**"Social Security Reform and the Final Report of the President's Commission to Strengthen Social Security"**

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Testimony before the Senate Finance Committee
October 3, 2002

Mr. Chairman and Members of the Committee, it is an honor to appear before you to discuss the plans put forward by the President's Commission to Strengthen Social Security. My testimony draws heavily on analyses of those plans jointly undertaken with Professor Peter Diamond of MIT.[2] A version of our analysis is attached as an appendix to this testimony.

The President's Commission issued a final report in December 2001 that contained three different proposals to address the long-term imbalance in Social Security. I will focus my attention on Model 2, which is rumored to have been favored by the largest number of commissioners, although our papers also address Model 3 in detail.

Model 2 has three key components: changes to the traditional benefit structure within Social Security; the creation of voluntary individual accounts; and the transfer of revenue from the rest of the budget to Social Security. Each component includes quite problematic elements.

***Traditional benefit changes***

The first component of Model 2 involves several changes to traditional Social Security benefits. The most important is that for everyone younger than 55 on January 1, 2002, Model

[1] The views expressed here are mine alone and do not necessarily represent those of the staff, trustees, or officers of the Brookings Institution.

[2] The analyses include "Reducing Benefits and Subsidizing Individual Accounts: An Analysis of the Plans Proposed by the President's Commission to Strengthen Social Security," Center on Budget and Policy Priorities and the Century Foundation, June 18, 2002; "Assessing the Plans Proposed by the President's Commission to Strengthen Social Security," *Tax Notes*, July 29, 2002; "An Assessment of the Proposals of the President's Commission to Strengthen Social Security," NBER Working Paper 9097, August 2002; and "Social Security: The Right Fix," *American Prospect*, Volume 13, Issue 17, September 23, 2002.

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.

Under current law, 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, by contrast, the replacement rate from traditional benefits would fall to 30 percent by 2032 and 20 percent by 2075 (see Table 1). The role of traditional Social Security benefits in allowing the elderly to maintain their standard of living in retirement would thus decline sharply in future decades under this proposal.

**Table 1: Effect of Price Indexing under Model 2 on Traditional Benefit Replacement Rates for Workers with Medium Earnings Claiming Benefits at Age 65**

| 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 traditional 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

Perhaps the most surprising aspect of these benefit changes is that, in evaluating their overall financial effects, the Commission assumed that they would be fully applied to the disabled and other vulnerable beneficiaries. To be sure, the Commission did emphasize that the disability benefit reductions "*should not be taken as a Commission recommendation for policy implementation.*"[3] Nonetheless, it 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.

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

As Robert Greenstein discusses in more detail in his testimony, the implications for the disabled are truly devastating. For example, a worker becoming disabled in 2040 would have disability benefits reduced by more than 25 percent under Model 2 relative to the benefits scheduled in current law. Many disabled workers would have little opportunity to accumulate substantial balances in their individual accounts to offset these benefit reductions, since 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.

It is also important to emphasize that the traditional benefit changes would apply to all workers under age 55, regardless of whether they opted for an individual account. The traditional benefit changes are so substantial that they are sufficient, by themselves and without the introduction of individual accounts, to *more than* eliminate the long-term deficit in Social Security.

***Voluntary individual accounts***

The second component of the plan introduces individual accounts that, by themselves, would then push Social Security back into deficit. In particular, workers would be given the option of having part of their payroll taxes deposited into individual accounts. 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.

The liability account would be 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. These reductions would be in addition to the traditional benefit changes described earlier.

The individual accounts are subsidized by charging an interest rate on the liability accounts (i.e., on the amounts diverted from the Trust Fund) that is projected to be <u>lower</u> 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 individual accounts cause a deterioration in Social Security's financial status.

To see this, imagine $100 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.

As a result of these subsidies, 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 a permanent basis rather than just over a "transition period" horizon. In other words, the Commission's model is 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 plan is designed to subsidize the individual accounts at the expense of the Trust Fund. If all eligible workers participated in the accounts, the subsidies on the diverted revenue over the next 75 years would amount to more than 0.6 percent of payroll, or more than $1 trillion in present value and about a third of the existing deficit in Social Security.

Note that these subsidy estimates assume that policy-makers will not step in to bail out individual account owners following stock market declines. The pressure that we have recently witnessed to bail out investors in the wake of the recent stock market declines, however, would presumably be even more potent if individual accounts were included as part of Social Security. Indeed, a substantial danger exists that the type of individual accounts

proposed under Model 2 would represent a "tails I win, heads you lose" proposition: If the stock market performed well, the government would not share in any of the upside benefit. But if the stock market performed poorly, there would likely be political pressure to have the government bail out investors – for example, by reducing the interest rate on the liability accounts.

In any case, in addition to the subsidies, 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. This more conventional transition cost would further worsen the actuarial balance over the usual 75-year projection period.

If all eligible workers chose to contribute to the individual accounts created under Model 2,[4] the net effect of the accounts -- including both the diversion of revenue and the subsequent reduction in traditional benefit obligations -- would be a deterioration in Social Security's 75-year balance equal to 1.1 percent of payroll, which is more than half the existing projected deficit (see Table 2).

**Table 2: 75-Year Actuarial Effects of Individual Accounts under Model 2**

| Assuming all eligible workers participate in individual accounts | Percent of 75-year payroll |
|---|---|
| **Actuarial balance with no individual accounts** | **+0.01** |
| + Impact of individual accounts | -1.08 |
| **Actuarial balance with individual accounts but no general revenue transfers** | **-1.07** |

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.

[4] As the Office of the Chief Actuary at Social Security has emphasized, predicting the participation rate in individual accounts under the Commission plans is difficult ("The proportion of workers who would voluntarily participate cannot be determined with any degree of certainty"). Nonetheless, the large subsidies provided to the individual accounts under Model 2 could result in very high participation rates. Depending on the precise form of the liability accounts under Model 2, which the Commission has not officially specified, the Office of Chief Actuary at Social Security has suggested that either two-thirds participation or full participation may be the most plausible assumption for this Model. Since the most plausible participation assumption under this plan may be 100 percent, it seems prudent when examining the fiscal implications of the plan and ascertaining the level of fiscal exposure the plan would create for Social Security and the federal budget to evaluate the effects of the plan with full participation. For those interested, our National Bureau of Economic Research working paper also provides the relevant figures under two-thirds participation rates.

After re-establishing long-term solvency through the traditional benefit changes, Model 2's individual accounts would thus throw Social Security back into long-term deficit.

***General revenue transfers***

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 if all eligible workers participated in the individual accounts. Remember that the entire cost of these transfers results from 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 scheduled Social Security benefits it contains for all beneficiaries, including those who do not opt for the individual accounts).

If the disabled were to be protected from the drastic benefit cuts I have already mentioned, the required transfers would increase to 1.5 percent of payroll (see Table 3). The present value of the transfers, depending on the assumption made with regard to the disabled, would amount to between $2.2 trillion and $2.8 trillion.

**Table 3: General Revenue Transfers Required under Model 2**

| | Assuming 100 percent participation |
|---|---|
| ***Percent of taxable payroll, 2001-2075*** | |
| General revenue transfers to make up for the losses the Trust Fund incurs as a result of the individual accounts | 1.23 |
| Including transfers required if the disabled are to be insulated from benefit reductions prior to retirement | 1.53 |
| | |
| ***Total cost in present value (2001 dollars)*** | |
| Without protection for the disabled | $2.2 trillion |
| Including protection for the disabled | $2.8 trillion |
| | |
| ***As percent of transfers required to eliminate currently projected 75-year imbalance with no other changes*** | |
| Without protection for the disabled | 66% |
| Including protection for the disabled | 82% |

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

To put these figures in perspective, note that the projected actuarial imbalance in Social Security over the next 75 years amounts to slightly under 1.9 percent of payroll. The general revenue transfers that would be required under Model 2 if all eligible workers participated in the individual accounts would amount to between two-thirds and four-fifths of what would be required under the fiscally reckless course of paying scheduled benefits simply by transferring funds from the rest of the budget to Social Security.

A claim of long-term balance that is heavily dependent on such substantial, unspecified general revenue transfers raises questions of credibility in addition to fiscal prudence, especially when the Commission makes no recommendations regarding where to find the money to be transferred. Given the current budget outlook, simply assuming the availability of such large transfers is highly problematic.[5]

There is widespread agreement about the problems associated with excessive reliance on general revenue transfers. For example, the Commission's own executive director previously labeled such general revenue transfers one of the "top ten tricks in the Social Security debate." As he explained, some account plans "want to promise the gains from personal accounts, but they don't want to be seen as reducing the benefits that come from the traditional system. So they pull a clever maneuver: They take a portion of the payroll tax and put it in personal accounts, but then they reimburse the Trust Fund by an equivalent amount."[6] Yet the Commission's plan itself reflects such a trick, effectively relying on a huge magic asterisk in the rest of the budget.

***Conclusions***

Social Security faces a projected long-term imbalance that should be addressed, and reform involves difficult tradeoffs. Nonetheless, my conclusion is that the Commission's plan is fundamentally flawed. It would dramatically reduce the role of traditional Social Security benefits in replacing previous wages upon retirement, and result in devastating reductions for

[5] In a forthcoming paper with Alan Auerbach of Berkeley, William Gale of Brookings, and Samara Potter of the University of Michigan, we estimate the 75-year unified budget fiscal gap as 4.1 percent of GDP if last year's tax cut is made permanent and 3.3 percent of GDP if the tax cut is frozen at its current levels. These figures imply large projected deficits outside Social Security over the next 75 years.

[6] Charles P. Blahous III, *Reforming Social Security* (Praeger Publishers: Washington, 2000), page 142.

disabled beneficiaries. Its individual accounts would not only generate the familiar transition costs but also involve a permanent and significant subsidy from the Trust Fund, and therefore impose costs on the Trust Fund on both a transitional and permanent basis. Finally, it would require substantial general revenue transfers – between two-thirds and fourth-fifths as much, assuming all eligible workers participated in the individual accounts, as the fiscally reckless course of simply transferring funds from the rest of the budget to eliminate the 75-year projected imbalance in Social Security with no other changes.

Such heavy reliance on general revenue transfers is extremely problematic, especially since the Commission did not identify any source for such transfers and since the budget outside Social Security already faces substantial long-term deficits. As the Commission's executive director correctly emphasized during the November 9, 2001 meeting of the Commission, "what general revenues do is increase the revenues that are committed and obligated to the social security program…Now what they do not answer, however, is the question of how that revenue is to be generated. It is an increase in commitments, but not necessarily a specification as to where that money is going to come from. It has to come from somewhere."[7]

[7] Transcript of the November 9, 2001 meeting of the Commission to Strengthen Social Security, page 128, available at http://www.csss.gov/meetings/transcripts.

# Assessing the Plans Proposed by the President's Commission to Strengthen Social Security

Peter A. Diamond and Peter R. Orszag[8]
July 2002

## 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 would restore actuarial balance in the absence of individual accounts. Model 2 does this solely through reductions in scheduled benefits. Model 3 covers roughly one-third of the projected actuarial deficit from new dedicated revenues and reduces scheduled benefits to close the other two-thirds of the deficit. The Commission does not recommend a source for these dedicated revenues.

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

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Commission's Report argues that "Personal accounts can also contribute towards the fiscal sustainability of the Social Security system."[9] 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 infinite-horizon 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 term.[10] 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 the benefits scheduled in current law. Many disabled workers would have little opportunity to accumulate substantial balances in their individual accounts to offset these benefit reductions since 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

[9] President's Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 11.

[10] 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.

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 scheduled 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.[11]

To examine the effects of the Commission's proposals in more detail, Section I of this paper analyzes the proposed changes in the determination and financing of traditional Social Security benefits. Examining the changes in traditional 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 traditional 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.

## I. 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

[11] 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.

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 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.[12] The comparisons to scheduled benefits are not intended to imply that reforms to the current system are not necessary. The Box below discusses this issue in more detail.

**The Baseline for Benefit Comparisons**

In describing proposed benefit changes to Social Security, the first step is to define an appropriate benchmark with 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 and financing requirements 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 those times.

[12] 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.

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.[13]

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."[14] 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 the plans to a baseline with a similar 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 throughout the analysis. 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 simultaneous use of multiple baselines is that they are more likely to confuse than to illuminate the debate. By using a single baseline to evaluate all aspects of a reform plan, 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.[15]

In a boxed separate presentation below, we also compare Model 2 with two baselines that are constructed to have the same cost as Model 2. This helps consideration of both aspects of a retirement income system – how to allocate benefits for a given level of costs as well as the benefit implications of different levels of revenues.

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[13] Alan Greenspan, "Saving for Retirement," Remarks before the 2002 National Summit on Retirement Savings, the Department of Labor, Washington, D.C., February 28, 2002.

[14] President's Commission to Strengthen Social Security, *Strengthening Social Security and Creating Personal Wealth for All Americans*, page 35.

[15] 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

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.

*Retirement benefits*

Model 2 makes several changes to traditional Social Security benefits. The most important change is that 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 reduction 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 introducing a factor in the Social Security benefit formula that uses the change in *prices* each year in the economy, rather than, as under current law, using only the change in *average wages* in the economy each year in determining initial benefits. (Under current law, once an individual retires and begins receiving Social Security benefits, benefits are adjusted each year by the change in prices in

comparing budgetary implications of the proposals to that with scheduled benefits (not benefit levels for current retirees).

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. We refer to this change in the Social Security benefit formula as changing from "wage indexing" to "price indexing," although there continues to be use of a wage index as well.[16]

**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 shift to price indexing will reduce benefits by the cumulative difference between wage growth and price growth in years after 2008, when this change in the benefit formula would go into effect. In particular, for those workers who become eligible for benefits in years after 2008, initial benefits at retirement will first be computed as under the current benefit formula. Then the benefits will be reduced by the ratio of the cumulative growth in prices to the cumulative growth in wages since 2008. 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 2008 and the year in which the worker becomes eligible for retirement benefits.

[16] Several different versions of "price indexing" are possible; the approach proposed by the Commission in Model 2 involves larger benefit reductions than the approach proposed the Panel on Social Security Financing appointed by the Senate Finance Committee in 1974-5. For further detail on the alternative approaches, see Stephen C. Goss, "Long-Range OASDI Financial Effects of a Proposal to CPI-Index Benefits Across Generations," Office of the Chief Actuary, Social Security Administration, May 3, 1999.

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. As shown in Table 2, 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 after 2008 to reflect the increase in consumer prices in the economy, rather than the increase in average wages.

**Table 2: Effect of Price Indexing under Model 2 on Replacement Rates for Two-Earner Couple with Medium Earnings Claiming Benefits at Age 65**

| 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

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 from traditional benefits would fall to 30 percent by 2032 and 20 percent by 2075.[17] Table 2 shows 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 traditional Social Security benefits in allowing the elderly to maintain their standard of living in retirement would decline sharply in future decades under this proposal.

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 traditional 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.[18] The assumed availability of revenue transfers

[17] 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 shown in the 2001 Trustees Report.

[18] The precise timing of the new revenues in the projections of the actuaries matches that of the revenues that would be generated for Social Security by an increase in the level up to which an individual's earnings are subject to the Social Security payroll tax and a transfer of the portion of the revenue from the partial income taxation of Social Security benefits that currently accrues to Medicare to Social Security. Such proposals, however, were not recommended by the Commission.

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.

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.[19])

**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 scheduled under the current Social Security benefit structure (see the middle column in Table 3). A baby born in

[19] 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.

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 Social Security benefits. There is also a benefit increase for those claiming benefits after the normal retirement age. 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 collecting disability benefits do not have substantial 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.[20]

**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 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.)

[20] 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).

The Commission was aware of this issue. 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.*"[21] Nonetheless, the Commission dedicated no revenue to mitigating any of the reductions in disability benefits that would result from its plans. That is, 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.[22] 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 scheduled 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

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

individual account components. They do so entirely (Model 2) or mostly (Model 3) by reducing Social Security benefits.

## II. 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.[23]

*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

[22] 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.

[23] 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.

percent of his or her taxable earnings (i.e., earnings that are subject to the Social Security payroll tax).[24]

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 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 life-long 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.

[24] 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.

*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.[25]

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 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

[25] 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 then paid back from the benefits of the surviving spouse.

subsidy comes from the Social Security Trust Fund, the financial condition of which is made worse by having to pay the subsidy.[26]

**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 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.

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 in 2072 at age 62 (the typical age at which beneficiaries currently claim their benefits). To measure the subsidy, we compare the debt that would be repaid to Social

Similarly, in the event of divorce before retirement, part of the debt is paid out of the benefits of the worker's former spouse.

[26] 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.

Security if a 3 percent interest rate were changed on the liability account to the debt repayment that would actually occur under Model 2.[27] 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 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.[28]

**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 |
| = *Subsidy per year under Model 2* | *$1,120* | *$1,887* | *$1,991* |

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.

[27] 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.

*Effects on Social Security financing*

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, 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. This 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 scheduled Social Security benefits it contains for all beneficiaries, including those who do not

[28] 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.

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 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 |
| *Actuarial balance with no individual accounts* | *0.01* | *0.01* |
| + Impact of individual accounts | -0.72 | -1.08 |
| *Actuarial balance with individual accounts but no general revenue transfers* | *-0.71* | *-1.07* |
| + General revenue transfers | 0.84 | 1.23 |
| = *Actuarial balance* | *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 |
| *Actuarial balance with no individual accounts* | *0.07* | *0.07* |
| + Impact of individual accounts | -0.44 | -0.65 |
| *Actuarial balance with individual accounts but no general revenue transfers beyond the dedicated revenue in the base plan* | *-0.36* | *-0.58* |

| | | |
|---|---|---|
| + General revenue transfers not including dedicated revenue in base plan | 0.38 | 0.65 |
| = *Actuarial balance* | *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.[29] 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, both Social Security and the individual come out ahead."[30] 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.

## III. COMBINED EFFECTS OF TRADITIONAL SOCIAL SECURITY CHANGES AND INDIVIDUAL ACCOUNTS

*Effects on Social Security financing*

As noted at the outset, the cost of current law scheduled benefits is greater than projected revenues by 1.86 percent of taxable payroll (under the 2001 Trustees assumptions). While actuarial balance could be restored by transferring this much general revenue to Social

[29] 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.

Security, such a proposal is not recommended by policy analysts. The combinations of the reductions to scheduled benefits and the cost of individual accounts under both Models 2 and 3 result in decreases in the levels of general revenue transfer that would be needed to restore actuarial balance. Nevertheless, the needed transfers remain very large. The Commission does not recommend any sources for these transfers, leaving them as unspecified transfers from general revenues.

In contrast with the 1.86 percent of payroll needed to finance scheduled benefits under current law, 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.[31] The table also shows the transfers that would be required if the disabled were to be protected from the benefit cuts in the plans. Although less than the current actuarial deficit, 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.

**Table 8: Revenue Transfers under Models 2 and 3 Assuming All Eligible Workers Participate**

| Percent of taxable payroll, 2001-2075 | Model 2 | Model 3 |
|---|---|---|
| General revenue transfers under Model 3 to restore solvency *before* 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 |
| | | |

[30] *Strengthening Social Security and Creating Personal Wealth for All Americans,* page 149.

[31] 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 likely to better approximate the outcome 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.

| | | |
|---|---|---|
| Total cost of transfers as a percentage of payroll over 75 years | | |
| *As specified by Commission (without protection for the disabled)* | 1.23 | 1.51 |
| *Including protection for the disabled* | 1.53 | 1.68 |
| | | |
| Total cost of transfers in present value (2001 dollars) | | |
| *Without protection for the disabled* | $2.2 trillion | $2.8 trillion |
| *Including protection for the disabled* | $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

Without the general revenue transfers, Model 2 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 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 net change in retirement income that would come from the individual accounts for those who participate in the 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. We examine two sets of retirees: Those who claim benefits at age 65 in 2052 and those who claim benefits at age 65 in 2075. The first set of retirees are just beginning their careers

when the principal changes to traditional benefits begin to take effect under Models 2 and 3, and therefore illustrate the effects of a full career under the proposed changes; the second set of retirees claim benefits at the end of the conventional 75-year horizon.

Under the 4.6 percent real return assumption, a medium-earning two-earner couple who opted for the accounts and claimed benefits at age 65 in 2052 would receive an expected combined benefit under Model 2 (including the annuity from the individual account) that is 7 percent below the Social Security benefits the couple would receive under the benefit structure in current law (see the middle column in Table 9). The medium-earning two-earning couple claiming benefits in 2075 would have a combined benefit under Model 2 that is 21 percent below scheduled benefit levels (see the middle column in Table 10).

**Table 9: Combined Monthly Benefit Levels for Each Member of a Two-Earner Couple Claiming Benefits at Age 65 in 2052 under Model 2**

| In 2001 dollars | Low earner ($15,875 in 2002) | Medium earner ($35,277 in 2002) | High earner ($56,443 in 2002) |
|---|---|---|---|
| *Scheduled benefit* | $986 | $1,628 | $2,151 |
| - Benefit reduction for all such beneficiaries | -$180 | -$529 | -$699 |
| + Annuity from individual account | $478 | $819 | $860 |
| - Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts) | -$234 | -$392 | -$407 |
| = *Total expected benefit* | $1,050 | $1,525 | $1,907 |
| | | | |
| Percent change without the individual account (change from benefits scheduled under current law) | -18% | -33% | -33% |
| Percent change with the account (change from benefits scheduled under current law) | +7% | -6% | -11% |

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.

**Table 10: 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) |
|---|---|---|---|
| *Scheduled benefit* | *$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 |
| *= Total expected benefit* | *$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.

To see how the different pieces of Model 2 would affect such couples, consider the couple claiming benefits at age 65 in 2075 (shown in Table 10). Under current law, each member of the couple would receive a monthly scheduled 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 below scheduled levels – or $933 a month for each member of the couple. 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 below the scheduled benefit level of $2,032 – or $417 per month for each member of the couple. A similar couple retiring at age 62 in 2072 would have a 23 percent decline relative to scheduled benefits.

Model 3 does not use 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, Tables 11 and 12 show combined benefits for couples retiring at age 62 in 2049 and in 2072. Table 11 shows that each member of the medium-earning couple participating in the accounts and claiming benefits in 2049 would receive a combined benefit approximately equal to the benefit scheduled under current law. 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, combined benefits would be 16 percent below scheduled benefit levels.

Table 12 shows that each member of the medium-earning couple claiming benefits in 2072 would receive $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. Again, 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). Without this contribution, the decline in scheduled benefits would be 24 percent.

**Table 11: Combined Monthly Benefit Levels for Each Member of a Two-Earner Couple Claiming Benefits at Age 62 in 2049 under Model 3**

| In 2001 dollars | Low earner ($15,875 in 2002) | Medium earner ($35,277 in 2002) | High earner ($56,443 in 2002) |
|---|---|---|---|
| *Scheduled benefit* | $796 | $1,314 | $1,737 |
| - Benefit reduction for all such beneficiaries | -$104 | -$285 | $410 |
| + Annuity from individual account | $330 | $735 | $968 |
| - Further Social Security benefit reduction for those selecting | -$144 | -$324 | -$377 |

| | | | |
|---|---|---|---|
| individual accounts (to repay Social Security partially for the funds shifted into individual accounts) | | | |
| - Reduction factor for early retirement | -$80 | -$131 | -$174 |
| = *Total expected benefit* | $799 | $1,309 | $1,744 |
| Percent change without the individual account (change from benefits scheduled under current law) | -23% | -32% | -34% |
| Percent change with the account (change from benefits scheduled under current law) | 0% | 0% | 0% |
| 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) | -12% | -16% | -19% |

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 1 and 2 shows the analogous results for workers who retire at age 65 in 2052 or 2075. The combined benefit levels are somewhat higher than under current law for two-earner couples who claim benefits at age 65 under Model 3 and opted to participate in the accounts. That result differs from those in Tables 10 and 11 because the increase in the actuarial reduction is less for someone retiring at age 65 than at age 62.

**Table 12: 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) |
|---|---|---|---|
| *Scheduled benefit* | *$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 | -$174 | -$391 | -$456 |

| | | | |
|---|---|---|---|
| accounts) | | | |
| - Reduction factor for early retirement | -$99 | -$164 | -$217 |
| *= Total expected benefit* | *$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 3 and 4 present the results for one-earner couples who claim benefits at age 65 under Models 2 and 3 in 2075. 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 through 12 and Appendix Tables 1 through 4 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.[32] 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."[33]

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 5 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. These numbers contrast with a reduction of 21 percent and an increase of 3 percent without risk adjustment.

*The Impact of Various Factors on the Benefit Comparisons*

[32] 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.

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

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 under the Commission plans would be larger. Each dollar that a pensioner bequeaths to heirs means a dollar less in lifetime 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.

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 also 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. They do not represent our preferred reform option.) 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. The reason for the generally larger 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 alternatives, the Social Security system would remain in balance after 2076.

**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 baselines 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 baselines, 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 benefit expansions for widows and widowers with low benefits, and for low earners with long careers, that cost as much as the provisions 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 baselines 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 baseline 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.[34] The second alternative baseline would simply reduce benefits by the same percentage for all newly eligible retirees after 2008, rather than

[34] 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.

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 6 compares the benefit reductions under these alternative baselines 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.[35] The first alternative baseline, 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 6 and 14 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 alternatives, the Social Security system would remain in balance after 2076.

## IV. 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 (albeit less than would be needed to pay all of scheduled benefits under current law). Because the

[35] 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.

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 to find the money to be transferred. 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.[36] 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.[37] 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 transfers to Social Security without making room for such transfers in the rest of the budget could place the benefits of seniors at risk.

[36] Under the 2002 Social Security Trustees assumptions, such revenue infusions would not be needed until 2041.
[37] President's Commission to Strengthen Social Security, *Interim Report*, August 2001, pages 20-21.

**Appendix Table 1: Combined Monthly Benefit Levels for Each Member of a Two-Earner Couple Claiming Benefits at Age 65 in 2052 under Model 3**

| In 2001 dollars | Low earner ($15,875 in 2002) | Medium earner ($35,277 in 2002) | High earner ($56,443 in 2002) |
|---|---|---|---|
| *Scheduled benefit* | $986 | $1,628 | $2,151 |
| - Benefit reduction for all such beneficiaries | -$129 | -$353 | -$508 |
| + Annuity from individual account | $418 | $930 | $1,243 |
| - Further Social Security benefit reduction for those selecting individual accounts (to repay Social Security partially for the funds shifted into individual accounts) | -$173 | -$383 | -$465 |
| = *Total expected benefit* | $1,103 | $1,821 | $2,423 |
| | | | |
| Percent change without the individual account (change from benefits scheduled under current law) | -13% | -22% | -24% |
| Percent change with the account (change from benefits scheduled under current law) | +12% | +12% | +13% |
| 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) | 0% | -5% | -7% |

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 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) |
|---|---|---|---|
| *Scheduled benefit* | *$1,231* | *$2,032* | *$2,685* |
| - 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 |
| *= Total expected benefit* | *$1,255* | *$2,086* | *$2,779* |
| | | | |
| 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 3: 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) |
|---|---|---|---|
| *Scheduled benefit* | $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 |
| = *Total expected benefit* | $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 4: 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) |
|---|---|---|---|
| *Scheduled benefit* | $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 |
| = *Total expected benefit* | $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 5: Risk-Adjusted Combined Monthly Benefit Levels for Each Member of a Medium-Earning Two-Earner Couple Claiming Benefits at Age 65 in 2075**

***Model 2***

| In 2001 dollars | Base scenario (no risk adjustment) | *Low yield/Risk-adjusted returns* |
|---|---|---|
| *Scheduled benefit* | $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 |
| = *Total expected benefit* | $1,615 | $1,227 |
| Change from benefits scheduled under current law | -21% | -40% |

***Model 3***

| In 2001 dollars | Base scenario (no risk adjustment) | *Low yield/Risk-adjusted returns* |
|---|---|---|
| *Scheduled benefit* | $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 |
| = Total expected benefit | $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 6: 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-earning couple retiring at age 65 in: | Model 2 | | | Alternative 1: benefit reductions phased in as under Model 2 | Alternative 2: same percentage reduction for all newly eligible retirees after 2008 |
|---|---|---|---|---|---|
| | Traditional benefits | Expected combined benefits | Expected combined benefits on a risk-adjusted basis | | |
| 2012 | -0.9% | 0.0% | -0.5% | -0.3% | -5.9% |
| 2022 | -9.9% | -6.1% | -8.5% | -3.0% | -5.9% |
| 2032 | -18.2% | -8.3% | -15.2% | -5.5% | -5.9% |
| 2042 | -25.7% | -5.9% | -20.5% | -7.8% | -5.9% |
| 2052 | -32.5% | -6.3% | -26.1% | -9.9% | -5.9% |
| 2075 | -45.9% | -20.5% | -39.6% | -14.0% | -5.9% |

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