² The table also shows the transfers that would be required if the

³¹ *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 149.

³² The 100 percent participation rate assumption is used here for simplicity. As the actuaries’ memorandum notes, the actual participation rate “cannot be determined with any degree of certainty.” See Memorandum from the Office of the Chief Actuary, page 16. The assumption of universal participation is more likely to hold for Model 2 than for Model 3, since Model 3 involves a smaller subsidy to the individual accounts and requires additional contributions by workers equal to one percent of their earnings.

The actuaries’ memorandum also presents figures reflecting an assumption that two-thirds of eligible workers participate. Under that assumption, the general revenue transfers over the next 75 years would amount to 1.1 percent of payroll under Model 2 and 1.3 percent of payroll under Model 3 if the disabled are held harmless from the benefit reductions, and 0.8 percent of payroll under Model 2 and 1.1 percent of payroll under Model 3 if disability benefits are reduced in line with retirement benefits.

disabled were to be protected from the benefit cuts in the plans. The transfers involved are substantial. This heavy reliance on revenue infusions is troubling in the absence of a specific source for the revenue and in light of the large deficits expected in the rest of the federal budget in coming decades.

Without the general revenue transfers, the plans would accelerate the year in which the Trust Fund is exhausted. Under the assumptions in the 2001 Social Security Trustees report, which are the assumptions the actuaries used to evaluate the Commission plans, the Trust Fund was expected to be exhausted in 2038. Under Model 2, if all eligible workers participated in the individual accounts, the exhaustion date would become 2025 in the absence of additional general revenue infusions — or 13 years sooner. Our technical companion paper discusses this result in more detail.

Effects on combined monthly benefits

To consider the impact of the Models on retirees, we need to consider both the reduction in traditional Social Security benefits and the retirement income that would come from the individual accounts. For a straightforward comparison, we consider annuities provided from the individual accounts that are adjusted for inflation each year, as Social Security benefits are. Moreover, we assume that the entire balance of the accounts is used to purchase an annuity, leaving no wealth to be bequeathed thereafter. Allowing possible bequests would reduce the amount of retirement income that could be financed from the accounts.

We initially focus on the expected combined benefits, assuming that the individual accounts earn a rate of return (after administrative costs and inflation) of 4.6 percent per year. That return is the rate of return the actuaries assume in their basic analysis of the Commission plans. Under the 4.6 percent real return assumption, a medium-earning two-earner couple claiming benefits at age 65 in 2075 would receive an expected combined benefit under Model 2 (including the annuity from the individual account) that is 21 percent below the Social Security benefits the couple would receive under the benefit structure in current law (see the middle column in Table 9).

Under current law, each member of the couple would receive a monthly benefit of just over \$2,000 (in 2001 dollars). The shift to price indexing under Model 2 would reduce the benefit by \$933 per month (for all such couples, regardless of whether they participated in the individual accounts). If the couple had decided not to participate in the individual account, the resultant benefit would be \$1,099 per month. This would be 46 percent — or \$933 a month for each member of the couple — below scheduled levels. If the couple *did* divert funds into an individual account, the annuity from the individual account would be expected to amount to \$989 per month, and the debt that would have to be repaid to the Social Security Trust Fund because of the accumulated liability account would amount to \$473 per month.

In other words, traditional Social Security benefits would be reduced by an additional \$473 per month for each member of the couple and thus would total \$626 per month (\$2,032 minus \$933 minus \$473). The combined benefit for each member of the couple thus would be \$1,615, including the income from the individual account. This combined benefit is 21 percent — or \$417 per month for each member of the couple — below the scheduled benefit

level of \$2,032. A similar couple retiring at age 62 in 2072 would have a 23 percent decline relative to scheduled benefits.

Table 9

Combined Monthly Benefit Levels for Each Member of a Two-Earner Couple Claiming Benefits at Age 65 in 2075 under Model 2			
In 2001 dollars	Low earner (\$15,875 in 2002)	Medium earner (\$35,277 in 2002)	High earner (\$56,443 in 2002)
<i>Scheduled benefit</i>	\$1,231	\$2,032	\$2,685
- Benefit reduction for all such beneficiaries	-\$425	-\$933	-\$1,233
+ Annuity from individual account	\$577	\$989	\$1,040
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$281	-\$473	-\$489
= <i>Total expected benefit</i>	\$1,102	\$1,615	\$2,003
Percent change without the individual account (change from benefits scheduled under current law)	-35%	-46%	-46%
Percent change with the account (change from benefits scheduled under current law)	-10%	-21%	-25%

Source: Memorandum from the Office of the Chief Actuary, pages 75-76, and authors' calculations. Based on intermediate assumptions from 2001 Trustees Report and an assumed net return (after administrative costs and inflation) of 4.6 percent per year. Assumptions are identical to those adopted by the actuaries in analyzing the Commission plans.

Model 3 does not replace wage indexing with price indexing in the Social Security benefit formula as Model 2 does, but it reduces monthly Social Security benefits based on increases in life expectancy and contains additional benefit reductions for workers who retire before the normal retirement age. Since age 62 is the most common retirement age today, Table 10 shows combined benefits for a couple retiring at age 62 (in 2072). Each member of the couple would receive a combined benefit of \$1,485, including the income from the individual account. This is 9.5 percent — or \$156 a month — below the scheduled benefit level of \$1,641. It should be noted that part of this benefit is financed by the payments by workers of an additional one percent of earnings to the accounts (over and above their payroll tax contributions). The payment by workers of this additional one percent of earnings is a condition of having an account under Model 3. Without this contribution, the decline in scheduled benefits would be 24 percent.

Appendix Table 1 shows the analogous results for workers who retire at age 65 in 2075. The combined benefit levels are slightly higher than under current law for two-earner couples who retire in 2075 and opted to participate in the accounts. That result, however, reflects the additional contributions of one percent of their wages, which are required under Model 3 to participate in the accounts; without the additional contributions from workers, combined benefits would be between 9 percent and 15 percent below scheduled benefits.

Table 10

Combined Monthly Benefit Levels for Each Member of a Two-Earner Couple Claiming Benefits at Age 62 in 2072 under Model 3			
In 2001 dollars	Low earner (\$15,875 in 2002)	Medium earner (\$35,277 in 2002)	High earner (\$56,443 in 2002)
<i>Scheduled benefit</i>	\$994	\$1,641	\$2,168
- Benefit reduction for all such beneficiaries	-\$221	-\$491	-\$685
+ Annuity from individual account	\$400	\$890	\$1,173
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$174	-\$391	-\$456
- Reduction factor for early retirement	-\$99	-\$164	-\$217
= <i>Total expected benefit</i>	\$900	\$1,485	\$1,983
Percent change without the individual account (change from benefits scheduled under current law)	-32%	-40%	-42%
Percent change with the account (change from benefits scheduled under current law)	-9%	-10%	-9%
Percent change with the account but without the additional contributions by workers of one percent of their earnings (change from benefits scheduled under current law)	-21%	-24%	-27%

Source: Memorandum from the Office of the Chief Actuary, pages 75-76, and authors' calculations. Based on intermediate assumptions from 2001 Trustees Report and assumed net return (after administrative costs and inflation) of 4.6 percent per year. Assumptions are identical to those adopted by the actuaries in analyzing the Commission plans.

Appendix Tables 2 and 3 present the results for one-earner couples who claim benefits at age 65 under Models 2 and 3. The benefit reductions are more substantial for such couples, primarily because Social Security provides a subsidy to one-earning couples whereas individual accounts do not. Under Social Security, a non-working spouse is entitled to a benefit equal to 50 percent of the worker's benefit. The individual accounts proposed under the Commission's plans would not subsidize "stay-at-home" mothers in this fashion.

Adjusting for Risk

The figures in Tables 9 and 10 and Appendix Tables 1 through 3 do not adjust for the risk that is inherent in individual account portfolios (or in any investment in stocks). The combined benefits under Models 2 and 3 would depend on the performance of the stock market. Stock market investment involves risk: stock returns vary significantly from year to year. Most individuals, however, are averse to risk. For example, an investment that has a higher expected return but carries a substantial risk of producing lower returns (or outright losses) may not be more attractive than an alternative investment with a somewhat lower expected return but much less risk. As a result, many analysts believe that in undertaking comparisons of benefits with different degrees of risk, the expected returns should be compared after adjusting for risk.

One simple method of adjusting for risk assumes that the full difference in expected returns between stocks and bonds reflects the greater risk associated with stocks.³³ Indeed, in evaluating recently enacted legislation to allow the Railroad Retirement Fund to invest in equities (i.e., stocks), the Office of Management and Budget stated:

“Equities and private bonds earn a higher return on average than the Treasury rate, but that return is subject to greater uncertainty...Economic theory suggests, however, that the difference between the expected return of a risky liquid asset and the Treasury rate is equal to the cost of the asset’s additional risk as priced by the market. Following through on this insight, the best way to project the rate of return on the Fund’s balances is to use a Treasury rate.”³⁴

In other words, in estimating the rate of return that the Railroad Retirement Fund will receive from investments in stocks, OMB concluded that the rate of return on Treasury bonds should be used rather than the higher average rate of return that stocks are expected to earn. OMB assumed that all of the difference between the average expected rate of return on stocks and the interest rate on Treasury bonds is due to the substantially greater risk that stocks carry. To the extent that OMB’s approach is valid, risk adjustment is straightforward: It entails projecting the individual account balances as if account balances were invested entirely in government bonds.

The actuaries produced figures for the individual accounts under this assumption. As Appendix Table 4 shows, under this approach, combined benefits under Model 2 for a medium-earning two-earner couple that retires at age 65 in 2075 would be 40 percent lower than the scheduled Social Security benefit levels. Under Model 3, the benefit reduction for such a couple on this risk-adjusted basis would be 19 percent.

The Impact of Various Factors on the Benefit Comparisons

In considering these comparisons, two points are worth noting. First, the figures produced here make two assumptions that tend to produce artificially high benefit levels under Models 2 and 3 and thus to understate the benefit reductions under these plans. The first assumption that inflates the retirement benefit figures is the assumption of significant reductions in disability and child survivor benefits. If those reductions did not occur and general revenue transfers were not increased to make up for the lost savings from those benefit cuts, the required reductions in Social Security retirement benefits would have to be correspondingly larger to ensure long-term Social Security balance. The second assumption that inflates the retirement benefit figures for Models 2 and 3 is that individual account balances are assumed to be transformed in full at retirement into lifetime annuities. One of the arguments the Commission advanced for individual accounts, however, is that such accounts would facilitate bequests to heirs. The benefit levels cited here leave no funds remaining to be passed on to heirs after retirement, since the full balances in the accounts are assumed to be converted into annuities. If only part of the account balances were annuitized, a portion of these account balances would be available to heirs, but the monthly income paid to retirees would be correspondingly lower – and hence the combined benefit reductions

³³ The assumption upon which this risk-adjustment method is predicated is not likely to be valid for all workers: In particular, the expected return to equities may exceed the level required to compensate some investors for the riskiness of equities relative to bonds.

³⁴ Office of Management and Budget, *Budget Systems and Concepts*, Fiscal Year 2003, pages 15-16.

Model 2 Compared To Two Alternatives That Achieve 75-year Balance With the Same Level of General Revenue Transfers

If the disabled are held harmless from the benefit reductions under Model 2 and all eligible workers participate in the individual accounts, this Model would entail general revenue transfers equal to 1.53 percent of payroll. One can compare the results of Model 2 to alternative plans that have the same level of general revenue transfers as Model 2 and that reduce benefits to the degree necessary to eliminate the 75-year imbalance remaining in Social Security after these transfers are made. These alternatives are described for comparative purposes only.

Under the alternative plans, the actuarial deficit remaining after the transfers would be 0.33 percent of payroll (the 1.86 percent of payroll deficit under the 2001 Trustees assumptions used to evaluate the Commission plans, minus the 1.53 percent of payroll in general revenue transfers). To make the alternatives as comparable as possible to Model 2, the alternatives also are assumed to include the benefit expansions for low-income widows and widowers, and for low earners with long careers, that are included in Model 2. The cost of these provisions is 0.21 percent of payroll, raising the actuarial deficit after these provisions are added to 0.54 percent of payroll.

The alternative plans would reduce Social Security benefits enough to lower costs by 0.54 percent of payroll to achieve 75-year solvency. The alternatives differ in how they would phase in these benefit reductions. The first alternative plan would phase in the required benefit reductions over the 75-year period in the same way as the traditional benefit reductions are phased in under Model 2.³⁵ The second alternative plan would simply reduce benefits by the same percentage for all new retirees after 2009, rather than allowing that percentage to increase over time as under the other alternative. Since both alternatives achieve the same level of overall benefit reductions over the 75-year period, the first alternative involves smaller benefit reductions in the early years and larger reductions in later years. Both alternatives maintain disability benefits (and benefits for current retirees and near retirees) at their levels under the current benefit formula. Our technical companion paper describes the calculations in more detail.

Appendix Table 5 compares the benefit reductions under these alternative plans to the benefit reductions under Model 2 for different generations of medium-earning two-earner couples that claim benefits at age 65. As the table shows, such a couple retiring in 2032 would experience an 18.2 percent reduction in benefits under Model 2 if it did not participate in the individual accounts. If it did participate in the accounts, its expected combined benefits (adjusted for risk) would be 15.2 percent below scheduled benefit levels.³⁶ The first alternative plan, by contrast, would require a 5.5 percent benefit reduction for such a couple. The second alternative would require a 5.9 percent benefit reduction. By 2075, Model 2 would involve a 40 percent reduction in expected combined benefits (adjusted for risk) for the couple if it participated in the individual accounts, whereas the alternatives would involve reductions of between 5.9 and 14.0 percent.

The reason for the generally larger expected benefit reductions under Model 2 than under the alternatives is that Model 2 would leave the Social Security system with more assets at the end of the 75-year period. Under Model 2, but not under the alternative, the Social Security system would remain in balance after 2076.

³⁵ To produce the same pattern of phasing in the benefit reductions as under Model 2, we simply scaled back the benefit reductions under Model 2's shift from wage indexing to price indexing to the degree necessary to produce benefit levels that generate savings equal to 0.54 percent of payroll over the next 75 years.

³⁶ As noted above, it is important to adjust for financial market risk in the individual accounts since the alternative plan would involve no such financial risk.

under the Commission plans would be larger. Each dollar that a pensioner bequeaths to heirs means a dollar less in monthly benefits that the pensioner can use for expenditures after retirement, because the pool of funds available to cover living costs during retirement is reduced.

Second, although scheduled benefits represent the best single benchmark for understanding reform plans (see the first Box above), the current benefit structure cannot be financed in full out of projected Social Security revenue. It may therefore be illuminating to compare the Models to alternative plans that reach 75-year balance in Social Security with the same amount of general revenue being transferred to Social Security as under the Models and which simply reduce traditional benefits to eliminate the 75-year imbalance that remains after these transfers. (It should be noted that such alternatives are discussed only for illustrative purposes.) The box below compares such alternatives to Model 2. It shows that on a risk-adjusted basis, Model 2 generally produces significantly lower combined benefits over the next 75 years — that is, it results in larger benefit reductions compared to the benefits scheduled under current law — than does an alternative with the same level of general revenue transfers.

V. Conclusion

Models 2 and 3 involve substantial reductions in traditional Social Security benefits, coupled with subsidized individual accounts that would make Social Security's financial situation worse without substantial infusions of revenue from the rest of the budget. Because the individual accounts exacerbate Social Security's financing deficit, large general revenue infusions are necessary for sustained periods to ensure long-term balance in Social Security, even though these models also include large reductions in Social Security benefits.

A claim of long-term balance that is heavily dependent on substantial, unspecified general revenue transfers, however, raises questions of credibility, especially when the Commission makes no recommendations regarding where the money to be transferred should be found. Indeed, Congress could erase the long-term deficit in Social Security without any other changes simply by legislating that the Trust Fund would be able to draw upon general revenue as needed to finance scheduled benefits.³⁷ If no other budget changes were made, such legislation would raise serious questions about how the general revenue transfers could be financed when the need arrived, and in fact, in its Interim Report, the Commission underscored such questions when discussing — and disparaging — the idea of financing scheduled benefits by transferring funds from the rest of the budget.³⁸ These same questions apply to the Commission's proposals themselves. Given the current budget outlook, simply assuming the availability of such large transfers is highly problematic and could be regarded as fiscally reckless.

Furthermore, it must be regarded as a distinct possibility that these large assumed transfers would not fully materialize. To the extent that the amount of assumed funding did not become available, Social Security benefits might have to be reduced further (i.e., to a greater degree than the Commission already has proposed) as part of subsequent efforts to adapt the system to the level of available funds. In the absence of a major shift in the budget outlook, such a scenario seems a significant political risk. Introducing personal accounts that depend upon large additional transfers to Social Security without making room for such transfers in the rest of the budget could place the benefits of seniors at risk.

³⁷ Under the 2002 Social Security Trustees assumptions, such revenue infusions would not be needed until 2041.

³⁸ President's Commission to Strengthen Social Security, *Interim Report*, August 2001, pages 20-21.

Appendix Tables

Appendix Table 1

Combined Monthly Benefit Levels for Each Member of a Two-Earner Couple Claiming Benefits at Age 65 in 2075 under Model 3			
In 2001 dollars	Low earner (\$15,875 in 2002)	Medium earner (\$35,277 in 2002)	High earner (\$56,443 in 2002)
<i>Scheduled benefit</i>	<i>\$1,231</i>	<i>\$2,032</i>	<i>\$2,685</i>
- Benefit reduction for all such beneficiaries	-\$273	-\$607	-\$848
+ Annuity from individual account	\$505	\$1,123	\$1,502
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$208	-\$462	-\$560
<i>= Total expected benefit</i>	<i>\$1,255</i>	<i>\$2,086</i>	<i>\$2,779</i>
Percent change without the individual account (change from benefits scheduled under current law)	-22%	-30%	-32%
Percent change with the account (change from benefits scheduled under current law)	+2%	+3%	+4%
Percent change with the account but without the additional contributions by workers of one percent of their earnings (change from benefits scheduled under current law)	-9%	-12%	-15%

Note: Based on intermediate assumptions from 2001 Trustees Report and assumed net return (after administrative costs and inflation) of 4.6 percent per year. Annuitization assumes actuarially fair, CPI-indexed joint-and-two-thirds-survivor annuities and the mortality projections from the 2001 Trustees Report.

Source: Memorandum from the Office of the Chief Actuary, pages 75-76, and authors' calculations.

Appendix Table 2

Combined Monthly Benefit Levels for One-Earner Couples Claiming Benefits\ at Age 65 in 2075 under Model 2			
In 2001 dollars	Low earner (\$15,875 in 2002)	Medium earner (\$35,277 in 2002)	High earner (\$56,443 in 2002)
<i>Scheduled benefit</i>	\$1,823	\$3,009	\$3,975
- Benefit reduction for all such beneficiaries	-\$629	-\$1,381	-\$1,825
+ Annuity from individual account	\$577	\$989	\$1,040
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$281	-\$473	-\$489
= <i>Total expected benefit</i>	\$1,490	\$2,144	\$2,701
Percent change without the individual account (change from benefits scheduled under current law)	-35%	-46%	-46%
Percent change with the account (change from benefits scheduled under current law)	-18%	-29%	-32%

Appendix Table 3

Combined Monthly Benefit Levels for One-Earner Couples Claiming Benefits at Age 65 in 2075 under Model 3			
In 2001 dollars	Low earner (\$15,875 in 2002)	Medium earner (\$35,277 in 2002)	High earner (\$56,443 in 2002)
<i>Scheduled benefit</i>	\$1,823	\$3,009	\$3,975
- Benefit reduction for all such beneficiaries	-\$404	-\$899	-\$1,255
+ Annuity from individual account	\$505	\$1,123	\$1,502
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$208	-\$462	-\$560
= <i>Total expected benefit</i>	\$1,716	\$2,771	\$3,662
Percent change without the individual account (change from benefits scheduled under current law)	-22%	-30%	-32%
Percent change with the account (change from benefits scheduled under current law)	-6%	-8%	-8%

Note: Based on intermediate assumptions from 2001 Trustees Report and assumed net return (after administrative costs and inflation) of 4.6 percent per year. Annuitization assumes actuarially fair, CPI-indexed joint-and-two-thirds-survivor annuities and the mortality projections from the 2001 Trustees Report.

Source: Memorandum from the Office of the Chief Actuary, pages 78-79, and authors' calculations.

Appendix Table 4

Risk-Adjusted Combined Monthly Benefit Levels for Each Member of a Medium-Earning Two-Earner Couple Claiming Benefits at Age 65 in 2075

<i>Model 2</i>		
In 2001 dollars	Base scenario (no risk adjustment)	<i>Low yield/Risk-adjusted returns</i>
<i>Scheduled benefit</i>	\$2,032	\$2,032
- Benefit reduction for all such beneficiaries	-\$933	-\$933
+ Annuity from individual account	\$989	\$600
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$473	-\$473
= <i>Total expected benefit</i>	\$1,615	\$1,227
Change from benefits scheduled under current law	-21%	-40%

<i>Model 3</i>		
In 2001 dollars	Base scenario (no risk adjustment)	<i>Low yield/Risk-adjusted returns</i>
<i>Scheduled benefit</i>	\$2,032	\$2,032
- Benefit reduction for all such beneficiaries	-\$607	-\$607
+ Annuity from individual account	\$1,123	\$692
- Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts)	-\$462	-\$462
= <i>Total expected benefit</i>	\$2,086	\$1,655
Change from benefits scheduled under current law	+3%	-19%

Notes: Based on intermediate assumptions from 2001 Trustees Report

Base scenario assumes net return (after administrative costs and inflation) of 4.6 percent per year. Annuitization assumes actuarially fair, CPI-indexed joint-and-two-thirds-survivor annuities and the mortality projections from the 2001 Trustees Report.

Low yield reflects the Treasury bond yield for all assets. In addition, annuitization interest rate is reduced by 30 basis points relative to Treasury bond yield.

Source: Memorandum from the Office of the Chief Actuary, pages 75-76, and authors' calculations.

Appendix Table 5

Benefit Reductions under Model 2 and Alternatives that Achieve 75-Year Balance with the Same Level of General Revenue Transfers as Model 2				
Medium-earning two-earner couple retiring at age 65 in	Model 2		First alternative: benefit reductions phased in as under Model 2	Second alternative: same percentage reduction for all new retirees after 2009
	Traditional benefits	Expected combined benefits on a risk-adjusted basis		
2012	-0.9%	-0.5%	-0.3%	-5.9%
2022	-9.9%	-8.5%	-3.0%	-5.9%
2032	-18.2%	-15.2%	-5.5%	-5.9%
2042	-25.7%	-20.5%	-7.8%	-5.9%
2052	-32.5%	-26.1%	-9.9%	-5.9%
2075	-45.9%	-39.6%	-14.0%	-5.9%

Source: Memorandum from the Office of the Chief Actuary, and authors' calculations