

# CRS Report for Congress

Received through the CRS Web

## **Social Security: What Happens to Future Benefit Levels Under Various Reform Options**

**August 20, 2001**

David Koitz  
Geoffrey Kollmann  
and Dawn Nuschler  
Domestic Social Policy Division

# Social Security: What Happens to Future Benefit Levels Under Various Reform Options

## Summary

Because Social Security is facing long-range financing difficulties, numerous proposals have been made to solve the problem with reforms that typically bundle together a variety of individual measures. Often it is difficult to identify when and by how much these measures would alter future benefits. As an aid to those exploring Social Security reform, this report unbundles various conceptual elements of many of the reform plans, and presents them in a “generic” form, in order to illustrate how certain changes would alter projected future retirement benefits.

The report first examines several benefit-constraint options. Among them are raising the age at which full Social Security retirement benefits can be received, changing the way initial benefits are computed, and constraining cost-of-living adjustments (COLAs). It also illustrates the effects of creating new personal savings accounts and presents their projected impact as a supplement to, or partial replacement of, the existing system, or as a means to close the gap between the benefit levels promised by the existing system and what can be paid under its projected future income. Finally, because across-the-board cuts may be seen as too severe for several types of recipients, other options that would ameliorate their effects, including one that would raise revenue, are also illustrated.

The benefits resulting from the principal options are compared to those computed under different baselines: benefits provided under current-law rules; benefits affordable under the system’s current financing provisions; the purchasing power of benefits of people retiring today; and benefits of recent retirees expressed as a percentage of pre-retirement earnings. The analysis shows that although the various benefit constraints would reduce benefits promised under current law, none would cause the purchasing power of future retirees’ benefits to be lower than that of someone retiring today. They would, however, reduce the role of Social Security as an earnings replacement system. The analysis also shows that because of the way the different options are phased in, the effects on different age cohorts would vary.

The role of personal accounts is examined under two financing alternatives. One assumes the accounts would be funded by diverting to them part of the current Social Security tax (a “carve-out” approach); the other assumes additional payments from workers or from federal general revenues (an “add-on” approach). Two annual rates of return are used to compute the value of the accounts, a “safe” rate of 6.4%, reflecting the projected rate of return for long-term government bonds, and a “market-based” rate on stocks of 10%. Given adequate time to grow, under either scenario the value of the accounts would substantially offset or exceed the benefit reductions that would occur under a number of the larger Social Security constraints that might be used to restore the system’s solvency. However, because the eventual worth of the personal accounts depends heavily on the power of compound growth, they would have significantly smaller effects on workers retiring in the next three decades (including most of the baby boom). They also would have a larger effect in mitigating across-the-board benefit cuts on high-paid workers than on low-paid workers.

## Contents

Introduction and Overview of Findings . . . . .	1
Overview of Findings . . . . .	2
Illustrative benefit reductions . . . . .	2
Illustrative personal accounts . . . . .	4
Other illustrative proposals . . . . .	9
Different Baselines – Alternative Ways of Measuring Benefit Changes . . . . .	11
“Benefits Prescribed by Current Law” Is Not a Constant Baseline . . . . .	11
Using Other Baselines Can Show How Well Policy Changes Achieve Certain Other Retirement Goals . . . . .	13
Description of Illustrative Options . . . . .	19
Expenditure Constraint Measures . . . . .	19
Raise the age for full retirement benefits to 70 by 2029 . . . . .	20
Raise the age for full retirement benefits to 66 by 2005 and thereafter in tandem with increases in longevity . . . . .	20
Raise age for full retirement benefits to 70 by 2029 and thereafter in tandem with increases in longevity . . . . .	20
Allow initial Social Security benefits to rise only with inflation . . . . .	20
Allow initial Social Security benefits to rise by one-half of the real growth implicit under current-law rules . . . . .	21
Reduce Social Security COLAs by 1 percentage point annually . . . . .	21
Personal Account Measures . . . . .	21
Basic personal account illustrations . . . . .	22
Combining personal accounts with measures that would reduce Social Security benefits . . . . .	22
Other Selected Reform Measures . . . . .	23
Raising the Social Security taxable earnings base . . . . .	23
Raising the level of Social Security widow’s and widower’s benefits . . . . .	24
Raising Social Security benefits for young survivor and disabled recipients . . . . .	24
Results . . . . .	26
Projected Effects of Expenditure Constraint Measures . . . . .	26
Projected reductions from current law benefit levels . . . . .	26
A consideration with COLA constraints . . . . .	29
The future purchasing power of Social Security benefits . . . . .	29
The decline in future replacement rates . . . . .	30
Projected Effects of Personal Account Measures . . . . .	33
Potential annuity payments from personal accounts . . . . .	33
Comparison of personal account annuities to the portion of Social Security benefits that would not be payable given the system’s projected financing gap . . . . .	34
Effect of coupling a new personal account system with certain Social Security benefit constraints . . . . .	35
Effect of financing considerations on the coupling of benefit constraints and personal accounts . . . . .	44

Effect on Social Security’s low-wage “tilt” of coupling personal accounts with Social Security benefit constraints . . . . .	57
Projected Effects of Other Selected Reform Measures . . . . .	61
Raising the Social Security taxable earnings base . . . . .	61
Raising Social Security widow’s and widower’s benefits . . . . .	62
Raising Social Security benefits for young survivors and disabled recipients . . . . .	62
Cautionary Notes . . . . .	65
Appendix . . . . .	66
Technical Comments on Report . . . . .	66
Methods and basic assumptions used to prepare report . . . . .	66
Assessment of public policy and market risks – traditional Social Security versus market-based personal accounts . . . . .	68
Annuitization of personal accounts . . . . .	70
How administrative costs might effect the assumed rates of return on personal accounts . . . . .	71
Effect of new personal accounts on other savings . . . . .	74

## List of Figures

Figure 1. Benefits “Promised” Versus Benefits “Payable” Under Current Law .	14
Figure 2. Increase in Purchasing Power of Future Benefits Under Current Law	17
Figure 3. Decline in Future Replacement Rates Under Current Law . . . . .	17
Figure 4. Effect of Add-on Versus Carve-out Approach to Funding Personal Accounts . . . . .	45
Figure 5. Effect of Rate-of-Return Assumption (Combined Benefit Under Option) . . . . .	46
Figure 6. Effect of Rate-of-Return Assumption (Separate Components Under Option) . . . . .	46
Figure 7. Combined Benefits Under Option Compared to Benefits “Promised” and Benefits “Payable” Under Current Law . . . . .	47
Figure 8. Effect on Social Security’s Low-Wage “Tilt” Assuming a 6.4% Rate of Return . . . . .	60
Figure 9. Effect on Social Security’s Low-Wage “Tilt” Assuming a 10% Rate of Return . . . . .	60

## List of Tables

Table 1. Illustrative Benefit Constraints that Could Help Restore Social Security’s Solvency . . . . .	2
Table 2. Alternative Views of the Value of Future Social Security Benefits . . . .	4
Table 3. Projected Impact of Coupling Personal Accounts Funded at 2% of Pay With Social Security Benefit Constraints . . . . .	6
Table 4. Projected Impact of Coupling Personal Accounts Funded at 2% of Pay With Social Security Benefit Constraints on Low, Average, and Maximum-Wage Earners . . . . .	8
Table 5. Changes in Future Social Security Retirement Benefits Resulting From Age-Related Provisions Enacted in 1983 . . . . .	12

Table 6. Social Security Benefits “Promised” vs. Benefits “Payable” Under Current Law . . . . .	14
Table 7. Purchasing Power and Earnings Replacement Rates From Future Social Security Benefits Projected Under Current Law . . . . .	16
Table 8. Years of Earnings Counted in Calculating Pre-Age 62 Survivor and Disability Benefit Cases Under Current Law . . . . .	25
Table 9. Projected Changes in Social Security Benefits Resulting From Various Benefit Constraint Options (Measured Against Benefit Levels “Promised” Under Current Law) . . . . .	27
Table 10. Effect of Paying 1 Percentage Point Lower Annual Social Security COLAs As a Recipient Grows Older . . . . .	29
Table 11. Projected Changes in Purchasing Power of Benefits Under Social Security Benefit Constraint Options . . . . .	31
Table 12. Projected Replacement Rates Under Social Security Benefit Constraint Options . . . . .	32
Table 13. Projected Indexed Annuities From Personal Accounts . . . . .	33
Table 14. Comparison of Payments From Personal Accounts to the Portion of Social Security Benefits That Would Not be Payable Under Current Law .	34
Table 15. Effect on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts . . . . .	36
Table 16. Separated Effects on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts . . . . .	38
Table 17. Net Replacement Rates Resulting From Coupling Social Security Benefit Constraints With Personal Accounts . . . . .	39
Table 18. Separated Effects on Replacement Rates From Coupling Social Security Benefit Constraints With Personal Accounts . . . . .	40
Table 19. Projected Future Purchasing Power From Coupling Social Security Benefit Constraints With Personal Accounts . . . . .	42
Table 20. Separated Effects on Future Purchasing Power of Benefits/Annuities From Coupling Social Security Benefit Constraints With Personal Accounts . . . . .	43
Table 21. Effect on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes . . . . .	49
Table 22. Separated Effects on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes . . . . .	50
Table 23. Net Replacement Rates Resulting From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes . . . . .	52
Table 24. Separated Effects on Replacement Rates From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes . . . . .	53
Table 25. Projected Future Purchasing Power From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes . . . . .	55
Table 26. Separated Changes in Future Purchasing Power of Benefits/Annuities From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes . . .	56
Table 27. Projected Value of Personal Accounts As Percent of Current Law Social Security Benefits: Differences Between Low, Average, and Maximum-Wage Earners . . . . .	58

Table 28. Change in Replacement Rates for Low, Average, and Maximum-Wage Earners Retiring in 2070 Under Benefit Constraints Coupled With Personal Accounts . . . . .	59
Table 29. Projected Impact of Raising Taxable Earnings Base on an Affected Worker's Social Security Benefits . . . . .	61
Table 30. Effect of Setting Widow's and Widower's Benefits to 75% of a Couple's Combined Pre-Death Benefits . . . . .	62
Table 31. Effect of Illustrative Liberalization of Social Security Maximum Family Benefits on a Young Survivor Family . . . . .	63
Table 32. Range of Effects of Increasing the Number of Years Disregarded in Computing Benefits for Workers Disabled Before Age 47 . . . . .	64

# Social Security Reform: What Happens to Future Benefit Levels Under Various Reform Options

## Introduction and Overview of Findings

Social Security has projected long-range funding problems. According to the latest estimates of the Social Security Board of Trustees, in 2016 the system's taxes will fall below its expenditures, and by 2038 its trust funds will be depleted. At that point its incoming tax receipts would be sufficient to cover only 73% of its benefits and even less in later years.<sup>1</sup> The question of how to deal with this gap has been a major catalyst for the Social Security reform debate. Should we raise revenue and/or cut benefits? Should we completely replace the system with something else? Or should we blend elements of the current system with elements of a new one?

Numerous bills introduced by Members of Congress and recommendations made by various commissions attempt to solve the problem with reforms that typically bundle together a multitude of measures. Often, it is difficult to identify when and by how much these measures would alter future benefits. As an aid to those exploring Social Security reforms, this report unbundles various conceptual elements of many of the reform plans, presenting them in a "generic" form, and, using a benefit computation model developed by the Congressional Research Service, examines how certain options would alter projected future retirement benefits.

Among the options illustrated are proposals to raise the age at which recipients can receive full Social Security retirement benefits, to alter the way initial benefits are computed, to constrain annual cost-of-living adjustments (COLAs), and to raise the maximum amount of earnings on which Social Security taxes are levied and benefits are computed, i.e., the so-called taxable earnings base. Also included are illustrations that show the effect of incorporating personal savings accounts into Social Security – accounts that might be seen as a supplement or an alternative to the existing system (or a portion thereof), or as a means to close the gap between the benefit levels the current system promises and what can be paid under its projected future income.<sup>2</sup>

---

<sup>1</sup> See "intermediate" projections of the *2001 Annual Report of the Board of Trustees of the Old Age, Survivors, and Disability Insurance Trust Funds*, March 19, 2001.

<sup>2</sup> Proposals for the Treasury to directly invest part of the Social Security trust funds in equities, which could achieve gains similar to personal accounts, are not analyzed in this report. For a further discussion, see: CRS Report RL30571, *Social Security Reform: The Issue of Individual Versus Collective Investment for Retirement*, by David Koitz.

To simplify the presentation, most of the illustrations are based on the commonly used example of a worker with a 43-year career who always earned average wages and retired at age 65. Although additional career profiles could be used, they would greatly expand the length and complexity of the paper, and they would not affect the illustrations of the *relative* impact of the Social Security benefit constraint options presented here because the benefit constraints are across-the-board in nature. Other career work patterns could have an effect on the relative value of personal accounts, however, and the report provides a number of additional illustrations of these effects.

## Overview of Findings

**Illustrative benefit reductions.** The report first shows the amount of benefit reductions that would arise from several proposals that could help to bring the system into long-range actuarial balance, i.e., to restore its solvency, by constraining its growth (see **Table 1**). The proposal causing the smallest long-range benefit reduction would eliminate only 13% of the system's projected average 75-year deficit. In contrast, the proposal causing the greatest reduction would produce program savings sufficient to restore solvency, at least on average for the projection period as a whole. The other proposals, for the most part, would produce program savings somewhere in between, and, like the first one would need to be viewed as measures that could contribute to a solution but *not* achieve solvency by themselves.

**Table 1. Illustrative Benefit Constraints that Could Help Restore Social Security's Solvency**

Benefit constraint measure	Percent of average 75-year deficit eliminated	Benefit reductions from levels prescribed by current law*		Benefit reduction in 2070 implied by making no program changes
		for new retiree in 2020	for new retiree in 2070	
Raise age for full retirement benefits to 70	62%	13.3%	19.2%	31.8%
Raise age for full retirement benefits in tandem with longevity gains	13	2.4	11.1	31.8
Raise age for full retirement benefits to 70 and then in tandem with longevity gains	72	13.3	27.5	31.8
Allow initial benefits to rise only with inflation**	100	9.9	40.8	31.8
Allow only ½ of the rise in "real" value of initial benefits	51	4.6	20.3	31.8
Reduce COLAs by 1% annually	73	11.3	12.0	31.8

**Note:** Long-range savings estimates were prepared by the Office of the Actuary of the Social Security Administration, May 2001. The reader is cautioned that one should not add together the financial effects of two or more of these proposals in order to determine their combined effect. Such a calculation would be inaccurate because of the interactions among the proposals.

\* Illustrations are based on projected lifetime benefits for full-time wage earners retiring at age 65 who always earned average wages. See Appendix for discussion of other assumptions.

\*\* Under current law, the purchasing power of future Social Security benefits is projected to rise.



**Table 1** also illustrates the benefit reduction each proposal would cause for workers retiring at age 65 in 2020 – the approximate middle of the baby boomers’ retirement years – and for similar workers retiring at age 65 in 2070. The latter case represents the full effect of the proposals. The table also compares these reductions to the amount of reduction implied by the lack of adequate long-range financing under current law, i.e., to the benefits that would be “affordable” under current projections of the system’s income. In other words, it compares the reductions to the benefit levels “promised” under current law and to levels reflecting the implicit benefit reductions that would occur if policymakers were to take no action to restore the system’s solvency – in 2070, this is projected to result in a 32% reduction in benefits.

Using the 2020 and 2070 retiree examples, **Table 2** shows the projected increase in the “real value” of benefits under the rules of current law, under the rules of current law if benefits were reduced to fit within the program’s projected income, and the amount of increase resulting from the various proposals. The results show that even though these proposals reduce benefits promised under current law, none causes the purchasing power of future retirees’ benefits to be lower than that of a 2001 retiree.<sup>3</sup>

However, **Table 2** also shows that the various illustrated proposals would reduce the role of Social Security in the future as an earnings replacement system. For the steady average wage earner retiring at age 65 over the 1990-2000 period, first year’s benefits expressed as a percent of final year’s earnings were an average of 42.4%. As **Table 2** shows, under current law the increase in the age for full retirement benefits from 65 to 67 (discussed at length later) will gradually reduce these ratios to 36.6% for comparable future retirees, a decline of about 14%. The illustrative proposals would cause these ratios to decline further, reaching levels between 35.6% and 21.7%, a decline from the 1990-2000 level of between 16% and 49%.

The debate over reforming Social Security involves more than an examination of whether and how its benefits should be constrained to restore solvency. If the solution to Social Security’s long-range financing problem is to reduce its benefits substantially, then the question arises of whether future retirement incomes will be inadequate. In this context, tax increases and other income-producing measures might be considered. They would not cause a reduction in benefits (although raising the amount of earnings subject to Social Security taxation would, in turn, eventually raise benefits, and this effect is discussed at length later in this report).

There also has been growing interest in new approaches to securing future retirement incomes that look beyond the traditional alternatives of cutting the system’s benefits or raising its taxes or other income. Most of these involve creation of new personal savings accounts modeled in one way or another after existing

---

<sup>3</sup> This occurs because, although it is often not understood, under current law rules the value of future benefits is projected to rise significantly, both in terms of the level of monthly benefits and in terms of their value over a person’s lifetime. There are two reasons lifetime Social Security benefits will grow in the future. One is that increasing life expectancies mean that retirees will collect benefits over a longer period of time. The other is, because future Social Security benefits are linked to the growth in average wages, and wages tend to rise faster than prices, the real value of monthly benefits promised in the future is projected to rise.

individual retirement accounts (IRAs) or employer-sponsored 401(k) plans. This report illustrates the effects of creating personal accounts and incorporating them as part of a Social Security reform plan.

**Table 2. Alternative Views of the Value of Future Social Security Benefits**

	Real increase in value compared to worker retiring in 2001		First year's benefits as % of final year's earnings	
	for 2020 retiree	for 2070 retiree	for 2020 retiree	for 2070 retiree
<b>Benefits “promised” under current law</b>	27%	111%	38.9%	36.6%
<b>Benefits “payable” under current law</b>	27	76	38.9	24.9
<b>Benefit constraint measures:</b>				
Reduce COLAs by 1% annually	12	86	37.8	35.6
Raise age for full retirement benefits in tandem with longevity gains	23	88	38.0	32.6
Raise age for full retirement benefits to 70	10	71	33.8	29.6
Raise age for full retirement benefits to 70 and then in tandem with longevity gains	10	51	33.8	26.6
Allow only ½ of the rise in “real” value of initial benefits	21	69	37.1	29.2
Allow initial benefits to rise only with inflation	14	25	35.1	21.7

**Note:** Illustrations are based on projected lifetime benefits for full-time wage earners retiring at age 65 who always earned average wages. See Appendix for discussion of other assumptions.

**Illustrative personal accounts.** The report shows that given adequate time to grow, the annuities or periodic payments these accounts would yield could go a long way to offsetting constraints on future Social Security benefits that may be considered to restore the system’s solvency. The longer the new accounts are assumed to accumulate, the greater their potential as an offset. In some cases, people could be even better off than if future Social Security benefits were fully financed (i.e., fully payable). The report illustrates the potential outcomes from steadily contributing 2% of the pay of a full-time worker, who always earned an average wage, into these accounts over their careers, and then combining the annuities resulting therefrom with the lower benefits that would result from enacting various Social Security constraint measures. Two annual rates of return are used to compute the value of the accounts, a “safe” rate of 6.4%, reflecting the projected long-term return on government bonds, and a “market-based” rate on stocks of 10%. Also, two alternative funding approaches for the personal accounts are considered. One assumes the money for the new accounts comes from additional contributions workers would make or the

government would make for them (perhaps using surplus tax receipts). The other assumes that workers would be allowed to divert part of their existing Social Security taxes to the accounts. The first is typically referred to as an “add-on” approach; the second as a “carve-out” approach.

It is important to recognize that the loss of revenue caused by using existing Social Security taxes to fund personal accounts would worsen the program’s long-range problem. The revenue loss could be offset by tapping a new income source for the system (e.g., general revenues). Absent that, however, benefits would have to be reduced to compensate for the lower receipts, and this reduction would have to be over and above what is needed to remedy the already existing long-range financing imbalance. To illustrate this effect, the report assumes that under proposals to divert Social Security taxes to personal accounts, a worker’s eventual Social Security benefits would be reduced by an amount equal to the percentage of his or her lifetime Social Security taxes that were used this way (including the employer share).<sup>4</sup> For workers who divert taxes to these accounts steadily over their entire careers, the additional benefit reduction would be 16.1%.

**Table 3** illustrates the combined benefits when personal accounts funded from these two approaches are coupled with three alternative benefit constraint measures. For instance, **Table 1** showed a potential 40.8% benefit reduction in 2070 under the proposal to limit the growth of future initial benefit awards to the rate of inflation (a measure with savings sufficient to restore the system’s long-range solvency). **Table 3** shows that, for workers earning an average wage, including an annuitized “add-on” personal account earning 6.4% would produce a combined benefit that would be 15.6% lower than under current law. Thus, it would replace more than 60% of their lost Social Security benefit. If the account were assumed to earn 10% annually, it would more than offset the lost Social Security benefit, yielding a combined benefit that would be 21% higher than under current law. If the account were funded through a “carve-out” approach and earned 6.4% annually, its annuity value would offset nearly 40% of the lost Social Security benefit, resulting in a net reduction of only 25%. If it earned 10% annually, it would more than offset the Social Security benefit reduction, yielding a combined benefit that would be 11% higher than under current law.

---

<sup>4</sup> It should be observed that this approach might not overcome transitional financing issues. While each worker’s eventual benefits would be reduced to reflect the earlier diversion of taxes from the system, during the early years the reduction in the system’s aggregate benefit payout may be insufficient to maintain the program’s solvency. Hence, either the other benefit constraints would have to be phased in faster or an alternative income source would have to be found for the system. In addition, this approach assumes that the benefit reduction workers would incur because of the tax diversion would apply equally to retirement, disability, and survivor benefits. If the benefit reductions were to apply only to the retirement portion of the program, they would have to be larger than reflected in **Table 3** and later tables in this report showing the effects of the “carve-out” approach.

**Table 3. Projected Impact of Coupling Personal Accounts Funded at 2% of Pay With Social Security Benefit Constraints**

Proposal	Percentage change in benefits from current law:			
	for 2020 retirees who funded accounts using –		for 2070 retirees who funded accounts using –	
	Add on	Carve out	Add on	Carve out
	Assuming accounts earn 6.4% annually*			
Create personal accounts and raise age for full Social Security retirement benefits to 70	-5.0	-10.8	+6.0	-7.0
Create personal accounts and allow initial Social Security benefits to rise only with inflation	-1.6	-7.7	-15.6	-25.1
Create personal accounts and offset Social Security benefits by 75% of personal account annuity	+2.1	-4.7	+6.3	-9.8
	Assuming accounts earn 10% annually*			
Create personal accounts and raise age for full Social Security retirement benefits to 70	-1.7	-7.5	+42.5	+29.5
Create personal accounts and allow initial Social Security benefits to rise only with inflation	+1.6	-4.4	+21.0	+11.4
Create personal accounts and offset Social Security benefits by 75% of personal account annuity	+2.9	-3.9	+15.4	-0.7

**Note:** Illustrations are based on projected benefits for full-time wage earners retiring at age 65 who always earned average wages. See Appendix for discussion of other assumptions.

\* The alternative 6.4% and 10% rates of return represent “nominal” rates; on an after-inflation, or what economists refer to as a “real” basis, they would be 3.0% and 6.5% respectively.

Under these scenarios, the annuities from personal accounts funded from either an “add-on” or a “carve-out” approach, coupled with a benefit constraint sufficient to achieve long-range actuarial balance (e.g., allowing initial benefits to rise only with inflation), eventually produce a combined benefit that would be higher than what would be affordable if policymakers did not address the system’s projected funding shortfall. This occurs under either a 6.4% or 10% annual rate-of-return for the accounts. For example, with personal accounts earning 6.4% annually, the 15.6% and 25.1% net reductions for the 2070 retiree under the “add-on” and “carve-out” approaches, respectively, are still smaller than the projected 32% benefit reduction that would occur in that year if Social Security benefits were adjusted to fit within the system’s income projected under current law.

As **Table 3** shows, the “carve-out” approach produces a smaller combined benefit than the add on approach in each case because it requires workers to give up a portion of their Social Security benefit in addition to the loss of benefits resulting from the constraint measure incorporated in the proposal. Nonetheless, the magnitude of the differential between the two approaches is not great. For example, for workers earning an average wage, if a personal account growing at 6.4% annually were joined with raising the age for full Social Security retirement benefits to 70, under the “add on” approach the combined benefits would be 6% higher than current law, and under the “carve out” approach they would be 7% lower, a difference of 13%. In 2070, the differences in the level of the combined benefits between the add on and carve out approaches under the three proposals range from 9.5% to 16.1%.

**Table 3** also illustrates the importance of the rate of return on the account. Even with an account to which only 2% of pay is contributed, the difference in benefits from compounding growth at different rates over a 43-year period can be quite large. At a 6.4% growth rate, an “add on” personal account coupled with the proposal to allow initial benefits to rise only with inflation would produce a net benefit reduction for the 2070 retiree of 15.6% (compared to current law). On the other hand, if the account grew at a 10% annual rate, the combined benefit would be 21% higher than current law. The spread between the two outcomes would be equal to 37% of current law benefits.

Another important factor, not reflected in **Table 3**, is the effect that personal accounts could have on the “tilt” of the Social Security system that now favors workers with lower career earnings. The Social Security benefit formula is designed to replace a higher proportion of earnings for low-wage workers. Everything else held equal, a personal account funded with a constant percentage of pay would produce an account that would be strictly proportional to the level of a worker’s earnings. Thus, a personal account intended to substitute for a portion of Social Security or make up for across-the-board reductions needed to bring the system into long-range actuarial balance would lessen the tilt currently favoring low-paid workers. This is not to say that a personal account to which 2% of pay is contributed would in and of itself discriminate among workers. Rather, it would be the natural result of shifting more of the combined benefit to a purely proportional system. **Tables 1 through 3** reflect benefit outcomes only for the “average earner” case. To illustrate the potential reduction in the tilt, **Table 4** shows the effects on replacement rates for “low,” “average,” and “maximum” earners<sup>5</sup> retiring in 2070 when a benefit constraint sufficient to achieve long-range actuarial balance is coupled with personal accounts.

As **Table 4** shows, if the personal account were to grow at a 6.4% annual rate, at all three wage levels it would make up for only part of the reduction in Social Security benefits. The reduction in earnings replacement would be greatest for the low-wage earner – 22.3% relative to current law, compared to a reduction of 5.0% for the high-wage earner. On the other hand, if the personal account were to grow at a 10% annual rate, it would more than make up for the benefit reduction at all three

---

<sup>5</sup> A “maximum-wage earner” is defined here to be someone who always earned the maximum level of earnings each year subject to the Social Security tax; a “low-wage earner” is defined as someone who always earned 45% of the average wage.

wage levels. However, the magnitude of the gain would be largest for the high-wage earner. The net increase for the high-wage earner would be 50.2% relative to current law compared to a net increase of 4.7% for the low-wage earner.

**Table 4. Projected Impact of Coupling Personal Accounts Funded at 2% of Pay With Social Security Benefit Constraints on Low, Average, and Maximum-Wage Earners**

Proposal	Replacement rates for 2070 retirees (in percent)		
	Low earner	Average earner	Maximum earner
	Current law		
	49.3	36.6	24.1
	Assuming accounts* earn 6.4% annually		
Create personal accounts and allow initial Social Security benefits to rise only with inflation	38.3	30.8	22.9
Relative <i>decrease</i> in replacement rate	-22.3%	-15.8%	-5.0%
	Assuming accounts* earn 10% annually		
	51.6	44.2	36.2
	4.7%	20.8%	50.2%

**Note:** Illustrations are for full-time low, average, and maximum wage earners who retire at age 65. See the Appendix for further description of these examples and a discussion of other assumptions.  
 \* Assumes “add on” approach is taken to fund the accounts.

The reader should keep in mind that the projected personal account balances shown in this report are *illustrations only*. In the real world, the outcomes will vary. The report makes no assertion that a career in which a worker has 43 years of continuous steady earnings is typical or that a 6.4% or 10% rate of return in each year of a 43-year investment period is a typical or likely investment scenario. For example, many workers start out earning relatively low wages early in their careers and earn increasingly higher wages as their careers progress. Under the Social Security benefit computation rules, a worker who earns low wages early in his or her career and earns increasingly higher wages over time could have the same average lifetime earnings, and therefore the same Social Security benefit as a worker who always earns average wages. However, with personal accounts, the points at which earnings peak and trough *and* the points at which personal accounts earn the highest rates of return during the investment period significantly affect asset accumulations. Specifically, because of the power of compound growth, contribution levels and investment performance *early* in a career have a disproportionate effect on the eventual value of the account. Workers who have low wages early in their careers could have asset

accumulations at retirement significantly lower than those shown for workers who always earn average wages. Similarly, if workers earn higher returns later in their careers, or if they have gaps in employment, they could have account balances at retirement lower than those illustrated. Conversely, if they earn the highest returns on their accounts earlier in their careers, they could have account balances at retirement higher than those illustrated. The point is that the reader should recognize that the eventual value of a personal account is very sensitive to the contribution level and rate of return *during each year of the investment period* (i.e., the worker's career). As a result, actual outcomes will vary from the illustrations shown for a worker who continuously earns average wages and achieves a steady rate of return on his or her personal account.

**Other illustrative proposals.** Other proposals illustrated in the report target a particular segment of the population or are designed to mitigate the effect of other constraint proposals on a particular group. One – raising the taxable earnings base – is a revenue measure that also alters benefits. The Social Security tax is levied on earnings only up to a certain level or base amount each year. In 2001, this figure is \$80,400. While raising the base is often seen as a means to bring in more receipts to help close the long-range funding gap, the proposal also would increase the amount of earnings credited to the affected workers' earnings records and thus potentially increase their eventual Social Security benefits. The workers involved are relatively high paid (only about 6% of workers today have earnings at or above the base). Consequently, while they may receive higher benefits, the return on the additional taxes they paid can be relatively modest because the system's benefit formula is designed to replace a smaller proportion of earnings for high-paid workers. For example, the report shows that increasing the base by \$50,000 in 2002 (from an estimated \$84,900 to \$134,900) would raise the benefits of a high paid worker retiring in 2030 by 24%, but the value of each additional tax dollar paid would render only \$0.42 in benefits. For the 2070 retiree, the benefit increase would be 30%, but for each additional tax dollar paid there would be only \$0.29 in benefits earned.

Another proposal would attempt to enhance Social Security benefits for aged widows and widowers, either to address their relatively high incidence of poverty today or to offset the impact of other general constraints that might be considered to restore the system's long-range solvency. When one member of a couple receiving Social Security benefits dies, the surviving spouse is sometimes left with just the higher of their two individual "pre-death" benefits, which can be as little as one-half of what the couple was formerly receiving. The proposal illustrated here would base Social Security widow's and widower's benefits on 75% of the combined level of benefits payable to the couple before one of them died. Doing so would raise the basic widow's or widower's benefit by a range of 12.5% to 50% depending on whether one or both members of the couple had work records of their own and the level of benefits payable on those records.

Two other proposals are directed at instances where a younger worker dies or becomes disabled. In these cases the earnings replacement value of personal accounts is curtailed by the shorter period over which contributions and investment returns are accumulated. This is more likely to be an issue where personal accounts are coupled with across-the-board benefit constraints. For example, an annuity from an account that accumulates for only 8 years would be worth only 6% of an annuity from an

account that accumulates over a full 43-year career. One proposal illustrated here to mitigate this effect would *raise the maximum Social Security benefits payable to a worker's family*. Under current law, spouses', children's, or other potential dependents' benefits are often reduced because of an overall limit on the benefits payable on a single earnings record. This limit ranges from 150% to 188% of the worker's basic benefit and varies with the size of that benefit. Under the proposal, these maximum percentages would be increased gradually over time as the general constraint on benefits becomes larger. For example, a 1/3% per year hike in the family maximum limit could raise the benefits payable to a family by 10% in 2030 and 26% by 2070.

The other proposal would *increase the number of years of earnings that can be dropped in calculating Social Security benefits for workers who become disabled before age 47*. Disregarding low earnings can raise a recipient's average career earnings for benefit calculation purposes. Under current law, when death occurs at a relatively early age, as few as 2 years may be used in calculating survivors benefits. The same applies when disability occurs before age 25. However, between the ages of 25 and 46, more years of earnings are counted in disability cases than for survivors. The proposal illustrated here would allow workers who become disabled at these ages to have the same number of years disregarded as in early death cases. Its effect would vary significantly depending on each worker's earnings record. Obviously it would have no effect on workers disabled after age 46. As a general rule, it's greatest effect would be on younger low-paid workers, and it's smallest effect would be on high-paid workers disabled at age 46. For example, a worker who became disabled at age 30, and who earned an amount equal to one-half of the minimum wage in the 4 preceding years, would receive 76% higher benefits under the proposal, whereas a worker disabled at age 46 who always earned the maximum taxable wage would receive an increase of only 0.08%.

The following sections of this report go into these illustrations in greater detail.



## **Different Baselines – Alternative Ways of Measuring Benefit Changes**

The effects of the proposals examined in this report are illustrated by comparing the benefits they are projected to provide to four different baselines:

1. Benefits prescribed by the rules of current law;
2. Benefits that would be payable if they were adjusted to fit within the system's projected income under the financing provisions of current law;
3. The purchasing power of benefits paid to today's retirees (i.e., the purchasing power of future retirees' benefits compared to those of workers retiring in 2001); and
4. Benefits expressed as a percentage of pre-retirement earnings for recent retirees (i.e., the average "replacement rate" for workers retiring in 1990-2000).

### **"Benefits Prescribed by Current Law" Is Not a Constant Baseline**

The most common approach policymakers use to evaluate proposed reforms of Social Security is to determine the extent to which they would alter the level of benefits prescribed by current law. However, these rules are changing. From the program's inception in 1935 until 2000, the age at which full retirement benefits<sup>6</sup> were payable was 65. However, as a result of legislation passed in 1983,<sup>7</sup> over a 22-year period the age for full retirement benefits is gradually rising to 67, beginning with those becoming eligible (i.e., attaining age 62) in 2000. For example, the age for full retirement benefits for people becoming eligible in 2001, the second year of the transition, is 65 and 4 months. Thus, those affected today are persons who choose to retire well before attaining this age, i.e., those now ages 62 and 63. Compared to what they would have received under the pre-1983 law, their benefits reflect 2 or 4 more months of reduction for "early retirement."

Other changes enacted in 1983 are now increasing the so-called delayed retirement credit, or DRC. This credit raises the benefit levels of people who delay filing for Social Security benefits until after they reach their age for full retirement benefits. The higher credit is currently being phased in and will reach its full level for

---

<sup>6</sup> The term "full retirement benefits" is a misnomer, because it does not represent the highest benefit a worker can receive. Under the law, a worker's basic benefit, or "primary insurance amount" (PIA), is determined by a benefit formula that is specifically applicable to the worker's age cohort (the formula changes annually for each new cohort). This basic benefit is what is being referred to by the term "full retirement benefits." For retirees, the amount of benefits payable will be lower or higher than their PIA if they choose to receive benefits before or after their cohort's full-benefit age.

<sup>7</sup> The Social Security Amendments of 1983, P.L. 98-21.

those becoming eligible in 2008 and thereafter.<sup>8</sup> **Table 5** illustrates how much lower or higher these benefits will be compared to those under the pre-1983 law.

**Table 5. Changes in Future Social Security Retirement Benefits Resulting From Age-Related Provisions Enacted in 1983**

Age at which worker elects to receive benefits	Percent of full benefits payable under pre-1983 law	Percent of full benefits payable under current law		
		Worker becoming eligible in 2001	Worker becoming eligible in 2010	Worker becoming eligible in 2022
Age 62	80	78 1/3	75	70
<b>Age 65</b>	<b>100</b>	<b>97 7/9</b>	<b>93 1/3</b>	<b>86 2/3</b>
Age 66	103	104 2/3	100	93 1/3
Age 67	106	111 2/3	108	100
Age 68	109	118 2/3	116	108
Age 69	112	125 2/3	124	116
Age 70	115	132 2/3	132	124

**Note:** Amounts in excess of 100% are the result of delayed retirement credits.

As shown in **Table 5**, when the 1983 law is fully phased-in (i.e., when the age for full retirement benefits reaches age 67 for workers who become eligible in 2022 or later), the benefits for anyone who retires before age 68 and 3 months<sup>9</sup> will be lower than under pre-1983 law. Because few people wait to file for benefits until after age 68 (4% of those filing for benefits in 1999), the basic effect of the 1983 changes is to cut benefits for a large majority of future retirees. As a result, it is not always clear what a proposed alteration of current law means. For people who become eligible for retirement benefits over the next 21 years, current law is a moving target. If comparisons to current law are intended to show by how much benefits resulting from reform proposals will differ from *those paid to today's retirees*, they are misleading because under current law benefits promised to future retirees already differ from those paid to today's retirees.

Comparisons to current law benefits are nonetheless important in a legislative sense. They allow policymakers to examine by how much a proposed change will alter previously established policy or what is perceived to be the "status quo." It

---

<sup>8</sup> Under the old law, the maximum DRC was 3% per year and was applicable to retirements delayed beyond age 65, up to age 70. Thus, the maximum cumulative DRC was 15% (5 years x 3% per year). Under current law, the DRC will eventually reach a maximum of 8% per year, and when the age for full retirement benefits reaches 67, the maximum cumulative DRC will be 24% (3 years x 8% per year).

<sup>9</sup> The point at which benefits are the same (110% of the PIA) under both the pre-and post 1983 law.

shows the degree of change on average and potential “winners and losers.” More than nine out of ten workers have a stake in Social Security and 45 million people currently receive benefits. Thus, the obvious first question for lawmakers is “how are we changing the rules that exist today and what does it mean in dollars and cents?” In effect, current-law policy generates certain expectations, and those expectations are a baseline, even if not constant or fixed, from one retirement cohort to the next. It also is important that the system’s income and costs as projected under current law determine the extent to which Social Security is under-or over-financed. Therefore, for those who believe that the fundamental goal of Social Security reform is to restore the program’s solvency, current law is the most appropriate baseline against which all reform proposals should be measured. From this perspective, the fact that benefits paid at any given age are changing as a result of the 1983 law is seen as irrelevant.

## Using Other Baselines Can Show How Well Policy Changes Achieve Certain Other Retirement Goals

Not only does the “benefits prescribed by current law” baseline change over time, it also does not reflect that current-law benefits are projected to be unsustainable. Under the Social Security trustees’ intermediate or “best guess” projections, Social Security’s trust funds would be depleted in 2038 and incoming receipts could pay for only 73% of the program’s expenditures (declining to 68% by 2070).<sup>10</sup> **Table 6** shows the level of Social Security benefits prescribed under the rules of current law, the benefits that would be affordable given the system’s projected financing limitations, and the difference, i.e., the amount that would *not* be payable if the projections materialized (all calculations are for full-time workers retiring at age 65 who always earned average wages).

**Table 6** illustrates that comparing a proposal’s projected benefits to those resulting from the rules of current law can be misleading since the full amount of benefits promised under current law would not be payable under the trustees’ projections. For example, a proposal that is shown to result in benefits that are 10% or 20% lower than under current law may at first glance appear politically unattractive, but may appear less so if compared to the 27% reduction in benefits that would have to occur in 2038 if policymakers were to take no action (see **Figure 1**).

---

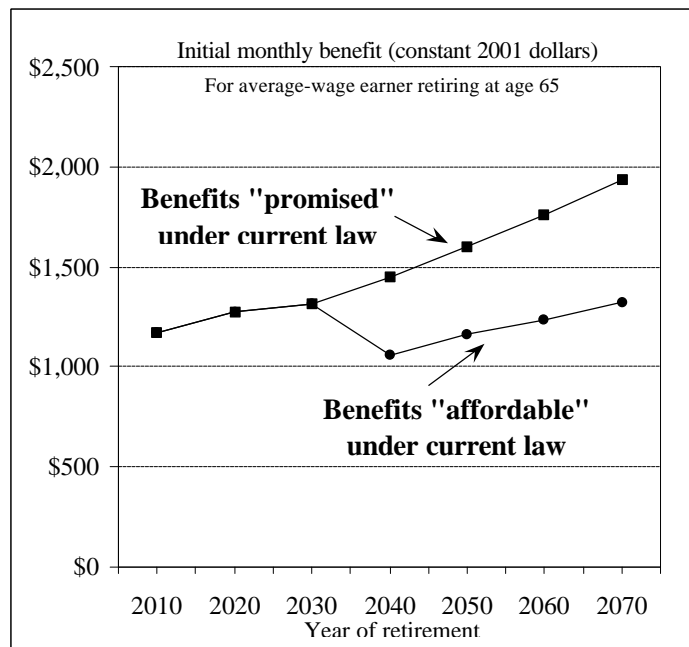
<sup>10</sup> Some observers point out that under the trustees’ projections Social Security tax receipts fall below the system’s expenditures in 2016 and remain lower thereafter. Although the trust funds are projected to have a balance of \$5 trillion in federal securities credited to them at that point (and will continue to have a balance until 2038), these observers pose the question of where the Government will get the money to redeem the securities. They argue that the system’s problems may occur earlier than 2038. The assumption here that benefits would be paid in full up to 2038 is based on the premise that the Treasury would not lose its authority to pay benefits in full prior to this date. It is not intended to dispute the possibility that financial strains on the Government and/or the Social Security system could emerge earlier.

**Table 6. Social Security Benefits “Promised” vs. Benefits “Payable” Under Current Law**

Initial Social Security Monthly Benefits (in constant 2001 dollars)				
Year of retirement at age 65	Assuming benefits “promised” under current law are paid in full	Assuming benefits are constrained by amount of projected deficit	Difference in dollars	Difference in percent
2010	\$ 1,171	\$ 1,171	0	0%
2020	\$ 1,273	\$ 1,273	0	0%
2030	\$ 1,317	\$ 1,317	0	0%
2040	\$ 1,450	\$ 1,059	-\$392	-27%
2050	\$ 1,597	\$ 1,164	-\$433	-27%
2060	\$ 1,759	\$ 1,237	-\$522	-30%
2070	\$ 1,936	\$ 1,319	-\$617	-32%

**Note:** Illustrations are benefits projected for full-time wage earners retiring at age 65 who always earned average wages. See Appendix for discussion of other assumptions.

**Figure 1. Benefits “Promised” Versus Benefits “Payable” Under Current Law**



The debate over reforming Social Security involves more than an examination of whether and how its benefits should be constrained to restore solvency. If the solution to the system's long-range financing problem is to reduce its benefits substantially, then the question arises of whether future retirement incomes would be inadequate. Thus, bringing the system's income and outgo into balance is only part of the issue. To give different perspectives on the broad effect of making a change to Social Security, and to address the issue of how adequate retirement benefits would be, this report uses two alternative baselines. One examines the question of adequacy by comparing the purchasing power of Social Security benefits of future retirees, under both current law and proposed benefit constraints, to the purchasing power of benefits for workers retiring today. The second baseline examines the role of Social Security in providing retirement income by comparing the proportion of pre-retirement earnings replaced by Social Security for future retirees under the illustrative benefit constraints to those provided to recent retirees (defined as those retiring at age 65 in the past decade or so).

Under current law, a recipient's basic monthly Social Security benefit is calculated by multiplying a three-step formula against most of the recipient's career earnings record. A new benefit formula is created each year for each new cohort of eligible recipients, a formula that reflects the annual increase in average wages occurring 2 years earlier. The earnings histories used to compute each person's average earnings, to which the formula is applied, also are indexed for wage growth from the year they were earned until the year the worker reached age 60 (earnings at age 60 and later are included in the calculation at their nominal value). Since wages are projected to grow faster than prices (under the trustees' intermediate forecast, wages would grow at a rate of 4.3% annually and prices at a rate of 3.3%), initial Social Security benefits for future retirees, one cohort to the next, are assumed to grow faster than inflation.

Thus, under current rules, Social Security benefits are projected to grow in "real terms," meaning that future retirees' benefits would have greater purchasing power than that of today's retirees. Conversely, because of the change in the age for full retirement benefits, the earnings replacement that these benefits would afford future retirees is projected to be noticeably lower than that afforded recent retirees of the same age. **Table 7** illustrates these two phenomena.

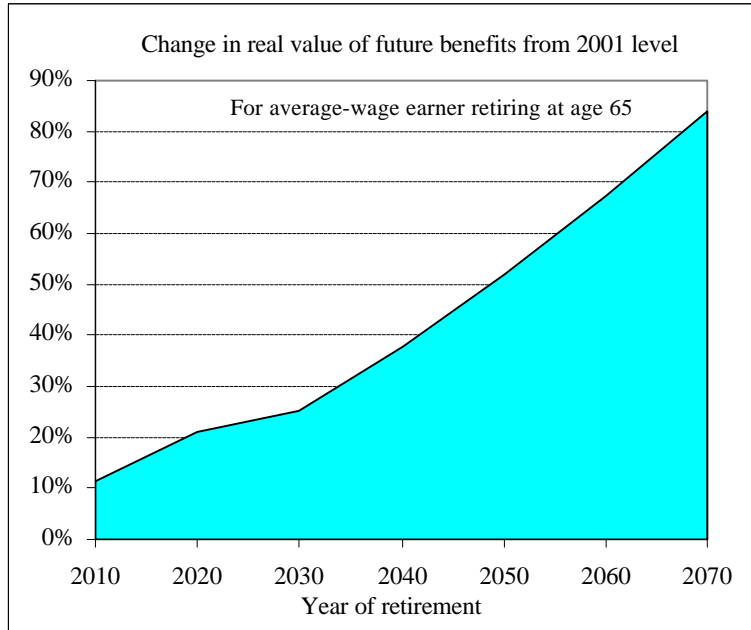
**Table 7. Purchasing Power and Earnings Replacement Rates  
From Future Social Security Benefits Projected  
Under Current Law**

<b>Projected Change in Purchasing Power of Current Law Social Security Benefits</b>		
<b>For full-time steady average-wage earner retiring at age 65 in:</b>	<b>Initial benefits in “constant” 2001 dollars</b>	<b>Increase in real value of future benefits from 2001 level (in percent)</b>
<b>2001</b>	<b>\$1,051</b>	<b>—</b>
2010	1,171	11.3%
2020	1,273	21.0
2030	1,317	25.2
2040	1,450	37.8
2050	1,597	51.8
2060	1,759	67.2
2070	1,936	84.1
<b>Projected Change in Social Security’s Replacement of Earnings</b>		
<b>For full-time steady average-wage earner retiring at age 65 in:</b>	<b>Earnings replacement rate (first year’s benefits as % of final year’s earnings)</b>	<b>Change in earnings replacement rate from average for 1990-2000 retirees (in percent)</b>
<b>1990-2000 average</b>	<b>42.4%</b>	<b>—</b>
2010	39.4	-7.1%
2020	38.9	-8.3
2030	36.6	-13.7
2040	36.6	-13.7
2050	36.6	-13.7
2060	36.6	-13.7
2070	36.6	-13.7

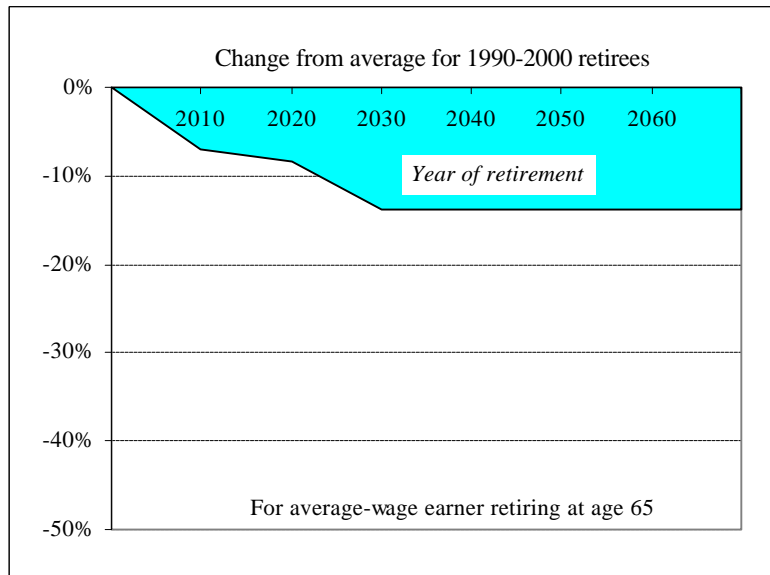
**Source:** CRS, based on intermediate assumptions of the 2001 Social Security trustees’ report.

**Table 7** shows that, in one sense, current law rules (assuming they were affordable) would result in substantial increases in the real value of future benefits – 25.2% for the 2030 retiree and 84.1% for the 2070 retiree (for “average wage earners” retiring at age 65 – see **Figure 2**). In another sense, Social Security’s future role as a source of retirement income would decline somewhat. While on average Social Security replaced approximately 42.4% of final year’s earnings for steady average wage earners retiring at age 65 in 1990-2000, it eventually would drop to a level of 36.6% for workers retiring at age 65 in 2025 and thereafter – a decline of nearly 14% (see **Figure 3**).

**Figure 2. Increase in Purchasing Power of Future Benefits Under Current Law**



**Figure 3. Decline in Future Replacement Rates Under Current Law**



These two baselines represent different approaches to assessing the adequacy of future Social Security benefits, under both current law and proposed reforms. One baseline suggests that future benefits could be less than those promised under current law and still provide a meaningful basic floor of retirement income. The other suggests that Social Security's role in replacing pre-retirement earnings is already scheduled to decline and would decline further if its financing problems were addressed through additional benefit reductions. Where to peg Social Security's future role within these two baselines is a value judgement for policymakers, but it is as much a part of the overall issue of Social Security reform as is bringing the system's finances into long-range balance.



## Description of Illustrative Options

### Expenditure Constraint Measures

The illustrative proposals examined first are ones that are designed to deal with Social Security's long-range funding gap by constraining future expenditures. According to the trustees' latest projections, on average over the next 75 years Social Security's expenditures will exceed its income by 14%.<sup>11</sup> A surplus of approximately 3% in the first 25 years is overwhelmed by deficits of 33% in the second 25 years and 40% in the last 25 years. In the final year of the projection period, 2075, the deficit is 45%. The proposals illustrated here could help close that gap. Not all of them would remedy the problem by themselves, but all would have a large effect. According to estimates prepared by the Office of the Actuary of the Social Security Administration, the proposal that would result in the smallest benefit reductions would eliminate 13% of the problem on average, and the proposal that would result in the largest reductions would eliminate the entire problem and then some (see the "actuarial effect" section of **Table 9** on pages 27 and 28. The types of proposals selected are intended to represent the broad range of ideas manifested in bills introduced in recent Congresses and proposals made by other panels and commissions. They are not necessarily identical to any specific bill or recommendation.

The illustrations are intended to show general effects on benefit levels. The first set of proposals beginning with **Table 9** illustrates the general effects of certain broad-based benefit constraints measures, and for this reason the analysis focuses on a hypothetical full-time worker who always earned average wages. It should be noted that all the constraint measures shown would produce roughly proportional benefit reductions. For example, raising the age for full retirement benefits to 70 by 2029 produces a long-range reduction in current law retirement benefits of 19% at ages 62, 65, and 70, and on low, average, and high wage earners alike. Policymakers could decide to follow a more targeted approach, perhaps to mitigate the effect of a constraint on certain types of recipients, (e.g., low-wage earners, early retirees, survivors, the disabled), or to offset the distributional or wealth effects of other measures, such as creating personal accounts and combining them with a general benefit constraint.<sup>12</sup> No judgement is made as to whether these effects should be mitigated or accentuated for any segment of the recipient population. Other illustrative measures designed to target specific segments of the recipient population are examined later in the report.

---

<sup>11</sup> The trustees' intermediate forecast assumes Social Security's average expenditures over the 2001-2075 projection period would equal 15.44% of the nation's taxable payroll, while its income would equal 13.58%. The difference of 1.86% of taxable payroll is equal to 14% of the system's average projected income ( $1.86/13.58 = 14\%$ ).

<sup>12</sup> For instance, a change in the Social Security benefit formula could affect low- and high-paid workers differently. Some reformers have proposed changing the replacement factors or the "bend points" in the benefit formula. Such changes would affect the tilt in formula, usually by providing less earnings replacement for high-paid workers.

**Raise the age for full retirement benefits to 70 by 2029.** As described earlier, under current law the age for full Social Security retirement benefits is scheduled to rise to 67 in two gradual steps. The first step began in 2000, affecting workers attaining age 62 in that year (62 is the earliest age at which retirement benefits can be received, i.e., the first year of eligibility). For workers reaching age 62 before 2000, the age for full retirement benefits remains at 65. The age for full retirement benefits currently is rising by 2 months per year until it reaches 66 for newly eligible workers in 2005. It then stays at 66 until 2017 when it again rises by 2 months per year until reaching 67 for newly eligible workers in 2022. It then remains at 67 for subsequent new retirees. Under the option examined here, the age for full retirement benefits would rise at the rate of 2 months every year until it reaches age 70 for those becoming eligible in 2029 and later. The proposal would take effect in 2006 (and would only apply those attaining age 62 in that year and thereafter).

**Raise the age for full retirement benefits to 66 by 2005 and thereafter in tandem with increases in longevity.** Under this option, the age for full retirement benefits would rise to 66 in 2005 as under current law. Thereafter, it would rise by 1 month every 2 years. This rate of increase would approximately match the projected rise in longevity under the trustees' intermediate projections. Under this scenario, the age for full retirement benefits would be 67 in 2030, 67 and 10 months in 2050, and 68 and 11 months in 2075. At that point the age increase would come close to matching about half of the overall increase in longevity since the program's inception in 1940. The proposal would take effect in 2007 (applying only to those attaining age 62 in that year and thereafter). This measure would replace the current law increase in the age for full retirement benefits from 66 to 67 scheduled to be phased in from 2017 to 2022.

**Raise age for full retirement benefits to 70 by 2029 and thereafter in tandem with increases in longevity.** Under this option, the age for full retirement benefits would rise by 2 months every year until it reaches age 70 for those becoming eligible in 2029. Thereafter, it would rise by 1 month every 2 years. This rate of increase would approximately match the projected rise in longevity under the trustees' intermediate projections from that point on, and by 2075 would come close to matching the overall increase in longevity since the program's inception in 1940. The age for full retirement benefits would be 70 and 10 months in 2050 and 71 and 11 months in 2075. The proposal would take effect in 2006 (applying only to those attaining age 62 in that year and thereafter).

**Allow initial Social Security benefits to rise only with inflation.** As discussed earlier, under current law Social Security benefits are projected to grow in "real terms," meaning that future recipients' benefits would have greater purchasing power than that of today's recipients. This is based on the trustees' projection that wages (from which benefits are determined) would grow faster than prices. Under this option, the annual adjustment made in calculating benefits would be set so that the initial benefits would rise only at the rate of inflation. Hence, the real value of initial benefits would be held constant over time, meaning that they would buy the same amount of goods and services for future recipients as they buy for today's recipients. To phase in the change without causing reductions to the real value of benefits by coupling it with the already scheduled hikes in the age for full retirement

benefits, the proposal would not take effect until 2006 (i.e., it would begin with those attaining age 62 or otherwise becoming eligible in that year), and the second phase of the current law hike in the age for full retirement benefits (raising it from 66 to 67 beginning in 2017) would be repealed.

**Allow initial Social Security benefits to rise by one-half of the real growth implicit under current-law rules.** This option would be similar in concept to the previous one, but the limitation on the growth of initial benefits would not be as large. Under this option, the annual adjustment made in calculating benefits would be set so that initial benefits would rise by one-half of the real growth resulting under current law. Hence, the real value of benefits still would be allowed to grow, meaning that the benefits would buy more goods and services from one cohort to the next, but not by as much as under current law. To phase in the change without causing reductions to the real value of benefits by raising the age for full retirement benefits, the proposal would not take effect until 2006 (i.e., it would begin with those attaining age 62 or otherwise becoming eligible in that year), and the second phase of the current law increase in the age for full retirement benefits (raising it from 66 to 67) would be repealed.

**Reduce Social Security COLAs by 1 percentage point annually.** Under current law, once initial Social Security benefits are determined under the formula, they are adjusted annually thereafter for inflation through cost-of-living adjustments – or COLAs. COLAs take effect beginning with the year after a worker reaches age 62 or otherwise becomes eligible for disability or survivor benefits. Even a worker who delays retirement beyond age 62 receives an adjustment in the level of his or her initial benefits to reflect COLAs that took effect in the intervening years. The amount of the COLA is based on the rise in the Bureau of Labor Statistics' Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) from the third quarter of 1 year to the third quarter of the next year. It becomes effective for the following December's benefits (and is payable in January of the next year). Under this proposal, the COLA would be reduced each year by 1 percentage point. For example, if the CPI-W rises by 3.3% during the measuring period, the following December's benefit increase would be 2.3%. This proposal would take effect beginning with the COLA for December 2006 (payable in January 2007).

## **Personal Account Measures**

Many of the recent Social Security reform bills, as well as reform plans proposed by others, have included measures to create personal Social Security savings accounts patterned after IRAs or 401(k) pension plans. They envision annual contributions to the accounts being made by the individual or the government (on behalf of the individual) that would be invested in stocks and bonds to accumulate assets for retirement, death, or disability. The value of each individual's account would vary depending on the amounts contributed and the rate of return of the investments. There is no uniform or "consensus" approach among proponents regarding how to structure these accounts, but their basic themes are that the accounts could serve as supplements to Social Security, as a way to create an entirely new system to replace income lost due to retirement, death, and disability, or as a means to offset all or part

of the benefit reductions that might be used to bring the system into long-range financial balance.

This report illustrates potential annuitized payments that personal accounts might produce. The analysis here first reflects the outcomes from a number of alternative contribution rates and investment returns, with the results expressed as “indexed” periodic annuity payments.<sup>13</sup> It attempts to make the numbers relevant to the Social Security reform debate by comparing them to the size of projected retirement benefits prescribed under current law, which illustrates the extent to which these annuities could supplement or replace a portion of the system’s benefits. It then examines the outcomes of combining personal accounts with a number of Social Security constraint measures. Although the report uses a generalized approach to personal accounts that is designed to show a reasonable range of outcomes, the reader is advised that there are many caveats to making such projections. The Appendix provides a more detailed discussion on some of the major ones. Broader economic issues that may be related to the creation of personal accounts are not analyzed in this report.

**Basic personal account illustrations.** To illustrate an array of examples, the analysis first determines the account balance that might be accumulated by *workers who always earned an average wage* under contribution rates of 1%, 2%, or 3% of their pay. No assumption is made as to how the accounts would be funded. For example, workers could pay additional sums over and above their Social Security taxes, they could divert a portion of their existing Social Security taxes to them, or the government could fund them with general revenues. The illustrations show how much an “indexed” periodic payment or annuity from a personal account would be relative to the size of projected Social Security benefits computed under current law rules. The outcomes are shown under alternative annual growth rates (rates of return) of 6.4% and 10% (or 3% and 6.5%, respectively, after adjustment for inflation). Hence, the analysis shows six possible outcomes – three different annual contribution rates combined with two different rates of return for each. The lower rate – 6.4% – is the trustees’ assumed long-range rate of return for the investments held by the Social Security trust funds under current law (basically the rate earned by longer-term U.S. government bonds), and serves as a proxy for the rate of return a relatively “safe” investment strategy would earn. The higher rate – 10% – represents the approximate average investment return achieved by the Standard and Poor’s 500 index from 1926 to 1999,<sup>14</sup> minus 1.3 percentage points. Contributions to the account are assumed to begin in 2002 (or at age 22 if occurring later) and continue through age 64. (For a detailed description of the assumptions and methodology used, see *Methods and Basic Assumptions Used to Prepare Report* in the Appendix.)

**Combining personal accounts with measures that would reduce Social Security benefits.** Under this set of options personal accounts would be

---

<sup>13</sup> An “indexed” periodic payment or annuity assumes that the payment would be increased automatically each year by the rate of inflation. Thus, the payment it would provide initially would be smaller than that provided by a traditional non-indexed annuity, but, unlike the non-indexed annuity, it would not lose value over time. Portraying the annuity from the personal account in this way makes them analogous to Social Security benefits.

<sup>14</sup> Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation: 2000 Yearbook*.

created for each Social Security taxpayer beginning in 2002 in conjunction with enactment of one of the *three* alternative options to help reduce Social Security's long-range deficit discussed earlier.<sup>15</sup> Under one option, Social Security benefits would be reduced at the time of retirement, or alternatively funded,<sup>16</sup> by 75% of the annuity value of the personal account. Under the other two options, the personal accounts would have no direct effect on Social Security benefits. However, it is assumed that the creation of the accounts would be accompanied by enactment of Social Security benefit constraints. One would raise the age for full Social Security retirement benefits to 70 by 2029. The other would allow initial Social Security benefits to rise only with inflation. To simplify the illustrations, annual contributions are assumed to equal 2% of pay throughout the worker's career. The analysis then shows two possible outcomes for each of the three "joined" options based on the two rate of return assumptions for the personal accounts.

## Other Selected Reform Measures

Additional proposals are included in this report to show a few types of targeted measures, i.e., measures designed to affect a particular segment of the population or mitigate the effect of constraint proposals on a particular group.

**Raising the Social Security taxable earnings base.** This option would affect only high-paid workers. The taxable earnings base is the maximum level of earnings subject to Social Security taxation each year. In 2001, the base is \$80,400. In any year in which there is a COLA, the base rises in proportion to the growth in average earnings in the economy since the previous COLA.<sup>17</sup> This income-producing option is illustrated because, unlike a payroll tax rate increase or general revenue infusion to the system, raising the base also may raise the eventual benefits of affected workers.<sup>18</sup> Since a recipient's career "taxable" earnings are used to compute Social

---

<sup>15</sup> Implicit in this scenario is the assumption that personal accounts would be mandatory. Some proposals for personal accounts would make them voluntary. Making participation optional would not alter the illustrations for personal workers, but it could have different effects on the system overall depending on which workers choose to participate (i.e., recognizing the possibility of "adverse selection" that could exist under a voluntary system). For example, if a disproportionate number of higher-paid workers were to opt for voluntary personal accounts and a portion of their existing Social Security taxes were diverted to fund them, program receipts available to pay for current benefits and administrative expenses would decline disproportionately. Since the system is designed to favor low earners, to the extent a higher percentage of higher-wage earners opted to divert some of their taxes to personal accounts, a greater burden for financing the system would fall on the lower-wage earners who remain fully vested in it.

<sup>16</sup> "*Alternatively funded*" means that the annuity would be reduced instead of the Social Security benefit, and a corresponding amount would be transferred to the Social Security trust funds. Either way, the combined payments would be the same.

<sup>17</sup> This linkage is prescribed under current law.

<sup>18</sup> Raising the system's income through higher payroll tax rates, or infusions of general revenues, would not directly alter future benefits. However, additional revenue would lower the amount by which benefits would have to be reduced to restore the system's solvency, and

(continued...)

Security benefits, raising the amount that is taxable will result in a higher “average” earnings level for computing benefits and, thus, raise the worker’s eventual benefits.<sup>19</sup> Under two variations illustrated here, the taxable earnings base, estimated under current law to be \$84,900 in 2002, would be increased by (1) \$15,000 (setting it at \$99,900 in 2002) or (2) \$50,000 (setting it at \$134,900 in 2002), after which it would rise again by the rate of average earnings in the economy.

**Raising the level of Social Security widow’s and widower’s benefits.** Under current law, a surviving spouse is entitled to the higher of his or her own Social Security benefit (from his or her own earnings record) or to a widow’s or widower’s benefit that is 100% of the deceased spouse’s benefit. This proposal would provide widow’s and widower’s benefits equal to 75% of the combined benefits paid to the couple before one of them died (or would have been paid had they filed for benefits). Because a spouse is eligible for one-half of the other spouse’s basic benefit, while they are both alive the couple’s combined benefits (before any reduction for early retirement) is *at least* 150% of the higher-earning spouse’s basic benefit. Hence, when one member of a couple dies, a surviving spouse without a work record receives a benefit that is 33% lower than the couple’s former combined benefit (the combined pre-death level drops from 150% to 100% of the deceased recipient’s former benefit). If the surviving spouse receives a benefit based on his or her own work record, that benefit is subtracted from the widow’s or widower’s benefit, and only the difference, if any, is paid as a survivor benefit. Hence, in these circumstances, when one member of a couple dies, the surviving spouse is left with the higher of the two individual “pre-death” benefits, which can be as little as one-half of what the couple formerly received. Enhancement of Social Security widows’ and widowers’ benefits is proposed frequently as a means of reducing the high poverty rates that prevail among aged widows and widowers. The range by which this proposal would increase the basic widow’s or widower’s benefit would be between 12.5% and 50%, depending on the level of benefits payable on each worker’s record.

**Raising Social Security benefits for young survivor and disabled recipients.** Two proposals are directed at instances where a younger worker dies or becomes disabled. In these cases the earnings replacement value of personal accounts is curtailed by the shorter period over which contributions and investment returns are accumulated. This is more likely to be an issue where personal accounts are coupled with benefit constraints, i.e., a change in the benefit formula that would result in across-the-board reductions in initial benefits. In contrast, proposals to raise the age for full retirement benefits might not affect young disabled and survivor cases (by design, their benefits currently are computed as if they already attained that age). Similarly, benefits under proposals to offset Social Security benefits by the amount of

---

<sup>18</sup> (...continued)

in this respect, they could have an effect on benefits. The reductions that otherwise would have to take place are illustrated by **Table 6**, which projects the difference between the benefit levels prescribed by current law and those that would be affordable under the trustees’ intermediate projections.

<sup>19</sup> It is assumed that the additional earnings taxed would accrue to the worker’s Social Security earnings record. Some proposals advocated in the past would have taxed the additional earnings without crediting them to the worker’s record.

the annuity from a personal account might not be much different from the level of benefits promised under current law, since the idea is to achieve those levels through the combination of Social Security benefits and annuity payments.

Under two measures illustrated here, it is assumed that proposals to create personal accounts and curtail the growth of initial Social Security benefits would be accompanied by additional measures allowing the system to retain a greater portion of its pre-reform “social insurance” function. One would accomplish this by *raising the maximum Social Security benefits payable to a worker’s family*. Under current law, spouse’s, children’s, or other potential dependents’ benefits are often reduced because of an overall limit on the benefits payable on a single earnings record. This limit, referred to as the “family maximum,” now ranges from 150% to 188% of the worker’s basic benefit and varies with the size of that benefit. Under the proposal, these family maximum percentages would be increased gradually over time as the constraint on basic benefits becomes larger.

The other proposal would *increase the number of years of earnings disregarded in calculating Social Security benefits for workers who become disabled before age 47*. Disregarding years of low earnings can raise a recipient’s average career earnings for benefit calculation purposes. Under current law, the highest 35 earnings’ years are used for workers age 62 or older. The number of years counted drops for younger disability or survivor cases. In early death cases, it drops by the number of years the worker died before age 62, with a minimum of 2 years used in the calculation for survivors of workers who die at or before age 29. The same rule applies in disability cases where the disability occurs after age 46 but before age 62. However, in cases where the disability occurs at ages 25 through 46, the number of “drop out” years is scaled back. In such cases more earnings years are counted in computing disability benefits than in survivor benefits (see **Table 8**). The proposal illustrated in this report would allow workers who become disabled at ages 25 through 46 to have the same number of years disregarded as in early death cases.

**Table 8. Years of Earnings Counted in Calculating Pre-Age 62 Survivor and Disability Benefit Cases Under Current Law**

Age at time of death or disability	Years counted for survivor benefits	Years counted for disability benefits
61	34	34
47	20	20
46	19	20
41	14	16
36	9	12
31	4	8
29	2	6
27	2	4
26	2	4
25	2	3
24 and younger	2	2

## Results

### Projected Effects of Expenditure Constraint Measures

**Projected reductions from current law benefit levels.** Table 9 illustrates the benefit reductions from current law levels resulting from the constraint measures described in the previous section. The effect of the measures is shown for workers with a career of steady average earnings retiring at age 65 from 2010 to 2070. The top section of the table shows the reduction in benefits in the first year of retirement; the middle section shows the reduction in benefits over a lifetime; and the bottom section shows by how much each proposal would reduce the system's long-range deficit.

The proposals causing the smallest initial reductions are: (1) reducing the COLA by 1 percentage point annually and (2) raising the age for full retirement benefits to reflect increases in longevity. The COLA proposal reduces the first year's benefit by only 3%. However, the reduction compounds year after year, resulting in reductions over a lifetime of 11% to 12%. Raising the age for full retirement benefits in tandem with increases in longevity would produce a small benefit increase for the 2030 retiree because the age for full retirement benefits then would be slightly lower than under current law (66 and 11 months instead of 67). However, the age for full retirement benefits would continue to rise for later retirees, resulting in an 11% first-year and lifetime benefit reduction for the 2070 retiree. The proposal causing the largest reductions for the 2070 retiree is the one that allows initial benefits to rise only with inflation. It would result in first-year and lifetime benefit reductions of 41%.

When observing the benefit levels in the following tables, the reader should keep in mind that only one of the options – allowing future benefits to rise only with inflation – is projected to achieve enough aggregate savings on its own to restore the system's long-range solvency, i.e., on average over the next 75 years. Because the various options are shown next to each other in each table, the reader might instinctively compare one option's effects to another as if they were comparable on an actuarial basis. If viewed this way, a proposal that shows higher residual benefits would appear preferable to another showing lower ones. To evaluate the options in this way would be misleading because the option incorporating the smaller cut would not get as close to or achieve actuarial balance as the ones incorporating larger cuts. Other benefit cuts or tax increases would have to accompany the options with the smaller effects if the system's solvency is to be restored. The tables are designed primarily to show how much each option *on its own* would change benefits. The third section of **Table 9** is designed to give the reader some sense of how far each option goes in restoring actuarial balance.



**Table 9. Projected Changes in Social Security Benefits Resulting From Various Benefit Constraint Options (Measured Against Benefit Levels “Promised” Under Current Law)**

Year of retirement at age 65	Raise age for full retirement benefits to 70 by 2029	Raise age for full retirement benefits to 66 by 2005 and then by increases in longevity	Raise age for full retirement benefits to 70 by 2029 and then by increases in longevity	Allow initial benefits to rise only with inflation beginning in 2006	Allow initial benefits to rise by ½ of real wage growth beginning in 2006	Reduce COLAs by 1 percentage point annually beginning in 2006
<b>Change in first year’s benefits from current law levels (in percent)</b>						
2010	-2.4%	-0.6%	-2.4%	-2.1%	-1.1%	-2.9%
2020	-13.3	-2.4	-13.3	-9.9	-4.6	-2.9
2030	-17.3	0.7	-17.3	-12.9	-3.3	-2.9
2040	-19.2	-2.6	-21.0	-20.9	-7.9	-2.9
2050	-19.2	-5.8	-23.1	-28.2	-12.2	-2.9
2060	-19.2	-8.7	-25.3	-34.8	-16.3	-2.9
2070	-19.2	-11.1	-27.5	-40.8	-20.3	-2.9
<b>Change in lifetime benefits from current law levels (in percent)</b>						
2010	-2.4%	-0.6%	-2.4%	-2.1%	-1.1%	-11.2%
2020	-13.3	-2.4	-13.3	-9.9	-4.6	-11.3
2030	-17.3	0.7	-17.3	-12.9	-3.3	-11.5
2040	-19.2	-2.6	-21.0	-20.9	-7.9	-11.6
2050	-19.2	-5.8	-23.1	-28.2	-12.2	-11.8
2060	-19.2	-8.7	-25.3	-34.8	-16.3	-11.9
2070	-19.2	-11.1	-27.5	-40.8	-20.3	-12.0

Year of retirement at age 65	Raise age for full retirement benefits to 70 by 2029	Raise age for full retirement benefits to 66 by 2005 and then by increases in longevity	Raise age for full retirement benefits to 70 by 2029 and then by increases in longevity	Allow initial benefits to rise only with inflation beginning in 2006	Allow initial benefits to rise by ½ of real wage growth beginning in 2006	Reduce COLAs by 1 percentage point annually beginning in 2006
<b>Actuarial effect of proposals on Social Security's long-range deficit<sup>20</sup></b>						
Percent of average 75-year deficit remaining	38%	87%	28%	0%	49%	27%
Percent of deficit remaining in 75 <sup>th</sup> year	63	83	48	0	39	61

**Note:** Illustrations are for full-time workers who always earned average wages. Comparisons are based on constant dollar amounts. See the Appendix for discussion of other assumptions.

<sup>20</sup> **FOOTNOTE TABLE:** The system's projected average 75-year deficit, expressed as a percent of taxable payroll, is 1.86%. In the 75<sup>th</sup> year, it is 6.05%. Similarly expressed in percent of taxable payroll, the reduction in these deficit figures resulting from each proposal is as follows:

Raise full benefit age to 70 by 2029	Raise full benefit age to 66 by 2005 and then by increases in longevity	Raise full benefit age to 70 by 2029 and then by increases in longevity	Allow initial benefits to rise only with inflation beginning in 2006	Allow initial benefits to rise by ½ of real wage growth beginning in 2006	Reduce COLAs by 1 percentage point annually beginning in 2006
<b>Average 75-year reduction (as % of taxable payroll)</b>					
1.15%	0.24%	1.34%	2.06%	0.94%	1.35%
<b>Reduction in 75<sup>th</sup> year (as % of taxable payroll)</b>					
2.21%	1.00%	3.17%	7.13%	3.67%	2.34%

**A consideration with COLA constraints.** With the exception of the proposal to constrain COLAs, **Table 9** shows that under each proposal the reduction in benefits during the first year of retirement and over a lifetime are proportionately the same (compare the figures for each proposal in the top and middle segments of the table). For instance, the effect of raising the age for full retirement benefits to 70 for someone retiring in 2070 in the first year is 19%, as is the loss in lifetime benefits. With the COLA constraint, however, there would be differences. The relatively small initial (first year) reduction of 3% is somewhat misleading, as is evidenced by the projected lifetime reduction of 12% in 2070.<sup>21</sup> The effect of the COLA constraint grows each year after a person joins the benefit rolls. In effect, it compounds over a recipient's lifetime, and the benefit reduction relative to current law grows larger the longer a person remains on the benefit rolls. Although the recipient would continue to get benefit increases under the proposal, and the nominal value of the benefits would go up, the purchasing power (or real value) of the benefits would decline. **Table 10** shows that, for a worker retiring at age 65, the value of the benefits would be 11.8% lower by age 75 and 23.8% by age 90.

**Table 10. Effect of Paying 1 Percentage Point Lower Annual Social Security COLAs As a Recipient Grows Older**

Monthly benefit at:	Benefits under current law	Benefits with annual COLA minus 1 percentage point	Percentage reduction from current law levels
Age 65	\$1,551	\$1,507	- 2.8%
Age 70	1,825	1,689	- 7.5
Age 75	2,147	1,892	-11.9
Age 80	2,525	2,119	-16.1
Age 85	2,970	2,374	-20.1
Age 90	3,493	2,660	-23.8

**Note:** Illustrations are for a full-time worker retiring at age 65 in 2010 who always earned average wages. Benefits shown in nominal dollars. See the Appendix for discussion of other assumptions.

**The future purchasing power of Social Security benefits.** While **Tables 9 and 10** show that these proposals would provide Social Security benefits that generally would be lower than those provided under current law, they would still provide benefits that have more *purchasing power* than those of today's retirees. Under current law Social Security benefits are projected to rise significantly in real terms. For example, in comparison to the purchasing power of the benefits of workers retiring today at age 65, a similar worker retiring in 2070 would receive a

---

<sup>21</sup> One might ask why the COLA option produces a reduction in initial benefits, since the widespread perception is that the COLA is meant to adjust benefits for inflation *after recipients join the benefit rolls*. COLA adjustments, however, start to apply to benefits the year after a person becomes eligible (at age 62), regardless of whether they choose to receive benefits. The illustrations in the table are for someone retiring at age 65, three years after he or she became eligible for benefits. Hence, the initial benefits shown under the proposal reflect 3 years' worth of COLAs that have been reduced by 1 percentage point annually.

benefit that would be 84% higher in terms of the goods and services it could buy (assuming there was sufficient financing to pay benefits promised under current law). Thus, under all the proposals illustrated here, the purchasing power of future retirees' benefits would still be higher than that of the benefits for comparable new retirees in 2001. Using the same hypothetical retirees as in **Table 9**, **Table 11** illustrates these increases. Note that the bottom section of the table shows that increases in the purchasing power of lifetime benefits are larger than those shown for initial benefits. This occurs because, as a consequence of increasing longevity, future retirees will collect benefits for a longer time than will 2001 retirees.

As the table shows, the proposal resulting in the smallest reduction in benefits from current law levels – increasing the age for full retirement benefits to reflect increases in longevity – produces an initial benefit that has 64% more purchasing power for someone retiring in 2070 than for someone retiring in 2001. The proposal resulting in the largest benefit reduction from current law levels – allowing initial benefits to rise only with inflation – still produces an increase in purchasing power of 9%. In terms of lifetime benefits, in 2070 benefits under these proposals have 88% and 25% more purchasing power, respectively, than for someone retiring in 2001.

**The decline in future replacement rates.** At first glance, it may appear that providing greater purchasing power to future retirees represents an expansion of the Social Security program. It can be construed that way because future recipients would be able to buy more goods and services with their Social Security benefits than people retiring in 2001. However, Social Security has always been described as a form of insurance against the loss of earnings due to retirement, disability or death. Because earnings have almost always tended to grow faster than prices, it is a natural product of Social Security's design that the value of Social Security benefits, expressed in constant dollars, rises over time. Under all the options (and as is slated to occur to a degree under current law as the age for full retirement benefits increases), the income provided by Social Security as a percent of retirees' pre-retirement earnings (the replacement rate) would decline. This would reduce Social Security's role in providing retirement income. These effects are illustrated in **Table 12**, which compares future replacement rates projected under current law and the various options to the average of those for workers retiring at age 65 in 1990-2000.

As **Table 12** shows, under current law Social Security replacement rates for a worker retiring at age 65 who always earned an average wage would decline from the approximate 42.4% level of the past decade to 36.6% for comparable workers retiring in 2025 and later – a decline of 14%. Setting aside the COLA constraint option (because its initial effect is not representative of its relative effect over a lifetime), the option resulting in the smallest reduction in initial benefits from current law levels – raising the age for full retirement benefits to reflect increases in longevity – also results in the smallest drop in replacement rates. Under this option, the replacement rate for the average-wage earner retiring in 2070 would drop to 32.6% – a decline of 23% from the 1990-2000 level. Under the option resulting in the largest benefit reduction from current law levels – allowing initial benefits to rise only with inflation – the replacement rate for the average-wage earner retiring in 2070 would drop to 21.7% – a decline of 49%.

**Table 11. Projected Changes in Purchasing Power of Benefits Under Social Security Benefit Constraint Options**

Year of retirement at age 65	Raise age for full retirement benefits to 70 by 2029	Raise age for full retirement benefits to 66 2005 and then by increases in longevity	Raise age for full retirement benefits to 70 by 2029 and then by increases in longevity	Allow initial benefits to rise only with inflation beginning in 2006	Allow initial benefits to rise by ½ of real wage growth beginning in 2006	Reduce COLAs by 1 percentage point annually beginning in 2006
	Increase in “real value” of first year’s benefits from that payable in 2001					
2010	8.6%	10.7%	8.7%	9.0%	10.0%	8.1%
2020	4.9	18.1	5.0	9.0	15.4	17.5
2030	3.5	26.0	3.5	9.0	21.1	21.6
2040	11.3	34.3	9.0	9.0	27.0	33.9
2050	22.6	43.1	16.7	9.0	33.3	47.5
2060	35.0	52.7	24.9	9.0	39.9	62.4
2070	48.7	63.7	33.6	9.0	46.8	78.8
	Increase in “real value” of projected lifetime benefits from that payable in 2001					
2010	11.3%	13.3%	11.3%	11.6%	12.7%	1.3%
2020	9.7	23.4	9.7	14.0	20.6	12.2
2030	10.6	34.6	10.6	16.5	29.4	18.4
2040	21.4	46.4	18.8	18.8	38.5	32.8
2050	36.1	58.8	29.6	21.0	48.0	48.7
2060	52.5	72.5	41.1	23.1	58.0	66.3
2070	70.7	88.0	53.3	25.2	68.5	85.9

**Note:** Illustrations are for full-time workers who always earned average wages. For an explanation of why the outcomes differ using first year’s benefits and projected lifetime benefits, see footnote 3 on page 3. See the Appendix for discussion of other assumptions.

**Table 12. Projected Replacement Rates Under Social Security Benefit Constraint Options**

Year of retirement at age 65	Current law	Raise age for full retirement benefits to 70 by 2029	Raise age for full retirement benefits to 66 by 2005 and then by increases in longevity	Raise age for full retirement benefits to 70 by 2029 and then by increases in longevity	Allow initial benefits to rise only with inflation beginning in 2006	Allow initial benefits to rise by ½ of real wage growth beginning in 2006	Reduce COLAs by 1 percentage point annually beginning in 2006
<b>1990-2000</b>	<b>42.4%*</b>						
2010	<b>39.4%</b>	38.5%	39.2%	38.5%	38.6%	39.0%	38.3%
2020	<b>38.9</b>	33.8	38.0	33.8	35.1	37.1	37.8
2030	<b>36.6</b>	30.3	36.8	30.3	31.9	35.4	35.6
2040	<b>36.6</b>	29.6	35.7	28.9	28.9	33.7	35.6
2050	<b>36.6</b>	29.6	34.5	28.1	26.3	32.1	35.6
2060	<b>36.6</b>	29.6	33.4	27.3	23.9	30.6	35.6
2070	<b>36.6</b>	29.6	32.6	26.6	21.7	29.2	35.6
Change from 1990-2000 period to 2070	<b>-14%</b>	-30%	-23%	-37%	-49%	-31%	-16%

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

\*Average replacement rate for the period.

## Projected Effects of Personal Account Measures

**Potential annuity payments from personal accounts.** Table 13 illustrates six variations in the projected annuity values of personal accounts, were the accounts to begin in 2002, for workers retiring at age 65 who always earned an average wage. The alternative contributions are 1, 2, and 3% of a worker's earnings and the alternative rates of return on the account balances are 6.4% and 10%.

Table 13 presents the results as a percent of projected Social Security benefits promised under current law. For example, a worker retiring in 2030, who always earned an average wage and steadily contributed 2% of pay earning a rate of return of 6.4%, would have accumulated account assets of \$33,176 (in 2001 dollars) by age 65. The indexed annuity payable from the account during the first year of retirement would be \$2,363. This amount would be equal to about 15% of the Social Security benefits the retiree would receive under current law. If the account were to grow by 10% a year, the first year annuity would be \$4,072, and would be equal to about 26% of the retiree's Social Security benefits. In effect, if intended to be an "add on" to Social Security, the table shows that, depending upon the amount of contributions, the rate of return, and the time over which the account grows, for workers always earning the average wage the account could pay an annuity that could supplement the Social Security benefit by anywhere from 1.7% to 95.8%. If intended to be an alternative to Social Security, the account could replace the benefits by equivalent amounts.

**Table 13. Projected Indexed Annuities From Personal Accounts**

Year of retirement at age 65	First Year's Payments From Personal Account Compared to First Year's Social Security Benefits Under Current Law (in percent)					
	Career Contribution Level:					
	1% of pay	2% of pay	3% of pay	1% of pay	2% of pay	3% of pay
	6.4% annual investment return			10% annual investment return		
2010	1.7%	3.3%	5.0%	1.9%	3.9%	5.8%
2020	4.1	8.3	12.4	5.8	11.6	17.3
2030	7.5	15.0	22.4	12.9	25.8	38.6
2040	11.1	22.2	33.3	24.1	48.2	72.2
2050	13.1	26.1	39.1	31.9	63.9	95.8
2060*	12.8	25.7	38.5	31.4	62.8	94.2
2070*	12.6	25.2	37.9	30.9	61.8	92.6

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

\* One might ask why the value of the personal account as a percentage of current-law Social Security benefits declines after 2050. This results from projected increases in longevity. Because the values are expressed as an annuity, the monthly benefit payable from the principal declines as the period over which the annuity must be paid increases.

It is important to note that the values shown in **Table 13**, and the following tables that show the effects of personal accounts, would be different for workers who have earnings patterns different from that of a full-time worker who always earned an average wage. For example, if a worker always earned the projected federal minimum wage, the ranges shown in **Table 13** would be from 0.9% to 57.6%. For a worker who always earned the Social Security maximum taxable wage, the range would be from 2.6% to 140.6%. In each case, the lower end of the ranges would be lower still if there were periods of unemployment in the worker's career.

**Comparison of personal account annuities to the portion of Social Security benefits that would not be payable given the system's projected financing gap.** Because the trustees project that the Social Security benefits prescribed by current law would not be fully payable beginning in 2038, comparisons to benefits promised under current law can be misleading. **Table 14** shows the benefit amounts prescribed under the rules of current law, the amounts that would be affordable given the system's projected financing limitations, and the difference, i.e., the amounts that would *not* be payable if the projections materialized (again, all calculations are for the *steady average-wage earner* retiring at age 65). It then compares the benefit shortfall to how much could be paid as an indexed annuity from a personal account funded at 2% of pay, growing at the alternative annual rates of return of 6.4% and 10%.

**Table 14. Comparison of Payments From Personal Accounts to the Portion of Social Security Benefits That Would Not be Payable Under Current Law**

Year of retirement at age 65	Initial Social Security monthly benefit (in constant 2001 dollars)			Personal account monthly annuity, assuming 2% of pay contribution and:	
	Benefits "promised" under current law	Benefits payable given projected income shortfall*	Difference between "promised" and "payable" benefits	6.4% annual return	10% annual return
2010	\$ 1,171	\$ 1,171	\$ 0	\$ 39	\$ 45
2020	\$ 1,273	\$ 1,273	\$ 0	\$ 106	\$ 147
2030	\$ 1,317	\$ 1,317	\$ 0	\$ 197	\$ 339
2040	\$ 1,450	\$ 1,059	\$ 392	\$ 322	\$ 698
2050	\$ 1,597	\$ 1,164	\$ 433	\$ 417	\$ 1,020
2060	\$ 1,759	\$ 1,237	\$ 522	\$ 451	\$ 1,103
2070	\$ 1,936	\$ 1,319	\$ 617	\$ 489	\$ 1,196

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

\* Does not include benefit reductions that might be necessary if the personal accounts were funded from a "carve out" of Social Security payroll taxes.



The figures in **Table 14** show that a personal account funded at 2% of pay with a 6.4% annual rate of return would offset much of the benefit shortfall for workers retiring in 2040 and later, and would significantly exceed the shortfall for all retirees if the annual return were 10% (compare the amounts in the two “*personal account monthly annuity*” columns on the right to the middle column labeled “*difference between ‘promised’ and ‘payable’ benefits*”). Although not reflected in the table, a personal account funded at 1% of pay would provide only a partial offset to the benefit shortfall if its annual return were 6.4%, but would more than offset the shortfall for 2050 and 2060 retirees if it achieved a 10% return. An account funded at 3% of pay would more than offset the benefit shortfall for all retirees under either a 6.4% or 10% annual return scenario, by as much as threefold if the return were 10%.

**Effect of coupling a new personal account system with certain Social Security benefit constraints.** While **Table 14** gives some perspective on the extent to which a personal account funded at 2% of pay might offset the projected benefit shortfalls for a worker always earning the average wage, few if any policymakers would envision a scenario of allowing Social Security benefits to drop abruptly when the trust fund balances are depleted. Benefit constraints likely would be phased in gradually, allowing future retirees time to adjust their retirement plans. **Table 15** illustrates how three relatively large benefit constraints would mesh with the potential annuities from personal accounts. The first would couple the creation of personal accounts with raising the age for full Social Security retirement benefits to 70. The second would couple personal accounts with allowing initial Social Security benefits to rise only with inflation. The third would offset Social Security benefits by 75% of the personal account’s annuity value (or alternatively, use the personal account to fund part of the Social Security benefit). To simplify the presentation, **Table 15** shows the net effect of each proposal, i.e., the combined effect of reducing Social Security benefits and providing annuities from new personal accounts.

**Table 15. Effect on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts**

Year of retirement at age 65	Percentage Change in Benefits from Current Law Levels					
	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029		Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006		Create personal accounts and offset Social Security benefits by 75% of personal account annuity	
	Assuming personal accounts funded at 2% of pay* earn annual return of:					
	6.4%	10%	6.4%	10%	6.4%	10%
2010	1%	1.4%	1.3%	1.8%	0.8%	1.0%
2020	-5.0	-1.7	-1.6	1.6	2.1	2.9
2030	-2.4	8.4	2.0	12.8	3.7	6.4
2040	3.0	28.9	1.3	27.2	5.6	12.0
2050	6.9	44.6	-2.1	35.7	6.5	16.0
2060	6.4	43.5	-9.2	28.0	6.4	15.7
2070	6.0	42.5	-15.6	21.0	6.3	15.4

**Note:** Illustrations are for workers who always earned average wages. See the Appendix for discussion of other assumptions.

\* Assumes “add on” approach is taken to fund the accounts.

Under the first approach shown in **Table 15** – coupling personal accounts with raising the age for full retirement benefits to 70 – if the personal accounts were to grow at a 6.4% annual rate, the annuities payable from them would slightly exceed the reduction in Social Security benefits for most cohorts, with the exception of those retiring in the 2020-2030 period. (These “earlier” cohorts would be fully affected by the increase in the age for full retirement benefits, but the personal accounts would not have a full career over which to grow). If the personal accounts were to grow at a 10% rate, by 2040 the annuities would substantially exceed the benefit reduction. **Table 16**, which separates the effects of the Social Security benefit constraints from those of the personal accounts, shows that with an account growing at a 6.4% rate, a 19% reduction in Social Security benefits for a new retiree in 2070 is more than offset by an account annuity whose value is equal to 25% of the current law Social Security benefit. At a 10% annual growth rate, the account annuity would be more than three times as large as the Social Security benefit reduction.

As with the first approach, under the second approach – coupling personal accounts with allowing initial benefits to rise only with inflation – the Social Security benefit reduction would be partially offset if the accounts were to grow at a 6.4% rate and more than offset if they were to grow at a 10% rate. **Table 16** shows that with the accounts growing at a 6.4% rate, a 41% reduction in Social Security benefits for a new retiree in 2070 is partially offset by a personal account annuity equal to 25%

of the current law Social Security benefit. At a 10% annual growth rate, the account annuity substantially exceeds the Social Security benefit reduction.

Under the third approach – offsetting Social Security benefits by 75% of the annuity payable from a personal account – by definition the combined benefit would be higher by an amount equal to 25% of the personal account annuity.<sup>22</sup> Also, the personal accounts will be one-third higher than the reduction in Social Security benefit, regardless of the rate of return on the personal account.<sup>23</sup> **Table 15** shows that if the personal account grew at a 6.4% rate, by 2070 the combined benefit would be 6.3% higher than the Social Security benefit payable under current law. If the account were to grow at a 10% rate, by 2070 the combined benefits would exceed current-law Social Security benefits by 15%. **Table 16** shows that with the accounts growing at a 6.4% rate, a 19% reduction in Social Security benefits for a new retiree in 2070 is more than offset by a personal account annuity equal to 25% of the current law Social Security benefit. At a 10% annual growth rate, a 46% reduction in Social Security benefits is more than offset by an account annuity equal to 62% of the current-law Social Security benefit.

---

<sup>22</sup> If the personal account annuity were \$1.00 and the Social Security benefit were \$2.00, after the 75% offset was applied, the Social Security benefit would be \$1.25, resulting in a combined benefit of \$2.25.

<sup>23</sup> The reduction in Social Security benefits equals 75% of the personal account, so the personal account (100%) exceeds the reduction (75%) by 33.3%.

**Table 16. Separated Effects on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts**

Change in Benefits from Current Law Levels (in percent)										
Year of retirement at age 65	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029			Create personal accounts and allow initial benefits to rise only with inflation beginning in 2006			Create personal accounts and offset benefits by 75% of personal account annuity			
	Reduction in Social Security benefits	Increase in retirement income from account funded at 2% of pay* with annual return of:		Reduction in Social Security benefits	Increase in retirement income from account funded at 2% of pay* with annual return of:		Reduction in Social Security benefits with account funded at 2% of pay* with annual return of:		Increase in retirement income from account funded at 2% of pay* with annual return of:	
		6.4%	10%		6.4%	10%	6.4%	10%	6.4%	10%
2010	-2.4%	3.3%	3.9%	-2.1%	3.3%	3.9%	-2.5%	-2.9%	3.3%	3.9%
2020	-13.3	8.3	11.6	-9.9	8.3	11.6	-6.2	-8.7	8.3	11.6
2030	-17.3	15.0	25.8	-12.9	15.0	25.8	-11.2	-19.3	15.0	25.8
2040	-19.2	22.2	48.2	-20.9	22.2	48.2	-16.7	-36.1	22.2	48.2
2050	-19.2	26.1	63.9	-28.2	26.1	63.9	-19.6	-47.9	26.1	63.9
2060	-19.2	25.7	62.8	-34.8	25.7	62.8	-19.2	-47.1	25.7	62.8
2070	-19.2	25.2	61.8	-40.8	25.2	61.8	-18.9	-46.3	25.2	61.8

**Note:** Illustrations are for workers who always earned average wages. See the Appendix for discussion of other assumptions.

\*Assumes “add on” approach is taken to fund the accounts.

**Tables 17 and 18** show a similar pattern for replacement rates for a steady average-wage earner under the three options. By the time the personal accounts are fully phased-in, only one option – coupling personal accounts with allowing initial benefits to rise only with inflation – does not produce a replacement rate that is higher than the benefits promised under current law, and this result occurs only when the account is assumed to grow at a 6.4% rate. However, if compared to the benefit levels payable under the system’s projected revenue stream (i.e., if no action were taken to close the long-range funding gap), leading to a “current law” replacement rate of only 24.9% in 2070, then all the options eventually would produce a higher replacement rate than current law (compare the 24.9% rate to the rates shown for the options on the bottom line of **Table 17**).

**Table 17. Net Replacement Rates Resulting From Coupling Social Security Benefit Constraints With Personal Accounts**

Combined Replacement Rate from Reducing Social Security Benefits and Creating Personal Accounts Funded at 2% of Pay* (First year’s benefits/payments as % of final year’s earnings)							
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029, assuming accounts earn annual return of:		Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006, assuming accounts earn annual return of:		Create personal accounts and offset Social Security benefits by 75% of personal account annuity, assuming accounts earn annual return of:	
		6.4%	10%	6.4%	10%	6.4%	10%
2010	39.4	39.7	39.9	39.8	40.0	39.7	39.7
2020	38.9	36.9	38.2	38.2	39.5	39.6	39.9
2030	36.6	35.6	39.6	37.2	41.2	37.9	39.9
2040	36.6	37.6	47.1	37.0	46.4	38.5	40.9
2050	36.6	39.0	52.8	35.7	49.5	38.9	42.3
2060	36.6	38.8	52.4	33.2	46.7	38.8	42.2
2070	36.6	38.7	52.0	30.8	44.2	38.8	42.1

**Note:** Illustrations are for workers who always earned average wages. See the Appendix for discussion of other assumptions.

\* Assumes “add on” approach is taken to fund the accounts.

**Table 18. Separated Effects on Replacement Rates From Coupling Social Security Benefit Constraints With Personal Accounts**

Separate Components of Replacement Rate from Reducing Social Security Benefits and Creating Personal Accounts Funded at 2% of Pay* (First year's benefits/annuities as % of final year's earnings)											
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029			Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006			Create personal accounts and offset Social Security benefits by 75% of personal account annuity			
		From Social Security	From account earning annual return of:		From Social Security	From account earning annual return of:		From Social Security, with an account earning annual return of:		From personal account earning annual return of:	
			6.4%	10%		6.4%	10%	6.4%	10%	6.4%	10%
2010	39.4	38.5	1.3	1.5	38.5	1.3	1.5	38.4	38.3	1.3	1.5
2020	38.9	33.8	3.2	4.5	35.0	3.2	4.5	36.5	35.6	3.2	4.5
2030	36.6	30.3	5.4	9.4	31.8	5.4	9.4	32.5	29.6	5.4	9.4
2040	36.6	29.6	8.1	17.6	28.9	8.1	17.6	30.5	23.4	8.1	17.6
2050	36.6	29.6	9.5	23.3	26.2	9.5	23.3	29.5	19.1	9.5	23.3
2060	36.6	29.6	9.4	22.9	23.8	9.4	22.9	29.6	19.4	9.4	22.9
2070	36.6	29.6	9.2	22.5	21.6	9.2	22.5	29.7	19.7	9.2	22.5

**Note:** Illustrations are for workers who always earned average wages. See the Appendix for discussion of other assumptions.

\*Assumes "add on" approach is taken to fund the accounts.

Under all three options, the purchasing power of future Social Security benefits is projected to be higher than that of the benefits for a comparable worker retiring in 2001. **Tables 19 and 20** show that adding an annuity from a new personal account would be a significant supplement to these higher levels.

In these tables, under the option creating the largest reduction in Social Security benefits – allowing initial benefits to rise only with inflation beginning in 2006 – future Social Security benefits would still be 9% higher than that of a retiree in 2001. However, supplementing the Social Security benefit with a personal account funded at 2% of pay and growing at a 6.4% rate of return would raise the future purchasing power of the initial benefit over that of the 2001 retiree by 27.7% for the 2030 retiree and 55.5% for the 2070 retiree. If the account were to grow at a 10% rate, the account would raise the initial benefit's purchasing power by 41.2% for the 2030 retiree and 122.7% for the 2070 retiree.

Under the proposal to raise the age for full retirement benefits to 70, a personal account funded at 2% of pay and growing at a 6.4% rate of return would raise the future purchasing power of the initial benefit over that of the 2001 retiree by 22.2% for the 2030 retiree and 95.1% for the 2070 retiree. If the account were to grow at a 10% rate, the account would raise the future purchasing power by 35.8% for the 2030 retiree and 162.4% for the 2070 retiree. Under the proposal to offset Social Security benefits by 75% of the account's annuity value, the account would raise the initial benefit's purchasing power by 29.9% for the 2030 retiree and 95.7% for the 2070 retiree. If the account were to grow at a 10% rate, the account would raise the initial benefit's purchasing power by 33.2% for the 2030 retiree and 112.5% for the 2070 retiree.

**Table 19. Projected Future Purchasing Power From Coupling Social Security Benefit Constraints With Personal Accounts**

Projected Changes in Purchasing Power of Combined Benefits From 2001 Levels							
Year of retire- ment at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029		Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006		Create personal accounts and offset Social Security benefits by 75% of personal account annuity	
		Accounts are funded at 2% of pay* and have annual return of:					
		6.4%	10%	6.4%	10%	6.4%	10%
2010	11.3%	12.3%	12.9%	12.7%	13.3%	12.2%	12.3%
2020	21.0	15.0	18.9	19.0	23.0	23.5	24.5
2030	25.2	22.2	35.8	27.7	41.2	29.9	33.2
2040	37.9	42.0	77.7	39.6	75.4	45.5	54.5
2050	51.8	62.2	119.6	48.6	106.0	61.7	76.1
2060	67.2	77.9	140.0	51.9	113.9	77.9	93.4
2070	84.1	95.1	162.4	55.5	122.7	95.7	112.5

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

\* Assumes “add on” approach is taken to fund the accounts.



**Table 20. Separated Effects on Future Purchasing Power of Benefits/Annuities From Coupling Social Security Benefit Constraints With Personal Accounts**

Projected Changes in Purchasing Power of Benefits From 2001 Levels											
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029			Create personal accounts and allow initial benefits to rise only with inflation beginning in 2006			Create personal accounts and offset benefits for 75% of personal account annuity			
		Social Security benefits	Income from account funded at 2% of pay* with annual return of:		Social Security benefits	Income from account funded at 2% of pay* with annual return of:		Social Security benefits		Income from account	
			6.4%	10%		6.4%	10%	Assuming account funded at 2% of pay* with annual return of:			
								6.4%	10%	6.4%	10%
2010	11.3%	8.7%	3.7%	4.3%	9.0%	3.7%	4.3%	8.4%	8.0%	3.7%	4.3%
2020	21.0	4.9	10.0	14.0	9.0	10.0	14.0	13.5	10.5	10.0	14.0
2030	25.2	3.5	18.7	32.3	9.0	18.7	32.3	11.1	1.0	18.7	32.3
2040	37.9	11.3	30.6	66.4	9.0	30.6	66.4	14.9	-11.9	30.6	66.4
2050	51.8	22.6	39.6	97.0	9.0	39.6	97.0	22.1	-20.9	39.6	97.0
2060	67.2	35.0	42.9	104.9	9.0	42.9	104.9	35.0	-11.5	42.9	104.9
2070	84.1	48.7	46.5	113.7	9.0	46.5	113.7	49.2	-1.2	46.5	113.7

**Note:** Illustrations are for a full-time worker who always earned average wages. See the Appendix for discussion of other assumptions.

\* Assumes “add on” approach is taken to fund the accounts.

**Effect of financing considerations on the coupling of benefit constraints and personal accounts.** Although this report makes no explicit assumption about how personal accounts would be funded, **Tables 14 through 20** reflect reform plans in which personal accounts would implicitly be funded in a way that does not alter the system's current financing, i.e., through an "add on" approach. These illustrations assume that the Social Security trust funds would continue to be credited with Social Security taxes as scheduled under current law and that a separate source of funding would be created for the personal accounts. For example, wage earners might be required to make additional payroll tax contributions to fund the accounts, or surplus federal tax receipts (assuming they exist) might be apportioned to each wage earner's account.

Alternatively, if these accounts were funded under the "carve out" method, i.e., using a portion of existing Social Security taxes that would otherwise be credited to the Social Security trust funds, the system's long-range actuarial deficit would be increased. If it were assumed that other funding sources would be established to make up for the diverted taxes (such as general fund infusions into the system), then the retirement income reflected in the previous tables would be the same as shown. However, if it were assumed that future Social Security benefits would have to be further reduced to make up for the larger deficit, the retirement income reflected in the previous tables would be too high. Larger benefit reductions would be required to avoid an increase in the system's actuarial deficit. Currently, the system's long-range deficit is projected to be 1.86% of taxable payroll for the next 75 years as a whole. A diversion of 2 percentage points of the Social Security tax to personal accounts potentially would increase the imbalance to something on the order of 3.86% of taxable payroll, more than doubling the average 75-year deficit.

Although there is no generic approach to offsetting this potential revenue loss, a number of proposals would reduce a worker's Social Security benefits by an amount equal to the percentage of lifetime Social Security taxes that are diverted. For example, the reduction in benefits for workers who throughout their career diverted 2 percentage points of the 12.4% Social Security tax (employee/employer shares combined) would be 16.1% of their future Social Security benefits ( $2/12.4 = 16.1\%$ ).<sup>24</sup>

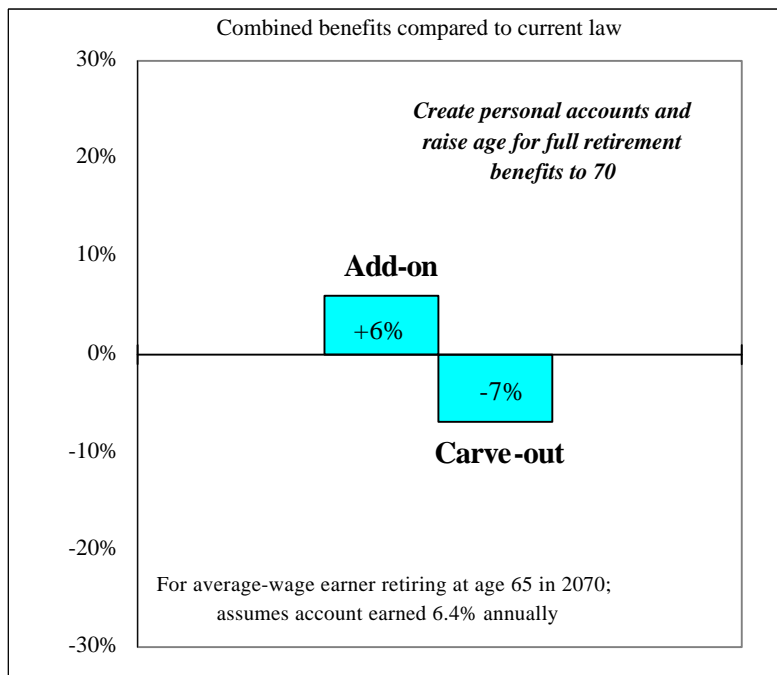
Like **Tables 15 through 20**, **Tables 21 through 26** illustrate retirement income under proposals that couple personal accounts with benefit reductions, but they incorporate further reductions in benefits to reflect the assumption that workers would give up a portion of their remaining Social Security benefits based on the percentage of lifetime Social Security taxes diverted to fund their accounts.

---

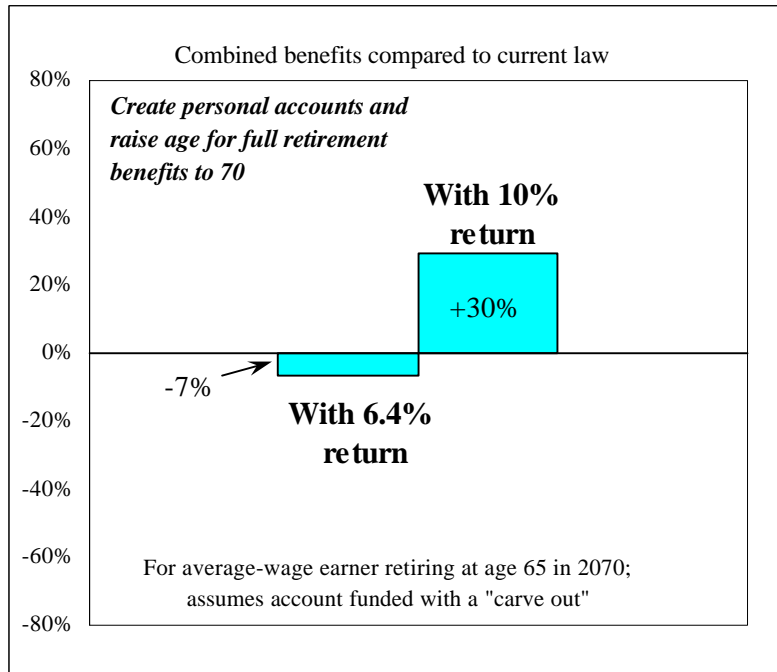
<sup>24</sup> The 16.1% reduction would apply to workers who divert 2% of their Social Security payroll taxes each year for a full 43-year career. The reduction would be smaller for workers with less than a full career under a system of personal accounts. Also, as mentioned in footnote 4 on page 5, this approach assumes that the 16.1% reduction would apply equally to retirement, disability, and survivor benefits. If the benefit reductions were to apply only to the retirement portion of the program, they would have to be larger than 16.1%.

**Table 15** showed that, under the first approach (coupling personal accounts funded from the add on method with raising the age for full retirement benefits to 70), the annuities payable from accounts of full-time workers who always earned an average wage and contributed 2% of pay that grew at an annual rate of 6.4% would slightly exceed the reduction in Social Security benefits for most cohorts. At 10% annual growth, however, the annuities would substantially exceed benefit reductions for those retiring in 2040 and beyond. For example, retirement income for a worker retiring in 2070 would be 42.5% higher than Social Security benefits under current law. By comparison, if it is assumed that benefits would be further reduced in proportion to the amount of Social Security taxes diverted to fund the account, as shown in **Table 21**, the annuities payable from accounts that grew at an annual rate of 6.4% would not be sufficient to offset Social Security benefit reductions for any cohort. For example, under this “carve out” approach the Social Security benefit for a worker retiring in 2070 would be reduced by about 32% from current law levels. The annuity payable from an account would offset only about 80% of that reduction, so the net retirement income from the two sources would be 7% lower than under current law (see **Figure 4**). At the higher growth rate of 10%, the annuity would more than offset the Social Security benefit reductions for workers retiring in 2040 and later. As shown in **Table 22**, for a new retiree in 2070 the annuity would equal 62% of current-law Social Security benefits, almost twice the amount needed to offset the 32% benefit reduction that would occur under the proposal, yielding a 30% net increase in retirement income (see **Figures 5 and 6**).

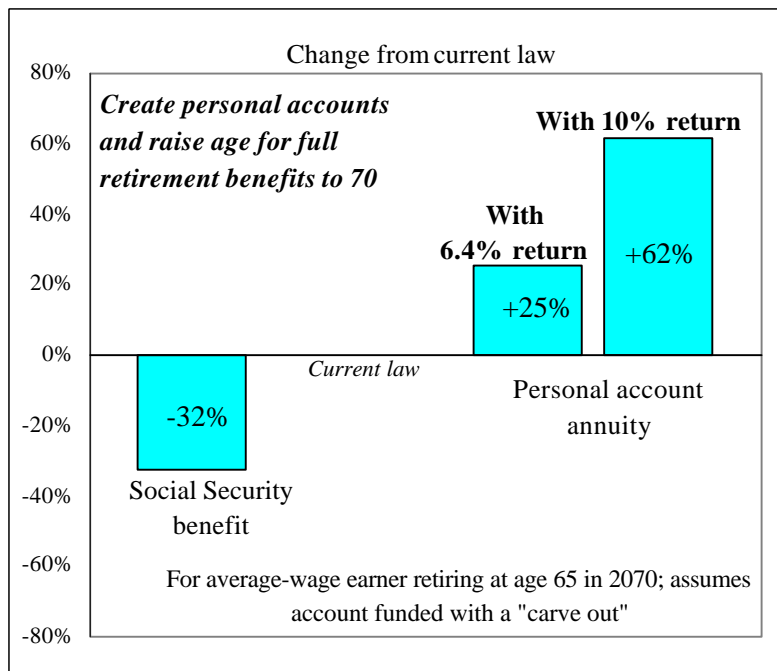
**Figure 4. Effect of Add-on Versus Carve-out Approach to Funding Personal Accounts**



**Figure 5. Effect of Rate-of-Return Assumption  
(Combined Benefit Under Option)**

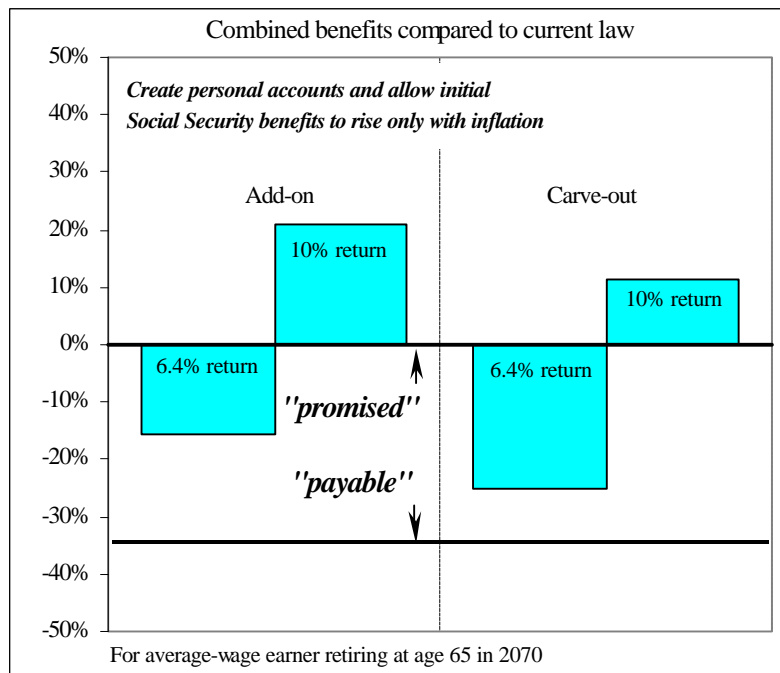


**Figure 6. Effect of Rate-of-Return Assumption  
(Separate Components Under Option)**



Similarly, **Table 15** showed that under the second approach – coupling personal accounts funded from the add on method with allowing initial benefits to rise only with inflation beginning in 2006 – the annuities payable from accounts that grew at an annual rate of 6.4% would only partially offset the benefit reductions for earlier cohorts, while at the higher growth rate of 10%, they would more than offset the benefit reductions for all cohorts. By comparison, as shown in **Table 21**, personal accounts that grew at an annual rate of 6.4% would not be sufficient to offset the larger benefit reductions. However, if the accounts grew at a rate of 10%, the annuities would exceed the benefit reductions for new retirees in 2030 and later although the net positive effect on retirement income would be somewhat lower. For example, under the add on approach shown in **Table 15**, a worker retiring in 2070 would receive a net increase of 21% over current law. If Social Security benefits are reduced further to reflect a diversion of taxes to fund the accounts, as shown in **Table 21**, the same worker would receive a net increase of 11%. When compared to the portion of Social Security benefits *affordable* under current law if no changes are made to the system, retirement income under the second approach would be higher under both an add on and a carve out approach assuming the personal accounts earned either a 6.4% or a 10% rate of return (see **Figure 7**).

**Figure 7. Combined Benefits Under Option Compared to Benefits “Promised” and Benefits “Payable” Under Current Law**



Under the third approach shown in **Table 15** – offsetting Social Security benefits for 75% of the annuity payable from a personal account funded from the add on method – accounts that earned either a 6.4% or 10% annual return would be sufficient to make up for the reduction in Social Security benefits. Under the proposal, the net increase varies from about 1% to about 16% depending on the cohort and the investment return. By comparison, personal accounts funded under the carve out method under both investment return assumptions would not be sufficient to offset the larger benefit reductions shown in **Table 21** for any cohort. With a 10% annual return, the proposal would result in only a small negative net effect for all cohorts, especially new retirees in 2050 and later for whom the net negative effect would be less than 1%. As shown in **Table 22**, assuming a 6.4% annual return, Social Security benefits would be reduced by about 35% for a new retiree in 2070 and the annuity would be equal to about 25% of current law benefits resulting in a 10% net reduction in retirement income. Assuming a 10% annual return, the reduction in Social Security benefits (-62.4%) would be roughly equal to the value of the annuity relative to current law benefits (+61.8%) for a net (rounded) reduction of -0.7%.

**Table 21. Effect on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes**

Change in Benefits from Current Law Levels (in percent)						
Year of retirement at age 65	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029		Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006		Create personal accounts and offset Social Security benefits by 75% of personal account annuity	
	Assuming personal accounts funded at 2% of pay earn annual return of:					
	6.4%	10%	6.4%	10%	6.4%	10%
2010	-2.0%	-1.5%	-1.7%	-1.2%	- 2.2%	-2.0%
2020	-10.8	-7.5	-7.7	-4.4	-4.7	-3.9
2030	-11.0	-0.2	-7.2	3.7	-6.8	-4.1
2040	-8.5	17.4	-10.0	15.9	-8.7	-2.2
2050	-6.2	31.6	-13.7	24.1	-9.6	-0.2
2060	-6.6	30.5	-19.7	17.4	-9.7	-0.4
2070	-7.0	29.5	-25.1	11.4	-9.8	-0.7

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

**Table 22. Separated Effects on Benefit Levels of Coupling Social Security Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes**

Change in Benefits from Current Law Levels (in percent)										
Year of retire- ment at age 65	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029			Create personal accounts and allow initial benefits to rise only with inflation beginning in 2006			Create personal accounts and offset benefits by 75% of personal account annuity			
	Reduction in Social Security benefits	Increase in retirement income from account funded at 2% of pay with annual return of:		Reduction in Social Security benefits	Increase in retirement income from account funded at 2% of pay with annual return of:		Reduction in Social Security benefits		Increase in retirement income from account	
		6.4%	10%		6.4%	10%	6.4%	10%	6.4%	10%
2010	-5.3%	3.3%	3.9%	-5.0%	3.3%	3.9%	-5.5%	-5.9%	3.3%	3.9%
2020	-19.1	8.3	11.6	-16.0	8.3	11.6	-13.0	-15.4	8.3	11.6
2030	-26.0	15.0	25.8	-22.1	15.0	25.8	-21.7	-29.8	15.0	25.8
2040	-30.7	22.2	48.2	-32.2	22.2	48.2	-30.9	-50.4	22.2	48.2
2050	-32.3	26.1	63.9	-39.8	26.1	63.9	-35.7	-64.0	26.1	63.9
2060	-32.3	25.7	62.8	-45.3	25.7	62.8	-35.4	-63.2	25.7	62.8
2070	-32.3	25.2	61.8	-50.3	25.2	61.8	-35.1	-62.4	25.2	61.8

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.



**Tables 17 and 18** show that, once personal accounts funded from the “add-on” method are fully phased in (around 2045), under each of the options the combined benefits would result in higher net replacement rates than under current law, with the exception of the second approach – coupling personal accounts with allowing benefits to grow only by inflation – when the accounts are assumed to grow by 6.4% annually. As shown in **Table 18**, current-law Social Security benefits would provide a replacement rate of 36.6% for a new retiree in 2070. Under the proposal, Social Security benefits would provide a replacement rate of 21.6% and an annuity payable from an account that earns 6.4% annually would replace 9.2% of the worker’s final earnings, yielding a net replacement rate of 30.8%. If the account earns an annual return of 10%, the annuity would replace 22.5% of the worker’s final earnings resulting in a net replacement rate of 44.2% (about 20% higher than under current law). **Tables 23 and 24** illustrate the effects on replacement rates when each option is combined with personal accounts funded from the carve out method. **Table 23** shows that, if the accounts were to grow at an annual rate of 6.4%, all of the options would result in lower net replacement rates compared to current law. The second approach – coupling personal accounts with allowing benefits to increase only by inflation – would result in a net replacement rate of 27.3% for a worker retiring in 2070. If the accounts were to grow at an annual rate of 10%, all of the proposals would result in a net replacement rate approximately equal to or higher than that provided under current law. For example, the first approach – coupling personal accounts with raising the age for full retirement benefits to 70 – would provide a net replacement rate of 47.3% for workers retiring in 2070 (compared to 36.6% under current law).

**Table 23. Net Replacement Rates Resulting From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes**

		Combined Replacement Rate from Reducing Social Security Benefits and Creating Personal Accounts Funded at 2% of Pay (First year’s benefits/annuities as % of final year’s earnings)					
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029	Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006		Create personal accounts and offset Social Security benefits by 75% of personal account annuity		
		Assuming accounts earn annual return of:					
		6.4%	10%	6.4%	10%	6.4%	10%
2010	39.4	38.7	38.9	38.7	38.9	38.5	38.5
2020	38.9	34.7	36.0	35.9	37.1	37.0	37.3
2030	36.6	32.5	36.5	33.9	37.8	34.0	35.0
2040	36.6	33.5	42.9	32.9	42.3	33.3	35.7
2050	36.6	34.3	48.1	31.5	45.3	33.0	36.4
2060	36.6	34.2	47.7	29.3	42.9	33.0	36.3
2070	36.6	34.0	47.3	27.3	40.7	32.9	36.3

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

**Table 24. Separated Effects on Replacement Rates From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes**

		Separate Components of Replacement Rate from Reducing Social Security Benefits and Creating Personal Accounts Funded at 2% of Pay (First year’s benefits/annuities as % of final year’s earnings)										
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029			Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006			Create personal accounts and offset Social Security benefits by 75% of personal account annuity				
		From Social Security	From account with annual return of:		From Social Security	From account with annual return of:		From Social Security		From account		
								Assuming annual return of:				
			6.4%	10%		6.4%	10%	6.4%	10%	6.4%	10%	
2010	39.4	37.3	1.3	1.5	37.4	1.3	1.5	37.3	37.1	1.3	1.5	
2020	38.9	31.5	3.2	4.5	32.7	3.2	4.5	33.9	33.0	3.2	4.5	
2030	36.6	27.1	5.4	9.4	28.4	5.4	9.4	28.7	25.7	5.4	9.4	
2040	36.6	25.3	8.1	17.6	24.7	8.1	17.6	25.3	18.2	8.1	17.6	
2050	36.6	24.8	9.5	23.3	22.0	9.5	23.3	23.6	13.2	9.5	23.3	
2060	36.6	24.8	9.4	22.9	20.0	9.4	22.9	23.7	13.5	9.4	22.9	
2070	36.6	24.8	9.2	22.5	18.1	9.2	22.5	23.8	13.8	9.2	22.5	

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

As shown in **Tables 19 and 20**, all three benefit constraint options combined with personal accounts funded from the add on method would result in an increase in purchasing power over that for a 2001 retiree (assuming either a 6.4% or 10% rate of return). Furthermore, in most instances, all three would provide a greater increase in purchasing power than benefits prescribed under current law. For example, assuming a 10% annual return, the first approach – coupling personal accounts with raising the full benefit age to 70 – would yield a net increase in purchasing power of about 162.4% for a new retiree in 2070. Because current law would provide the same worker with an 84% increase in purchasing power over that for a 2001 retiree, the purchasing power of the benefit under the proposal would be 93% greater than that of the benefit prescribed by current law. Assuming a 6.4% annual return, the second approach – coupling personal accounts with allowing benefits to increase only by inflation – would provide a worker retiring in 2070 with a 55.5% net increase in purchasing power over that for a 2001 retiree (however, it would be 34% less than under current law).

When benefits are reduced further to take into account a diversion of Social Security taxes to fund the personal accounts, a different pattern emerges. As shown in **Tables 25 and 26**, when the rate of return on the accounts is assumed to be 6.4%, all three proposals would provide greater purchasing power than that for a 2001 retiree (although less than that provided under current law). Assuming a 10% annual return, two of the options — coupling personal accounts with raising the full benefit age to 70 and allowing initial benefits to grow only by inflation — would provide even greater purchasing power than current law once the personal account system has had time to mature. For example, retirement income under these two options would provide a worker retiring in 2070 with a net increase in purchasing power of 138.4% and 105.1%, respectively, over that for a 2001 retiree (compared to 84.1% under current law). Once personal accounts are fully phased in, retirement income under the third option (offsetting Social Security benefits by 75% of the annuity from an account that earns a 10% return) would provide about the same increase in purchasing power as Social Security prescribed by current law.

**Table 25. Projected Future Purchasing Power From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes**

Projected Net Change in Purchasing Power of Benefits From 2001 Levels							
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029	Create personal accounts and allow initial Social Security benefits to rise only with inflation beginning in 2006		Create personal accounts and offset Social Security benefits by 75% of personal account annuity		
		Assuming account funded at 2% of pay with annual return of:					
		6.4%	10%	6.4%	10%	6.4%	10%
2010	11.3%	9.1%	9.7%	9.4%	10.0%	8.9%	9.0%
2020	21.0	7.9	11.9	11.7	15.6	15.3	16.3
2030	25.2	11.4	24.9	16.3	29.8	16.7	20.1
2040	37.9	26.1	61.9	24.1	59.8	25.9	34.8
2050	51.8	42.5	99.8	31.0	88.4	37.2	51.6
2060	67.2	56.1	118.2	34.3	96.4	50.9	66.5
2070	84.1	71.2	138.4	37.9	105.1	66.0	82.8

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

**Table 26. Separated Changes in Future Purchasing Power of Benefits/Annuities From Coupling Illustrative Benefit Constraints With Personal Accounts Funded With “Carve out” of Social Security Taxes**

Projected Change in Purchasing Power of Benefits From 2001 Levels												
Year of retirement at age 65	Current law	Create personal accounts and raise age for full Social Security retirement benefits to 70 by 2029			Create personal accounts and allow initial benefits to rise only with inflation beginning in 2006			Create personal accounts and offset benefits for 75% of personal account annuity				
		From Social Security benefits	From account funded at 2% of pay with annual return of:		From Social Security benefits	From account funded at 2% of pay with annual return of:		From Social Security benefits		From account		
								Assuming account funded at 2% of pay with annual return of:				
			6.4%	10%		6.4%	10%	6.4%	10%	6.4%	10%	
2010	11.3%	5.4%	3.7%	4.3%	5.7%	3.7%	4.3%	5.2%	4.8%	3.7%	4.3%	
2020	21.0	-2.1	10.0	14.0	1.7	10.0	14.0	5.3	2.3	10.0	14.0	
2030	25.2	-7.3	18.7	32.3	-2.4	18.7	32.3	-2.0	-12.1	18.7	32.3	
2040	37.9	-4.5	30.6	66.4	-6.5	30.6	66.4	-4.7	-31.6	30.6	66.4	
2050	51.8	2.8	39.6	97.0	-8.6	39.6	97.0	-2.4	-45.4	39.6	97.0	
2060	67.2	13.3	42.9	104.9	-8.6	42.9	104.9	8.1	-38.5	42.9	104.9	
2070	84.1	24.7	46.5	113.7	-8.6	46.5	113.7	19.6	-30.9	46.5	113.7	

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

**Effect on Social Security’s low-wage “tilt” of coupling personal accounts with Social Security benefit constraints.** Table 27 shows the percentage of Social Security benefits that personal accounts would represent for low, average, and high-paid workers. It illustrates that personal accounts would represent a larger percentage of Social Security benefits for high-wage earners than low-wage earners. This occurs because the current Social Security benefit formula is “tilted” in favor of low-wage earners.<sup>25</sup> Although Social Security benefits are not based on a worker’s taxes, a comparison of taxes paid to benefits received shows that lower-wage earners receive a higher return on their taxes than higher-wage earners. Similarly, when benefits in the first year of retirement are compared to a worker’s final earnings, lower-wage earners have a larger percentage of their earnings replaced by benefits. This so-called “tilt” in the program is deliberate and has existed since its inception. It is one of the social insurance features of the program, reflecting the view that Social Security should provide a means through which low-wage workers can sustain at least a “minimal” standard of living in retirement without resorting to welfare. This report does not debate the merits of the “tilt” but merely shows that a personal account funded with a constant percentage of pay would produce, everything else held equal, an account that would be strictly proportional to the level of a worker’s earnings. Thus, a personal account intended to substitute for a portion of Social Security or make up for across-the-board reductions needed to bring the system into long-range actuarial balance would lessen the tilt currently favoring low-paid workers. This is not to say that a personal account to which 2% of pay is contributed would in and of itself discriminate among workers with different levels of earnings. Rather, the lessening of the tilt would be the natural result of shifting more of the combined benefit to a purely proportional system.

---

<sup>25</sup> Benefits are computed by applying a three-step formula to a worker’s “average indexed monthly earnings” (AIME) calculated using as many as 35 years’ worth of earnings. For workers who reach age 62 in 2001, monthly benefits are the sum of 90% of the first \$561 of AIME, 32% of earnings over \$561 through \$3,381, and 15% of the amount above \$3,381. Both the earnings used to compute the worker’s AIME and the so-called “bend points” in the benefit formula (“\$561” and “\$3,381”) are indexed to reflect growth in average wages in the economy. For retirees, each year’s earnings are indexed from the year they were earned to the year the worker reaches age 60. Earnings at age 60 and beyond are included in the averaging calculation at their nominal value.

**Table 27. Projected Value of Personal Accounts As Percent of Current Law Social Security Benefits: Differences Between Low, Average, and Maximum-Wage Earners**

Percent of Social Security Benefits Replaced by Personal Account Annuities			
Year of retirement at age 65	Relative lifetime earnings level		
	Low-wage	Average-wage	Maximum-wage
	Accounts funded at 2% of pay with annual return of 6.4%		
2010	2.5%	3.3%	5.2%
2020	6.2	8.3	12.6
2030	11.1	15.0	22.6
2040	16.5	22.2	33.7
2050	19.4	26.1	39.6
2060	19.1	25.7	39.0
2070	18.7	25.2	38.3
	Accounts funded at 2% of pay with annual return of 10%		
	Low-wage	Average-wage	Maximum-wage
	Accounts funded at 2% of pay with annual return of 10%		
2010	2.9%	3.9%	6.0%
2020	8.6	11.6	17.6
2030	19.1	25.8	39.0
2040	35.8	48.2	73.1
2050	47.4	63.9	97.0
2060	46.6	62.8	95.3
2070	45.9	61.8	93.8

**Note:** Illustrations are for full-time workers retiring at age 65 who steadily contributed to personal accounts beginning in 2002 or later. See the Appendix for discussion of other assumptions.

A key point here is that an across-the-board cut in Social Security benefits when coupled with building personal accounts would affect workers with low earnings or truncated work histories more adversely, because the accumulations in their personal accounts would not make up or adjust for as much of a cut as it would for average and high-wage earners. For example, if a proposal were designed to achieve a 25% general reduction in benefits by 2070, **Table 27** shows that, under the 6.4% rate-of-return scenario, the reduction would basically match the value of the personal account for the average wage earner, meaning that these workers would receive a combined benefit approximately equal to benefits promised under current law. The low-wage earner, however, would receive a combined benefit that would be 6.3% lower than under current law, and the worker who always earned the maximum taxable wage would receive a combined benefit that would be 18% higher.

**Table 28** shows that if personal accounts earning 6.4% annually were combined with allowing initial benefits to grow only at the rate of inflation, by 2070 the reduction in total payments from current law levels would be 22.1% for low-wage earners, compared to 15.6% for average-wage earners, and 4.8% for maximum-wage earners. If, instead, the personal accounts earned 10% annually, the combined



benefits would exceed those afforded by current law rules for wage earners at all three levels, but again the “tilt” would be lessened. The combined payments would be 5.0% higher than under current law for low-wage earners, and 21.0% and 50.6% higher, respectively, for average and maximum wage-earners (see **Figures 8 and 9**).

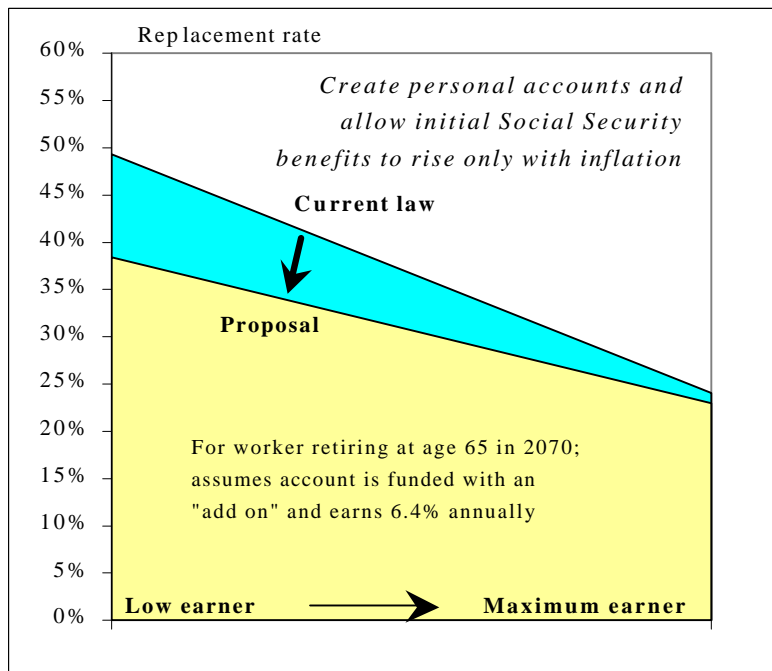
**Table 28. Change in Replacement Rates for Low, Average, and Maximum-Wage Earners Retiring in 2070 Under Benefit Constraints Coupled With Personal Accounts**

	Relative lifetime earnings level					
	Low-wage		Average-wage		Maximum-wage	
	Accounts funded at 2% of pay* earning annual return of:					
	6.4%	10%	6.4%	10%	6.4%	10%
<i>Raise age for full Social Security retirement benefits to 70:</i>						
Replacement rate	48.9%	62.2%	38.7%	52.0%	28.6%	42.0%
Relative change from current law	-0.5%	+26.6%	+6.0%	+42.5%	+19.1%	+74.7%
<i>Allow initial Social Security benefits to rise only with inflation:</i>						
Replacement rate	38.3%	51.6%	30.8%	44.2%	22.9%	36.2%
Relative change from current law	-22.1%	+5.0%	-15.6%	+21.0%	-4.8%	+50.6%
<i>Offset Social Security benefits by 75% of personal account annuity:</i>						
Replacement rate	51.4%	54.8%	38.8%	42.1%	26.4%	29.7%
Relative change from current law	+4.7%	+11.5%	+6.3%	+15.5%	+9.6%	+23.5%

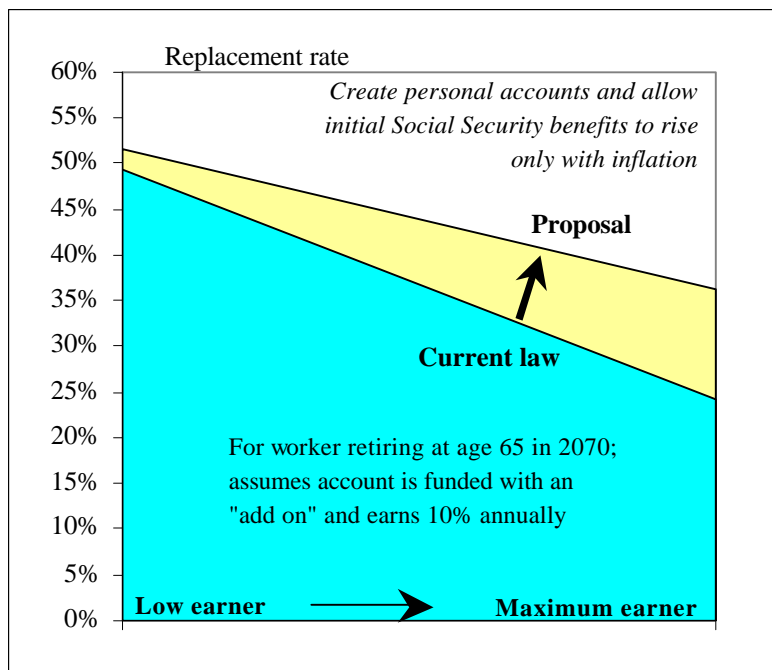
**Note:** Illustrations are for full-time workers retiring at age 65 who steadily contributed 2% of pay to personal accounts. See the Appendix for discussion of other assumptions.

\* Assumes “add on” approach is taken to fund the accounts.

**Figure 8. Effect on Social Security's Low-Wage "Tilt" Assuming a 6.4% Rate of Return**



**Figure 9. Effect on Social Security's Low-Wage "Tilt" Assuming a 10% Rate of Return**



## Projected Effects of Other Selected Reform Measures

**Raising the Social Security taxable earnings base.** Under the two variations of this option illustrated here, the taxable earnings base would be increased by (1) \$15,000 and (2) \$50,000, respectively, effective in 2002, after which it would rise again by the rate of average earnings in the economy. **Table 29** shows the increase in benefits for workers retiring in 2030 and 2070 who had earnings at or above the proposed new levels of the base throughout their careers. If the base were increased by \$15,000 in 2002 (setting it at \$99,900 instead of an estimated \$84,900), and indexed thereafter to reflect average wage growth, benefits for a maximum earner retiring in 2030 would be 7.3% higher than those prescribed under current law. For the comparable worker retiring in 2070, benefits would be 9.1% higher. If the base increased by \$50,000 in 2002, (setting it at \$134,900 instead of \$84,900), and indexed thereafter to reflect average wage growth, benefits for a maximum earner retiring in 2030 would be 24.1% higher than those prescribed under current law. For the comparable worker retiring in 2070, benefits would be 30.1% higher.

It should be understood, however, that while these workers would have higher benefits than under current law, the value of their lifetime benefits relative to the taxes they paid would have fallen. **Table 29** shows that the value of the additional benefits received would be a small proportion of the value of the additional taxes paid. This is the result of the low replacement of the earnings on which the higher taxes would be paid – all of the additional earnings credited to the worker's record would be converted into benefits in the lowest bracket (15%) of the Social Security benefit formula.

**Table 29. Projected Impact of Raising Taxable Earnings Base on an Affected Worker's Social Security Benefits**

Year of retirement at age 65	Replacement rate	Change in replacement rate from current law	Change in purchasing power from 2001 level	Change in benefits from current law	Value* of additional benefits as percent of additional taxes paid
<i>Raise Base by \$15,000 in 2002</i>					
2030	+22.0%	-8.8%	+47.1%	+7.3%	+41.8%
2070	+22.3%	-7.2%	+119.8%	+9.1%	+28.8%
<i>Raise Base by \$50,000 in 2002</i>					
2030	+18.9%	-21.7%	+70.2%	+24.1%	+41.8%
2070	+19.7%	-18.0%	+161.9%	+30.1%	+28.8%

**Note:** Illustrations are for full-time workers who always earned maximum taxable wages. See the Appendix for discussion of other assumptions.

\* Discounted at 6.399%, the effective rate of return on long-term U.S. government bonds projected under the intermediate assumptions of the 2001 Social Security trustees' report.

**Raising Social Security widow's and widower's benefits.** Table 30 shows the effect of basing Social Security widow's and widower's benefits on 75% of combined pre-death Social Security retirement or disability benefits payable to the couple. The illustrations show the results for both one and two-earner couples. In the case of a one-earner couple, the deceased worker is assumed to have received a monthly benefit under current law of \$1,000 before his or her death; the spouse therefore would have received a spousal benefit of \$500 a month before the death of his or her partner (for a combined monthly benefit of \$1,500). In case of a two-earner couple, three illustrations are provided. As Table 30 shows, the range of the increase in benefits provided under this option would be between 12.5% and 50%.

**Table 30. Effect of Setting Widow's and Widower's Benefits to 75% of a Couple's Combined Pre-Death Benefits**

Comparison of surviving spouse's benefit under current law and proposal, assuming:				
Couple had combined benefits of \$1,500 a month before one of them died –	Monthly benefits of one-earner couple before death of primary recipient –	Monthly benefits of two-earner couple, each member having benefits on his or her own record before death of primary recipient or other member –		
Benefit levels of each member of couple before death of one spouse (read across):	1 <sup>st</sup> spouse – \$1,000	1 <sup>st</sup> spouse – \$1,000	1 <sup>st</sup> spouse – \$1,000	1 <sup>st</sup> spouse – \$1,000
	2 <sup>nd</sup> spouse – \$500 (paid as dependent's benefit)	2 <sup>nd</sup> spouse – \$500 or less*	2 <sup>nd</sup> spouse – \$750	2 <sup>nd</sup> spouse – \$1,000
Survivor benefit under current law:	\$1,000	\$1,000	\$1,000	\$1,000
Survivor benefit under proposal:	\$1,125	\$1,125	\$1,313	\$1,500

\* If less than \$500, under current law the benefit the spouse earns from his or her own work record would be supplemented to bring it up to \$500 (the supplemental portion being paid as a dependent spouse's benefit). Assumes that both members retired at the age for full retirement benefits.

**Raising Social Security benefits for young survivors and disabled recipients.** An ancillary issue with the creation of personal accounts is their effect on surviving family and disability benefits. By definition, these types of benefits are paid to younger workers and their dependents. If a worker dies or becomes disabled at a young age, there would not be enough time for a personal account to accumulate much value. As mentioned earlier, this is more likely to be an issue where the creation of the personal account is coupled with a general constraint on benefits. The annuity from a personal account that grows for only 8 years would be worth only 6% of an account that grows for 43 years; one that grows over 18 years would be worth only 18%; and one that grows over 28 years would be worth only 39%. To ameliorate this phenomenon, policymakers could augment the Social Security benefits of these recipients. Examples of ways to address this issue and their projected effects are described below.

***Raising the Social Security maximum family benefit.*** Table 31 shows the effect of raising the “family maximum” levels, which under current law range from 150% to 188% of the principal recipient’s basic benefit. Under the proposal, these family maximum percentages would be increased gradually by 1/3% per year as the effect of the general benefit constraint becomes larger. If personal accounts were included as part of the proposal, presumably the personal account annuities would offset part of the benefit reductions as well.

The table shows the amount by which family maximum benefits would increase over current law levels. By 2070, the family maximum would be 26% higher than under current law. This would substantially offset the general benefit constraints that would be required if the program’s expenditures were curtailed to stay within its projected income.

**Table 31. Effect of Illustrative Liberalization of Social Security Maximum Family Benefits on a Young Survivor Family**

Maximum Family Monthly Benefit in 2001 Dollars (Worker always earned average wage and has 2 or more eligible survivors)			
Year of worker’s death at age 42	Family maximum under current law	If family maximum rises at 1/3% per year after 2001	Increase (in percent)
2010	\$2,340	\$2,411	3.0%
2020	2,576	2,744	6.5
2030	2,836	3,126	10.1
2040	3,123	3,555	13.8
2050	3,439	4,047	17.7
2060	3,787	4,607	21.7
2070	4,170	5,245	25.8

**Note:** Illustrations are for full-time workers who always earned average wages. See the Appendix for discussion of other assumptions.

***Increasing the number of years that can be disregarded in computing benefits for persons disabled before age 47.*** Table 32 shows the effect of increasing the number of years of earnings that can be disregarded in calculating benefits for workers who become disabled before age 47. This option would allow workers who become disabled at ages 25 through 46 to have the same number of years disregarded as in early death cases as displayed in Table 8. Table 32 illustrates the range of its effects. Obviously, this option would do nothing for workers disabled after age 46. Among those gaining additional “drop-out” years, this option would have the largest impact on a very young worker with low earnings, because the proportional effect of fewer years in the denominator would be larger and the increase in average earnings would be replaced by the highest bracket (90%) in the benefit formula. This option would have the least impact on high-paid workers

who become disabled at age 46, because the proportional effect of decreasing the number of years in the denominator determining average earnings would be the smallest, and because any increase in average earnings would be replaced by the lowest bracket (15%) in the benefit formula. **Table 32** portrays the effect on workers at these two extremes.

**Table 32. Range of Effects of Increasing the Number of Years Disregarded in Computing Benefits for Workers Disabled Before Age 47**

<b>Large Effect: Worker Disabled at Age 30 Who in the Previous 4 Years Earned An Amount Equal to One Half the Minimum Wage</b> (in 2001 dollars)		
Current law benefits	Benefits under proposal	Difference
\$226	\$398	76%
<b>Small Effect: Worker Disabled at Age 46 Who Always Earned the Maximum Taxable Wage</b> (in 2001 dollars)		
Current law benefits	Benefits under proposal	Difference
\$1,972	\$1,974	0.08%

**Note:** Illustrations are for workers who become disabled in 2006. See the Appendix for discussion of other assumptions.

## Cautionary Notes

The purpose of this report is to illustrate the potential impact of various Social Security reform measures on future benefit levels. Although the measures examined are ones commonly proposed to help restore the system's solvency, only one is estimated to do so. Each of the others would require, to varying degrees, additional benefit reductions, tax increases, or new sources of income to bring the system into long-range financial balance. Therefore, the reader is cautioned not to compare the measures based only on the size of the benefit reductions they would produce.

Also, in providing illustrations incorporating personal accounts in a Social Security reform plan, two alternative funding approaches are used. One assumes the accounts would be funded with a portion of existing Social Security taxes (a "carve out" approach), and the other assumes they would be funded by other means (an "add on" approach). The report makes no judgement as to which would be preferable. However, it is important to note that, while the add on approach would have no direct impact on the system's financing, by definition the carve out approach would worsen it. In recognition of this, the report assumes that additional benefit constraints would be necessary to avoid or mitigate this effect. Thus, in viewing the illustrations depicting the effects of personal accounts, readers should be aware that the outcomes will differ depending on which approach is used to fund the accounts.

The report makes no assumption regarding whether participation in personal accounts would be mandatory or voluntary. Whether they are mandatory or voluntary makes no difference in the portrayal of the effect on recipients of coupling personal accounts with benefit constraints. However, whether they are mandatory or voluntary could have an impact on the system's financing, particularly under a carve out approach. A system of voluntary accounts could lead to what is known as "adverse selection." For example, if the workers choosing to participate in voluntary personal accounts funded from a carve out approach tended to be mostly high-paid workers, the loss of the Social Security taxes they otherwise would have paid would outweigh the reductions in Social Security benefits they would incur. (This occurs because of the tilt in the benefit formula that replaces a lower proportion of earnings for high-paid workers discussed earlier.) Thus, a greater burden for financing Social Security would fall on the workers who choose not to participate in personal accounts. No adjustment for this effect is included in the report's "carve out" illustrations.

For purposes of showing personal account accumulations, the analysis assumes a 43-year career, based on a person starting work at age 22 and always earning the average wage until retirement at age 65. This stylized scenario is often used in analyzing Social Security benefits (for example, in the portrayal of replacement rates). However, such a scenario should not be construed to necessarily represent a "typical" worker, because of variabilities in unemployment, the ages of entry and exit from the work force, career earnings patterns, etc. These variations are particularly important in calculating the value of personal accounts accumulations.

Additional cautions regarding assumptions made in preparing the report are discussed at length in the Appendix.

## Appendix

### Technical Comments on Report

**Methods and basic assumptions used to prepare report.** Over the years the Congressional Research Service has developed a computer model that does case simulations of personal workers' Social Security benefits. Computations of benefits are based on current law, and the underlying economic and demographic projections used are those contained in the intermediate or "best guess" assumptions of the latest report of the Social Security Board of Trustees. The computations can be expressed in current and constant dollars or as a percentage of pre-retirement earnings that Social Security benefits replace.

The model can be modified to reflect the features of various reform plans so the effect on present and future recipients' benefits and taxes can be evaluated, including the value and effect of personal accounts. It also can be modified to show the effect of differences in personal characteristics (e.g., in their relative earnings levels), in underlying economic and demographic assumptions, or to reflect alternative assumptions about how much of future Social Security benefits can be paid generally given the system's projected financing problems. However, it is a case simulation model and does not do cohort analyses or stochastic modeling.

A crucial measure in comparing the value of benefits over a lifetime is the computation of present values. The model does so by constructing streams of benefit payments that accrue at a specified rate of interest and include cost of living adjustments for benefits. These streams are adjusted by the probability that a particular worker will survive to each year. These probabilities are based on the mortality assumptions contained in cohort life tables on which the intermediate demographic projections are based. We use cohort, rather than period, life tables because they reflect expected improvements in mortality.

Under the intermediate assumptions of the 2001 Social Security trustees' report, average wages in the economy and prices (as measured by the CPI) are assumed to grow ultimately at an annual rate of 4.3% and 3.3% respectively.<sup>26</sup> For lifetime benefit computations (expressed as the present value of benefits at age 65), the probability of survival in each year after retirement is based on the trustees' projections of mortality for a recipient's age cohort and the annual interest rate used for discounting is 6.399%.<sup>27</sup> The trustees project mortality rates separately for men

---

<sup>26</sup> For illustrations involving minimum, low, and maximum-wage earners, the level of earnings year-to-year is assumed to grow at the rate of average wages in the economy.

<sup>27</sup> "Discounting" is used in present value analysis to reflect the value of money over time. For example, to compute the value of lifetime Social Security benefits, the calculation involves determining the amount of money that would have to be invested at a given rate of interest at the time of retirement so that the principle and accumulated interest would be just sufficient to fund a recipient's benefit given his or her probability of survival in each subsequent year. The discount rate used in this analysis, 6.399%, is the same as that employed in the trustees' report intermediate projections for long-term federal securities. The reader should recognize

(continued...)



and women. The illustrations shown in this report are based on “unisex” mortality assumptions that reflect a blending of the trustees’ separate assumptions for men and women. This methodology was chosen largely because the proposals illustrated here envision an annuity system that mandates the use of unisex assumptions in computing annuities (in recognition that gender-based projections of life expectancy are not permitted in determining the amount of annuities payable under 401(k) plans, etc.). Also, because men and women with the same circumstances (i.e., earnings history, age, and time of retirement) receive the same level of benefits for as long as they live, Social Security implicitly annuitizes on a unisex basis.

To provide illustrations of the effect of the various options and the asset accumulations in personal accounts, the analysis assumes a 43-year work career, based on a person starting work at age 22 and always earning the average wage until retirement at age 65. This stylized scenario is often used in analyzing Social Security benefits (for example, in the portrayal of replacement rates). However, such a scenario should not be construed to necessarily represent a “typical” worker, because of variabilities in unemployment, the ages of entry and exit from the work force, career earnings, etc. These variations are particularly important in calculating the value of personal account accumulations.

Another variable with a very large impact on personal account values is the investment rate of return. For illustrative purposes, the analysis uses two average rate-of-growth (or rate-of-return) scenarios, 6.399% (rounded to 6.4% in the discussion) and 10% annually. The lower rate-of-return scenario — 6.399% — represents the same long-range rate projected for the federal securities held by the Social Security trust funds under the trustees’ current intermediate assumptions. These securities consist largely of nonmarketable *special issue* federal notes and bonds, which earn rates of interest equal to that of all federal securities sold and traded in the financial markets with maturities of more than 4 years. The higher rate-of-return scenario — 10% — represents a return equal to the approximate 11.3% average annual rate of growth of the S&P 500 market index (including dividends) over the 74-year period 1926 to 1999, minus 1.3 percentage points per year to reflect administrative costs and related management fees.<sup>28</sup> The use here of these two scenarios is not intended to suggest that either one represents the most likely future range of returns for individuals or age segments (cohorts) of society generally. The intent is only to show the potential asset accumulations and annuity outcomes from

---

<sup>27</sup> (...continued)

that an alternative discount rate could significantly alter the figures shown in the tables.

<sup>28</sup> This adjustment is a crude proxy for these fees (e.g., for the costs of buying and selling securities, marketing, and account maintenance). “Index fund” investments might have costs of a mere fraction of a percent, whereas actively traded, personally-directed accounts might have considerable transaction charges. Perhaps most important, experience in other countries suggests that the extent to which administrative charges cut into the potential rates of return is heavily dependent on the competition that might exist among investment companies vying for new accounts. A number of commentators have pointed out that marketing expenses have been very costly in some countries that have redesigned their Social Security systems to include personal investment components (e.g., Great Britain and Chile).

a reasonably wide range of possible investment returns, given the past performance of market “averages.”

As mentioned in the body of the report, these two rates of return are expressed in nominal terms throughout the report. Economists tend to favor expressing rates of return in so-called “real” terms, i.e., adjusting them for inflation. It is difficult to know the true magnitude (or worth) of an investment return if expressed in nominal terms, because part of the rate might merely reflect inflation and therefore provide no increase in the real value of the asset. For example, if a nominal rate earned on an asset is 5%, it would provide no increase in the asset’s real value if the inflation rate is 5%, whereas it would if inflation were 2% or 3%. To determine a real investment return, nominal rates are reduced by the underlying inflation assumption, which under the trustees’ intermediate forecast is 3.3% annually. Hence, the “real” rate-of-return scenarios modeled for this report are 3% annually when referring to a nominal rate of 6.4% ( $106.399/103.3 = 1.03$ ) and 6.5% annually when referring to a nominal rate of 10% ( $110/103.3 = 1.065$ ).

**Assessment of public policy and market risks – traditional Social Security versus market-based personal accounts.** There has been considerable attention drawn to the question of whether reforming Social Security by creating personal savings accounts would subject people’s retirement income to greater risk than modifying the program in traditional ways, i.e., increasing taxes or constraining benefit growth. The financial markets, particularly the equities market, are volatile, and if people were to be unlucky or unwise in their investment choices, their retirement incomes could suffer. If workers invest in index equity or bond funds that reflect broad market performance, as is prescribed in a number of bills introduced in the past few Congresses, the risk of investing in poor-performing individual stocks would be mitigated. Nonetheless, there still would be substantial variation in the value of personal accounts due to fluctuations in the broad market over time. Even over many years, the markets can produce varied results for investors, and consequently produce varying results for different cohorts of retirees. While one generation might benefit from a market rising by 10% per year over their contribution years, another might only experience an increase of 5% annually. The timing of when they work (or invest) and retire (or draw down their assets) can be a critical factor.

The assumed rates of return used in this analysis do not try to simulate the future ebb and flow of the nation’s financial markets. They reflect steady growth of assets year-over-year. In the real world the markets can be expected to behave very differently; they will go up and down and the pattern of investment growth can be erratic even over 10- or 20-year periods. As a result, the actual growth of a worker’s personal account could differ markedly from what is shown in this report.

However, to presume that the traditional Social Security system provides a “guaranteed” government-afforded benefit that is more reliable than a market-based, personal retirement account system, may overstate the certainty of the traditional system’s ability to pay the level of benefits it currently promises. Certainly, over a short-run period, i.e., of 5 or 10 years – few would challenge the notion that the financial markets could fluctuate significantly more than the economic variables affecting Social Security benefits. Thus, annuities payable from such accounts could be far more unpredictable in the short run than one’s projected Social Security

benefits. And it is also true that under current benefit rules individuals with the same wage history and retiring at the same age (at the same time) are treated the same by Social Security. Under a system of personal accounts, these individuals may receive different benefits. However, they may not be worse off than under the traditional Social Security system. They might all receive higher personal account annuities than what they would receive from the traditional system. They could be lower as well, but the fact that these different people could receive different benefits under a system of personal accounts does not make it riskier than the traditional system. The traditional system is not a stable benchmark. Its promised benefits also could be altered.

Social Security benefits are not contractual (unlike personal savings accounts) and can be reduced by a change in the law, as was done a number of times since 1977, and may have to be done again given the trustees' current projections of a large looming deficit.<sup>29</sup> Conversely, a buildup of larger than projected trust fund reserves might ultimately lead to pressure on future Congresses to authorize larger benefits, only to have to pull them back again because of unexpected adverse economic or demographic circumstances. This happened in the early 1970s. Social Security benefits were increased very significantly from 1967 through 1972, then had to be greatly revised (scaled back) twice in the following 11 years. Benefit levels for new retirees swung about 25% in relative value in the late 1970s and early 1980s.<sup>30</sup> If Congress chooses to address the system's currently projected financing problems with across-the-board benefit cuts, the total reductions could be as large as 27% from the levels projected to prevail in 2038 under the current benefit computation rules. Such is the volatility inherent in a largely pay-as-you-go system.

In the context of assessing the risks inherent in most of the personal account proposals that have been put forth thus far, it should be observed that few rest all or even most of their future benefits on equity investments. In addition few, if any, envision truly unregulated investments. Most would employ 401(k)-type arrangements providing workers with investment choices similar to the index fund options of the federal employees' Thrift Savings Plan (TSP). Hence, the probability that poor market choices or timing will decimate a worker's future retirement income is considerably less likely than under a hypothetical Social Security system modeled after a fully self-directed, market-based, defined contribution system.

Also, while the equity markets are much more volatile than the economy generally, e.g., changes in gross domestic product, average wages, etc. are typically

---

<sup>29</sup> In the past, when making changes to benefits, Congress generally has not reduced them for current recipients. The reductions typically have been prospective in nature.

<sup>30</sup> As a result of changes in the benefit computation rules enacted in 1977 to shore up the Social Security system (P.L. 95-216), the relative level of "initial" benefits for full career average-wage earners dropped by 25% from 1981 to 1985 (the replacement rate — the ratio of the initial benefits to final earnings — dropped from 54.4% for an age-65 retiree in 1981 to 40.9% for a similar retiree in 1985). This followed a rise of nearly 60% over the preceding 11-year period. As a result of amendments enacted in 1983 (P.L. 98-21), the relative benefit levels for similarly-situated future retirees are scheduled to drop by another 12 or 13% by 2022 (the effect of phasing up the age for receipt of "full" benefits from 65 to 67).

less volatile — the traditional Social Security system is strongly influenced by the performance of the economy and its expansion-recession phases. Social Security's revenues are contingent on the number of people working and paying taxes as well as the rate of growth of their wages. The initial benefits it provides are derived from the wage histories of its covered workers and are adjusted thereafter to rise with inflation. In addition, other non-economic factors such as early retirement trends, shifts in immigration, and fluctuations in the incidence of disability can greatly vary the system's payout.

In summary, the fluctuations in the financial markets, and the commensurate effect this may have on the assets and annuities resulting from personal savings accounts, might well be greater than the broader economic fluctuations affecting the financial flows of the traditional Social Security system, but other demographic and political factors can affect the “non-contractual” benefits of the traditional system. *In this context, this report makes no determination of the relative risks for the incomes of future retirees under the various proposals it analyzes. Many variables can effect the reliability of each of them, making a valid assessment that one is riskier than another very difficult.* It is enough to say that each method of financing involves some element of risk. It is left to congressional policymakers to make value judgements as to which risks and what levels of risk are acceptable.

**Annuitization of personal accounts.** The illustrations in this report employ the principles of annuitization to express the value of the projected personal account assets in terms of the monthly inflation-indexed benefits they would produce over a worker's retirement years. However, they are not intended to represent “purchased” annuities. Simulating the process of annuitizing, i.e., spreading or paying out personal account accumulations over the period of a person's retirement — on a scale that encompasses every potential retiree in society — is complex and highly speculative. Today's annuity market is relatively small and expensive. Annuitizing on a large societal basis could result in either large or small charges by the annuity providers, depending on the potential costs of administration (which possibly could be minimized through tight regulation and limiting marketing practices), but more importantly on the risk the providers envision of underestimating annuitants' longevity.<sup>31</sup>

On the other hand, the current rules pertaining to drawing down Individual Retirement Accounts (IRAs) used by many retirees who wish to avoid annuitizing, and the costs thereof, might serve as a proxy. Retirees might also avoid these costs by employing a *personalized* method of drawing down their accounts, involving either an accelerated or delayed liquidation of the assets. Although there would be other

---

<sup>31</sup> For a lengthy discussion of annuitization issues, see *Social Security Privatization and the Annuities Market*. CBO. February 1998. CBO points out that the costs of annuity policies offered by insurance companies today are 15% to 25% higher than “average mortality would suggest,” but it cautions that the current market is small. It states that “a variety of policy options might be considered to avoid the high costs of annuities in a privatized system. Those policy options would monitor the regulation of withdrawals from personal retirement accounts, the timing of annuity purchases, the regulation of annuities markets, and the generosity of government minimum benefit guarantees.”

factors affecting a retiree's choice to annuitize, if the public were to perceive annuitization as expensive, more people could be expected to draw down their retirement assets on their own. If annuities were viewed as having modest costs, then more people could be expected to purchase them.

If the creation of personal accounts and their eventual annuitization were to be mandatory, both the large size of the population involved and the fact that annuitization would be mandatory could greatly lessen the potential costs from those incurred in today's annuity policies – particularly if annuitization were administered through a single insurer or under rules precluding insurers as a group from discriminating on the basis of probable life expectancies. However, there are many unknowns, notable among them being how “inflation-adjusted” annuities would be priced.

**How administrative costs might effect the assumed rates of return on personal accounts.** There are widely varying views about how much administrative expenses would reduce the returns on investments that workers would realize under proposals to create personal accounts. Some suggest that administrative costs would be a minor offset, while other suggest they would be so large that they would defeat the purposes of establishing the accounts. These general assertions, however, tend to oversimplify the debate. There are many types of personal account proposals with a wide range of designs that could greatly vary how much administrative expenses would erode their potential returns.

Many of the Social Security reform plans that have been proposed envision the creation of a process similar to the federal employees' Thrift Savings Plan (TSP), under which the Treasury Department would serve as the collective receiver of contributions for subsequent investment in individually-selected broad-based equity or bond funds (perhaps administered by one or more non-governmental financial institutions). Some 2.5 million federal employees participated in the TSP in March 2001<sup>32</sup> The Federal Retirement Thrift Investment Board, which oversees and is responsible for the TSP, reports very modest administrative expenses for operation of the TSP.<sup>33</sup> However, no institution has had experience handling the volume of records and transactions that would arise from payroll contributions from a participant population of 155 million or more. As a result, many administrative issues (and potential costs) would likely arise with a personal account system that are not observed or well understood at this point. Notable among them is whether a high volume of small dollar transactions that an investment company may be required to

---

<sup>32</sup> *Thrift Savings Plan Highlights*, May 2001.

<sup>33</sup> The Board reports that record keeping and oversight costs were approximately 0.06% of fund assets in 1999. Although data on the transaction charges and management fees of Barclay's Equity Index Fund — the stock fund used by the TSP — were not published, financial statements for two prominent equity index mutual funds — the Vanguard Group's S&P 500 Index Fund and T. Rowe Price's Equity Index 500 Fund — show administrative expenses for 2000 equal to 0.18% and 0.35% of the funds' holdings respectively (these figures also include the record keeping costs of the funds). The Vanguard Group's figure was representative of the relative administrative costs incurred by its fund over the preceding 10 years.

handle would raise the relative magnitude of administrative costs compared, say, to the experience of large mutual fund companies today. They often incur administrative expenses of a fraction of a percent of their assets.<sup>34</sup> However, they routinely require minimum initial deposits of \$1,000 or \$2,500 and minimum subsequent deposits of \$100 or more.<sup>35</sup> These “conditions” can greatly hold down transaction activity. A high volume of small dollar deposits and account balances, as could be expected to arise from regular payroll deductions, might significantly raise the percent of fund assets that administrative costs consume — these are sometimes referred to as “expense ratios.”

The effect on employers might be significant as well, particularly in dealing with investment education of their employees, misreporting of contributions, misreporting of account numbers, failure to withhold, under- and over-withholding, switching of investment companies/funds, changing employers, fraud avoidance, and oversight.

On the other hand, a number of factors might be expected to lessen such problems and the costs they would generate. First, professional management by experienced and regulated investment companies, as frequently used in 401(k) arrangements, could minimize excessive trading and the transaction charges that might be expected from a self-directed, continuously traded, equity account. Second, to the extent that workers were required, or elect, to make use of a uniform withholding and depositing process managed by the Treasury Department — that subsequently channels their deposits into limited-switching “index” funds — fewer investment options would be provided, participant trading would be constrained, and transaction volume and expenses would be minimized.<sup>36</sup> This has been the reported experience

---

<sup>34</sup> The Vanguard Group also has cited a 1997 industry average for equity-index mutual funds of 0.33% of assets, as determined by Lipper Analytical Services (see *Vanguard's Index Trust Prospectus*, April 20, 1998). In direct consultation we had with Lipper Analytical Services, data Lipper provided for funds whose fiscal years ended in the May 1997 - September 1998 period showed a “median expense ratio” of S&P 500 index funds of 0.60% for retail investors and .35% for institutional investors. Also of note is the experience of the TIAA-CREF Equity Index Fund. It reports an expense ratio for 2000 of .26% of assets.

<sup>35</sup> The Fidelity Magellan Fund — the largest equity mutual fund in America with assets on March 31, 2000 of approximately \$109 billion — reported administrative expenses over the preceding 12 months equal to .75% of the average assets of the fund. Although currently closed to new investors, it required a \$2,500 minimum initial deposit (\$500 on a retirement account), and minimum \$100 deposits through its so-called “automatic” account builder system.

<sup>36</sup> In regard to turnover rates for large index funds, the Vanguard Group of mutual funds notes in its annual report for 2000 (The “Vanguard U.S. Stock Index Funds – Large-Capitalization Portfolios, Annual Report, December 31, 2000”) – “Generally, a passively managed fund sells securities only to respond to redemption requests or to adjust the number of shares held to reflect a change in the fund’s target index. Turnover rates for large-cap stock index funds tend to be very low because large-cap indexes, such as the S&P 500, typically do not change much from year to year. Turnover rates for mid-cap and small-cap stock index funds tend to be higher (although still relatively low, compared to actively managed stock funds), because the indexes they track are more likely to change as a result of mergers, acquisitions, business failures, or growth of companies than a larger-cap index.” The

(continued...)

of the federal TSP with respect to its equity index fund (i.e., the so-called “C” fund). Similarly, to the extent the federal TSP is used as a model, charges that typically are levied on mutual fund accounts with low balances, e.g., annual “maintenance” fees or the like, would not occur.<sup>37</sup> Third, while unforeseen administrative issues (and accompanying costs) could arise because of the large magnitude of accounts and transaction activity a personal account system would create, there also would likely be significant economies of scale.<sup>38</sup>

In summary, there is no definitive basis to assess the relative magnitude of the costs of administering personal accounts. The high-yield scenario illustrated in this report — reflecting a 10% annual growth rate — incorporates an arbitrary adjustment for trading and other administrative fees (the average annual 11.3% return of the S&P 500 Index over the 1926 to 1999 period was reduced by 1.3 percentage points). Expressed differently, the annual rate of return on personal account assets was assumed to be 12% lower than the Index’s average annual growth rate ( $1.3/11.3 = 12\%$ ). The adjustment may appear to be large relative to expense ratios incurred by equity-index funds today, but given the “administrative” uncertainties, its use here provides a conservative approach to projecting the outcomes from a higher risk, higher-yielding investment scenario. No explicit adjustment was made to the low-yielding scenario — reflecting a 6.399% annual growth rate. The modest return it portrays could be viewed as already incorporating the potentially lower administrative costs of investing through a conservative, minimally traded, high-grade, bond index strategy.<sup>39</sup>

---

<sup>36</sup> (...continued)

report continues “As of June 30, 2000, the average turnover rate for passively managed domestic equity index funds investing in common stocks was approximately 21%; for all domestic stock funds, the average turnover rate was approximately 90%, according to Morningstar, Inc.” The report shows a turnover rate of 6% for the Vanguard 500 Index Fund in 1999.

<sup>37</sup> For instance, the Fidelity Magellan Fund imposes a \$12 annual “maintenance” fee on accounts with balances under \$2,500. It also requires a “load” on new deposits of 3%, but the load may be lower on accounts with balances in excess of \$250,000. Similarly, the Vanguard Group of index funds imposes a \$10 annual maintenance fee on accounts with balances under \$10,000. These types of requirements do not exist in the federal TSP.

<sup>38</sup> A study done for the Department of Labor showed significantly lower mutual fund expense ratios for “institutional” and large pension plan investors compared to individual “retail” investors. Institutional and large investors in index equity funds were shown to have average expenses ratios in 1996 of 0.35% and 0.13% respectively, compared to retail investors who had a ratio of 0.59%. Economic Systems Inc. *Study of 401(k) Plan Fees and Expenses*, submitted to the Department of Labor, Pension and Welfare Benefits Division. April 13, 1998. Also see statement of Joel M. Dickson, Senior Investment Analyst, Vanguard Group, before the Subcommittee on Finance and Hazardous Materials of the House Committee on Commerce, July 24 1998. (Hearing on *Enhancing Retirement Through Individual Investment Choices*. Washington, GPO, 1998.) He discusses various means to simplify administration of personal accounts and achieve economies of scale.

<sup>39</sup> The trustees’ long-range investment yield used in this report represents an assumption about the return on outstanding “federal” securities. A broader-based bond investment strategy (continued...)

**Effect of new personal accounts on other savings.** If new personal savings accounts were mandated or promoted as part of a Social Security reform plan, people might be expected to make different decisions about their “other” savings. For instance, they might save less in existing 401(k) accounts or IRAs. No adjustment for these possible effects is made in this report.

This does not represent a conclusion that the effect on other savings of creating a new personal account system is likely to be negligible or unlikely to occur. It merely reflects uncertainty about what the effect would be. The effect on other savings poses a significant question about whether and to what extent a Social Security reform plan would effectively increase a worker’s eventual retirement assets and, as well, whether society as a whole would save more. While some reduction in other savings might be expected from introducing a new form of personal account system as part of Social Security, it would be highly speculative to generalize or suggest what the reduction in other savings might be. Much depends on the incentive effects of other tax preferences and workers’ propensity to save and consume. To the extent the favorable income tax treatment afforded under current tax law to other forms of savings (IRAs, 401(k)s, employer-sponsored private pensions, and the like) is continued, the incentives to participate in these other arrangements would continue. Similarly, to the extent such accounts are funded from governmental funds (e.g., out of surplus federal tax receipts or the like) and require no new contributions from participants, the dis-savings effects of creating new accounts should be lessened. Nonetheless, regardless of how these new accounts were to be funded or treated under the income tax code, to the extent persons feel that they have a larger nest egg than they might otherwise have, they may be inclined to borrow or spend more of their discretionary income. And by so doing, they would alter their net savings, and as a group, the overall level of savings achieved in the economy.<sup>40</sup>

---

<sup>39</sup> (...continued)

would include corporate bonds and possibly those of other nations with higher yields. Hence, a more generalized bond-investment scenario would be expected to yield a higher return than assumed in this report.

<sup>40</sup> For a further discussion, see CRS Report RL30708, *Social Security, Savings, and the Economy*, by Brian Cashell.