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## 1994-95 Advisory Council On Social Security Technical Panel on Trends and Issues in Retirement Saving Final Report

Olivia Mitchell

*University of Pennsylvania*, [mitchelo@wharton.upenn.edu](mailto:mitchelo@wharton.upenn.edu)

Joseph Quinn

*Boston College*

G. Lawrence Atkins

*Winthrop, Stimson, Putnam & Roberts*

Richard Burkhauser

*Syracuse University*

Gary Burtless

*The Brookings Institution*

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## 1994-95 Advisory Council On Social Security Technical Panel on Trends and Issues in Retirement Saving Final Report

### Abstract

The charge of the Technical Panel on Trends and Issues in Retirement Savings (TIRS) was to "assist the 1994-95 [Social Security] Advisory Council with respect to its charge to analyze the relative roles of the public and private sectors in the provision of retirement income, particularly how underlying policies of public and private programs, including relevant tax laws, affect retirement decisions and the economic status of the elderly."

### Keywords

retirement savings, social security, American labor market, OASI Trust Fund

### Disciplines

Demography, Population, and Ecology | Economics | Family, Life Course, and Society | Finance | Social and Behavioral Sciences

### Comments

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### Author(s)

Olivia Mitchell, Joseph Quinn, G. Lawrence Atkins, Richard Burkhauser, Gary Burtless, Robert Clark, Peter D. Paul, John Haley, Daniel Halperin, Eric Hanushek, Diane Macunovich, Dallas Salisbury, John Shoven, and Stephen Zeldes

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1994-95 ADVISORY COUNCIL ON SOCIAL SECURITY

TECHNICAL PANEL ON TRENDS AND ISSUES IN RETIREMENT SAVING

FINAL REPORT

1994-95 Advisory Council on Social Security  
Technical Panel on Trends and Issues in Retirement Saving  
Final Report  
September 29, 1995

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**1994-95 Advisory Council on Social Security**  
**Technical Panel on Trends and Issues in Retirement Saving**  
**Final Report**

**EXECUTIVE SUMMARY**

The charge of the Technical Panel on Trends and Issues in Retirement Savings (TIRS) was to "assist the 1994-95 [Social Security] Advisory Council with respect to its charge to analyze the relative roles of the public and private sectors in the provision of retirement income, particularly how underlying policies of public and private programs, including relevant tax laws, affect retirement decisions and the economic status of the elderly."

The Panel members were

Olivia Mitchell, International Foundation of Employee Benefit Plans,  
Professor of Insurance and Risk Management, The Wharton  
School, University of Pennsylvania (co-chair)

Joseph Quinn, Professor of Economics, Boston College (co-chair)

G. Lawrence Atkins, Director of Health Legislative  
Affairs, Winthrop, Stimson, Putnam & Roberts

Richard Burkhauser, Professor of Economics, The Maxwell School,  
Syracuse University

Gary Burtless, Senior Fellow, The Brookings Institution

Robert Clark, Professor of Economics and Business,  
North Carolina State University

Peter Diamond, Paul A. Samuelson Professor of Economics,  
Massachusetts Institute of Technology

John Haley, Watson Wyatt Worldwide, Inc.

Daniel Halperin, Professor of Law, Georgetown University

Eric Hanushek, Professor of Economics and Director, Wallis Institute of  
Political Economy, University of Rochester

Diane Macunovich, Associate Professor of Economics, Williams College

Dallas Salisbury, President, Employee Benefit Research Institute

John Shoven, Charles R. Schwab Professor of Economics and Dean,  
School of Humanities and Sciences, Stanford University, and

Stephen Zeldes, Professor of Finance, The Wharton School, University of  
Pennsylvania.

The Panel met in Washington, D.C. for nine sessions, including two  
presentations before the Advisory Council, and produced this Report.

## **Introduction**

The social security system is not in long-term actuarial balance. The Social Security Trustees, using their intermediate assumptions, project that currently legislated Old Age, Survivors, and Disability Insurance (OASDI) tax revenues will be less than currently legislated benefits after the year 2013. Projected benefits begin to exceed the sum of OASDI taxes and interest earned in 2020, resulting in a decline in the OASDI Trust Funds, and projected depletion in 2030. Over the 75 year long-range planning horizon, the difference between the projected income and cost flows is a deficit equal to an annual 2.17 percent of taxable payrolls. Some combination of benefit decreases and/or revenue increases will be required to close this gap.

In addition to these social security retirement and disability program concerns, much more immediate funding problems exist with the Hospital Insurance component of Medicare, whose Trust Fund is projected to run out in 2002. Moreover, Congressional Budget Office analysis of the President's proposed budget for fiscal year 1996 projects continued federal budget deficits through the year 2000. It is in this context that the Technical Panel on Trends and Issues in Retirement Savings discusses various social security options below.

The Executive Summary begins with a section on current and projected trends in labor markets, employer pensions, savings and the well-being of the elderly. The Summary then discusses policy options designed to deal with projected social security fiscal imbalances, as well as selected other proposals to improve the economic well-being of future retirees. The Summary includes other conclusions and suggestions that the Panel thought were useful to convey to the Advisory Council on Social Security and to the public at large.

The Panel did not seek consensus; rather, its charge was to develop evaluation criteria and to use them to discuss a range of policy options. The Panel discussed both incremental and wide-ranging changes in social security and related programs, changes designed to alleviate both social security's long run fiscal deficit and the broader problem of potentially inadequate retirement income for future generations of retirees. On many of the issues discussed, Panel members were not unanimous, although on some issues they did all agree. Available evidence and supporting arguments are contained in the body of the Final Report.

Some topics were beyond the Panel's charge and therefore are not discussed in detail in this Report. One is the central role of the nation's overall economic health, which has a major impact on the social security system's fiscal health. To the degree



that social security encourages, or at least does not discourage, work and savings, it enhances the prospects for economic growth. The Panel also did not examine how changes in the medical care and health insurance markets will interact with the Medicare and Disability Insurance programs. These two components of the social security system were the subjects of reports by previous Social Security Advisory Councils, and were beyond this Panel's purview.

### **Trends in labor markets, pensions, savings and the well-being of the elderly**

In this section, the Panel discusses recent and probable future trends likely to affect the economic well-being of future retirees. Here the Panel assumes no major changes in the institutional environment, even though it realizes that changes in the largest program, social security, are absolutely necessary. Given its importance to older Americans, significant changes in social security may well affect the trends discussed here.

Labor force participation rates of older Americans (especially men) declined dramatically between 1950 and the mid-1980s. This decline coincided with expanded coverage, increased real benefits and earlier ages of eligibility for retirement benefits in both social security and many employer pension plans. Since the mid-1980s, however, this early retirement trend has abated or stopped.

● In the absence of major institutional change, but given the already legislated change in the Normal Retirement Age for social security from 65 to 66, and then to 67, the Panel anticipates a slow and modest reduction in early retirement, with Americans retiring slightly later over the next several decades.

The American labor market is changing in significant ways. Traditional manufacturing employment is declining, and service jobs are on the rise. Some evidence suggests that the quality of jobs is becoming more bimodal, with job growth among low-skilled, low-paid service workers and high-skilled, high-paid technical and professional employees. This pattern of job growth is reflected in the changing American income distribution, which is becoming more unequal.

Employer pensions are also in flux. After increasing rapidly during the 1950s and 1960s, the proportion of workers participating in an employer pension has leveled off, with slight increases appearing in 1993 and 1994 for the first time in years. About half of the full-time civilian labor force is participating at any given time. Participation rates increase significantly with age, job tenure and earnings level, suggesting that the

proportion of workers covered at some time during their work lives will be higher than indicated in any cross-sectional snapshot. Vesting in plans has grown, meaning that entitlement to benefits has increased. There is a movement away from traditional employer-managed and directed plans (often with defined benefits) to more individualistic plans, with faster vesting, more elective contributions and participant-directed investments.

● Barring major institutional change, it is unlikely that pension coverage will increase significantly over the next several decades. Benefit entitlement will grow because of faster vesting, and the trend toward more participant-directed, defined-contribution plans will continue. Below, the Panel discusses policy options that might be adopted to encourage additional pension coverage.

Private and aggregate national saving in the United States are low by international and by the nation's own historical standards. Many Americans reach retirement age with little personal savings beyond equity in a home. Little professional agreement exists on what public policies short of mandates would encourage a significant change in American savings habits.

● The Panel is not optimistic about any dramatic turnaround in U.S. saving rates, although there is some expectation of modest increases in private savings if future social security benefits were decreased.

The economic status of elderly Americans has improved significantly over the past several decades. Median incomes of the elderly have risen relative to those of the rest of the population, and elderly poverty rates have fallen precipitously, even as fewer and fewer older Americans remained at work. Much of the credit for this improvement goes to federal programs -- especially social security -- and to the growth of employer based pensions. Around these encouraging averages, however, remain significant pockets of economic distress, with poverty much more prevalent among elderly who are very old, living alone, female, Black or Hispanic. The financial costs associated with long-term care remain a major economic risk, even for middle- and upper-middle income Americans.

Evaluation of the retirement prospects of the current generation of middle-aged workers, the baby boomers, depends on the point of comparison. Their income and asset accumulation experiences thus far suggest that current workers, especially those at the upper end of the income distribution, will approach retirement with more resources than their parents did, but without enough to maintain the standards of living that they themselves enjoyed prior to retirement. The baby boomers are

unlikely to enjoy the dramatic increases in the value of their real estate or the legislated real increases in social security benefits that their parents did; in fact, social security benefits have been cut (through legislated delays in the Normal Retirement Age and the taxation of some benefits), and additional decreases may be legislated in the future. The groups of elderly now disproportionately at risk of poverty are likely to remain so. An important unknown is the rate of growth of real wages over the next several decades. Some analysts extrapolate from the dismal record of the past two decades, and foresee only very modest growth in the future. Others point to demographic changes on the horizon (smaller entry level cohorts), and anticipate real wage growth more in line with long-term trends

Life expectancy is expected to continue to increase. Although life expectancy and health status do not always move in lock step, recent evidence suggests that the health status of the elderly is improving on average and will continue to do so in the future.

Because the social security system is not in long-term actuarial balance, significant adjustments in future contribution levels and/or benefit outlays will be necessary. Social security benefit cuts (either directly or through further delays in retirement ages) are one option. The Panel asked whether there are changes already under way that would offset the effects of potential benefit cuts on the future economic well-being of the elderly. The general answer is no -- the Panel sees no easy solution on the horizon. The Panel anticipates small increases in the average age of retirement, which will help, and some members foresee either higher real wage growth and/or some increase in personal savings. But the Panel believes that far more substantial adjustments than are currently under way will be necessary to compensate for any significant decreases in social security benefits.

What adjustments are most likely? Employer pension coverage? Patterns of personal savings? Labor force participation late in life? The Panel considered policy initiatives to encourage each of these, and discusses them below.

● The Panel's consensus, especially given further expected increases in life expectancy, is that the last option - delayed retirement - would be the most likely and easiest response for the majority of older Americans who leave career jobs and the labor market voluntarily and in good health. For others, however, poor health or poor labor market prospects late in life would make this adjustment difficult or impossible.

## **Policy Options for Dealing with Projected Social Security Imbalances**

The Panel stresses that some combination of benefit cuts and/or revenue increases is necessary to restore the social security system to actuarial balance, and urges that appropriate legislation be enacted promptly. Policy options were analyzed in a three step process. First, the Panel developed six criteria against which to judge any specific proposal. Then, a straightforward baseline benefit cut (an across-the-board decrease in the Primary Insurance Amount (PIA) formula for future retirees) was compared with a straightforward baseline revenue increase (an increase in the OASI payroll tax rate). Finally, the Panel compared other means of lowering benefits with the baseline PIA decrease, and other means of raising revenues with the baseline payroll tax increase.

The Panel adopted the following six criteria:

1) Adequacy of retirement income, relative to poverty thresholds and to the household's pre-retirement income;

2) Insurance against unforeseen income fluctuations (such as those caused by disability, the death of an earner, unanticipated early retirement or unexpected longevity);

3) Avoidance of market inefficiencies; in particular, in the labor-leisure choice (the allocation of time during and at the end of the worklife) and in the consumption-savings choice (the allocation of lifetime income between consumption during the worklife, consumption during retirement and bequests);

4) Equity of lifetime social security taxes and benefits, both between and within generations;

5) Encouragement of private and aggregate national saving; and

6) Strengthening the financial integrity of the nation's retirement income systems.

## **Timing and Implementation of Policy Options**

Panel members concur on several issues regarding the timing of legislation and the implementation of whatever social security adjustments are chosen.

- The Panel urges that any significant changes in social security benefits be announced with sufficient lead time for workers to adjust their savings, consumption and retirement plans.

- The Panel suggests that promptly legislated policy changes combined with some delay in implementation best helps people plan for the future. The desirability of delayed implementation only increases the urgency of prompt legislation.

- The Panel urges that any payroll tax increases and benefit reductions be phased-in over time, rather than implemented abruptly. Gradual implementation reduces the magnitudes of notches (different treatment of cohorts close in age) and the perception of unfairness that notches engender.

## **Benefit Decreases versus Revenue Increases**

The Panel acknowledges that the fiscal imbalance facing OASDI is a very serious one, demanding immediate attention, but did not attempt to reach a consensus on the appropriate mix of benefit cuts and revenue increases to address the imbalance. The Panel's focus was to analyze the pros and cons of achieving balance with different mixes of reduced benefits and increased revenues and to compare alternative means of both benefit decrease and revenue increase.

- The Panel's criteria do not unequivocally favor either raising taxes or decreasing benefits. Rather, some criteria, such as adequate retirement income, favored tax increases, while others, like equity of lifetime social security taxes and benefits between generations, favored benefit cuts.

- Closing the fiscal imbalance with additional revenues rather than benefit decreases is suggested if one emphasizes the first two criteria, adequate retirement income and insurance against unforeseen income fluctuations. Social security benefit cuts would increase the number of Americans with inadequate retirement income, and lower the insurance protection offered to workers, survivors and dependents. Within a generation, the use of tax increases rather than general benefit cuts favors those with

the longest life expectancies -- those most likely to receive benefits for a long time -- and those with lower incomes for any given life expectancy.

- Closing the fiscal imbalance with benefit decreases rather than tax increases is suggested if one emphasizes the fourth and fifth criteria, equity between generations and the encouragement of private savings. The expected return on social security contributions is already going to be lower for baby boomers than for past, current and near-future recipients (and this return will decline even further when either social security taxes are raised or future benefits are cut). Younger participants would pay the higher taxes for many more years than would older participants planning to retire soon. Lower benefits would also encourage some individuals to offset part of the loss through their own savings behavior.

- Social security retirement benefits induce some older workers to leave the labor force earlier than they otherwise would. Benefit cuts, especially if combined with an increase in the early age of entitlement (now age 62), are likely to reduce this effect. In addition, payroll taxes may discourage the labor supply of younger workers, a labor market distortion that is more likely to decline if benefits are cut than if payroll taxes are increased.

- The Panel found little professional consensus on the size of the impact of social security on private savings. To the extent that social security benefits substitute for private savings, benefit cuts rather than tax increases would encourage private savings. But many workers with little or no savings beyond their home equity are unlikely to make significant changes in their savings behavior in response to the changes in social security benefits being contemplated. The Panel concludes that reducing benefits might have a small positive effect on private savings.

### **Alternative Types of Benefit Decreases**

The Panel compared the effects of the baseline benefit cut (an across-the-board decrease in the PIA formula) with those of several alternatives, including reducing disproportionately the benefits of high-wage workers, delaying retirement ages, reducing the cost-of-living adjustment and means-testing benefits.

- If benefits are to be reduced, strong arguments suggest increasing the ages of eligibility for early and normal social security benefits. Most Panel members believe that delaying these retirement ages is a sensible response to increases in life expectancy,

and one that prevents lifetime benefits from automatically increasing as recipients live longer.

- If benefits are to be reduced, most Panel members believe that the Normal Retirement Age (NRA) for social security benefits, currently scheduled to increase to age 67, should be increased further, and that it should eventually be indexed to life expectancy. Most agree that the scheduled hiatus between the increases to age 66 (2000-2005) and 67 (2017-2022) should be eliminated.

- Most Panel members believe that the Early Entitlement Age (EEA) for social security benefits should also be raised, with most supporting a new EEA of 64 or 65.

- The Panel opposed means-testing social security benefits on the basis of other retirement income or accumulated wealth. To avoid loss of social security benefits, some workers might reduce their own retirement saving or persuade employers to shift compensation from pension contributions to earnings. Either response would lower savings and private retirement incomes.

- If benefits are to be reduced by means other than or in addition to increases in the NRA and EEA (for example, if the PIA formula becomes less generous), most Panel members prefer disproportionate cuts at the top to an across-the-board decrease.

The Panel also discussed how to allocate the burden of benefit reductions across different cohorts -- those already retired, those about to retire (for example, within 5 years), and those further away from retirement.

- If benefits are to be cut, the Panel does not favor entirely exempting people already retired or about to retire. However, the Panel favors smaller benefit reductions for these groups than for future retirees.

- Social security benefits are the only fully indexed annuity available to (nearly) all workers. The threat of inflation would be a very serious concern to retirees, especially those with long lives after retirement, if full indexation were eliminated. For this reason, the Panel opposes permanently indexing social security benefits by less than the cost of living. At the same time, the Panel urges that the Bureau of Labor Statistics investigate whether the specific Consumer Price Index currently used to adjust benefits correctly measures the cost of living. If this measure is found to be biased, the Panel would support corrective changes in the method of calculation.

● The Panel was split on whether a temporary delay or reduction in the cost-of-living adjustment would be desirable. Some Panel members favored this if benefits were decreased for future retirees, as a way of spreading some of the burden to current and near-future retirees.

The Panel is concerned about the well-being of workers in poor health if the Early Entitlement Age (EEA) were raised from age 62. Under current law, individuals can apply for Disability Insurance (DI) before age 65, and those deemed eligible receive benefits equal to 100 percent of their PIAs. If the EEA were raised, some people who would have opted for early social security benefits at or after age 62 would instead seek DI benefits. Some would be found ineligible, and others would not even apply. In the case of an increase in the EEA, the Panel discussed whether DI rules should be relaxed for people aged 62 and older and whether the age of entitlement for Supplemental Security Income (SSI) should be lowered from age 65 to age 62. Both DI and SSI might experience large increases in applications if the age-of-eligibility rules were changed, highlighting the fact that altering one piece of the social security benefit structure can have profound effects on other components of social security and on other programs.

● The discussion persuaded some Panel members that persons as young as 62 should be allowed to apply for SSI benefits or face relaxed DI rules if the EEA is raised, to provide a safety net for those unable to support themselves until eligible for retirement benefits under the new EEA rules. Some members think that DI benefits should continue to equal 100 percent of PIA, regardless of the age of the disabled recipient, while others feel that DI benefits should be set equal to the early retirement amount, to avoid increased incentives to seek DI benefits if early retirement benefits are reduced. Others are concerned about the effect of such a reduction on the well-being of young and old disabled beneficiaries.

● The Panel focused in detail on the status of surviving spouses, because family benefits can fall substantially with the death of a husband or wife. The significant disparity in the poverty rates of elderly couples and those living alone suggest that mechanisms be considered to raise the ratio of survivors to couples benefits. If the early age of entitlement for widows' benefits is increased, then the calculation of benefit reductions for widows should be changed to preserve benefit levels or limit benefit cuts for this population.

## **Alternative Types of Revenue Increases**



The Panel compared the effects of the baseline revenue increase (a simple increase in the payroll tax rate) with those of three alternatives: raising the earnings limit on which payroll taxes apply, expanding the definition of taxable income to include employee benefits, and infusing additional general revenues into the Social Security Trust Fund.

- If additional revenues are to be raised, most Panel members favor raising the payroll tax rate rather than increasing the taxable earnings threshold. The threshold increase, unless applied only to the employers' portion or combined with a change in the benefit formula, would increase future benefits for those at the upper end of the income distribution, which a payroll tax increase would not.

- Panel members expressed little enthusiasm for including employee benefits in the taxable wage base, citing significant measurement problems.

- Panel members expressed almost no enthusiasm for additional direct infusion of general revenues, preferring to maintain the link between social security contributions made and benefits received.

### **The OASI Trust Fund**

The OASI program is partially funded. The OASI Trust Fund currently exceeds one year's outlays, and is projected to grow for about two decades, as revenues exceed benefit payments. The Panel discussed whether OASI should remain at least partly funded or revert to a pay-as-you-go system as was in effect before the 1983 amendments.

- The Panel believes that OASI should continue to be at least partly funded, meaning that the Trust Fund should maintain a significant and stable margin over annual expenditures over the foreseeable future.

On the assumption that Trust Fund reserves will continue to exist, the Panel discussed how to invest it. The Fund is currently invested in special issue Treasury securities, whose interest and principal are virtually free of default risk. The Panel examined whether part of the Trust Fund should be invested in private capital markets, with the expectation that investments would earn a higher rate of return than if invested solely in Treasury securities.

The Panel believes that a judgment on this proposal should depend on an assessment of its opportunities and its costs. If investing the Trust Fund in stocks carried no risk and provided a higher expected return, the stock portfolio would obviously be preferable. However, there is a risk-return tradeoff which must be examined and assessed in light of social security objectives. A related issue involves who bears the risk if equities perform poorly - future social security recipients, future social security contributors, or general taxpayers?

Panel discussions raised other questions. To what extent would investing the Trust Fund in equities increase national saving? How might it change perceptions about the size of the government deficit and increase political pressure to reduce it? How much would the inclusion of equities in the Trust Fund alter private household saving decisions? To what extent would this proposal expose future beneficiaries to additional political risk, because government officials might encourage the selection of private equity investments using criteria other than pure risk and return?

● The Panel did not reach a consensus on the proposal to invest some of the Trust Fund reserves in equities, and concluded that the issue deserves additional study.

### **Individual Accounts within Social Security**

The Panel discussed the pros and cons of converting all or part of the Social Security Trust Fund (or the annual surplus) to individual social security accounts, over which participants would exercise some investment discretion. In considering this proposal, the Panel noted that distributing the annual surpluses to individual accounts would require additional adjustments to benefits and/or taxes beyond what would be required to achieve system solvency without this distribution.

The Panel identified several attractive features of this proposal. Participants could allocate their funds as they preferred. Personal control might reduce uncertainty about the future politics of social security and increase public confidence in the system. It would probably be easier to increase social security taxes if the increases were directed to individual accounts. Moving these funds off-budget might create pressure to reduce the deficit, and thereby increase national saving.

Panel members also raised concerns about introducing individual accounts within social security. Would people manage these retirement assets prudently, and understand the risk and return tradeoffs inherent in private investment holdings? Would additional regulatory structures be necessary? Should the government offer a

market index fund as a low-cost option? Would the administrative expenses of an individualized system substantially exceed those of the current Social Security Administration? Should participants be permitted to access the funds prior to retirement, or lump sum payouts at retirement? Would these accumulations be considered "assets" for means-tested assistance programs? Can they be bequeathed?

● Despite these questions and concerns, many Panel members find promising the proposal to convert part of the Social Security Trust Fund to individual accounts, if the remainder of the social security system can still be made solvent. The Panel recognizes the need to coordinate the pattern of any benefit cuts with the pattern of benefits that would be received from these individual accounts.

● Most Panel members would prohibit access to the funds for any reason other than retirement, and would mandate that the benefits be wholly or in part distributed in the form of an annuity, rather than permitting a 100 percent lump sum cashout. The Panel was divided on whether the annuity could be best managed by the government or the private sector.

### **Other Retirement System Changes**

The Panel considered other issues related to the nation's retirement system, public and private.

● The Panel identified strong arguments for including all new state and local employees in the social security system.

The Panel reviewed the range of ages currently used in retirement income policy, and concluded that much more coherent and integrated policy is needed. These ages include several discussed above (the NRA, the EEA and the ages at which people can apply for SSI and DI) as well as the age at which surviving spouses can apply for survivor benefits and the maximum age of the social security earnings test. In addition, the Panel noted that ages specified in IRS tax code for tax-qualified pension plans should be coordinated with any new ages recommended for social security purposes. For example, tax law specifies that employer-provided pension benefits under qualified plans may not exceed a certain dollar level when the worker attains the social security NRA, and an actuarially reduced amount at earlier ages. These linkages should be considered as the NRA increases. Similarly, tax law requires that workers receive minimum distributions from their private retirement accounts once they attain

age 70.5. This age should probably be reevaluated in light of other proposed reforms and increasing life expectancies.

- The Panel favors a more coherent policy on the ages the IRS uses in the tax code and the SSA uses in social security regulations.

Many Americans save very little and many workers reach retirement with little or no employer pension benefits. To remedy this situation, some have advocated mandatory private pensions outside the social security system, or proposed additional tax inducements to save or simplified pension regulations to reduce the regulatory burden. The Panel discussed these issues concerning retirement saving, both inside and outside employer pension plans.

- The Panel overwhelmingly opposes mandated employer-pensions at the present time. This contrasts with the Panel's openness to individual accounts within social security.

- The Panel favors simplification of the tax rules under which employer pension plans operate. Differences arose regarding the precise ways in which the tax code and nondiscrimination legislation should be reformed. Some members favor raising the contribution and benefit limits covering employer-provided pensions, and/or coordinating the very different benefit levels for different types of defined-contribution vehicles. Many members also support the idea of having streamlined regulations that companies can follow when establishing a tax-qualified defined-benefit or defined-contribution plan.

- Most Panel members favor increasing the incentives for private savings, such as raising the limits on Individual Retirement Accounts.

A valuable attribute of social security benefits is that they are the only life annuities that are fully inflation-protected and available to (almost) all workers in the United States. The Panel urges the federal government to consider issuing inflation-indexed bonds which firms or individuals could buy to generate private sector retirement annuities protected from inflation.

- The Panel favors the government issue of Treasury bonds indexed to price inflation, recognizing that some phasing in of this new credit instrument would be necessary.

## **SSA Policy Modeling and Research**

The Panel urges the Social Security Administration to take advantage of its new independent agency status to re-structure its policy analysis and forecasting functions, making more use of the expertise in the policy community. Some Panel members suggest that the Social Security Administration would benefit from more frequent interactions with academic and practicing experts outside the government to advise SSA on issues of assumptions and methods, and also on broader issues facing the nation's retirement income system.

- The Panel urges SSA to make available to the research and policy community the actuarial and economic models it uses for forecasting and analysis. Computer programs, documentation and research reports should be more widely available.

- The Panel also urges that the data used in modeling social security system outcomes be made available to the research and policy community, in ways that preserve confidentiality while permitting analysts outside SSA to evaluate forecasts and simulate alternative policy scenarios. We note that implementation of these recommendations would have resource implications for the SSA research offices.

- Many questions that the Panel struggled with require up-to-date, sophisticated modeling and data sets. The Social Security Administration's longitudinal Retirement History Survey (1969-79) played a major role in augmenting our understanding of retirement processes in the 1970s. The current longitudinal Health and Retirement Survey will do the same in the 1990s. The Panel urges that the Social Security Administration increase its support of data gathering and analysis efforts as a means of answering the policy questions raised in this report and others that will confront the system as it continues to evolve.

## **Conclusion**

The social security program in the United States has been extremely successful and popular since its inception, and has been instrumental in improving the well-being of millions of American retirees and their dependents and survivors. When fiscal problems have been forecast in the past, adjustments have been made to address them. The same is needed now. The earlier the necessary adjustments are legislated, the better, because early notification of impending changes gives people time to adjust their savings and retirement plans accordingly. The fiscal problems currently

anticipated with the graying of the baby boom generation are manageable, and the Panel strongly urges policymakers and politicians to decide promptly on the appropriate mix of benefit decreases and revenue increases to return social security's fiscal house to order.

## **1994-95 Advisory Council on Social Security**

### **Technical Panel on Trends and Issues in Retirement Saving**

#### **Final Report**

##### **Preface**

In October 1994, the 1994-95 Advisory Council on Social Security convened a panel of technical experts to assist it in its deliberations. The charge of this Technical Panel on Trends and Issues in Retirement Savings was to "assist the 1994-95 [Social Security] Advisory Council with respect to its charge to analyze the relative roles of the public and private sectors in the provision of retirement income, particularly how underlying policies of public and private programs, including relevant tax laws, affect retirement decisions and the economic status of the elderly."

The Panel members were

Olivia Mitchell, International Foundation of Employee Benefit Plans  
Professor of Insurance and Risk Management, The Wharton School,  
University of Pennsylvania (co-chair)

Joseph Quinn, Professor of Economics, Boston College  
(co-chair)

G. Lawrence Atkins, Director of Health Legislative Affairs, Winthrop,  
Stimson, Putnam & Roberts

Richard Burkhauser, Professor of Economics, The Maxwell School, Syracuse  
University

Gary Burtless, Senior Fellow, The Brookings Institution

Robert Clark, Professor of Economics and Business,  
North Carolina State University

Peter Diamond, Paul A. Samuelson Professor of Economics,  
Massachusetts Institute of Technology

John Haley, Watson Wyatt Worldwide, Inc.

Daniel Halperin, Professor of Law, Georgetown University

Eric Hanushek, Professor of Economics and Director, Wallis Institute of  
Political Economy, University of Rochester

Diane Macunovich, Associate Professor of Economics, Williams College

Dallas Salisbury, President, Employee Benefit Research Institute

John Shoven, Charles R. Schwab Professor of Economics and Dean, School  
of Humanities and Sciences, Stanford University, and

Stephen Zeldes, Professor of Finance, The Wharton School,  
University of Pennsylvania.

The Panel met in Washington, D.C. for nine working sessions between October 1994 and March 1995, including two presentations before the Advisory Council, on January 27 and March 11, 1995.

The Panel divided its work into three substantive areas. The first was a review of several trends relevant to the current and future economic well-being of older Americans. These included labor market, employer-sponsored pension and private savings trends. The next was the development of specific criteria with which to judge policy options for reducing the Social Security fiscal gap, and detailed evaluations of several means of raising Old Age and Survivors Insurance (OASI) revenues or reducing OASI expenditures. Finally, the Panel discussed other policy options that might affect future retiree well-being.



Members of the Panel, individually and in groups, researched these areas, and presented drafts of their findings and recommendations to the entire Panel. These were then the topics of lively discussions at our meetings, which led to subsequent revisions of the text. This Final Report and its Executive Summary were edited by the co-chairs, with considerable and frequent input from members of the Panel. Our intention was to make the report as non-technical as possible, given the constraints of the subject matter. Interested persons may consult the extensive list of references for further reading.

The Panel thanks David Lindeman, the Executive Director of the 1994-95 Advisory Council on Social Security, and his staff of Dan Wartonick, Wayne Sulfridge, Arlene Berger, Nick Curabba and Jeanne Hawkins, who handled our many requests cheerfully, quickly and professionally. We also thank Stephen Goss and Steven Sandell of the Social Security Administration, who assisted us in our work, and Joseph Foote and Marilyn Thomas, who offered numerous editorial suggestions that substantially improved the manuscript.

Olivia S. Mitchell

Joseph F. Quinn

(co-chairs)

## **I. Introduction**

The social security system is not in long-term actuarial balance. The Social Security Trustees, using their intermediate assumptions, project that currently legislated Old Age, Survivors, and Disability Insurance (OASDI) tax revenues will be less than currently legislated benefits after the year 2013. Projected benefits begin to exceed the sum of OASDI taxes and interest earned in 2020, resulting in a decline in the OASDI Trust Funds, and projected depletion by 2030. Over the 75 year long-range planning horizon, the difference between the projected income and cost flows is a deficit equal to an annual 2.17 percent of taxable payrolls. Some combination of benefit decreases and/or revenue increases will be required to close this gap.

In addition to these social security retirement and disability program concerns much more immediate funding problems exists with the Hospital Insurance component of Medicare, whose Trust Fund is projected to run out in 2002. Moreover, the Congressional Budget Office analysis of the President's proposed budget for fiscal year 1996 projects continued federal budget deficits through 2000. It is in this context that the Technical Panel on Trends and Issues in Retirement Savings (TIRS) discusses various social security options below.

Many topics were beyond the Panel's charge and therefore are not discussed in detail in the Final Report. One is the central role of the nation's overall economic health, which has a major impact on the social security system's fiscal health. To the degree that social security encourages, or at least does not discourage, work and savings, it enhances the prospects for economic growth. The Panel also did not examine how changes in the medical care and health insurance markets will interact with the Medicare and Disability Insurance programs. These two components of the social security system were the subjects of reports by previous Social Security Advisory Councils, and were beyond this Panel's purview.

This Report has three goals:

- To assess how observed trends in labor markets, employer pensions and private savings are likely to affect the old-age security of current and future retirees in the absence of major institutional change;

- To develop evaluation criteria and apply them to specific policy options for reducing the social security actuarial imbalance; and

- To discuss other policy changes that might improve retiree well-being in the future.

The Panel did not seek consensus about which policy options should be selected. Rather, it presents a range of options and a set of evaluation criteria that can be used to choose among them. The Panel discusses both incremental and wide-ranging changes in social security and related programs, changes designed to alleviate both social security's fiscal deficit and the broader problem of potentially inadequate retirement income for future generations of retirees. On many of the issues discussed, Panel members were not unanimous, although on some issues they did all agree.

Part II describes trends in labor markets, employer-sponsored pensions and national savings, and discusses the implications of these for the economic well-being of future retirees. Part III turns to policy options for social security, first outlining a set of six evaluation criteria, and then applying these criteria to a range of general and specific policy options. Part IV discusses the integration of various social security eligibility ages, including the age for early retirement benefits, and then expands the analysis to other issues that will affect retiree well-being in the next century. The Report ends with an Overview and Conclusions.

## **II. Labor Market, Pension, and Saving Trends, and Implications for Retiree Well-Being**

The purpose of this section is to offer informed opinion on the future of labor markets, pensions, and savings behavior, and on how these trends might affect the economic well-being of future retirees. Here the Panel assumes no major changes in the institutional environment, even though we realize that changes in the largest program, social security, are necessary. Given its importance to older Americans, significant changes in social security may well affect the trends discussed here.

The Panel begins with a discussion of the labor market for older workers, emphasizing recent retirement trends, the influence of social security and employer pensions on labor force decisions, and some barriers to work that older Americans face. It then addresses trends in employer-sponsored retirement and health benefits, including changes in the types of coverage, and the characteristics of and risks associated with defined-benefit and defined-contribution pension plans. It then turns to saving trends, and asks whether Americans save too little and why it matters. Throughout this discussion, the Panel identifies policies that might encourage changes in these trends, for example, longer work lives, growth in pension coverage or additional saving. Section II ends with a discussion of the implications of these issues for the economic well-being of older Americans, including the past and current status of retirees and the prospects of those in the future, especially the members of the baby-boom generation who will begin to reach traditional retirement age early next century.

### **A. The Labor Market for Older Workers**

The post-World War II period has seen dramatic changes in the labor force behavior of older workers. Americans are retiring much earlier than they used to and, given increases in longevity, are spending much longer periods in retirement. These changes have coincided with increases in the magnitude and generosity of public and private retirement income programs -- social security and employer pensions -- and there is reason to believe that these phenomena are related. This section briefly reviews recent retirement trends and discusses the evidence that the financial incentives in retirement income programs have played an influential role. An important implication is that retirement trends are not exogenous, but rather have been and can be influenced by public policy decisions.

**Retirement trends:** A remarkable demographic development has occurred in the U.S. during the past 40 years. Older workers, especially men, have been leaving the

labor force at younger and younger ages, at least until recently. In 1950, for example, nearly half of all American men aged 65 or over were in the labor force; by the mid-1980s and still today, fewer than 1 in 6 are.

The early retirement trends can be seen in detail in figure II-1, which shows labor force participation rates for 5-year cohorts of older American men over the past three decades. The long-term patterns are clear. The percentage declines since 1964 are about 30, 40 and nearly 50 percent for men aged 60-64, 65-69 and 70 or over, respectively. For men aged 50-54 and 55-59, below the earliest age of eligibility for social security retirement benefits, the declines are much less dramatic. Figure II-1 also suggests that the long term early retirement trend may have abated or come to a halt. For all the male cohorts shown, participation rates have changed very little since the mid-1980s.

For women, as can be seen in figure II-2, the pattern is very different, because two offsetting phenomena are at work. Although people are retiring earlier, women, especially married women, are more likely to work than before. For the oldest two cohorts, aged 65 and above, the resultant trends are flat. For the younger two groups, the latter trend dominates, and participation rates are on the rise. For the middle group, women age 60-64, the long term trend is flat, but there has been a noticeable increase during the past few years.

More detailed data on older men illustrate an interesting point. Figure II-3 shows participation rates since 1968 for men aged 60 through 65, by individual age. Note the increasing importance of age 62, the earliest age of eligibility for social security retirement benefits. In 1968, the largest labor supply decline occurred at age 65. Now, the biggest decline occurs at age 62. A significant gap at 65 still remains, but much of the labor force withdrawal has already occurred by then. The story is similar for women -- the behavioral change at age 62 is larger than that at age 65.

**Part-time employment:** Not only do older Americans retire earlier than they used to, but those who do keep working often work part-time (fewer than 35 hours per week). The prevalence of part-time work rises significantly with age. Although fewer than 7 percent of men aged 25-59 and employed in the nonagricultural sector work part-time, 16 percent of those aged 60-64, 42 percent of those 65-69, and well over half of the employed men aged 70 or over do (U.S. Bureau of Labor Statistics 1994c, table 33). There is even a noticeable increase between those aged 60 and 61 (12 percent part-time) and those 62-64 and therefore eligible for social security retirement benefits (21 percent part-time) (unpublished B.L.S. statistics).

For women, part-time work is more prevalent at all ages. About 20 percent of employed women aged 25-59 work part-time, along with a third of those aged 60-64, 57 percent of those aged 65-69, and two thirds of the employed women aged 70 or over. The increase at age 62 is even more pronounced -- from 28 percent at ages 60 and 61 to over 40 percent among those 62-64. The vast majority of the older Americans who work part-time say they are doing so voluntarily.

Since 1970, the increase in the importance of part-time work among older employed workers has been significant, from 38 to 48 percent for men and from 50 to 60 percent for women. In this sense, the long term early retirement trend may be continuing still, but through reduced hours rather than labor force withdrawal.

**The nature of retirement:** The stereotypical retirement involves a move directly from full-time career employment to complete labor force withdrawal. Although this type of retirement is common, research has shown that many older Americans do not leave the labor market when they leave their career jobs. Gradual or partial retirement -- the use of bridge jobs -- is an important phenomenon in America. Among wage and salary workers in the 1970s, for example, more than a quarter did not retire completely in one move (Quinn et al. 1990). A few of them dropped to part-time status on their career jobs, but most found new jobs. Among the self-employed, only half retired abruptly from full-time career work. Of those who did not, half dropped to part-time hours on the same job, and the other half found new employment.

Most of those who change jobs also change occupation and industry, and most move down the socioeconomic ladder -- from skilled to unskilled and from white collar to blue collar. Some evidence suggests that those at the ends of the economic spectrum are the most likely to utilize bridge jobs (ibid.). Poor people may do so because they have to, lacking pension coverage and personal savings, and often eligible for only modest social security benefits, while wealthy people may do so because they want to, enjoying interesting jobs with important non-pecuniary benefits. If there is a labor market trend toward a more bimodal set of jobs, as argued below, then this phenomenon of gradual retirement may become more important in the future.

More current data suggest that partial or gradual retirement remains widespread. Ruhm (1995) finds that between 30 and 40 percent of those aged 58 through 63 and employed in 1989 were working on a post-career "bridge" job, and the proportion is higher than for workers the same age in 1969. Quinn (1995) finds considerable bridge employment in the initial (1992) wave of the new Health and Retirement Survey.<sup>1</sup>

The importance of ages 62 and 65 in retirement decisions suggests that many older Americans are being influenced by social security provisions. Labor supply transitions at these and earlier ages, like 55 and 60, suggest a similar role for employer pensions. Because much of this report will focus on social security and employer pensions, the Panel turns now to a detailed description of how these programs might affect the labor supply of older Americans and the nature of the evidence that they do.

**Social security incentives:** Most Americans are affected by social security (OASDI) throughout their lives, contributing taxes while employed and receiving benefits when retired. Some receive benefits earlier, through the survivors or disability programs. Both contributions and benefits depend on covered earnings, so there is a relationship between the two. When assessing the impact of the system on an individual or a cohort, economists tend to view the system in a life-cycle framework, and consider the contributions and benefits in tandem. The extent to which citizens do the same is unclear.

Labor supply decisions depend on individual preferences and budget constraints -- the options people face in the labor market. Social security can affect budget constraints in several fundamental ways. It can increase or decrease one's lifetime wealth, depending on whether the value of the benefits received exceeds the value of the contributions made. (It can also change how one can use that wealth, by providing a (nearly) universally available indexed annuity at retirement.) It can also alter the pattern of compensation over time, increasing compensation at some ages and reducing it at others. Finally, for those who are credit constrained, the availability of an income flow from retirement benefits (usually at age 62) is important. In theory, all of these factors should influence labor supply, and considerable empirical research suggests that they do.

Wealth effects of social security: The simplest economic explanation for the post-World War II early retirement trend is that the nation has grown wealthier over time. Americans can afford to start work later, work fewer hours per year and retire earlier than they once did.

Recent cohorts of retirees have worked in a generally robust economy and have enjoyed significant increases in the value of their real estate. Their wealth was further augmented by the social security system, because the retirement benefits being paid to these cohorts will exceed the present value of their and their employers' contributions. For example, government estimates show that a man who lived to and retired at age 65 back in 1980 after a lifetime of average earnings would expect to receive retirement benefits worth nearly \$98,000 (all these figures are in 1992 dollars), more than

\$70,000 greater than the \$26,000 in contributions made by him and his employer, and assumed to be invested in government securities.<sup>2</sup> His benefits were worth 3.7 times the taxes paid. Women retiring in 1980 after a lifetime of average earnings gained even more because of their longer life expectancies in retirement: their benefit/tax ratio was 4.4 and their net gain nearly \$90,000. Lower-earners had an even higher benefit/tax ratio, while high-wage workers earning at the social security tax ceiling had lower ratios (3.35 and 3.96, for high-wage men and women retiring in 1980) but higher absolute dollar gains (about \$87,000 and \$110,000, respectively). People retiring more recently have experienced lower benefit/tax ratios; nevertheless, in 1992, new retirees' ratios all still exceeded 1.00 for men and women, for minimum, average and maximum earners (*ibid.*); the smallest absolute gain (for a male maximum-earner retiring in 1992) was still nearly \$25,000.

More comprehensive computations have been made by Steuerle and Bakija (1994), who estimate the net gain or loss from participation in the social security retirement and survivors' programs (the disability component is excluded), with and without adjustment for the chance of death after age 21.<sup>3</sup> They compare hypothetical recipients reaching age 65 in five-year intervals beginning in the 1940s and forecast until the year 2050 (Steuerle and Bakija, Table A.3). They assume that taxes and benefits currently in place are maintained even though the system cannot remain solvent with this structure. Twelve combinations are considered, using three earnings histories (low, average and high) and four family structures (single men, single women, 1-earner and 2-earner couples).<sup>4</sup> The results show that 11 out of 12 of these hypothetical recipients retiring at age 65 in 1995 will enjoy a positive net transfer from OASI. All three two-earner couples are net winners, with net transfers ranging from \$57,000 to \$85,000 (in 1993 dollars); the highly paid 1-earner couple nets \$140,000. The only net loser is the high-wage single man (with no survivors' benefits), whose expected retirement taxes exceed his lifetime benefits by about \$10,000 (*ibid.*, Table 5.1 or Table A.3)

Net social security transfers peaked prior to the 1983 Social Security Amendments and are now in decline. High-wage, two-earner couples and high-wage single women retiring at 65 in 2005 will be paying in more than they receive in benefits given current law (respectively, -\$19,000 and -\$28,000); high-wage single men retiring at age 65 will receive about \$73,000 less than they contributed (*ibid.*, Table A.3).

What effects did these large positive net transfers have on older cohorts' behavior, and what effects will some large negative transfers have on future workers? These questions are difficult to answer. Although economic theory, common sense and casual empiricism suggest a link between wealth and retirement, the size of the effect has



been difficult to pin down. One observation that suggests an important effect is the fact that the largest declines in the labor force participation rates of older men occurred just after significant increases in real social security benefits (about 50 percent) were legislated between 1968 and 1972. Skeptics point out, however, that retirement patterns did not change dramatically during the 1950s despite the fact that aggregate social security wealth rose rapidly as coverage was increased (Moffitt, 1984). Recent research suggests that social security might account for at most one-third of the labor force participation decrease over time (Hausman and Wise 1985; Ippolito 1990).

Compensation effects of social security: In addition to influencing lifetime wealth, social security also alters the pattern of compensation with age, and eventually can decrease the net compensation of older workers. Many defined-benefit employer pension plans do the same, and the effects can be significant. Social security and most defined-benefit employer pensions promise a stream of benefits once certain conditions are met. The value of this stream of future income is conveniently summarized by its present discounted value (PDV), which is the size of the asset today that would be required to generate this stream of income in the future.<sup>5</sup>

Prior to the age of eligibility, the value of the future benefit stream increases with additional work -- social security "wealth" is on the rise. By working, one earns twice -- the paycheck and the increase in the PDV of future social security benefits. But once the worker is eligible to receive benefits, this can change. Those who delay receipt of social security (for example, by continuing to work full time) forego current benefits. This loss must be compared to the gains from the fact that future social security benefits will be higher because of the additional year of work. Which stream is worth more (a smaller annual benefit, beginning now, or a larger annual benefit, beginning (say) a year from now) depends on whether the future benefit increments are sufficient to compensate for the initial year of benefits foregone. If the delayed stream is worth more, then one still gains twice by working -- the paycheck and the positive social security wealth accrual. But if the delayed stream is worth less, then one loses social security wealth by continuing to work, and one's true net compensation is the paycheck minus the amount of the wealth loss (the decline in the PDV).

If forgoing one year's benefits is just offset by the future increments earned, then the PDV of the benefit stream is the same regardless of the age of initial receipt. Social security benefits claimed at age 62 are only 80 percent of what that same earnings record would yield at age 65 (the "normal" retirement age). This decrement can be viewed as a 20 percent penalty for receipt at age 62 (about a 7 percent penalty for each year of receipt prior to age 65), or, equivalently, as a similar reward (slightly higher on the age-62 base of 80 percent) for each year of delay past age 62. For the

average person, using single life actuarial tables and ignoring survivor benefits, this penalty/reward is approximately actuarially fair. But individual life expectancies differ by gender, race, ethnicity, health status, and other personal characteristics, so a reward that is actuarially fair on average will be inadequate or excessive for many others, thereby either encouraging or discouraging retirement at age 62.

At social security's normal retirement age, currently 65, the rules change. For each year that benefit receipt is delayed after age 65, future benefits are increased by 4.5 percent. This is the delayed retirement credit (DRC).<sup>6</sup> For many, a 4.5 percent reward is inadequate to compensate for a year of forgone benefits. The DRC is currently legislated to increase by 0.5 percent every other year until it reaches 8 percent (close to actuarially fair, on average) early next century. Until it does, the social security incentives will tend to discourage work on average after age 65.

How important are the effects of social security rules on worker behavior? There appear to be important effects because labor supply behavior changes dramatically at key social security ages. These effects can be seen in Figure II-4, which shows participation rates by gender and age in 1993. For both men and women, the largest declines occur at ages 62 and 65 -- the ages of eligibility for early and normal social security benefits. For men, labor force participation rates drop by 12 points at age 62 and by 10 points at age 65; for women, they drop by 9 and 7 points, respectively. The declines at these ages are higher than those at the other ages around them.

Figure II-5 shows retirement hazard rates, defined as the fraction of those who are in the labor force in one year who leave during the following year. Sharp peaks appear at ages 62 and 65, and the pattern shifts over time. In the early years, the age-65 peak dominated, but by 1986, more retirements had shifted to age 62, and both hazard rates were about the same. These patterns led Hurd (1990: 596) to conclude that "(t)he peak at age 65 is probably due to a combination of social security, pensions, and possible mandatory retirement, but it is difficult to think of any explanation for the peak at 62 except for the availability of social security benefits."

A different view of the same phenomenon appears in Figure II-6, which plots "annual exit rates," the difference between labor force participation rates at adjoining ages. The 1960 data are of special interest because men could not claim social security retirement benefits until age 65 then, and the data show no retirement peak at age 62. After early retirement benefits were permitted for men in 1961, an age 62-peak appeared and grew with each succeeding decade, while the age 65 peak declined monotonically. This evidence suggests that "(i)t is difficult to account for the double-peaked pattern in the 1970-1990 graphs, and the increased popularity of departure

from the labor force at age 62, with any explanation that does not assign a central role to social security." (Leonesio 1991: 5)

Extensive econometric studies have confirmed that the financial incentives in social security and employer pensions do influence the timing of individuals' retirement decisions (Hurd 1990; Quinn, et al. 1990). Using behavioral models based on the longitudinal Retirement History Study of the 1970s, several analysts have simulated the impact of social security reforms, including an increase in the delayed retirement credit at age 65 (currently under way), a delay in the age of normal retirement (which will begin in 2003), and an across-the-board reduction in benefits. These studies predicted changes in retirement behavior in the expected direction, but modest in magnitude -- on the order of months, not years (Burtless and Moffitt 1984; Fields and Mitchell 1984b; Gustman and Steinmeier 1985; Gohman and Clark 1989). A shortcoming of these studies is that they all assume that changes in social security would not affect other essential economic variables like pensions or wages. If these important retirement determinants did respond to changes in the social security environment, then the effects of social security changes could differ from those found in this research.

Another aspect of the system thought to influence work decisions is the social security "earnings test." Benefits decline as recipients earn over an exempt amount. In 1995, those aged 62-64 lose \$1 for each \$2 earned over \$8,160, and those aged 66-69 lose \$1 for each \$3 earned over \$11,280. Because of benefit recalculations and the rewards for delayed receipt, however, the benefits forgone are partially, entirely or more than entirely returned via higher benefits later. The earnings test disappears entirely at age 70, and recipients can collect benefits regardless of earnings. Although these effects will diminish in importance in the future, as the delayed retirement credit increases, they appear to have had some effect on reported behavior in the past. Earnings of older workers tend to cluster just below the amount at which social security benefits would be reduced, as shown in Figure II-7 (Burtless and Moffitt 1984; Leonesio 1991).<sup>7</sup>

Considerable research has established that social security rules contain significant retirement incentives (or work disincentives), for nearly everyone after age 65, and for some, depending on life expectancy, before that. Behavioral equations explaining individual retirement decisions suggest that people behave as though they understand and respond to these incentives. The higher the penalty associated with continued work, the more likely people are to leave their jobs and the labor force.

**Pension incentives:** Defined-benefit pension plans are similar to social security in that they promise a stream of future benefits once certain requirements are met.<sup>8</sup> Benefits are usually based on some combination of years of service and earnings, often averaged over the last few years of employment. Like social security, the value of a pension stream is conveniently described by its PDV, the size of the asset today required to provide the promised benefits. (The same caveats regarding life expectancies apply.) Also like social security, this PDV can rise or fall with continued work after the age of eligibility, depending on the details of the pension plan. If the PDV rises (that is, if future increments from delayed receipt exceed the benefits initially foregone), then accrual is positive; if the PDV is falling, then pension accrual is negative, and true compensation is less than the paycheck by the amount of the pension wealth lost.

It is difficult to summarize the incentives provided by defined-benefit pensions, since there are hundreds of thousands of them, each with its own rules and regulations. Nonetheless, considerable research has shown that many do penalize work at older ages, often after the age of earliest pension eligibility.

In an early attempt to quantify pension incentives, Fields and Mitchell (1984a) examined the details of 14 specific plans and estimated the incentives facing an average worker at each age between 60 and 68. They found that the PDV of pension rights tended to rise and then fall, peaking between the ages of 60 and 65. With a sample of men from one of the plans, they estimated total lifetime income (from age 60 on) for hypothetical retirement ages between 60 and 68 - the sum of the PDVs of earnings, social security and pension benefits. The increase in this total after an additional year of work is the true compensation for working that year. Fields and Mitchell found that this sum fell each year after age 60, and at age 68 was less than 40 percent of what it had been 8 years earlier. This is a substantial pay cut.

More recently, Kotlikoff and Wise (1989) studied nearly 1,200 pension plans and found that accruals for the typical plan were negative for those who worked past the normal retirement age defined in the plan. In many cases, accruals were negative after the earliest age of pension eligibility, encouraging retirement at that point. It was not unusual for the annual loss in pension wealth to equal 30 percent of annual wages.

Research shows that many workers respond to these pension incentives by leaving career jobs and often the labor force as well before these pay cuts occur (see Quinn, et al. 1990, for a summary of this literature). For example, Burkhauser (1979) showed that auto workers were more likely to leave the firm the larger the pension wealth loss associated with continued work. Rhine (1984) found that employees in companies with attractive early retirement benefits were more likely to retire earlier than those in

companies without such inducements. Fields and Mitchell (1984a) compared retirement incentives and individual behavior, and found that those with the most to gain by postponing retirement tended to retire later. Similarly, Kotlikoff and Wise (1989) studied the employees of one particular firm for which they knew exact pension details, and showed that departure rates at specific ages coincided precisely with the discontinuities in worker compensation caused by social security and pension plan rules.

Departure from the firm does not necessarily imply departure from the labor force. Herz (1995: table 1) has documented a significant increase over the past decade in the percentage of early male pensioners (men aged 50-64 and receiving pension income) who remain in the labor force, often part time.

**Other explanations for early retirement:** Age 62 is now the most popular age of initial social security receipt; 72 percent of new beneficiaries claim benefits prior to age 65, and more than half claim them as soon as they can, at age 62 (U.S. House of Representatives 1994:18, 22). Clearly, something is happening at this age. Because social security rules are close to actuarially fair at that age, on average, it is difficult to lay all the blame there. (This explanation may make sense after age 65, but most Americans have already retired by then.) What then can explain the prominence of age 62 retirements?

One explanation may be a liquidity effect -- many older Americans do not have sufficient savings to finance retirement prior to social security receipt and are unable to borrow against future income to do so. If so, income flows and consumption decisions are not separate, as simple life-cycle models assume. What might be happening at age 62, then, is the aggregation of people who would prefer to retire earlier but cannot, lacking enough wealth to tide them over until they become eligible for retirement benefits. If this hypothesis is correct, then the early retirement spike should be more prominent for low wealth individuals than for those with ample assets, a hypothesis that is confirmed by the data. Specifically, people with low wealth in the Retirement History Survey had two retirement spikes (a large one at age 62 and a smaller one at 65), while people with high wealth had only one spike, at age 65 (Kahn 1988).

Another reason for the concentration of retirements at age 62 may be confusion about social security and pension incentives. Many people "may not understand how their current earnings affect their future benefits. It is possible, therefore, that social security is discouraging labor supply (prior to age 65) only because its provisions are poorly understood" (Blinder, Gordon and Wise 1980:441). In a similar vein, Mitchell (1988) found that workers covered by pension plans had considerable misinformation

about their plans' provisions, especially concerning the requirements for early retirement.

Different life expectancies or interest rates may also explain some retirement behavior. Whether future benefit increments adequately compensate for benefits foregone depends on how long one expects to claim benefits and the relevant interest rates for discounting. The lower the life expectancy, or the higher the discount rate, the less likely delaying retirement will pay. Retirement studies use average life expectancies by age, rather than predictions based on the individual's health status, and common interest rates, rather than specific rates relevant to different socioeconomic or tax-bracket group. Those in poor health are known to retire earlier than others, holding other factors constant. In addition to a direct health effect, they may be responding to financial incentives to retire that do not appear to researchers using average life expectancies.

Finally, social security rules may influence societal perceptions about an appropriate retirement age. Before social security retirement benefits were permitted at age 62 (1956 for women; 1961 for men), 65 was generally accepted as an appropriate retirement age in the United States. This acceptance was reflected in mandatory retirement rules and in the provisions of many private pension plans, which is no longer the case. Mandatory retirement has been all but eliminated, and most defined-benefit pension plans permit and encourage retirement well before age 65. These changes may well be related to the social security change. As the major source of retirement income and as a public policy reflecting national norms about retirement, social security may have impacts well beyond those generated by its benefit calculation rules.

To what extent would additional changes in social security rules have an impact on future retirement trends? Once already legislated changes in the delayed retirement credit are enacted, the benefit structure will be close to actuarially fair, on average, from age 62 on. Delays in the age of "normal retirement" are then just thinly disguised across-the-board benefit reductions -- waiting longer for a given benefit is the same as receiving a lower benefit at any given age. Empirical evidence suggests that the impacts of such changes would be small, at least in the short run, although these studies are all partial equilibrium in nature. A delay in the age of earliest eligibility (age 62), on the other hand, is likely to be much more important, as it was when age 62 eligibility was introduced. It would affect those who are liquidity constrained, increase the financial burden on firms who want to induce early retirement on their own, and might well affect societal expectations and norms over time.

**Barriers to work in old age:** Most of the recent retirement literature in economics has taken a supply side perspective -- workers are assumed to choose among various options, based on their preferences and the financial options and incentives they face. There is also a much smaller demand-side literature, which asks whether older workers face particular obstacles or restricted job opportunities as they age (Straka 1992; Hutchens 1994).

Several interesting differences arise in the labor market experiences of older workers. Although their official unemployment rates tend to be lower than those of the labor force as a whole, older Americans are more likely than others to be discouraged workers -- out of work but no longer looking and therefore not officially counted as unemployed.<sup>9</sup> Although older workers (in the mid-1980s) were about as likely as younger workers to be laid off, those who were laid off were much more likely to end up out of the labor force -- about one-third of those aged 55 to 64, three-quarters of those 65 or older, compared with fewer than 10 percent of those 20 through 54 (Herz and Rones 1989). Older workers who are laid off or fired are more likely than others to experience long spells of unemployment, and they suffer greater earnings reductions if they do find work (Shapiro and Sandell 1987).

Older workers may face declining job prospects as they age for several reasons. Some may suffer age discrimination per se, but others face sources of labor market adversity, sometimes privately efficient, that happen to increase with age. For example, firms with large fixed costs of hiring or training may prefer younger workers who offer more potential years of employment over which to amortize the fixed costs.

In some cases, long-term, mutually beneficial implicit contracts between employers and employees may require cessation of employment or a significant cut in pay late in life. Lazear (1979) has argued that firms might lower turnover costs by paying workers less than their contribution to the firm during the early years of employment, and then more than their contribution near the end. Some compensation is delayed to encourage long tenure with the firm. If this pattern of compensation reduces turnover costs and the gains are distributed between the employer and the employees, then both parties can benefit. But at the point when lifetime compensation and lifetime contribution are equal, the employment contract must be terminated or the worker's compensation decreased to the level of his or her contribution. Although this agreement looks discriminatory at the end, it may have benefited the workers over the life cycle. This theory offers an explanation both for mandatory retirement, now generally outlawed, and for pension plans that penalize workers who stay on the job "too long."

An additional problem may be the full-time/part-time mix of jobs that are available. Many older workers would like to retire gradually, which often means a period of part-time work before complete labor force withdrawal. In a recent survey of older Americans, 21 percent of the working men (aged 55-64) and 43 percent of the working women (aged 50-59) wanted to work part time (and the proportion increased with age), but only 6 and 19 percent, respectively, were actually doing so (Quinn and Burkhauser 1994b: table 1). Given these preferences, why are more older Americans not working part time? There are several possible reasons. Compensation is often poor on the jobs that are available, and many employers are reluctant to hire older workers at all.

Workers who move from full time to part time usually do so at considerably lower wage rates and with fewer benefits (Gustman and Steinmeier 1985; Jondrow, Brechling and Marcus 1987; Quinn et al. 1990; Kramer 1995). Lower pay for these older workers is not necessarily evidence of discrimination. Workers who switch jobs lose specific human capital -- the expertise acquired on the old job that is not relevant on the new one (Shapiro and Sandell 1985). Their productivity can therefore decline when they move, but for reasons having nothing to do with age. Fixed hiring, training and employee benefit costs are amortized over fewer hours, both because of the worker's part-time status and because older workers have fewer years of service to offer to the firm. If so, firms may have to offer lower wages in order to make the arrangement profitable. As a result, firms often offer part-time employment in jobs that require relatively little supervision or training, and exclude fixed-cost benefits from the compensation package.

A final obstacle is employer attitudes toward older workers. Although employers speak highly of older workers' strong work ethic, loyalty and dedication, many fear that older workers are difficult to train and do not cope well with the technological aspects of many jobs (American Association of Retired Persons 1989; Belous 1990).

In summary, older workers do face labor market obstacles as they age. Many who remain on their career jobs face declining compensation, as defined-benefit pensions or social security wealth decline in value with continued employment. Switching jobs is difficult because many employers are not eager to hire older workers, for reasons that may or may not be accurate. Part-time work usually results in lower pay, fewer benefits and reduced economic status. In a detailed survey of these issues, Straka (1992) concludes that without the elimination some of these demand side obstacles, attempts to increase the working lives of older Americans through antidiscrimination legislation or supply side measures may be ineffective.



**Conclusions:** The labor market for older Americans has undergone significant change in the post-World War II period. The most dramatic change has been the trend toward earlier labor force withdrawal for men, which lasted until the mid-1980s. For women, the early retirement trend has largely been offset by the simultaneous increase in the participation rates of married women. Considerable evidence indicates that the growth of and financial incentives imbedded in social security and many (defined-benefit) employer pension plans played an important role in this movement toward earlier retirement.

Many older Americans do not retire in one move, directly from full time career employment to complete labor force withdrawal. Rather, some retire more gradually, taking bridge jobs in the interim. These are often part time jobs, sometimes involving self-employment, and usually involving a change of industry and/or occupation. The bridge jobs generally pay less than the career jobs did, and are lower down the socioeconomic scale.

## **B. The Changing Nature of Employment**

Broad trends in the labor market will affect those approaching retirement age today as well as those whose retirement decisions are far in the future. Job mobility can influence the relative attractiveness of different types of pensions, and changes in the distribution of earnings can have implications for future elderly poverty rates. The Panel discusses several relevant labor market trends and asks what they might suggest for the future.

The recent and current emphasis on corporate downsizing, combined with a recession in the early 1990s, has contributed to a perception that the American workforce is increasingly mobile and that jobs are less stable than they were in the past. Recent layoffs, including middle management positions in blue-chip firms once noted for their loyalty to workers, have strengthened these perceptions.

The evidence backing these perceptions is mixed. Although there does appear to be a secular growth in the importance of part-time and contingent workers (those hired for a fixed term), aggregate evidence does not indicate that average job tenure for the American workforce is on the decline.

**Contingent and part-time workers:** These workers lack a permanent full-time attachment to a single job. They may work part time on one or more jobs, may work as temporary employees through an employment agency, or may be subcontractors or independent professionals.

Temporary employees, probably fewer than 3 percent of the workforce, fill in for a short time on jobs that have been vacated or created to meet a short-term increase in demand.<sup>10</sup> Many are supplied by agencies that employ the individuals and contract out their services. Agencies that originally specialized in providing clerical help now provide a wide range of skilled and semi-skilled workers. Leased employees are placed in jobs lasting a year or more, and have become a popular way for firms to fill jobs without providing benefits or making long-term commitments. Independent contractors are self-employed people who work on a contract basis for one or more employers. Growth in these categories reflects employers' interest in having greater labor supply flexibility without the employee benefit obligations associated with career workers.

Self-employment, which overlaps with the independent contractor sector, accounts for about 9 percent of the total workforce, a proportion which has changed little over the past several decades (Quinn 1995).<sup>11</sup> The self-employed have to provide their own benefits beyond social security. The self-employed today have the lowest rates of pension coverage (16 percent in 1992) of any broad category of American workers.

The proportion of the workforce working part time has stabilized in recent years following significant growth during the prior decades. It grew from 15 to 20 percent between 1969 and 1983, and has remained about 19 percent since then (Saltford and Snider 1994: Table 1).

**Job tenure and mobility:** Despite the broad press coverage that corporate downsizing and interrupted careers have received, aggregate government statistics do not support the notion that job tenure is declining. For example, over the past 15 years, the fraction of workers remaining on the same job for more than eight years has remained constant -- 30 percent in 1979 and 31 percent in 1983, 1987, and 1991 (Council of Economic Advisors 1994: 126; see also Diebold et al. 1994). Americans are mobile, but they have always been so.

These aggregate numbers, however, might be concealing offsetting changes underneath. For example, the increasing proportion of older workers (who tend to have longer job tenure) might be masking declining tenure statistics within age cohorts. Age- and gender-specific tenure statistics suggest otherwise, however, because they appear to be fairly stable for men in all age groups and slightly increasing for women (Yakoboski and Silverman 1994: table 16).

It is still possible that the aggregate statistics conceal offsetting changes within certain demographic or socioeconomic subgroups of the population. For example, there is evidence that black workers, low-seniority workers and workers without any college education have experienced a decline in job stability, but there are much more conflicting signals on the college-educated population (Diebold et al. 1994; Farber 1995; Marcotte 1995; Swinnerton and Wial 1995).<sup>12</sup> The most recent recession (1990-91) appears to have affected college educated workers and older workers more than previous recessions had (Farber 1993; Gardner 1995). This raises the possibility that the public perception of increasing mobility is caused by the recent experience of members of the labor force who traditionally enjoyed the most stable employment patterns. If so, the aggregate data may be concealing an erosion of the kind of job attachment that is associated with retirement income accumulation.

The Council of Economic Advisors (1994:126) has summed this issue up nicely. "Whether or not job security is decreasing, two things are clear. First, there has always been a great deal of instability in the U.S. labor market. Second, there is no question that there is a *perception* that job security is decreasing. This may be due entirely to the normal increases in job losses during the recent recession, to media accounts of mass layoffs at companies that used to offer unusually stable jobs, or to increases in job stability that simply are not reflected in aggregate statistics." Additional research is certainly needed on this issue.

**Quality of jobs:** Many analysts have argued that traditional middle class jobs are on the decline in America, and that recent job growth has been concentrated at the extremes -- low-wage, low-skill personal service workers at one end and highly-skilled, professional and technical workers at the other (e.g., Bluestone and Harrison 1982; Harrison and Bluestone 1988; Levy and Murnane 1992; Rosenthal 1995).<sup>13</sup> The middle seems to be shrinking, with the decline of average-wage, blue-collar, unionized workers in manufacturing jobs. As late as 1965, nearly 30 percent of the full-time workforce was in manufacturing jobs while fewer than 15 percent were in services. Twenty-five years later, the positions were reversed: only about 17 percent of employees were in manufacturing and 25 percent were in services in 1991 (Anzick 1993).

Jobs in the professional service sector have grown rapidly. These include professional and technical positions that require high levels of skill and creative problem-solving ability, much of which is provided through college and graduate school education, rather than through on-the-job training. These are engineers, lawyers, investment bankers, consultants, writers, designers, and a host of other occupations involved with the manipulation, analysis and communication of abstract concepts.

This group has experienced real pay increases over the past decade. Many can maintain flexible working careers, controlling their hours and extending their productive worklife into old age if they choose.

Gittleman and Howell (1995) use 17 measures of job quality and cluster analysis to group more than 600 jobs covering 94 percent of the American work force into 6 categories, or contours.<sup>14</sup> They find that "the distribution of employment over the period 1973-90 shifted sharply away from the two middle-quality contours toward the two highest-quality contours.... [Although] the two lowest-quality contours showed no decline in employment share... [there was] a sharp drop in the quality of low-skill jobs." (p. 420) Rosenthal (1995) analyzed data on 278 occupations and found that the majority of jobs created between 1983 and 1993 were in the highest and the lowest paying quartiles.

**Racial diversity:** The population reaching retirement age in the next century will be much more diverse racially than are current cohorts of retirees. The Census Bureau projects that between 1990 and 2030 the older (65+) white population will grow by about 90 percent, while the older black population will increase by almost 250 percent, and the older Hispanic population (of any race) by nearly 400 percent (U.S. Senate 1991:14).

As a result, the proportion of elderly who are minority will double from 14 percent in 1990 to a quarter by 2030, and then increase to nearly a third by the year 2050 (ibid., chart 1-8). As shown below, minority populations have been underrepresented among those covered by pensions and overrepresented in the poverty populations.

**Income distribution:** One result of the growing divisions in the U.S. workforce has been an increase in income inequality, which is found for a variety of income concepts, household units and measures of inequality (Károly 1993). There is general agreement that the primary cause of this has been increased labor market inequality -- a widening gap between the hourly wages and annual earnings of those at the extremes of the pay distribution (Levy and Murnane 1992; Danziger and Gottschalk 1993; Gottschalk and Danziger 1995).

Over the past two decades, median real family income in the United States has been stagnant, growing at only 0.2 percent in the entire 20 years between 1973 and 1993, after having more than doubled between 1947 and 1973. (CEA 1994:115; CEA 1995:176).<sup>15</sup> This overall stagnation, however, conceals dramatic changes. Between 1973 and 1993, the real incomes of the richest quintile of American families grew by

25 percent, while those of the middle quintile were virtually constant and those of the lowest quintile actually fell 15 percent (CEA 1995: 178).

Studies of wage growth reveal similar patterns. Among both men and women, the distribution of real wages has become more unequal. "Between 1973 and 1993 real hourly wages of full-time male workers at the 10th percentile...declined 16 percent, while real hourly wages at the median fell 12 percent. Over the same two decades, workers at the 90th percentile eked out a wage *gain* of 2 percent. The net effect is that levels of wage inequality for men have been greater in recent years than at any time since 1940. Women received wage increases throughout the wage distribution, but the gains were concentrated at the top. Women at the 10th percentile earned 6 percent higher wages, while those at the 90th percentile had gains of 24 percent" (CEA 1995:176).

A major cause of this widening of earnings and therefore income inequality has been increasing returns to education and experience during the 1980s. The college-to-high-school wage premium for young workers increased more than 100 percent between 1974 and 1992, and the ratio of the wages of experienced to inexperienced workers has risen as well (CEA 1994: 117; see also Murphy and Welch 1993). In addition, inequality has increased in the earnings of those within education, experience and skill classes. The ratio of 90th to 10th percentile wages has increased within the distributions of high school graduates, college graduates, young (inexperienced) and old (experienced) workers. Those in the upper percentiles have experienced significant growth in real wages while those in the lower ends have seen only slight growth or declines (Gottschalk and Danziger 1995).

Many factors have been cited to explain these changes in earnings inequality, including skill-biased technical change (for example, the importance of computer literacy), declining unionization, the erosion of the real minimum wage, changes in industrial structure (the deindustrialization mentioned above), immigration of low skilled labor, and increased international competition in product markets.<sup>16</sup> Although debate continues about the relative importance of these factors, a general consensus exists that the earnings and therefore the income distribution in the United States has changed dramatically over the past two decades. The earnings distribution has become more unequal both because of a growth at the top and a decline in both absolute and relative earnings at the bottom.

**Implications for pension coverage and retirement income adequacy:** With the exception of the increasing labor force participation of married women, little in the labor market trends discussed suggests that pension plan coverage will increase

dramatically in the near future. Middle class unionized jobs have declined, and they were frequently associated with pension coverage. In service industry jobs, coverage is much less likely.<sup>17</sup> If the importance of the contingent economy and part-time work increase further, long-term job attachment may diminish, signaling a shift in the obligation to prepare for retirement from employers to individuals (Allen and Freeman 1994).<sup>18</sup> This shift can already be seen in the dramatic growth of defined-contribution pension plans, discussed in Section II-C below. Finally, the increase in earnings and income inequality is a concern, both because of its current implications and because it bodes ill for retirement income adequacy in the future.

### **C. Trends in Employer-Sponsored Pensions and Retiree Health Benefits**

Recent changes in employer-provided pensions are examined in this section. Although the proportion of people in the labor force who participate in a pension has changed very little, a shift toward defined-contribution plans as the primary form of employer-sponsored retirement plan has occurred, along with a dramatic increase in the number of workers participating in 401(k) plans. Funding and tax regulations are discussed along with concerns about the allocation of risk between employers and employees, which differs by pension plan type. New federal regulations along with changing economic conditions explain many of these trends.

**The tax and regulatory environment of employer-sponsored pensions:** The Internal Revenue Code provides favorable tax treatment for savings in the form of employer-sponsored qualified pension plans.<sup>19</sup> Employer contributions to a qualified retirement plan are deductible as a business expense. Neither these contributions nor the earnings of the pension fund are counted as part of the employee's taxable income until the pension funds are distributed. Employees may sometimes also make after tax contributions to qualified plans. In that case, the contributions are taxed when earned, not when distributed; however, fund earnings on these contributions are not taxed until they are distributed. If employers establish plans under sections 401(k) or 403(b) of the Code, employee contributions avoid current taxation.

The federal government encourages pensions through this preferential tax treatment, the objectives of which include increasing individual savings for retirement and encouraging national savings. To qualify for this preferential treatment, pension plans must conform to a series of government regulations concerning vesting, participation, funding limits, discrimination in terms of coverage and benefit levels, and the purchase of insurance from the Pension Benefit Guaranty Corporation (PBGC). These issues are discussed below.

Tax preferences decrease tax revenues. This loss in government revenue is called a tax expenditure. The pension tax expenditure is the largest calculated by the government, and was estimated at \$57 billion in the Fiscal Year 1993 federal budget, about half of which was due to public-sector plans (Salisbury 1993, 1994).<sup>20</sup> Some think that this tax expenditure is too large for a program that covers only half of the labor force, and that pension contributions or at least the earnings of pension funds should be taxed currently. Others respond that employer pensions encourage saving and provide a major component of retirement income for millions of retirees and therefore should continue to be encouraged.

Pension tax expenditures are predominantly a middle to upper income class benefit. Those with incomes below \$30,000 filed 42 percent of the taxable returns in 1992, but received less than 9 percent of the pension tax expenditures (Salisbury 1993; table 7). (They also had less than 8 percent of the total tax liability in 1992.) Whether the middle or upper class benefits more depends on the comparison made. If these tax preferences are viewed as simple expenditures, they appear to go disproportionately to the upper class. For example, the 5 percent of the (taxable) households with (1992) income above \$100,000 received 20 percent of the pension tax expenditure; the 24 percent with incomes between \$50,000 and \$100,000 received 43 percent.

But the value of the income exclusion is higher for upper income taxpayers not only because they are more likely to participate in employer pensions, but also because they face higher marginal tax rates and pay more taxes. When the tax preferences are viewed not as expenditures but as tax reductions, a different story emerges. Those at the bottom end receive little or no tax relief because they already pay little or no federal income tax. Those with income above \$100,000 reaped 20 percent of the pension tax expenditure, but paid more than 40 percent of the taxes paid (*ibid.*). Those earning \$50,000 to \$100,000 enjoyed 43 percent of the tax expenditure, but had only 33 percent of the tax liability. And those earning between \$30,000 and \$50,000 paid 18 percent of the taxes, but enjoyed 28 percent of the tax liability. The ratio of pension tax expenditures to total income taxes paid is the highest for those with incomes between \$30,000 and \$50,000 per year. Had these pension incentives been eliminated and nothing else changed, those earning between \$30,000 and \$50,000 would have seen their federal income taxes increase by 18 percent; those in the highest category (\$200,000+) would have suffered a 3 percent tax increase. Tax changes enacted in 1993 reduced the maximum compensation that any employee can be deemed to receive for tax deferral purposes from \$235,840 to \$150,000, which will lower the relative tax expenditure for high earners (Liston and LaBombarde, 1994).<sup>21</sup>

**Changes in pension plan coverage and type:** Employer-provided pension plans are an important source of retirement income to millions of older Americans. Using income data from the Current Population Survey, Grad (1992) reports that income from public and private pensions and annuities provided 18 percent of the aggregate income of couples and unmarried persons aged 65 or older in 1990 (exactly half the proportion provided by social security), an increase of 2 percentage points since 1976.<sup>22</sup> The importance of pension income to the elderly generally rises with income level -- from 3 and 8 percent in the lowest two quintiles to 16 percent in the middle quintile, and then to 22 and 20 percent in the top two quintiles. The percentage of the elderly receiving any pension and annuity income tells a similar story. It has risen over time, from 31 to 44 percent between 1976 and 1990, and it increases with income level, rising from 8 to 50 percent between the 1st and 3rd quintiles, and then to 67 percent in the highest 2 quintiles (ibid.).<sup>23</sup>

Coverage and participation among current workers: There are several sources of data on pension coverage (Beller and Lawrence 1992). The most commonly used is the Current Population Survey, which often includes special supplements on pension issues. Another is the Form 5500 report sent annually by all private pension plans to the Internal Revenue Service. A third is the IRS Annual Tax File, a sample of those who have filed tax returns in a given year (Schieber 1995).

Estimates of pension coverage rates depend on the data source used, the definition of coverage adopted (usually, currently participating in a plan) and the population being described.<sup>24</sup> Populations of interest include all workers, all wage and salary workers (excluding the self-employed), all private wage and salary workers (excluding government employees), all full-time private wage and salary workers (excluding part-time workers) and the ERISA work force (which includes all those aged 21 or older who have worked for an employer for at least a year, and who work at least 1,000 hours annually).

The proportion of workers participating in a pension plan increased rapidly between the end of World War II and the mid-1970s, but has remained relatively stable since then (Andrews 1985; Bloom and Freeman 1992; Turner and Beller 1992; Silverman and Yakoboski 1994). Analysis of Current Population Surveys between 1972 and 1993 indicates that pension participation among full-time private wage and salary workers ranged between 48 and 50 percent during this period (U.S. Department of Labor 1994b). Participation among full-time male workers has declined slightly from 54 to 51, percent while coverage of full-time females increased from 38 to 48 percent.

Yakoboski et al. (1994: Tables 1 and 2), using 1993 CPS data, report participation rates of 44 percent for all civilian



workers and 47 percent for civilian, nonagricultural, wage and salary workers.<sup>25</sup> Among the latter, the participation rate is 43 percent for those working between 1500 and 1999 hours per year, and 58 percent for those working 2000 or more hours. Of the ERISA work force (see definition above), 56 percent participated in an employer-sponsored plan in 1993. Coverage is higher among men (50 percent of the nonagricultural wage and salary work force) than among women (44 percent), and higher among those covered by a union contract (79 percent) than others (40 percent). Participation increases dramatically with education (Reno 1993: Table 2.9) and with annual earnings, from only 8 percent of those earning less than \$10,000 per year, to 61 percent of those earning between \$20,000 and \$25,000, and 80 percent of those earning \$50,000 or more annually.

Participation in pension plans also rises with age and with tenure as workers meet eligibility conditions and advance into better jobs where employers are more likely to offer pensions. Among civilian, nonagricultural wage and salary workers with less than one year of tenure in 1993, only 11 percent participated in an employer pension (Yakoboski et al. 1994: Table 2). This increases to 35 percent for those with 1 to 4 years of tenure, 60 percent for those with 5 to 9 years, and reaches 80 percent for those with 15 or more years of service. In 1993, the participation rate for wage and salary workers between the ages of 21 and 30 was only 34 percent, compared to 53 percent for those aged 31 to 40 and over 60 percent for those aged 41 to 60 (*ibid.*). The fact that pension participation increases with age suggests that lifetime pension participation rates will exceed the point-in-time coverage rates shown in any cross-sectional data, since the latter includes many younger workers currently uncovered who are likely to enjoy pension coverage as they progress in their careers.<sup>26</sup>

Pension coverage is also related to firm size. Only 10 percent of workers in firms with fewer than 10 employees participated in a pension in 1993, compared with 50 percent for persons in firms with 100 to 249 employees, and 67 percent for those with more than 1,000 employees (*ibid.*).

Pension coverage is much higher in the government sector. In 1988, for example, while 48 percent of the full-time private sector employees were covered by pensions on their current jobs, 87 percent of the full-time federal government workers were covered, as were 86 percent of the full-time state and 88 percent of full-time local government employees (Turner and Beller 1992: Table B2). Yakoboski et al. (1994) estimate that 79 percent of all federal workers participated in an employer-sponsored pension plan in 1993, as did 74 percent of all state and local workers.

In 1993, 63 percent of all private full-time wage and salary workers were employed by firms offering a pension and 50 percent were actually participating in a pension (U.S. Department of Labor 1994b). This implies that 80 percent of these workers employed by firms with pension plans actually participated in these plans. Among those offered a pension but not participating, 39 percent did not participate because they had not yet met the service conditions while another 31 percent chose not to contribute to the plan. Other reasons for lack of participation included 6 percent who were in jobs not covered by the employer-sponsored plan and 7 percent who did not work enough hours, weeks or months per year to qualify for participation.

In a recent paper, Schieber (1995) argues that the CPS data on which so much the pension information is based significantly understate the receipt of employer-sponsored retirement income. There are several possible reasons for this. One is that persons receiving lump-sum pension distributions may invest these funds in financial instruments, and then report the income in subsequent years as interest or dividends rather than as pension income.<sup>27</sup> Alternatively, recipients of lump-sum pension payments could use the funds to pay off consumer debt or a mortgage, and report no "income" in later years at all. Another possibility is that some people who receive pension annuity checks from a third-party payers (such as insurance companies) do not report them as pension income on surveys.

Schieber uses the IRS Annual Tax File to estimate the receipt of pension, annuity and IRA income for elderly (over 65) federal income tax filers.<sup>28</sup> His research is most useful at the middle and upper parts of the income distribution, where most households would be expected to file federal income tax forms. Schieber finds that slightly over three-quarters of the filing units in the upper two IRS quintiles reported pension income, compared to an estimate of two-thirds from the CPS as reported by Grad (1992).<sup>29</sup> In addition, Schieber finds that the amounts of pension income reported in the CPS is smaller than in the IRS files, and claims that "the CPS fails to measure as much as one-third of the total income that is being paid out in the form of pensions and annuities directly and also fails to attribute other income for the elderly that comes from the employer based retirement system to the plans responsible for that income (p. 29)." Although the differences in samples and income definitions make the sources of these discrepancies impossible to identify, the IRS data suggest, as do the National Income and Product Accounts data, that the CPS estimates understate the importance of the pension income received by older Americans.

Types of pension plans: Employer-provided pension plans are typically divided into two types, defined benefit and defined contribution, although recent changes in the

structure of some pension plans have created hybrid plans that blur this traditional distinction. Defined-benefit plans promise retirement benefits based on a predetermined formula, while defined-contribution plans provide for a specified contribution each pay period. These plans differ with regard to the types of financial risks borne by the employer and the employee, the effect of mobility on the value of the pension, the effect of changes in pension rules on the value of benefits, responsibility for the investment of pension funds, their influence on worker behavior and the effect of government regulation on the administrative cost of the plans. One of the most important trends in employer pensions is the movement towards greater use of defined-contribution plans as the primary employer-sponsored retirement plan (Clark and McDermed 1990; Turner and Beller 1992; U.S. Department of Labor 1994b).

The proportion of primary pension plans with more than 100 participants that are defined-benefit has declined in all industries and in all size groups (Clark and McDermed 1990; Clark et al. 1994). The proportion of all plans that were defined-benefit fell from 28 percent in 1984 to only 14 percent in 1991 (U.S. Department of Labor 1994a). Non-401(k) defined-contribution plans have remained at approximately 70 percent of all plans while 401(k) plans have increased from 3 percent of all plans in 1984 to 16 percent in 1991.<sup>30</sup> The increasing importance of 401(k) plans is even more dramatic when the number of participants is examined. As a percentage of all pension participants, those in 401(k) plans have increased from 12 percent in 1984 to 31 percent in 1991, while defined-benefit participants have declined from 50 percent of the total to 42 percent. Participants in non-401(k) defined-contribution plans declined from 38 to 27 percent during the same period. The dramatic growth in 401(k) plans is further shown in the actual number of plans and participants. In 1984, about 17,000 such plans covered 7.5 million workers. By 1991, almost 115,000 401(k) plans covered nearly 20 million participants.

Participation rates in 401(k) plans are relatively high. In 1993, more than one-third of all private sector workers were offered the opportunity to participate in a 401(k) plan, and of those offered a plan, two-thirds choose to participate. The proportion of those offered who participate increases sharply with age, rising from 34 percent of those under 25 to 57 percent of those aged 25 to 29, 69 percent among those aged 30 to 34, and between 70 and 79 percent of workers between the ages of 35 and 64. This rate also rises with years of service and annual earnings. The median percent of pay contributed to 401(k) plans is 6 percent for both men and women, and does not vary much by age or annual earnings. Despite the relatively high participation rate for a voluntary plan, there are many workers covered by these plans who choose not to participate -- the other third. If 401(k) plans are the only

retirement plans offered by an employer, their optional nature leads to substantially lower participation than if all eligible workers are required to participate, as is the case in many defined-benefit plans.

**Cost of employer pensions:** Economists generally agree that, over the long run, workers bear most of the cost of employer pension contributions through lower wage earnings.<sup>31</sup> The tradeoff between wages and employee benefits has long been recognized in collective bargaining, compensation decisions made by business managers, and the selection of jobs by workers (Rosen 1974; Smith 1979; Brown 1980; Woodbury 1983). Research suggests that workers accept a portion of their total compensation in the form of future pension benefits when the effective price of these benefits if bought through the employer is less than what it would cost the worker. Greater value from employer-provided pensions is attributable to quantity discounts, risk pooling, and the preferential tax treatment of both pension contributions and the investment returns. Factors that increase the cost of employer pensions (like costly government regulations) will tend to reduce the demand for this benefit.

**Characteristics of defined-benefit and defined-contribution plans:** In a defined-benefit pension plan, the plan sponsor promises to pay a retirement benefit based on a specified formula. The size of the benefit depends on eligibility and participation requirements, vesting standards, the benefit formula, and often the employee's recent earnings history (see below). In defined-contribution plans, employers and employees make periodic contributions into a pension account for individual workers.

In 1991, about 70 percent of those in defined-benefit plans offered by medium and large firms had to meet some age and/or service requirement in order to become eligible to participate in the plan.<sup>32</sup> The most frequently used eligibility standard, covering about a third of participants in defined-benefit plans, was age 21 with one year of service, the maximum permitted by federal regulations. The current participation requirements are reasonable guidelines that do not significantly affect the retirement income of those who do not achieve coverage while limiting the record keeping associated with very short term employees.

Most defined-benefit plans require 5 years of service before workers become vested in the plan (that is, before they have legal rights to benefits even if they leave the firm). This period has been reduced by government regulations, which currently require that firms provide vesting standards at least as generous as 100 percent after 5 years or a graded vesting schedule with partial vesting after 3 years and 100 percent after 7 years. Because, under current requirements, all full-time covered workers will

ultimately receive a pension even if they remain with the firm for only 5 years, further reductions in vesting standards would have only a limited effect on the size of retirement incomes.

The normal retirement age of a plan is the age at which a retiree can begin receiving unreduced retirement benefits or benefits based on the prescribed benefit formula in the plan. In most defined-benefit plans, this occurs at a particular age (most commonly, age 65), or when some combination of age and service with the firm (e.g., age 62 and 10 years of service, or age plus years of service equals 85) is achieved (Mitchell 1992: Table 9.4) About 8 percent of participants are in plans that allow retirement with unreduced benefits after a specified number of years of service (usually 30), regardless of age (ibid.).

In virtually all plans, workers face early retirement options and can begin receiving benefits prior to the normal retirement age. The most prevalent early retirement age is 55 with 10 years of service. These early retirement features typically provide strong incentives for workers to retire from their career employer prior to the normal retirement age, often at the earliest age of eligibility (Kotlikoff and Wise 1989). With the continued aging of the population, the age for full social security benefits (100 percent of the worker's Primary Insurance Amount) is scheduled to be raised, first to age 66 and later to 67. The age at which maximum benefits can be received from a defined-benefit plan is often tied to the age for full social security benefits. If retaining older workers in the labor force is important, consideration might be given to establishing a minimum retirement age for tax-qualified employer pension plans.

In nearly all defined-benefit plans, the benefit depends on years of service. In addition, for more than two-thirds of all participants in defined-benefit plans sponsored by medium and large firms in 1991, benefits also depended on earnings. Among these workers, 80 percent were in final-earnings plans (most commonly, the average of the highest consecutive 3-5 years) and 20 percent were in plans using career average earnings formulas. Participants typically receive a specified percentage of average earnings (however defined) for each year of service. Another quarter of all participants in defined-benefit plans (mostly covered by collectively bargained contracts) were in plans that pay a specified dollar amount per year of service, independent of earnings. Other types of formulas were used in plans that cover about 7 percent of defined-benefit participants.

In final earnings plans, for workers who stay with the firm until retirement, the value of initial retirement benefits is protected against changes in the cost of living as long as earnings growth matches or exceeds the rate of inflation. Where retirement

benefits are specified in absolute dollar amounts, more common in collective bargaining environments, the real value of initial benefits will decline unless it is periodically increased to reflect changes in the price level. These adjustments are often a topic of negotiation.

Participants in defined-benefit plans who leave their career employers prior to retirement age suffer pension losses relative to long tenured workers. This loss in the lifetime value of pension benefits results from the use of final earnings in the benefit formula and the lack of indexation of vested benefits to future inflation or wage growth. This loss in the value of a pension discourages job turnover among persons covered by defined-benefit plans (Allen et al. 1993; see Gustman and Steinmeier 1993 for a contrasting view).

Often, early retirement benefits are not fully actuarially reduced relative to normal retirement benefits. In this case, the present value of expected benefits is highest at the early retirement age, and then declines. The magnitude of the subsequent decline depends, in part, on the response of future wages and pension benefits to inflation. The decline in pension "compensation" along with the early availability of pension benefits tends to encourage retirement. The discontinuities in pension compensation as workers age (for example, the increases in pension accrual during the years just prior to eligibility for early retirement benefits and the sharp declines in accruals (and therefore compensation) thereafter) change the financial reward for working each additional year and thereby influence labor supply decisions (Burkhauser 1979; Fields and Mitchell 1984a; Kotlikoff and Wise 1989; Quinn et al. 1990; Ruhm forthcoming).

In 1991, 54 percent of all participants in private defined-benefit plans were integrated with social security in the sense that the employer pension provides a smaller proportional benefit to the lower paid, whose social security benefits will represent a greater proportion of their pre-retirement earnings (U.S. Bureau of Labor Statistics 1993). The most prevalent form of integration (covering about two-thirds of those in integrated plans) was the excess method, in which a less generous benefit formula applies to earnings below some specified dollar amount. The remainder were in plans that use the offset method of integration, which reduces pension benefits by some proportion of social security benefits received. The federal government has specified maximum reductions permitted under both types of integration.

Defined-contribution plans include savings and thrift plans, profit sharing plans, employee stock ownership plans, money purchase plans, and 401(k) and 403(b) plans. The benefits at retirement depend on past contributions and the rate of return on accumulated pension funds. Many plans allow for individually-directed accounts so

that participants can decide how pension funds are invested. Defined-contribution plans tend to have less restrictive vesting standards: 31 percent of defined-contribution participants are in plans that allow for immediate vesting (this is required for 401(k) plans and common in 403(b) plans). Virtually all plans allow for lump-sum distributions at retirement or at termination of employment, which employees can (but often do not) then roll over into other plans or into individual retirement accounts.

Pension compensation in defined-contribution plans is more explicit than it is in defined-benefit plans, because it is simply the employer's contribution to the pension fund. Therefore, these employer pension costs are more visible to workers than are the employer costs associated with defined-benefit plans. Traditionally, employer contributions are a percent of annual earnings and are unaffected by age and years of service, although basing contributions on age or service is becoming more common. Funds are generally deposited in individual accounts whose value is disclosed to the worker, and they are viewed as belonging to the worker. A worker who leaves the firm prior to retirement retains ownership of the entire vested value of the pension fund. Pension assets can either remain with the plan sponsor or be distributed to the departing worker as a lump-sum that can then be rolled over. In either case, the worker continues to receive all future returns on the pension assets. Because of these factors, individuals with defined-contribution plans tend not to suffer losses in pension wealth with job changes that those with final-pay defined-benefit plans do, and mobility rates are therefore less likely to be affected.

Annual benefits are determined by the size of the pension account and the age of the recipient when benefits commence. To hold the asset value of the expected benefit stream constant, defined-contribution plans have implicit actuarial adjustments for different retirement ages. (Of course, the size of the pension account continues to grow if the worker remains on the job and new contributions are made.) Thus, defined-contribution plans are less likely than defined-benefit plans to influence retirement decisions.

One problem associated with any plan with a lump-sum payout is that the lump-sum must be turned into an annuity if it is to provide a guaranteed (nominal) income flow over the recipient's remaining lifetime. Annuities indexed to the Consumer Price Index are unavailable (other than social security), and the ability to buy even fairly priced nominal annuities in the private market is a concern given the problems of adverse selection and group size. In addition, life expectancies vary by gender, ethnicity and other personal characteristics. Therefore, a key factor in the conversion of a pension accumulation to an annuity is the size and composition of the pool of persons with whom one is grouped.

**Risks associated with pension plans:** Defined-benefit plans differ from defined-contribution plans in who bears various types of risk. Some of the risks are specific to the individual worker, and some are broader, applying to the firm, the industry or the economy as a whole. For example, workers with earnings-dependent pensions face the risk of uncertain future wages, especially those whose benefits will depend on their average wages during their last few years of work. Those whose benefits will depend on wages averaged over their careers face the risks of inflation during the work life, which can seriously erode the real value of early years' earnings.

The risk to pensions from job turnover is borne by the worker in a defined-benefit plan, because turnover tends to reduce lifetime retirement benefits. This loss in pension wealth occurs even if the worker finds immediate employment at identical earnings with another firm with an identical pension. The loss occurs because benefits are based on earnings up to or at the time of separation, and are fixed in nominal terms at that time. Thus, a worker who switches employers will have lower total pension benefits than one who remains with a single firm, even if they have the same earnings profile. Both the number and the timing of moves and the rate of inflation thereafter will influence the size of the pension loss (Clark and McDermed 1988; Gustman et al. 1994). The problem is the lack of portability of pension credits across employers, and it is a significant risk factor for the participant in defined-benefit plans.

Workers in smaller firms may have less opportunity for job advancement and therefore a higher probability of voluntary job separation. If so, such employees are likely to prefer defined-contribution plans. Small firms also are much more likely to go out of business than large firms, which would lead to the same preference.

The risk of employer bankruptcy or the lack of adequate pension funding should also be considered by participants in a defined-benefit plan. Termination of a fully funded pension plan (whether because of employer bankruptcy or other economic conditions) has an effect similar to any other form of employment separation; lifetime pension benefits are reduced because workers are unable to complete their working careers at higher levels of earnings in the same pension plan. If workers correctly perceive termination risks, firms with a higher probability of bankruptcy or likelihood of canceling the pension plan will have to offer higher cash earnings to attract comparable workers.

Inadequately funded pensions that are terminated at bankruptcy tend to exacerbate the losses of pension wealth. To limit such losses, the Employee Retirement Income Security Act (ERISA) requires that defined-benefit plans purchase pension insurance



from the Pension Benefit Guaranty Corporation (PBGC). If the assets in the pension fund are inadequate to pay the vested benefits, the PBGC guarantees the payment of such benefits within specified limits. Pension insurance reduces the risk that workers will not receive vested benefits in the event of plan termination. Since the PBGC now bears the risk associated with underfunding, the government has an increased interest in the full funding of pension funds and in the setting of PBGC premiums so that they provide adequate revenues to cover defaults. Determining appropriate premiums that allow for risk differentials has become an important component of pension policy. These premiums are costs to the plan sponsors and therefore raise the cost of providing pension coverage to workers. At the same time, they increase the value of the pension promises to the covered workers.

Another risk faced by defined-benefit participants is the possibility that the firm might reduce the generosity of the plan for future years of service. This outcome would also impose a loss in expected pension benefits on workers in final earnings plans.

Financial market risks are borne directly by the participants in defined-contribution plans and only very indirectly by participants in defined-benefit plans.<sup>33</sup> In the former, differences in rates of return to pension assets directly affect the size of an individual's pension account at retirement. Portfolio allocation decisions that yield lower returns lead to lower lifetime benefits. If workers systematically select portfolios that promise less risk but lower returns than do plan managers in defined-benefit plans, then participants in defined-contribution plans will have lower average benefits in retirement than those in equally costly defined-benefit plans.<sup>34</sup> Greater risk aversion by participants would likely be reflected in individually-directed pension accounts being more heavily weighted towards bonds rather than equities. As long-run investments, bonds and fixed-return instruments have consistently yielded lower returns than equities (Ibbotson Associates 1993). The participant must also be concerned about the effect of short-run fluctuations. Declines in asset values may significantly reduce the value of the pension fund just when the worker had planned to retire. The risk of significant declines in asset values near the planned retirement date can be partially offset by moving funds into less risky assets as the expected retirement age approaches.

Inflation risk confronts participants in both types of plans. Those in defined-contribution plans must be concerned with the responsiveness of the rate of return of their pension funds to changes in the rate of inflation while they are still working. If contribution rates are constant, real employer contributions will not decline if earnings keep up with the rate of inflation. After retirement, the effect of inflation on the real

retirement benefit will depend on whether the pension funds have been converted into a fixed nominal annuity, an annuity indexed to market returns or whether the assets continue to be actively managed with inflationary increases in nominal returns accruing to the retiree. The issuance of government bonds indexed to inflation would provide considerable additional protection against post-retirement inflation risk (see Section IV-F below).

Participants in earnings-related defined-benefit plans must consider the impact of inflation on the rate of growth of their earnings. For workers in final-average-pay plans whose earnings rise with inflation, future real pension benefits are not much affected by moderate inflation as long as they remain with their employers. But if earnings lag behind prices, then the real value of future retirement benefits will decline. For workers who have left their employers and are currently in deferred vested status, inflation systematically erodes the real value of future pension benefits that are frozen in nominal terms at the time the worker left the firm. Even moderate rates of inflation cause major reductions in the real value of deferred pension benefits earned early in the work life. This inflation effect substantially increases the detrimental effect of job changes for workers covered by defined-benefit plans. For participants in dollar amount plans, the inflation risk to benefits at retirement is much more direct. Benefits are specified in fixed dollar terms. As a result, if regular plan amendments do not increase the dollar amounts, the real value of these promised benefits will steadily erode. These plans are nearly all collectively bargained, and the dollar amount is typically set as part of the negotiations.

After retirement, the effect of inflation on real pension benefits depends on post-retirement benefit adjustments. Many public employee plans provide automatic cost-of-living adjustments to retirees: for example, federal civil servant pension plans have annual automatic cost-of-living adjustments tied to increases in the consumer price index. Adjustments under the older federal employee plan are equal to the annual increase in consumer prices. Adjustments under the newer plan are less than the full increase in the price index, however, and increases are granted only to retirees aged 62 or older. In 1992, just over half of the participants in state and local plans were covered by automatic cost-of-living adjustment provisions, although about 60 percent of those so covered were in plans that limited the increase to 3 percent or less per year (U.S. Bureau of Labor Statistics 1994b).

In contrast, only 5 percent of participants in private defined-benefit pension plans had automatic cost-of-living adjustments in 1991. However, many private plans have provided ad hoc increases after retirement; of those raising benefits in this manner, the increase has been on the order of 40 percent of inflation during the 1970s but less

since then (Allen et al. 1986, 1992). Increases in pension benefits for retirees have been more prevalent in large, collectively bargained plans and have been larger for individuals who had greater pre-retirement tenure and who have been retired for a long period. Although the size of the ad hoc post-retirement increases has varied over time, they have generally fallen well short of the rate of inflation. For most workers with defined benefits, then, the real value of the benefits declines during retirement.

Individuals differ in their risk preferences and in their understanding of the risks they face. As a result, some workers will prefer defined-benefit pensions while others will prefer defined-contribution plans. Neither of the plans is "better" for all workers. However, it is important to understand what factors have stimulated the movement away from defined-benefit and towards defined-contribution plans and to examine how these trends will affect the economic well-being of future retirees.

**Questions regarding the future role of pensions in the United States.** In evaluating the future of employer pensions, several important questions must be addressed. They are outlined below, along with the Panel's current understanding of how they might play out under alternative scenarios.

1. Why did the growth in pension coverage cease in the 1970s? Without further government action, how will pension coverage change in the future?

Most researchers conclude that the spread of pensions prior to 1970 was largely driven by the preferential tax treatment given to pension contributions and earnings (Ippolito 1986; Woodbury and Huang 1991). Other factors included rising real income that increased the demand for deferred consumption and the 1949 Supreme Court decision in the *Inland Steel* case that made pensions a mandatory issue for collective bargaining. Evaluation of the current status of pension contributions and the decision to offer pensions reveals that employers are sensitive to the after-tax cost of providing pension benefits (Long and Scott 1982; Woodbury 1983; Sloan and Adamache 1986; Woodbury and Huang 1991).

The end of pension expansion coincided with a period of stagnant real wages, new government regulations that raised the cost of providing pensions, changes in tax policy and industrial mix, declines in unionization and a changing composition of the labor force. Workers are likely to bear most if not all of the cost of employer pension contributions in the form of lower wages. Given the progressive benefit structure of social security and current marginal income tax rates, it is plausible to argue that pensions now cover most workers who are willing to "buy" tax-deferred retirement income at current prices.<sup>35</sup>

Significant growth in the proportion of the labor force participating in employer-sponsored pensions is unlikely to occur given current policies. Mandating that employers offer and workers participate in a plan would, of course, expand coverage. Mandating could be done in conjunction with the existing social security system or in response to a major modification of social security.

2. Why has there been movement away from defined-benefit plans and toward defined-contribution plans?

This trend is in part the result of government regulations that have increased the relative administrative cost of defined-benefit plans.<sup>36</sup> Continuing increases in the insurance premium that must be paid to the Pension Benefit Guaranty Corporation may also have contributed to the declining desirability of defined-benefit plans. In addition, new rules have encouraged firms to offer 401(k) plans. The decline in the proportion of pension participants covered by defined-benefit plans (as opposed to firms offering plans) has also been affected by structural changes in the economy (Clark and McDermed 1990; Gustman and Steinmeier 1992; Clark et al. 1994; Silverman and Yakoboski 1994). If Congress continues to enact changes that increase the relative cost of defined-benefit plans, the trend toward defined-contribution coverage will continue. These higher operating costs are also expected to reduce the proportion of the labor force employed in firms that offer pension plans.

3. To what extent will the growth in defined-contribution plans adversely affect retirement incomes in the future?

Some analysts have expressed concerns about the shift towards defined-contribution plans. First, some inexperienced participants in self-directed defined-contribution plans may follow investment strategies that are more conservative (with lower yields and therefore lower eventual retirement benefits) or more risky (with a high probability of loss of capital) than they would pursue if they knew more. Second, some plans require employee matching before the firm contributes to the plan, and some workers temporarily or permanently opt not to participate. Third, separated workers who have participated in defined-contribution plans may be more likely to accept and spend lump-sum distributions rather than roll them over into another retirement plan.<sup>37</sup> If these concerns are valid, the shift towards greater use of defined-contribution plans may result in fewer people receiving pension benefits and lower benefits for some who ultimately do receive benefits.

Several offsetting issues should be considered. First, the administrative costs of defined-contribution plans are usually lower than those of defined-benefit plans. These lower costs may result in more firms offering pension plans. Thus, without defined-contribution plans, firms deciding not to offer defined-benefit plans may opt for no plan at all. Second, more immediate vesting and greater portability of pension funds under defined-contribution plans should result in greater benefits in retirement, if the funds are preserved until then. And finally, education by plan sponsors can help employees make wise savings and investment decisions (Milne et al. 1995).

4. How will firms react to increased social security taxes or reduced social security benefits?

If the social security tax and benefit structure is changed, there will be an automatic response in those pension plans that are integrated with social security. For example, in offset plans which reduce pensions by some proportion of social security benefits, pension benefits would rise by some fraction of any social security cuts. The exact changes in pension benefits will depend on the details of integration and whether the current integration rules are altered in response to the social security changes.

Other reactions of employers to future social security changes are difficult to predict. If social security taxes are raised while benefits are maintained, other employee compensation will be reduced to the extent that workers bear the cost of this payroll tax. Whether this occurs through lower wages or reductions in pension compensation depends on worker preferences for current versus future compensation. If social security benefits are reduced in the future, workers may demand more employer-provided retirement income. It is uncertain, however, whether workers would be willing to give up sufficient current consumption to offset fully declines in social security benefits.

Another interesting and important issue is how employers will respond to the changes in the social security environment already legislated. Both the delay scheduled for the age for full social security benefits (from 65 to 67) and the increases in the delayed retirement credit, already underway, will tend to induce later retirement. Will employers attempt to offset the reductions in social security retirement incentives by increasing analogous incentives in their own pension plans? Or will they go along with the social security changes by raising their normal retirement ages as well? How would employers who offer pensions respond to a delay in social security's early age of entitlement (62)? Should the government take a position on this issue by mandating minimum retirement ages for tax qualified pension plans? Answers to these questions require further consideration and debate.

5. To what extent would the encouragement of portable pensions for workers enhance their retirement income?

The preceding analysis has shown how workers who regularly change employers suffer reductions in their pension benefits relative to workers who do not. Many workers have only loose attachments to any particular firm. Workers with high turnover rates would have improved retirement income if they could participate in an occupational pension associated with their profession or occupation rather than with a specific employer or job. In this case, job changes would not require changes in their pension plans.

One example of such a pension is TIAA-CREF, which allows many college and universities staff to move among employers without suffering breaks in coverage or loss in pension benefits. The development of similar pension plans for other occupations would allow workers to have contributions from different employers placed in a single pension account.

Pensions are difficult to provide for low-wage and contingent workers because of their high mobility and multiple employers. Their low compensation and relatively low marginal tax rates makes it less likely that they would prefer future benefits to current compensation. A national pension plan might be established that permits irregular contributions, contributions from multiple sources and full portability. Employers of part-time, seasonal, temporary, or domestic workers, as well as full-time low-wage workers, could then contribute regularly or irregularly to workers' pension accounts.

**Retiree health benefits:** The availability of employer-sponsored health insurance for retired workers is a growing concern for workers, retirees, employers and policy makers. Ever increasing health care costs and recent changes in accounting rules have caused many employers to re-examine their role in providing health benefits for current and future retirees.<sup>38</sup> The economic security of workers will be affected if fewer employers offer retiree health insurance or more employers require contributions from workers or retirees to fund it. In addition, the Medicare hospital insurance trust fund is forecast in the 1995 Trustees' Report to be exhausted by 2002 under intermediate actuarial economic assumptions (Board of Trustees 1995). The availability of retiree health insurance is likely to become an increasingly important income security issue as the baby boom generation moves into retirement.

In 1992, 52 percent of the (mostly large) employers surveyed by A. Foster Higgins & Co. (1993) provided health care benefits to retirees *under age 65*, down from

62 percent in 1988.<sup>39</sup> The two largest declines were in 1991 and 1992. In addition, the percentage of these employers offering coverage who fully financed their retiree health insurance declined from 38 percent (1988) to 32 percent (1992). The percentage requiring full financing by the retirees fell slightly from 25 to 23 percent in 1992, while the percentage of employers sharing the cost with the retirees increased significantly, from 37 to 45 percent.

Many employers integrate their retiree health insurance packages with Medicare and offer supplemental insurance for retirees *aged 65 or older*. This practice is slightly less common than offering health benefits to retirees under age 65 and has also been falling in recent years. A. Foster Higgins survey data indicate that 46 percent of a sample of medium and large employers offered and contributed to health benefits to retirees aged 65 or older in 1992, down from 55 percent in 1988. While these data suggest a decline in the proportion of *firms* offering retiree health insurance both before and after age 65, U.S. Bureau of Labor Statistics (BLS) data indicate that the percentage of full-time *workers* in medium and large private establishments offered retiree health insurance has been relatively stable at about 45 percent since 1988 (*ibid.*). The BLS surveys also show a decrease in the percentage of workers with retiree health benefits available only prior to age 65, and a small increase in the percentage of workers with benefits available throughout the retirement years.

Less is known about full-time workers employed in small private establishments, but the BLS data indicate that about 18 percent of these workers had employer-sponsored coverage in 1992, up slightly from 1990 (U.S. Bureau of Labor Statistics 1994a). With respect to full-time state and local government workers, the proportion with fully or partially employer-funded retiree health insurance coverage dropped from 58 to 51 percent between 1990 and 1992 (U.S. Bureau of Labor Statistics 1994b). Other workers may have been able to purchase health insurance at group rates after retirement because of Consolidated Omnibus Budget Reconciliation Act (COBRA) regulations.<sup>40</sup>

The first wave of the Health and Retirement Survey (HRS) provides a cross-sectional snapshot of retiree health coverage in 1991. Preliminary tabulations suggest that about 60 percent of wage and salary workers aged 51-61 had retiree health insurance available, either through their current jobs or through their spouses' employers.<sup>41</sup> Coverage was higher for workers in unions and for workers participating in a pension, and it increased with both firm size and the individual's earnings (Fronstin 1995).

The overall estimates are slightly lower than those suggested by retirees in the 1988 Current Population Survey. Gustman and Steinmeier (1994) estimate that 72 percent of men and 65 percent of women who retired from jobs lasting 5 years or more had potential health insurance coverage from that job, and that 60 percent and 43 percent, respectively, actually took the coverage.

A restructuring of retiree benefits appears to be under way. According to a 1988 survey by Johns Hopkins University and the Health Insurance Association of America, over one-third of surveyed firms offering retiree health benefits expected to increase employee contributions (de Lissoy, et al. 1990). These firms also intend to expand the use of managed care health plans to provide retiree health benefits, to limit health plan coverage and/or benefits, and to tighten eligibility requirements.

As employers reduce their sponsorship of retiree health insurance, the economic security of retirees (especially early retirees, leaving employment prior to 65, the age of Medicare eligibility) will become less certain. This may induce changes in the labor force behavior of older workers. Recent research suggests that older workers contemplating retirement are sensitive to the availability of retiree health insurance. Karoly and Rogowski (1994), using the Survey of Income and Program Participation (SIPP), find that the availability of retiree health insurance doubles the probability of retiring for men aged 55 to 62.<sup>42</sup> Gustman and Steinmeier (1994) find that it discourages retirement prior to the age of eligibility, and encourages it thereafter, with an overall effect that is very modest. Madrian (1994) finds a more substantial effect, and estimates that individuals with employer-provided post-retirement health insurance retire substantially earlier -- on average, about a year earlier -- than those without. She also estimates that the increased availability of retiree health insurance between the early 1960s (when about 25 percent of retirees had it) and the 1980s (when close to half did) might explain between 10 and 20 percent of the decline in the labor force participation rates of men aged 55-64.

There is agreement that employer sponsored health insurance increased dramatically in the 1960s and 1970s (before it was very expensive to provide), that employers are currently cutting back on this benefit and/or requiring retirees to pay more of the cost and that employers are contemplating further reductions in generosity in the future. There is also consensus that older workers considering retirement are sensitive to the availability of health insurance after retirement, but considerable debate exists about the magnitude of the behavioral effects.

**Conclusions:** Employer provided retirement benefits represent a major source of economic well-being for many retirees. They provide an important component of



retirement income to many workers who have remained with the same company for most of their careers and smaller amounts to more mobile workers. Retirees from larger firms, unionized firms, and higher paying firms are more likely to receive pension benefits. Retiree health insurance is also more likely for these retirees.

The proportion of workers covered by a pension plan or a retiree insurance health plan increased until the end of the 1970s. Pension coverage has remained relatively stable during the past 15 years, while retiree health coverage declined during the 1980s. These retirement benefits are critical to those who receive them, and the elimination or curtailment of these benefits would considerably reduce these individuals' retirement income.

In the absence of major institutional change, like mandating employer coverage, current trends do not suggest any expansion of pension or health coverage on the horizon. Quite the opposite, current levels of pension and health coverage and benefits are threatened by government regulations and policies aimed at reducing the federal deficit. Because employer provided benefits are important components of the economic well-being of older persons, this forecast is a matter of concern, especially if combined with reductions in the level of support from government health and retirement programs.

#### **D. Trends in National Savings**

This section examines U.S. saving rates, and finds them to be low in aggregate compared to U.S. historical trends and to international standards. The microeconomic, disaggregate data are also discouraging: most Americans reach retirement age with insufficient savings to maintain pre-retirement consumption. Several explanations for this phenomenon are discussed, as are policy options to encourage growth in personal saving.

**Why more saving is desirable:** The current rate of saving in the United States is low relative to those of the past. The decline appears especially large when saving is measured on a net basis using national income and product account (NIPA) tabulations. But it is also seen to be lower with alternative measures, including gross NIPA saving, net saving adjusted for revaluations of assets, NIPA saving adjusted for consumer durable purchases, and NIPA saving adjusted for government capital investments. The drop in saving is more ambiguous if research and development spending and education and training investment are included. Part of the ambiguity arises, however, because it is difficult to allocate educational spending between "investment" and "consumption."

Compared with other rich countries, net saving in the United States is low -- alarmingly low according to some. This has implications for the future growth of income and consumption in the United States relative to other countries, and it may have implications for the relative influence of the United States in world affairs.

One reason that low saving rates are a concern is that the social return to saving is probably higher than the private return enjoyed by individual savers. Private savers receive an after-tax return, and the taxes on the returns to savings generate benefits for other members of society. Hence, when deciding to allocate lifetime incomes between current and future periods, private savers systematically undervalue the benefits of deferring consumption because they ignore an important part of the future benefits.

More pertinent for social security analysis is the argument that the drop in saving has reduced the potential rate of growth in national income, which in turn reduces the potential consumption of future workers and retirees. Because future workers will be asked to finance social security and Medicare benefits for the current generation of workers, the redistribution of potential consumption from the future to the present raises questions about the equity of the intergenerational transfer. If real wages in the future turn out to be the same or only slightly higher than current wages, then the increased burden of paying for future social security and Medicare benefits may actually reduce the future net wage below the current after-tax wage. Future workers may thus face the prospect of lower wages (and consumption) than current workers, in part because the current generation of workers and retirees has saved so little. Future workers do not get a voice in current decisions, so it is important that current decision makers keep the interests of this group in mind.

If voters and policy makers believe the U.S. retirement income system faces serious peril, then one way to reduce the peril is to increase the size of the economic pie available in the next century. The retirement consumption of current workers must ultimately be derived from the output produced by future workers. The future output of the country must be divided between the consumption of future workers, future retirees, and investment. If the relative living standards of the retired elderly are to be protected, then the share of national income devoted to the consumption needs of the future elderly must rise, because a larger proportion of the population will be elderly in the next century. The most certain way to boost future income is to raise the future productive capacity of the nation, which can be accomplished through higher saving rates today.

**Why do Americans save so little?** Why has saving declined so much, especially since the early 1980s? Saving the correct amount for retirement requires a

difficult set of calculations, and these computations are only performed, and their results seen, once in a lifetime. Some people make errors and save too little. Even if they make the correct calculation, many people find it hard to refrain from consuming today in order to ensure adequate income in the distant and uncertain future. In addition, many institutions have been established that diminish the need to save for costly emergencies or predictable events that will occur before retirement, reducing the need for nonretirement savings. Social security and Medicare, by insuring income and medical consumption in retirement, reduce the need for retirement saving. Medical and other kinds of insurance reduce the need to maintain large savings balances for unexpected emergencies. In addition, need-based programs, like public assistance and college aid, create disincentives to save. If two families receive similar incomes, need-based programs offer more generous treatment to the family with less accumulated savings. Finally, the improvement of credit institutions, like mortgage lending and consumer credit, has made it easier for many people to borrow. Americans have taken advantage of this and increased their borrowing. In some cases, the availability of credit has reduced the need to save.

In addition, an increased fraction of retirement income has been annuitized; that is, converted into an asset that lasts until the death of the worker or spouse. Employer-sponsored pensions represent one form of annuitized asset. These pensions provide a higher percentage of retirement income than they did before 1975. Many consumers may therefore leave fewer assets to their surviving heirs in the form of unintended bequests. Saving may be lower than it would be if individual consumers had less access to annuitized retirement income.<sup>43</sup>

Even if these institutional changes have improved consumer welfare, they have reduced the need for precautionary and retirement saving. How much they have reduced the rate of private saving is a matter of controversy among economists.

**Policy Options for Increasing Savings:** There are really two questions here: what policies can raise private saving, and can they also raise aggregate national saving? A policy that succeeds in raising private saving may fail to increase national saving if it simultaneously reduces public saving; that is, increases the government deficit. The Panel examines specific policies that have been suggested to raise private and/or public saving. Where necessary, the analysis will distinguish between the effects on saving in the short, medium and long run.

To preview the Panel's findings, the literature suggests few simple answers to these questions.<sup>44</sup> Assessing the effects of policy on savings patterns is difficult because policies sometimes have effects on households' savings environments that are hard to

identify. For example, measuring how tax changes affect household or pension savings requires information on savings responses to different tax regimes, holding other things constant. The ideal "experimental" data do not exist, of course, so empirical researchers rely on actual historical records to try to identify what a particular tax change accomplished while controlling for other factors that varied over time and across households or firms. Journal debates rage over whether any given set of "control variables" is sufficient to isolate the true effect of key policy variables, and whether observed policy effects actually reflect some other unmeasured but crucially important factor correlated with a policy tool (for example, unobserved health problems or saving proclivities).

A more serious source of professional disagreement is that researchers do not yet have a fully unified theory of why people save. Simple economic models of saving are inadequate representations of real world behavior, but more complex models are difficult to work with and often do not produce clear-cut predictions about responses to policy changes. The life-cycle framework is the foundation for most economic savings models. In its simplest variant, it posits that people save out of their (perfectly forecast) earnings to ensure a smooth consumption stream between retirement and their (perfectly forecast) date of death. Not surprisingly, some of the predictions generated by this perfect-certainty model are contradicted by empirical studies of U.S. savers. For example, the simple theory suggests that people dissave as they near death; in this light, elderly people would be expected to draw down their assets as they age, and those who expect to live longest should save the most. In fact, many elderly have virtually no retirement assets (other than their expected social security benefits), and there is considerable debate about whether those with retirement assets draw them down as they age (Hurd 1990). Another ambiguity arises regarding the effect of the return on savings. In the simple model, higher anticipated earnings on retirement savings (or lower taxes on retirement savings) increase peoples' incentives to save, because the rewards from doing so are larger. Nevertheless, higher expected returns (or lower expected taxes) might encourage more current consumption or earlier retirement, because people are wealthier. Hence, even the simple life-cycle model fails to offer simple predictions about the determinants of retirement savings patterns.

Important extensions of the life-cycle framework have sought to make behavioral models more realistic by recognizing additional savings motives, particularly due to uncertainty (Hubbard et al. 1994). Some studies emphasize the wide range of approaches households can adopt to cope with these risks, although their increased complexity sometimes makes it more difficult to predict how household savings patterns will respond to policy changes. For the wealthier population, for example, old-age savings can take on a strategic role if parents use their prospective bequests to

exact a commitment from their adult children to provide for them in old age (Pauly 1990). If this proposition is widely true, savings patterns should respond not so much to changes in tax rates, but rather to changes in long-term care policy. Another model emphasizes the role of annuities in protecting against longevity risk; here, precautionary saving in old age is strongly affected by insurance market characteristics (Kotlikoff and Spivak 1981). A third class of studies suggests that poor people may not save for old age because they rely on "safety net" government programs such as Aid to Families with Dependent Children (AFDC), Medicaid, Supplemental Security Income (SSI), and Food Stamps, all of which penalize private savings (Hubbard et al. 1995). Consequently, an explanation for the lack of savings observed among the old may be less attributable to myopia than to rational responses to social insurance programs.

On the whole, second-generation savings models acknowledge that many environmental and institutional factors shape savings patterns, in more complicated ways than first anticipated by the simple life-cycle studies. As a result, numerous empirical studies have been conducted examining what factors seem to influence savings patterns, particularly the specific types of assets believed to be vehicles for retirement savings. The consensus is that many Americans reach retirement age with relatively little savings, and what they do have is concentrated in the form of housing equity, anticipated pension benefits, including 401(k) plans, and anticipated social security benefits. A brief review of what is known about the factors that influence the accumulation of each of these three assets is useful, along with other factors the influence savings.

**Determinants of saving in the form of housing:** Housing is the single most important private asset held by older Americans. About three-quarters of households with heads aged 45-69 own their homes, and many have substantial housing equity (Hendershott 1994). In 1991, for example, the median value of home equity by elderly households aged 65-69 was \$50,000 (including those with 0 equity), over half of the median net worth (\$96,600, excluding social security and pension wealth) of these households (Poterba, Venti and Wise, 1994: table 1).<sup>45</sup>

Given these statistics, it could be argued that increasing home equity might be a successful strategy to increase savings for retirement. From this vantage point, the question then becomes what policies might be pursued to increase housing wealth. Before turning to that matter, it is important to note the controversy and policy debate about whether housing can and should be considered an asset to sustain life in retirement. For instance, state Medicaid policies do not usually force elderly couples to sell their homes before becoming eligible for publicly provided long-term care coverage.

Some analysts have also argued that housing assets should not be "counted" as retirement wealth because few people reduce their housing stock as they move into retirement (Venti and Wise 1990a). On the other hand, owning a house and living in it does provide housing services, which is in-kind income. In addition, at advanced ages and especially after widowhood, people apparently do reduce their housing stock, implying greater housing equity might well improve retirement well-being (Hoynes and McFadden 1994).

If housing equity is an appropriate vehicle for retirement savings, what then are the policy tools available to encourage it? One issue is the responsiveness of housing investment to interest rates. A recent review of the literature concludes that U.S. housing purchases are not very sensitive to changes in interest rates, and that the insensitivity is growing more pronounced with the advent of adjustable rate mortgages (Hendershott 1994). This finding implies that the ability to influence savings in housing by altering interest rates is limited, at least in the short run.

Although governments have adopted numerous other policy instruments to influence housing patterns, remarkably little information exists on their effectiveness. Issues that have been studied include the effect of tax preferences and the special capital gains exemption offered on one home sale after age 55. Because inflation has subsided and because fewer people itemize deductions now than previously, the tax subsidy effect has apparently declined. Skinner (1994) and Poterba (1994b) both conclude that the tax subsidy has had only modest effects on the nation's housing stock, increasing it only by 10 percent above what it would have been otherwise. Whether changes in bequest taxes and capital gains exemptions have affected real estate holdings has received less attention.

Several other government policies have been designed to influence housing investments including mortgage subsidies, subsidies to those facilitating secondary mortgage markets, and benefits offered to savings and loan institutions. In most cases, little evidence exists about how effective these policies are in influencing net new housing stock (Poterba 1994b). These subsidies are also less common now than a decade ago. Few of these policies have been evaluated in terms of their net effect on household saving, so it is still very much in question whether these subsidies increased private saving or merely reallocated people's saving toward housing. And even if they did increase private savings, the net effect on national saving depends also on eventual impact of the reduced tax revenues (the tax expenditure) on other government taxing and spending decisions, and therefore on eventual government saving. This is an even more difficult question.

Even if policy tools can be identified that influence net housing saving, the question remains as to whether increasing housing equity is necessarily good public policy. Housing prices are quite volatile in the United States, as demonstrated by the run-up in housing prices during the 1970s followed by their poor performance in the 1980s. Because many home owners already have the majority of their total assets in housing, it may not be sensible public policy to encourage even more such investment, particularly were it to come at the expense of other more diversified assets.

This problem of volatile housing values may become even worse in the future, according to several recent forecasts (Mankiw and Weil 1989; Schieber and Shoven 1994). These models relate time-series data on the size of demographic cohorts to housing prices, and predict that when the baby boomer generation retires and sells its homes, housing values will fall precipitously. Not everyone agrees with these gloomy forecasts, because they depend on the particular time periods and empirical models used. Indeed Hendershott (1994) claims that these predictions of severe asset value decline are eliminated by adding controls for income and real post-tax interest rates to the earlier models, and also by varying the endpoints of the data series. Nevertheless, because the prognosis for future housing values is uncertain at best, dramatic changes in national housing policy are probably not warranted on the grounds of increasing economic security in retirement.

**Determinants of saving in the form of pensions:** Employer sponsored and individually held pensions are the second most important privately held asset available for retirement purposes. Nonetheless, the median level of retirement savings in pensions is quite low -- \$16,000 (including those with 0 pension wealth) for households with heads aged 65-69 in 1991, about one-third as large as median housing equity. Pension asset holding is very skewed, however. Average (mean) pension wealth was \$62,300 in the same year, about the same as mean housing equity (\$65,000) (Poterba, Venti and Wise, 1994; table 1).

One question of keen interest to policy makers is whether it is possible to increase pension saving without having adverse effects on other components of compensation, employment, and the federal government budget deficit. The answer appears to be no.

Before turning to that discussion, however, it is important to mention that specialists disagree about whether pension saving should be increased via public tax incentive. One reason is an equity one, because the tax expenditures go disproportionately to higher-paid workers, who are also more likely to receive government guarantees on future benefit promises via the PBGC. Another reason is

that this strategy increases national savings by less than it does private savings, because of the increased tax expenditures. In addition, some argue that pension plan investors tend to earn below-market rates of return on assets (Lakonishok et al. 1992). Nevertheless, there is a common perception that less saving would occur were it not for the seemingly automatic nature of employer (and often employee) pension contributions (Thaler 1994).

On the assumption that more pension savings is desirable, the question arises as to what policy actions would increase pension savings. Perhaps the most important policy instrument is the tax code -- pension contributions and investment earnings have received tax protection in the United States for at least 40 years, which enhances the appeal of pension saving relative to other forms of saving. The conditions under which this tax protection is offered require a pension plan to meet certain coverage and benefit requirements (known as nondiscrimination rules), as well as reporting requirements to participants and the government.

How effective is the tax incentive "carrot" in inducing more pension saving? Has the "stick" of nondiscrimination requirements been effective in spreading pension participation to more (lower paid) workers? These questions have received much attention in recent years. One approach is to investigate benefit plan responses to changes in marginal income tax rates. A study that examined the effects of tax cuts under the 1986 Tax Reform Act concluded that employer pension contributions were quite sensitive to tax policy. The results imply that eliminating the tax preference for benefits would cut employer contributions to pensions by one-half, with low-wage workers feeling the greatest reduction in pension savings (Woodbury and Huang 1991:139). More recent studies tend to confirm that pension savings are sensitive to tax policy, although the estimates are imprecise because of the difficulty of obtaining individuals' marginal income tax rates along with pension savings information.

Data problems also plague assessments of the effect of pension regulations, such as nondiscrimination rules, on the willingness of companies to offer pensions as well as the amount of the contributions. One report concluded that about half of the nationwide decline in defined-benefit pension coverage was attributable to the cost and complexity of these nondiscrimination regulations (Clark and McDermed 1990), while other analysts find a smaller regulatory burden (Gustman and Steinmeier 1992; Chang 1993). Some studies suggest that one important deterrent to pension growth has been rising levels of premiums which defined-benefit plans must pay to the Pension Benefit Guaranty Corporation (Ippolito 1989).



Without focusing on particular point estimates, it seems reasonable to conclude that requiring pension plans to pay insurance premiums and cover lower-paid workers, and limiting the tax-favored pension savings of higher-paid workers, had a depressing effect on the number of pension plans in the past two decades. On the other hand, because of the nondiscrimination rules, lower-paid workers are now more likely to be covered where plans exist. Whether these regulatory changes resulted in a net decrease in overall retirement savings or simply caused substitution of nonpension for pension savings is not known.

Because many of the studies of traditional pension plans have been inconclusive, researchers have turned to two other types of retirement savings -- Individual Retirement Accounts (IRAs) and 401(k) plans -- to examine the responsiveness of savings to incentives. Legislation permitting tax-deferred IRAs for workers without employer pensions was first passed in 1974. Eligibility was extended to all workers in 1981 and then restricted in 1986. For a 5-year period, 1982 through 1986, most workers were eligible to deposit up to \$2,000 of pre-tax income per year into a tax-protected account, with additional amounts available for spouses. When contribution and eligibility limits made IRA plans less popular in 1987, 401(k) plans began to grow. More than a quarter of the entire U.S. population aged 35-54 participates in a 401(k) plan today, with a median account balance of about \$6,000 (Engen, Gale and Scholz 1994).

Are these new types of plans really retirement savings vehicles? If so, are they merely substitutes for saving that would have occurred in other forms, or do they generate net new savings? Research studies are not yet conclusive.<sup>46</sup> Demonstrating that people with 401(k) plans save more than similar people without them requires a good "control group," which is difficult to obtain. One approach is to observe that families with access to a 401(k) plan have more savings accumulated than do apparently similar families, with comparable incomes, but without access to a 401(k) (Poterba, Venti and Wise, forthcoming). Their findings suggest that encouraging 401(k) plans would increase private saving. A contrary view is that people with strong preferences for saving choose to work for firms where 401(k) plans are offered, while people who cannot or do not wish to save work in companies without such options (Engen et al. 1994). The latter perspective implies that making 401(k)-type plans more appealing (for example, by raising savings limits) would have little impact on current non-savers (Ippolito 1993).

The current consensus is that 401(k) and IRA plans have had some positive effect on boosting retirement wealth (but how much remains a topic of active debate), and that they may increase savings more in the long run than in the short run, as

people exhaust their opportunities for asset shuffling. The conservative assessment is that the advent of 401(k) plans mainly promoted a reallocation of funds from IRAs and defined-benefit plans, with at most a 1 percentage point net increase in national saving (Engen et al. 1994). This view is based in part on the high rate of withdrawals prior to retirement, and the fact that many who withdraw funds devote the money to current consumption (Atkins 1986; Andrews 1992). The prohibition of these withdrawals would probably increase eventual retirement savings for those who chose to participate in the plans, but fewer people would contribute because of the reduced accessibility of the money.

**Social security and saving for retirement:** It is widely agreed that social security policy is the single most potent federal method of influencing retiree well-being. In 1991, older households (aged 65-69) anticipated a stream of social security benefits totalling almost \$100,000 (the median value), which is higher than the median value of the rest of their (non-social security and non-pension) net worth (Poterba, Venti and Wise 1994). This benefit stream is fully indexed, providing retirees with inflation protection for their most important retirement income source.<sup>47</sup>

To what extent do social security benefits offset other retirement saving? Would changes in social security, such as benefit cuts or delays in the ages of eligibility, induce offsets in private saving? These questions have been the focus of intense research for two decades; however, as Poterba (1994a:13) concludes, "the existing empirical literature in this area is weak and there is relatively limited prospect for improvement." Time-series aggregate data do suggest a negative correlation between social security promises and private savings, but many alternative explanations for this finding are available. A positive correlation between social security benefits and savings appears in household cross-sectional studies, but this estimate of the effect of social security on savings is not credible; rather, both social security benefits and accumulated savings are positive functions of lifetime earnings. This empirical finding does not predict how individuals would behave, all other things equal, if social security benefits were cut.

Evidence on social security's effects on private pensions is more conclusive, and not particularly encouraging. Early research by Munnell (1974) concluded that higher social security does reduce private pension saving, a finding strongly corroborated in a recent study by Gullason et al. (1993), who concluded that pension wealth is affected, but not other types of savings. However, the results suggest that the effects are small.

Some have argued that social security might not have an observable effect on savings if people reacted to more generous retirement benefits by retiring earlier, instead of by changing their saving behavior. Although this explanation is plausible, data suggest that retirement patterns are not very responsive to changes in benefits of the sort enacted over the past two decades (Fields and Mitchell 1984b; Quinn et al. 1990; Kreuger and Pischke 1992; Gustman, Anderson and Steinmeier 1995). Hence, moderate social security benefit changes within the existing eligibility structure would probably have only modest effects on labor supply decisions at the end of the worklife.

In contrast, it is far from clear how aggregate savings and retirement patterns would be affected by radical changes in social security; for instance, if the age of eligibility for early social security benefits were delayed, or all or part of the social security system were replaced with a national defined-contribution system (Diamond 1993; Myers 1993). The effects of the latter would obviously depend on program characteristics (including whether the system were mandated, its size and administrative costs), whether the contributions were invested in government bonds or private holdings on an internationally diversified capital market, and how much the government protected those with low pensions with an old-age poverty program.

**Other factors influencing savings:** Several other factors that affect saving policy should be mentioned. One is how well-informed consumers are about financial issues and the need to save for retirement. Recent surveys give U.S. consumers low scores. Many consumers apparently do not understand compound interest, making it difficult to estimate how much to save for retirement (Bernheim 1994; Kotlikoff and Auerbach 1994). Other studies have noted that older workers have error-laden estimates of their likely social security benefits (Bernheim 1993, 1994), and many do not understand their employer-provided pension plans (Mitchell 1988). Accurate retirement savings calculations also require an estimate of life expectancy. Hamermesh (1985) and Hurd and McGarry (1993) find that people's expectations about life expectancy and its determinants are roughly accurate, although Hamermesh finds that the distributions implied by survey responses have a wider variance than the true distributions. One way to boost savings may be to educate people about the magnitude of their total consumption needs in retirement.<sup>48</sup>

**Conclusions:** The Panel finds that most Americans hold three major forms of retirement wealth: houses, private pensions, and social security. People's holdings of net home equity are not strongly influenced by policy tools, and even if they were, there would not be a strong impact on aggregate national saving. The Panel also concludes that it is probably not possible to enhance net aggregate saving significantly by easing pension regulations or sweetening tax inducements. It appears that, because

pensions and social security are substitutes to some extent, reducing social security benefits would probably encourage pension saving modestly.

## **E. Implications for Future Retiree Well-being**

This section discusses forecasts about future retiree well-being. The Panel asks how income and assets other than social security might be expected to change over the next several decades, and what recent trends in the health status of older Americans imply. The Panel concludes that future retirees will probably have higher real income in retirement than current retirees do, but probably not enough to maintain their pre-retirement consumption standards unless savings or retirement behavior changes significantly.

Six areas are discussed: (1) the economic status of today's elderly, and how that has changed over the past 35 years; (2) the retirement prospects of today's baby boomers; (3) the socio-economic diversity of the elderly and the identification of groups at risk in retirement; (4) alternative views about the economy over the next several decades; (5) prospects for asset prices when the baby boomers retire, and (6) the health of older Americans.

The literature reaches some consensus on the first three topics and the last. Current retirees are, on average, considerably better off financially than prior cohorts of retirees, but this improvement "on average" conceals significant pockets of economic distress. Future retirees, again on average, are likely to exceed their parents' current standard of living in retirement, as they have done at all points in the life cycle to date, but the pockets of economic distress are unlikely to disappear. Single Americans (especially single mothers), those with low levels of education or non-stable employment patterns, minorities, and non-homeowners are most at risk in retirement. The major area of disagreement here concerns the appropriate standard to use in evaluating the baby boomers' retirement prospects. If they are likely to exceed their parents' real incomes in retirement, yet be unable to maintain their own pre-retirement standard of living, is this to be judged a success to be lauded, a problem to be addressed, or both? Finally, the life expectancy of older Americans continues to rise, and their health, which does not have to move hand-in-hand with life expectancy, appears to be improving in the aggregate, although variation occurs across income classes and racial groups.

There is considerably less consensus on the other two topics -- the future course of the economy over the next several decades (including the impact of demographic shifts on economic growth) and the impact of the retirement of the baby boomers on future asset prices.

**The economic status of current retirees:** There is general agreement by researchers on several key points about current and recent cohorts of retirees<sup>49</sup>.

First, poverty rates among those aged 65 or older have fallen dramatically over the past 35 years, from 35 percent in 1959 to a low of 11.4 percent in 1989 and back to 13 percent by 1992 (U.S. Bureau of the Census 1993a: table 3). As seen in figure II-8, most of the decline occurred by the mid 1970s. The elderly poverty rate had dropped to under 15 percent by 1974, just after legislated increases in real social security benefits on the order of 50 percent. It should be noted, however, that, while the poverty thresholds are increased annually for the cost of living, they are not adjusted for increases in the general standard of living: these official statistics measure absolute, not relative, poverty.<sup>50</sup>

Second, the official statistics ignore in-kind benefits, which are substantial for older Americans. Were they included and the poverty thresholds left unchanged, official poverty for the elderly and for others would be lower. The Census Bureau estimates that the 1992 poverty rate for those aged 65 or older would have been 10.4 percent (rather than the official rate of 12.9 percent) were taxes subtracted and the value of Medicare, Medicaid and other means-tested government noncash transfers included.<sup>51</sup> When an imputed return on home equity is included, that elderly poverty rate drops to 6.2 percent (U.S. Bureau of the Census 1993b: table 2).

Third, social security and other federal programs are credited with much of the improvement in the economic well-being of the aged, which took place even as the labor force participation rates of older men were dropping significantly. Both coverage and the generosity of social security benefits increased dramatically over the past 35 years. Estimates of the incidence of poverty in the absence of these transfers (assuming, quite unrealistically, no changes in labor supply or savings behavior) suggest the tremendous importance of social security income among older Americans.<sup>52</sup> The Census Bureau estimates that the elderly poverty rate would have been 50 percent in 1992 were government transfers subtracted from money income (U.S. Bureau of the Census 1993b: table 2).

Fourth, the elderly are a very heterogeneous group. While the overall poverty rate for those aged 65 or older was about 13 percent in 1992, it was under 11 percent for those aged 65-74, 15 percent for those 75-84, and 20 percent for those aged 85 or older, the fastest growing age group in America (U.S. House of Representatives 1994: table A-7). Nine percent of elderly men were poor, compared with almost 16 percent of elderly women. Only 6 percent of elderly in married couple families were poor, compared to 25 percent of those living alone (more than 80 percent of whom are women). Hispanic elderly are twice as likely to be poor as white elderly (22 versus 11 percent), and black elderly are three times as likely (33 vs. 11 percent). Poverty is the norm in some subgroups; for example, 51 percent of Hispanic elderly women living alone were poor in 1992, as were 57 percent of analogous black women (U.S. Bureau of the Census 1993a: table 3).

Fifth, although actual poverty rates for the elderly are lower than for the entire population, the proportion of the elderly living near poverty is disproportionately high. In 1992, while 13 percent of the elderly were poor, 20 percent had incomes less than 1.25 times the poverty threshold, and nearly a quarter were below 1.5 times the threshold (U.S. Bureau of the Census 1993a: table 17).

In summary, the economic status of the elderly has improved significantly over time, to a great extent because of large Federal cash and in-kind transfers targeted at this group. Nonetheless, serious pockets of poverty continue to exist, primarily among elderly widows and minorities, and a disproportionate number of the elderly who are not poor are not far from the poverty threshold.

**Retirement prospects of the baby boomers:** The messages presented by the U.S. House of Representatives (1987), Easterlin et al. (1993), Sabelhaus and Manchester (1993), Manchester (1994) and Yakoboski and Silverman (1994) -- and even, to a great extent, Kotlikoff and Auerbach (1994) and Merrill Lynch (1994) -- are similar with regard to the baby boomers' expected levels of retirement income and the relation of these levels to those of their parents.

Overall income levels: Sabelhaus and Manchester (1993) analyze real income levels on a per household, per capita, per adult and per adult equivalent basis and show that in all four cases, in aggregate, by income quintile, age (25-34 and 35-44) and marital status, baby boomers are considerably better off than their parents were at the same ages. For example, the baby boomers' average household income was over \$42,000 in 1989, 46 percent higher than their parents' was in 1960 (see table II-1). The difference is higher at the upper end of the income scale (50 percent in the highest quintile) than at the lowest (25 percent), and even higher when measured on per capita, per adult or per equivalent adult basis. The authors conclude that "as long as real wages continue to grow and assuming that social security and private pensions remain intact and that health care expenditures do not swamp other gains, most baby boomers are likely to enjoy higher real incomes in retirement than their parents." It is worth noting that real wage growth and future health care expenditures are both causes of concern for many policy analysts.

Easterlin et al. (1993: 501, 503) reach similar conclusions: "The evidence clearly belies the notion that on average the baby boomers are doing less well than their parents. . . . Is the baby boomers' advantage over their parents likely to be maintained into retirement? The life cycle income profiles suggest that the answer is yes. . . . The improvement of the boomers over their parents at retirement, however, may prove to be less than it is currently. Although the data for younger ages are incomplete, the

baby boomers' profiles appear to rise less steeply between ages 25-29 and 40-44 than their parents', and projecting this slower rate of increase to retirement would yield somewhat diminished relative improvement. But, the present comparison clearly does not support the view that the boomers will, on average, end up *less* well off than their parents."

Easterlin et al. (1993) offer two caveats to these findings. Because of some demographic differences between the baby boomers and their parents, such as delayed or foregone marriage, increased divorce rates and fewer children, "as they move into retirement, [boomers] are less likely than their parents to be living with a spouse, and are likely to have fewer adult children" (p. 517).<sup>53</sup> In addition, the economic prospects of the boomers differ markedly by income quintile. "For [the top income quintile], the life cycle profiles give no sign of flattening until the retirement ages are reached. . . .The lowest income segment of each cohort is a different story. It remains true [in this quintile] that those in the baby boom generation are currently doing better than their counterparts in the parental generation. But the percentage income advantage of the boomer generation over the parental generation is much less than for the upper income group." (p. 514) The authors conclude that "while the boomers in retirement will typically do better than their parents in terms of material well-being, their advantage from a total welfare viewpoint may be less. Moreover, the segment of the boomers whose current economic prospects are worst, the poorest part of the trailing edge cohorts, may do less well than their parents in terms of both economic well-being and total welfare." (p.520)

Yakoboski and Silverman (1994) agree that baby boomers in general will enjoy a standard of living higher than that of their parents in retirement, but they may not be able to maintain their own pre-retirement living standard. But housing wealth may close the gap for the boomers, to the extent that they are willing to tap this source. This study emphasizes that "non-homeowners, the less educated, the single and the youngest boomers" are at the greatest risk of experiencing financial hardship in retirement.

Kotlikoff and Auerbach (1994) and a study produced by Merrill Lynch (1994) conclude that baby boomers are likely to exceed their parents' standard of living in retirement, but they emphasize that this will not be in keeping with "the American dream" if future retirees are unable to maintain their own pre-retirement standard of living. In addition, the authors emphasize the unsustainability of current government fiscal policy, and maintain that once required adjustments are made, such as tax increases and transfer payment reductions, the retirement prospects of the boomers will dim considerably. Both the Manchester (1994) and Yakoboski and Silverman



(1994) project that baby boomers' retirement incomes will exceed those of current retirees, but Yakoboski and Silverman suggest that replacement rates (the ratio of retirement to pre-retirement income) will fall.

The picture painted by Levy and Michel (1991) is more negative, even about the current economic well-being of baby boomers relative to their parents. The major analytic difference is that Levy and Michel focus entirely on male earnings among the baby boomers, ignoring the large improvements in female earnings and the decline in the average number of children per woman. The most pessimistic picture presented by these authors is by Levy and Michel (1985), in which they emphasize the deteriorating fortunes of middle class baby boomers ("a dramatic decline in its ability to pursue the American dream: a home, financial security and education for their children" (p. 1)) and offer a gloomy picture of the boomers' future. The report implies that the growing federal deficit will keep interest rates and inflation high, and productivity and wages low, so that the baby boomers "in the 21st century [will] bear the costs of resolving not only their personal debt but the national and international debts as well." (p. 21)

Savings and wealth: As noted in Section II-D, American saving rates are low by international and by U.S. historical standards. Although returns on assets (interest and dividends) provide an important source of income for older Americans (about 17 percent of aggregate income for all elderly units in 1992), they are only about half as important as either earnings (30 percent) or social security (33 percent) (U.S. House of Representatives 1994: table A-10). Among the elderly poor, interest and dividends are inconsequential, providing a mere 3 percent of total income. Many Americans reach retirement with little accumulated savings (excluding home equity), and have difficulty maintaining their pre-retirement standards of living.

Despite these discouraging aggregate statistics, a number of studies suggest that baby boomers on average have accumulated more wealth relative to income than their parents had at the same time in the life cycle. Exceptions are single people and the youngest baby boomers (aged 25-34) in the bottom income group. "But, especially when attention is focused on the middle 60%, ratios of wealth to income are the same or significantly higher than in 1960. . . .The only groups which show consistent declines in the ratio of wealth to consumption are single people in the bottom and top quintiles. . . . All other groups, including the vast majority of boomers, have accumulated more wealth [relative to consumption] than their parents' generation had at the same age 30 years ago." (Sabelhaus and Manchester 1993:12-13)

On the other hand, the parents of the baby boom generation (many of whom are now retired) enjoyed substantial windfalls that aided them in retirement, such as

strong real wage growth in the 1950s and 1960s, substantial increases in real social security benefits in the early 1970s, increased rates of pension coverage and the substantial appreciation of housing assets. These are windfalls that baby boomers are unlikely to experience. Kingson (1992: 37) feels that "the value of equity in baby boomers' homes is likely to grow less than that experienced by current cohorts of elders." And younger boomers may be at a particular disadvantage, having missed the appreciation of house prices in the 1970s and 1980s. As house prices appreciated, rents rose.<sup>54</sup> The high rents decreased the abilities of some baby boomers to save (for example, for a down payment), and diminished their prospects for relying on home equity in their retirement years.

One unknown in this equation is the role that inheritances will play in the future. The current generation of retirees is doing well, on average, having enjoyed significant windfalls from social security and real estate. What ultimately happens to this wealth remains to be seen. One possibility is that it will be bequeathed back to the current generation of workers, and that this, in the end, will be a significant source of their retirement income.<sup>55</sup> Some of their "savings," in other words, may be in their parents' accounts, not (yet) in their own. Barring this, little evidence suggests that the importance of asset income will grow significantly in the future.

Earnings: Despite dramatic declines in the labor force participation rates of older American men in the post-World War II period, earnings remain a very important source of income for those aged 65 or older. Earnings provide 30 percent of aggregate income for elderly households. Earnings are negatively correlated with poverty status; in 1992, fewer than 4 percent of those aged 65 or older who worked during the year (and fewer than 3 percent of those who worked year-round, full-time) were poor, compared with more than 14 percent of those who did not work at all during the year. Among blacks, the difference is even more pronounced -- 7 percent of those who worked (and less than 3 percent of those working year-round, full-time) were poor, compared with more than 37 percent of those who did not work (U.S. Bureau of the Census 1993a).

Labor force participation rates among older Americans have changed very little since the mid 1980s, suggesting that the long term early retirement trend in America is over. Other changes in the work place are under way: a moderate growth in the number of contingent workers, a growing disparity in the quality of jobs and increases in earnings and income inequality. Barring significant changes in public policy (for example, a delay in the age of eligibility for early social security benefits), little reason exists to believe that the importance of earnings for older Americans will change dramatically in the future.

Pension income: Private and public sector employee pensions are expected to continue providing a modest but important source of retirement income, especially for middle and upper income households, and their importance should grow for women. Pensions currently provide about 16 percent of aggregate income of the elderly, although less than 3 percent for the elderly poor (U.S. House of Representatives 1994: table A-10). Coverage rates declined slightly in the 1980s but have since recovered. Some (e.g., Woods 1989) project declining rates of coverage in the future, and others (e.g., Andrews and Chollet 1988; Yakoboski and Silverman 1994) emphasize the small gains during 1987-91, and expect further increases. Barring major changes in the regulatory environment, however, few expect dramatic improvements in the proportion of the work force covered by pensions.

The importance of defined-contribution coverage is increasing, and many analysts expect this trend to continue. Some of this change is attributable to increased administrative costs of defined-benefit plans, and some may be caused by the preferences of workers who expect to change jobs frequently or move in and out of the labor force. Defined-contribution accumulations are more portable than are the pension rights in traditional defined-benefit plans. At the same time, as noted in Section II-C, they entail a different set of risks from defined-benefit plans, such as market risk (because only the contributions are guaranteed), lower yields (if participants are risk-averse and follow investment strategies more conservative than traditional pension managers) and the risk that lump-sum distributions prior to retirement (e.g., when changing employers) will be consumed rather than saved. Also, defined-contribution plans are more likely to require employee contributions, which means that some workers will decline to participate.

An important unknown is how employer pensions will respond to changes in the social security environment -- for example, the already legislated increase in the normal retirement age from 65 to 67, or a hypothetical delay in the earliest age of eligibility. Will firms attempt to offset this by increasing their incentives for early retirement, or accommodate the change by raising their own early and normal retirement ages? If the latter, the combined effect of social security and pension changes could have a significant effect on future patterns of retirement.

**Baby boomers most at risk in retirement:** In a comprehensive report on the implications of diversity on the retirement prospects of the baby boom generation, Kingson (1992: 50) identified the most vulnerable groups as

single parents, low-wage workers, those who are living at or below the poverty level, those who are closed out of home ownership, or those who lack adequate

pension coverage. Although their numbers cannot be precisely estimated, we know they are concentrated among the 10.7 million households headed by female baby boomers. We know they can be found disproportionately among the roughly 3 million baby boomers with less than ninth grade education and among the 'one quarter of black men aged 25-34' in 1980 'who had not finished high school and could not compete' in the economy in the 1970s (Levy, 1987). We know they can be found among the roughly 8 million baby boomers with incomes below the official poverty line in 1988 -- including about 2.8 million blacks (22.4% of all black boomers), 1.3 million Hispanics (20.3% of all Hispanic boomers), and 5.2 million whites (7.8% of all white boomers). And we know they are likely to be found among the roughly 50% of full-time private wage and salary workers who are not covered by private pensions and among the nearly 50% of baby boomers who did not own homes in 1988.

Approximately 18 million baby boomers are members of racial and ethnic minorities. The Census Bureau projects that, while 86 percent of the elderly population in 1990 was non-minority, this proportion will drop to 75 percent by 2030 and to 68 percent by 2050 (U.S. Senate 1991: chart 1-8). In 1992, 26 percent of all blacks aged 25-44 and 24 percent of Hispanics this age were below the poverty line, compared with 9 percent of whites (U.S. Bureau of the Census 1993a: table 5). Kingson suggests that the high levels of unemployment experienced by young black men may have a permanent negative effect on their lifetime earnings patterns. He points out that members of minority groups work disproportionately in arduous and potentially disabling working conditions, and so are likely to be disproportionately affected by proposals to raise retirement ages. Feldman (1991) points to a wide diversity in mortality rates and in morbidity among the elderly, which he does not expect to decline, and Kingson (1992: 44) suggests that "retirement age policy that seeks to encourage later retirement by reducing benefits (e.g., by raising the age of eligibility for full benefits) and does not provide substantial offsetting liberalizations in eligibility for disability insurance benefits will undoubtedly have very deleterious effects on those baby boomers with health problems during their later working years (especially those with fewer years of education and fewer employment options)."

Manchester (1994) emphasizes that single, poorly educated boomers will fare the worst in retirement, and that baby boomers who do not own homes may be hard pressed to accumulate sufficient wealth for retirement.

The Congressional Budget Office projects that for workers in the bottom half of the income distribution in 2019, social security will provide 60-70 percent of retirement income (U.S. House of Representatives, 1987). For most baby boomers,

retirement incomes will be well above those of today's retirees. Poverty rates will be more concentrated among the single, especially single women. And, since official poverty thresholds rise with prices but not with the standard of living, those living below the poverty level in the future may feel more deprived than do poor people today.

**The economy and the retirement prospects of baby boomers:** Researchers generally agree that much of the baby boomers' economic progress to date, or lack thereof, can be attributed to the effects of their relative numbers and to macroeconomic trends. But analysts differ widely in terms of the relative weights they attach to these two sets of causal variables, demographic and macroeconomic. They also differ with regard to the underlying causes of the macroeconomic trends, and hence with regard to prognoses on those trends. As a result, the literature seems to fall into three general categories:

First, the extreme demographic position is that most of the negative trends observed over the past 20 years have resulted, directly or indirectly, from the large demographic fluctuations caused by the size of the baby boom cohort. Other factors are viewed as much less important. The demographic effects have been felt throughout the economy, but most severely by the baby boomers themselves. Although the baby boomers will continue to experience less favorable market conditions than those in smaller birth cohorts throughout their lifetimes, the economy is likely to trend upward over the next two decades as the negative effects of the baby boom on the economy (low wages, low productivity, the shift to low-wage, low-skill, service-sector jobs, and low savings rates) are mitigated by the entry of smaller birth cohorts into the household formation stage.

Second, the moderate demographic position is that most of the negative effects of large cohort size have been and will be experienced only by the baby boomers themselves, and that their relatively poor experience over the past 20 years is attributable not only to their own cohort size but also to independent macroeconomic effects, many of which have also been adverse. Demography, while important, is not destiny. These researchers tend to be more optimistic about future macroeconomic trends. They generally feel that the next two decades will be more favorable than the past two, but for the most part (with the possible exception of savings rates) they do not attribute this turnaround to demographic fluctuations.

Third, according to the macroeconomic pessimists, the baby boomers have experienced adverse conditions, both as a result of their large cohort size and also as a result of poor macroeconomic performance. Researchers in this category see continued

negative effects on the baby boomers of their own cohort size (such as the potential for "asset meltdown" next century) and find little reason for hope that macroeconomic conditions will improve over the next two decades.

Addressing the future of middle- and upper-wage baby boomers, Kingson (1992), who typifies the moderate demographic position (group 2), writes: "(t)he greatest threats to the economic well-being of these baby boomers in retirement are likely to come from health care costs, the possibility that economic productivity will be less than anticipated, legislative changes that could reduce the value of Social Security (by reducing the cost-of-living protection, for example, or further raising the age of eligibility for full benefits), and the failure of employer-based pensions to meet contractual obligations." (p. 37)

Kingson echoes an opinion of Russell (1982) and Levy and Michel (1991) that the bulk of the baby boomers' problems to date have not reflected adverse birth cohort size, but rather a prolonged slowdown in economic growth. These authors (along with Aaron, Bosworth and Burtless, 1989) link this economic slowdown to low levels of national savings and investment. Other economists view the productivity slowdown as an independent source of slow earnings growth, not merely the effect of low savings.

Kingson takes pains to dispel the notion that the baby boomers are a homogenous group, fated by their cohort size to a lifetime of deprivation and frustrated attempts to better the living standards of their elders. He argues that other factors (e.g., economic investment, bio-medical research) can help prepare for the retirement years of the baby boomers, and accepts the arguments of Aaron et al. (1989) that if the federal deficit is reduced and if payroll taxes are increased to keep the OASDI program afloat, then the additional savings created can increase productivity to help finance the baby boomers' retirement. Similarly, Palmer (1989) estimates that a per capita GNP growth rate of only 1.5 percent per year would be sufficient to cover the increased retirement costs of the baby boom generation. Kingson's general message is that the baby boomers' cohort size is not the only determinant of their fate: he rejects the notion that demographic trends alone will undermine the well-being of baby boomers in retirement.

Those in the extreme demographic camp argue that the impacts of cohort size are much more pervasive. For example, McMillan and Baesel (1990), Fair and Dominguez (1991) and Blomquist and Wijkander (1994, using Swedish data) have suggested that the low rates of savings observed over the past 20 years have been largely the result of demographic patterns; namely, the passage of the baby boomers through the minimum savings points of their life cycles.<sup>56</sup> These authors all attempt to

document the strong macroeconomic effects of the age structure of the population. McMillan and Baesel (1990:186), for example, use Census Bureau population data to project the ratio of savers to borrowers into the future, and find that "(t)he middle population projection forecasts [the ratio of savers to borrowers] to increase from 0.666 in 1980 to 1.013 in 2005 and then drop rapidly again to 0.796 in 2030. . . . Using the middle [ratio of savers to borrowers] series, output growth per capita is negative through 1990 and then grows rapidly to 2.5% per year in 2010. The steady-state unemployment rate declines from 7.7% in 1985 to 2.7% in 2010 before increasing again. Equilibrium real interest rates decline from 6.1% in 1985 to -1.4% in 2010 before climbing back to 4.2% in 2030."

McMillan and Baesel also explored the effects of raising the retirement age on productivity and savings patterns. "We constructed a 'deferred retirement' middle [ratio of savers to borrowers] series by gradually increasing the retirement age from 65 to 70 during the period 2000-2030. . . .Surprisingly, this reaction exaggerates the projected changes in output growth, unemployment, and interest rates. . . .Why? Because under the deferred retirement scenario both the Baby Boom generation and their children are simultaneously in their prime productivity and savings years." (p.189)

Blomquist and Wijkander (1994: 47) state that "(t)he results of our simulations suggest that it would be fruitful to take demographics into account to a larger extent than done hitherto in models of the economy. The simulations also show that, whether the interest elasticity of individual savings is positive or negative, there exists no stable relationship between the real rate of interest and aggregate household savings. Both the rate of interest and savings are endogenous in our model. Depending on the form of the demographic changes, the changes can for some time periods create a positive correlation between savings and the interest rate, and for other periods a negative relationship."

Authors in the third category, the macroeconomic pessimists, take exception to these conclusions. For example, Cantor and Yuengert (1994: 76) suggest that "(w)hile the baby boomers' savings rates should rise with age, the impact on the aggregate saving rate will be mitigated by a continuing high rate of early retirement and a rising share of households headed by individuals either over 65 or under 35 -- households that tend to have relatively low saving rates."

Authors in the third category tend to be pessimistic about baby boomers' prospects, because they see continued high real interest rates and low savings producing low productivity and wage growth. They think that little of the

macroeconomic effects experienced by the baby boomers to date have been attributable to their cohort size, and they therefore see little relief as the demographic structure changes.

As can be seen in this research, demographic changes are easier to predict than are their macroeconomic consequences. This conclusion is frustrating because the state of the economy over the next several decades will be a key determinant of the size of the pie to be allocated among workers and retirees and therefore of the state of financial well-being of future retirees.

**Asset value uncertainty:** Funded pension plans, both private and government, face the same future demographic and economic environment as social security. Just as social security finances are predicted to be strained by the retirement of the baby-boom generation, funded pension plans may likewise face massive net redemptions, as aggregate benefit payouts exceed contributions and asset earnings. Further, housing values could be depressed by the relative sizes of the elderly cohort and the household formation cohort, as suggested by Mankiw and Weil (1989). One conclusion is that the members of the baby boom generation, because of their sheer numbers, face added uncertainty about all of their retirement assets.

Private pensions have been a major source of net saving in the economy for the entire post-World War II period. Figure II-9 shows the change in real national wealth and the change in real pension wealth (all expressed in 1990 dollars) for 5-year intervals since 1950, taken from the National Balance Sheets of the Flow of Funds Division of the Federal Reserve Board. In the 1950s, 1960s, and 1970s, the change in real pension wealth tended to be between 10 and 15 percent of the change in the national wealth. Since 1981, however, the relationship between the growth in real pension assets and the growth in real national wealth has changed dramatically. It should be noted that the Flow of Funds accounts attempt to measure the market value of assets. Pension assets, particularly stocks and bonds, enjoyed large total real rates of return during this period and the change in real pension wealth accelerated somewhat from the levels of the 1970s. But the change in real national wealth was much lower in the 1980s than in the previous three decades and actually turned negative in the first part of the 1990s.

Some of this change is due to the sharp fall in national saving rates discussed above. The change in the real national wealth was also depressed in recent periods by depressed farm and commercial real estate values. The result is that the growth in the real wealth in pension funds has exceeded the growth in the real wealth of the country since 1981. Although this phenomenon is not likely to continue, it does reinforce the



idea that pensions are a tremendously important part of the national saving picture in the United States.

In a recent study, Schieber and Shoven (1994) superimposed the 1993 social security intermediate demographic and economic forecasts on the private pension system, taking into account the age and gender structure of the working and retired populations, the pattern of pension plan participation and plan design, the mobility of the workforce and observed retirement behavior. They referred to the long-run real rates of return on assets shown below, and then made conservative assumptions about future returns, assuming real rates of return of 5 percent on stocks, 2 percent on long-term corporate bonds and a zero real rate on money market instruments such as Treasury bills.

The net saving of private pensions (contributions plus real asset returns less benefit payouts) is equal to about 3.7 percent of the total private payroll in the economy, or between 2.5 and 3.0 percent of GDP. Once again, the importance of pensions is apparent since the total net saving rate in the economy has not been above 3.0 percent of GDP since 1985. The available evidence indicates that pension saving is at least the same order of magnitude as national saving. Shoven and Schieber project that while this may continue for another decade or so, the demographic structure is such that pensions are not likely to remain a main source of saving in the economy. Their baseline forecast for private pensions is shown in Figure II-10. The analysis assumes that the fraction of payroll that corporations contribute to pensions will remain at approximately current levels.

The message from this simulation is both clear and dramatic. Pensions, which have been a major acquirer of assets -- a source of saving -- for the past several decades, will soon become a major liquidator of assets -- a source of dissaving. The projection shows aggregate pension benefits exceeding aggregate contributions for the first time in 2006 and aggregate benefits exceeding both contributions and real asset returns by 2024. Funded pensions become an enormous net seller of assets at approximately the same time that the social security system begins to run a negative cash flow and attempts to sell off the assets in its trust fund. One wonders, to say the least, what effect this massive change from buyers to sellers of assets will have on asset prices.

It is possible that asset prices will be depressed by the selling pressure resulting from the sheer numbers of the retired baby boomers. The housing price inflation of the 1970s could be re-played in reverse in the second and third decades of the 21st century, although this time the affected assets would likely include stocks, long-term bonds, houses, and other forms of real estate. If asset prices are depressed by the

simultaneous liquidation of pension fund and social security trust fund reserves, it could have a major impact on participants in defined-contribution plans (including IRAs, Keoghs, and 401(k) and 403(b) plans), on the sponsors of defined-benefit plans, and on the PBGC. Obviously, people who save outside a pension vehicle would also be disappointed in their realized rates of return if this scenario occurs. It should be emphasized that what is being suggested is that savings will be very scarce, real interest rates high, and thus the value of real assets and financial assets behind them reduced.

The underlying demographic pattern is a given, and will almost inevitably cause the saving of the pension system to slow, whether or not the economic assumptions used by the Social Security Administration and by Shoven and Schieber turn out to be accurate. The question of interest here is whether the decreased pension savings will cause asset prices to fall and by how much. The answers depend on economic parameters that are not well known. First, there are several reasons why one might not expect the switch of pension funds from net buyers to net sellers to depress prices. Rational expectations theorists would assert that this occurrence has already been foreseen by market participants and therefore is already imbedded into today's asset prices. Because of the foresight of investors, the occurrence of a widely foreseen event should have no contemporaneous effect on prices. This theory will be put to the test in a significant way with the impact of the retirement of the baby boomers on asset markets, and the members of the cohort themselves have more than an academic interest in the outcome. The rational expectations theory, at least in its strongest form, is not widely enough accepted to suggest that baby boomers need not be concerned.

Even if one does not subscribe to the strong rational expectations view, one might hope that the impact of American retirees on world capital markets would not be sufficient to affect global asset prices and interest rates. Even if there are not enough "Generation X" members to buy the assets of the boomers without a significant discount, the assets can be sold to other participants in global capital markets. The problem with this argument is that the demographic structures of Japan and Europe are similar to that of the United States. It is difficult to imagine the elderly in Japan, for instance, buying the assets of America's elderly when the Japanese will also be trying to finance the retirement of their large elderly cohort. Perhaps the problem will be alleviated by China and the other emerging economies in the world, but considerable doubt exists about that.

Estimating how much asset prices might be depressed is difficult and speculative. It is useful to recall that the United States currently has 3.2 workers per retiree, and that this ratio is expected to fall to approximately 2.0 workers per retiree

by about 2030. These figures are often used to describe the pressure that the baby boomers would cause a purely pay-as-you-go social security system. Two workers (rather than 3.2) would have to finance the benefits of each retiree, forcing a reduction in retiree benefits, an increase in worker contributions, or both. Of course, reality is not quite so simple; for instance, the necessary payroll tax rate depends on the level of real wages as well as on the number of retirees per worker. However, the ratio of workers to retirees is very important when assessing social security finances. This same ratio can provide some rough intuition about the potential magnitude of asset price reductions due to the retirement dissaving of the baby boomers.

In a closed economy model, for example, the workers would have to finance retirees' benefits in a pay-as-you-go system and also buy the assets of the retirees in a funded system (either a private pension system or a funded social security system). If the 2 workers do not save more per capita than the previous generation's 3.2, and if the amount they save is unresponsive to changes in the rate of return offered on assets, then asset values could fall by approximately one-third. Such a fall in the market value of the U.S. capital stock relative to its replacement cost is not unprecedented. In fact, in the late 1970s U.S. capital stock was selling for less than 70 percent of its replacement value. Despite the fact that assets have been depressed in value by this much before, it still would have a major impact on the well-being of the baby boomers in retirement. It is even possible, of course, that the 2 workers per retiree will each save less than previous workers because of the higher income taxes and payroll taxes that they may face and because of the other impacts of a higher total dependency ratio in the economy. In that event, the depression in asset prices could be larger.

As mentioned earlier, this analysis of the magnitude of the price effects is problematic. In fact, the adjustment to the lack of pension saving could take place in other ways. Rather than sell their assets to the generation of workers, the retired could simply consume their capital stock; that is, run them down and extract as much cash as possible. The adjustment to the dissaving of the numerous elderly could be disinvestment of the capital stock -- lower or even negative net investment in the economy. Although all of this analysis has been for a closed economy, it is not at all clear that the outcomes are significantly different in an open, global economy, given the demographic similarities in the developed nations mentioned above.

A modest and pragmatic conclusion is that the large baby boom generation does face extra uncertainty about their retirement assets, including social security. The government could help the situation by encouraging private saving and reducing the federal deficit (that is, reducing government dissaving).

**The health and longevity of older Americans:** Statistics clearly indicate that the life expectancy of Americans is on the rise. Men and women born in 1940 (just after the creation of the social security system) could expect to live 61.4 and 65.7 years, respectively. By 1990, these life expectancies had risen to 71.1 and 78.8 years, 10 and 13 years longer than in 1940 (U.S. House of Representatives 1994: table A-2). By 2010, when the oldest baby boomers will have attained traditional retirement age, the life expectancy of new-borns is projected to be 74 and 80 years.

For those who actually reach age 65, similar trends are observed. In 1940, the life expectancies for men and women who reached aged 65 were 11.9 and 13.4 years; by 2010, they will be 15.8 and 19.7 years, increases of 4 and 6 years, respectively.

These increases play a prominent role in the debate about the appropriate ages of early and normal retirement in the future. But an equally important issue concerns the health status of older Americans. Does living longer mean living healthier? In this section, the Panel discusses recent trends and projections regarding the health of workers around early and normal retirement age and the recent literature on mortality and morbidity. A key question is whether increases in life expectancy are likely to produce longer productive lives (and if so, for whom) or merely longer periods of morbidity.

Because the sharply increasing life expectancies in the 1970s appeared to be accompanied by an increasing incidence of self-reported health problems, some researchers (for example, Gruenberg 1977; Verbrugge 1984) felt that the life expectancy advances had resulted from reduced mortality from chronic disease, resulting in a higher proportion of elderly with long periods of morbidity. Others felt that while the first effect of reduced mortality from chronic disease would naturally be higher levels of morbidity, these levels could be reduced as medical science turned its focus toward increasing the age of onset of chronic disease (Fries, 1980). Crimmins et al. (1994) simulated various patterns of reduced mortality and morbidity, and showed that the first effect would be a lengthening of the period of morbidity and dependence, followed by a shortening as age at onset is increased.

Data presented by Crimmins and Ingegneri (forthcoming) indicate that after a period of deterioration in self-reported health in the 1970s, "there is some evidence that the trend toward deterioration in self-reported health among the middle-aged and older population was arrested and perhaps even reversed in the 1980s." They reject the hypothesis that the turnaround was caused by changes in people's expectations regarding health, because no reason exists for these expectations to have declined in the 1980s.

Crimmins and Ingegneri's finding of a reversal in the trends of reported health of the elderly during the 1980s is supported by Manton, Corder and Stallard (1993), Waidmann, Bound and Schoenbaum (1994), and Manton, Stallard and Corder (1995). Manton et al. (1993) analyzed samples of the Medicare-eligible population found in the National Long-Term Care Surveys and found a modest drop in the prevalence of chronic (90 days or more) disability between 1982 and 1989. Waidmann et al. (1994:1) concluded that "prevalence rates for the chronic conditions most likely to be disabling either remained stable or fell." Finally, in the most recent study, Manton et al. (1995) used the National Long-Term Care Surveys to examine 16 specific medical conditions. They report that the average number of these medical conditions per person among U.S. elderly fell by 11 percent between 1982 and 1989.<sup>57</sup> Declines were observed consistently across age, sex and disability level groups.

Bound and Waidmann (1992) went a step further and argued that average health among the elderly did not actually deteriorate in the 1970s, despite the declines noted in the self-reported data. Rather, they argue, the changes reported in the 1970s were the result of a combination of social forces affecting the way individuals perceive their health and report on it. More generous disability benefits and easier access to them increased the proportion of the population who described themselves as impaired, and then applied and often received disability benefits (Quinn and Burkhauser, 1994a). Crimmins and Ingegneri (forthcoming) agree. "This explanation certainly fits the time trend for the older working age and retirement age population of deteriorating health during the 1970s, a period when benefits became increasingly available, and improving health during the 1980s, a time when benefits became more difficult to obtain."

Waidmann et al. (1994) argue that changes in the social security disability program in 1965 (when workers with temporary as well as permanent disabilities became eligible for benefits) and the establishment of the Supplemental Security Income (SSI) program in 1974, together with increases in real benefits and increasingly liberal eligibility requirements from 1965 through the mid-1970s are strongly related to the pattern of self-reported health during this period. "When we include SSI, the changes in the fraction receiving disability income closely match the changes in the fraction reporting that they are limited in their ability to perform their major activity. . . . Furthermore, the most dramatic changes in the fraction of individuals reporting activity limitations occur for those under the age of 65 -- those who are eligible for disability programs. Indeed, for men and women aged 70 or older, who were presumably unaffected by changes in Disability Insurance (DI) and SSI, levels of activity limitation remained effectively unchanged throughout the study period. If trends in activity limitations reflected mortality declines, we would expect to

see these age patterns reversed, since mortality declines were greatest for those over 65." (p.14) Finally, Bound and Waidmann (1992) add that efforts at disease prevention and early diagnosis increased dramatically in the 1970s, leading to increased awareness among the elderly population, rather than absolute increases in the incidence of disease.

As usual with the elderly, the mean or average can be deceptive. Feldman (1991) finds a substantial increase in the gap between the death rates of those with low and high levels of education between 1960 and 1980. He suggests a scenario in which the longevity gains and morbidity declines fall primarily on those of higher socioeconomic class, while those at the other end of the spectrum (even if enjoying small absolute gains) fall further behind. In this case, increases in the ages of eligibility for social security benefits, which might be suggested by the health gains of the elderly on average, should be tempered by a concern for those not sharing in this good fortune.

In summary, although the jury is still out on these issues, the latest available evidence suggests that the health of the middle-aged and older Americans has increased during the 1980s and into the 1990s, and probably more so at the upper socioeconomic levels. These gains are likely to continue, as medical technology is re-focused from reducing mortality from chronic diseases (the primary initial focus) to increasing the age of onset of chronic disease. This is expected to compress the period of dependence and ill-health, at the same time that life expectancy is increased. This trend is expected to be reinforced by the observed relationship between mortality and education (Preston and Elo, 1994), given projected increases in the educational levels of the elderly.

It was the observed pattern of deterioration in self-reported health among the middle-aged and elderly in the 1970s that led to the "failure of success" argument -- the hypothesis that sharply decreased mortality from chronic disease resulted in increased proportions of frail and sick elderly (Gruenberg 1977). Recent work appears to have undermined that argument, pointing instead to improvements in the early identification of chronic disease, and therefore the earlier accommodation of known health problems.

**Conclusions:** Research suggests that the economic status of current retirees is, on average, better than that of their parents (largely because of social security), that the current economic position of the baby boom generation is better than that of their parents at the same age, but that the saving rates of the baby boomers are lower than necessary to maintain their standards of living after retirement. Single people,

especially single mothers, those with low education or irregular work histories, minorities, those without home ownership, and those without the option to continue working as they age are at the greatest risk with regard to their retirement prospects. Opinions diverge about how the economy will evolve between now and the time of the baby boomers' retirement. One source of concern is the future profile of asset prices, when private and public retirement systems, both here and abroad, change from net buyers to net sellers of assets. On average, both the life expectancy and the general level of health appears to be rising for older Americans, but differences (which may be increasing) occur by socioeconomic class.

This analysis of future trends takes the social system as given, despite the fact that currently legislated contribution rates are insufficient to pay currently legislated benefits. Something has to give, and the decisions about what, when and to or for whom can have large impacts the future economic well-being of older Americans.





### **III. Policy Options for Dealing with Projected Social Security Imbalances**

In this section the Panel describes several evaluation criteria that it devised for judging the effects of alternative policies to correct projected social security imbalances. The Panel also outlines what this set of policies might include--specifically, increases in payroll taxes and curtailments in benefits. Finally, the Panel evaluates these potential changes using the specific criteria outlined at the outset and indicates where possible tradeoffs lie. The Panel's charge, and its goal in preparing this Report, was to outline and evaluate options rather than to make policy recommendations, on the understanding that some combination of benefit cuts and/or revenue increases are necessary to restore the social security system to actuarial balance. It is the Panel's intention to offer a framework for assessing various policy alternatives but not to make specific recommendations on which particular package to adopt.

#### **A. Criteria for Evaluating Social Security Benefit and Tax Changes**

The Panel developed six criteria as guidelines for evaluating the effects of alternative methods of correcting projected social security imbalances:

Criterion 1. Adequacy of retirement income. A primary goal of the social security system is to contribute to an adequate retirement income for older Americans. Many Americans approach their late middle age without adequate sources of retirement income. Some experienced poverty all their lives and therefore were not able to save. Others may have been myopic (thinking that they would never retire), may have refused to think about their consumption needs in old age, may have underestimated their longevity, or simply may have miscalculated what was necessary to maintain their standard of living in retirement.

From a policy perspective, there are two ways of thinking about retirement income adequacy. One legitimate goal is the avoidance of poverty among older Americans (that is, meeting a minimum income standard). Another is the provision of a reasonable replacement rate, meaning that retirement income should attain at least some minimum fraction of pre-retirement income. The Panel understands that both standards are imperfect measures of the adequacy of a particular retirement package, because they examine only current levels of income and ignore the possibility that old-age consumption patterns change over time. Nonetheless, these measures are useful and widely discussed ways of judging the adequacy of retirement income. Using this criterion, a social security change that increases retirement income adequacy would be judged positively.

In addition to concern about incomes near the time of retirement, it is also important to examine the continuing value of benefits afterwards. The fact that social security benefits are paid as an annuity indexed to the Consumer Price Index (CPI) plays a crucial role in maintaining the adequacy of retiree benefits as people age. Because employer-provided pensions are not usually fully indexed, they can shrink in real terms over time. Similarly, people may consume their nonannuitized wealth as they age, again exposing them to the risk of outliving their command over resources. Thus adequacy many years into retirement must be considered, as well as benefit adequacy immediately after retirement.

Criterion 2. Insurance against income fluctuations. Social security is designed to provide some insurance against unforeseen events that interrupt a worker's flow of income. These shocks include death of an earner and events that precipitate early retirement such as disability. One could also include here bad fortune in the choice of an occupation whose skills have become obsolete, or unanticipated shocks to the value of training and education (for example, the result of industry downsizing). Social security also provides risk pooling, providing income to those who are eligible for benefits by virtue of having met benefit eligibility criteria. For example, a single worker who contributes to the system and survives to retirement age receives retired worker benefits, but a single worker who dies before retirement age does not receive payments to his or her estate. Similarly, social security offers insurance by transferring from shorter lived people (men, on average) to those who are longer lived (e.g. women, on average). In this way, the social security system affords a form of insurance by pooling risks across those who do, and do not, eventually meet eligibility criteria.

Insurance that cushions the blow of reduced earnings will inevitably affect people's decisions and behavior. For example, research suggests that the availability of social security retirement benefits induces early retirement and increases the chance that someone who could work will apply for disability benefits. Also, workers are covered by Disability Insurance, and if they have dependents, these receive Survivors Insurance. These components of the social insurance program act as labor market distortions by lowering the worker's effective net labor market earnings (the difference between what the worker could earn on a job and the social benefit payments). Some labor market inefficiency is an inevitable consequence of providing insurance. Thus, the question is not whether labor market distortions exist, but whether the amount of insurance is too great or too small given the accompanying distortions.

Criterion 3. Avoidance of market inefficiencies. With respect to market inefficiencies, the Panel focused on two important decisions that individuals and families make, namely:

- i) The labor-leisure choice, or how people allocate their time both in their early and middle years, and also at the time of the retirement decision; and
- ii) The savings-consumption choice, or how people allocate income between consumption during the worklife and consumption during retirement.

Social security influences both labor-leisure and savings-consumption behavior, enabling people to retire earlier than they otherwise would. For younger workers, social security payroll taxes reduce the marginal take-home pay of those earning less than maximum covered earnings. People will tend to perceive that they are paying more in social security contributions than they will receive in the form of social security benefits (that is, if payroll taxes are considered to be net taxes), which will reduce the value of working and affect labor supply decisions as do other taxes on earnings.

Savings patterns are affected by social security if promised benefits induce some people to decrease their own private savings. How much they are affected is important to national savings, an issue taken up below. The Panel is also concerned about whether people save what they should given their opportunities and constraints, and about whether these private savings decisions are influenced by government programs such as social security. Although neither assets nor asset income directly affect the computation of a retiree's social security benefits, the program does interact with both via the income tax and means-tested benefits programs. These interactions cause some to save at rates different from those they would if not confronted by the distortions inherent in these programs. For example, taxing retirees' social security benefits may discourage private savings by those whose asset income would otherwise be high enough to expose them to benefits taxation. Alternatively, for some who retire early with social security, additional private savings may be generated in anticipation of a longer period out of the labor force. Overall, a social security reform which reduced labor market and savings distortions would be viewed positively according to this criterion.

Criterion 4. Equity of lifetime social security taxes and benefits. Social security differs from privately-purchased insurance in that it includes explicit and implicit redistributive components. For example, those who are high earners over their lifetimes pay more in taxes and receive lower returns on these taxes than do the lifetime poor. In addition, substantial cross-generational differences exist in benefits received versus taxes paid. Massive intergenerational transfers have been delivered to current and past retirees who contributed to the system in its early years before there were many retirees, financed by the current generation of workers to whom smaller net

benefits will accrue under current law. This pattern, often seen during the start up of certain types of social insurance systems, is no longer viable.

The Panel recognizes that the past and future of social security are very different. Under this criterion, therefore, the Panel asks how various reform proposals affect the lifetime distribution of social security contributions and benefits. In general, the Panel seeks to identify changes that alter the distribution of lifetime benefits and taxes both:

- i) Between generations; and
- ii) Within generations.

Criterion 5. Encouragement of national saving. The Panel shares many experts' concern that the national saving rate in the United States is too low. This low saving rate undercuts investment, which in turn is a primary determinant of future output. All forms of saving are important: personal saving, corporate saving and saving (or dissaving) by the government sector. When using this evaluation criterion, the Panel asks whether a specific policy proposal is likely to increase aggregate national saving.

Criterion 6. Strengthening the financial integrity of retirement income systems. The Panel's goal is to discuss policy proposals to help eliminate the long-run fiscal imbalance of the social security system. The typical social security analysis forecasts the system's budget 75 years into the future. In the Panel's view, this focus should be broadened to address other concerns influencing the social security system's integrity. The Panel also emphasizes that social security reform proposals should be evaluated in terms of their contribution to strengthening the financial integrity of the private retirement income system as well. In general the Panel believes that:

- i) All proposed reforms should ensure that the Social Security Trust Fund does not approach or dip below zero during the 75-year interval; and
- ii) A reform that offers a better balance at the end of the 75-year period and thereafter implies stronger financial integrity.

The Panel stresses that these criteria be used to design a combination of benefit cuts and/or revenue increases necessary to restore the social security system to actuarial balance.

## **B. The Scope of Social Security and the Timing of Adjustments**

This section begins with a description of two baseline scenarios for social security that frame most of the other reforms currently under discussion. In this analysis the Panel compares and contrasts a "larger" versus a "smaller" social security system. A larger system maintains promised benefits at their currently legislated levels. This scenario implies that taxes must be raised to cover these promised benefits. At the other end of the spectrum, a smaller system would maintain current payroll tax rates while reducing benefits to achieve balance with those implied revenues. The size of the system can be varied continuously between those two limits.

The Panel assesses the pros and cons of both the smaller and larger systems using the evaluation criteria developed above. The Panel then addresses the question of timing, focusing on the relationship between the timing of benefit cuts or tax increases and the size of the changes needed to achieve actuarial balance.

**Larger versus Smaller Systems:** The Panel believes that the social security system must be restored to actuarial balance. Many combinations of revenue increases and benefit decreases could achieve this. To list them all, comparing each one with each other one, would be tedious and difficult to follow. Instead, the Panel chose to describe what we believe to be the most important types of revenue increases and benefit decreases. The Panel selects what it terms a baseline tax increase option, along with a companion baseline benefit decrease option, and then proceeds in four logical steps. First, the Panel uses the evaluation criteria described above to discuss the baseline tax increase and benefit decrease. Second, the Panel considers alternative timing paths for the baseline reforms. Third, it examines other ways to cut benefits with the baseline benefit cut. Fourth, other tax increase policies are compared with the baseline tax increase option.

**Comparing tax increases and benefit decreases:** Our hypothetical baseline benefit decrease is a proportional decrease in the Primary Insurance Amount (PIA) formula. In this scenario, all persons born in or after a particular year, which is arbitrarily taken here to be 1940, will experience the same percentage decrease in their PIA amounts. The hypothetical baseline tax increase is a rise in the payroll tax rate beginning in the year 2002 -- when workers born in 1940 attain age 62 -- with equal increases levied on employers and employees (and a matching increase for the self-employed). These two baselines are chosen for their simplicity, not because the Panel has selected them as particularly desirable changes to make.

In the first baseline scenario, the Panel assumes that benefits would be cut by reducing the Primary Insurance Amount (PIA) by the same percentage for all. This reduces the benefit as a fraction of the worker's Average Indexed Monthly Earnings

(AIME). For example, in 1995, a worker's PIA is computed as 90 percent of his first \$426 of AIME, plus 32 percent of the next \$2,567 of AIME, plus 15 percent of AIME above that. (Thus \$426 is the "first bend point" and \$2,567 the "second bend point" in the PIA formula.) A 10-percent reduction in benefits would be achieved by proportionally reducing the percentages in the PIA formula, such that the smaller PIA would be 81 percent of the first \$426 of AIME, plus 28.8 percent of the next \$2,567 of AIME, plus 13.5 percent of AIME above that.<sup>58</sup> This formula change reduces benefits proportionately for all those covered by the new formula, on the presumption that family maximums and disability benefits are treated symmetrically.

The second baseline scenario increases payroll taxes beginning in the year 2002 by enough to raise the same amount of revenue that is generated by the "baseline" benefit cut described above. It would not alter the maximum earnings subject to tax or the definition of earnings subject to tax (for example, employee benefits), and would maintain the current division of the tax among employers, employees, and the self-employed.

**Magnitudes of Benefit Cuts or Tax Increases:** Table III.1 shows three combinations of proportional PIA decreases and payroll tax increases that would be sufficient to restore actuarial balance over the next 75 years, assuming they were legislated to begin in the year 2002, and no other changes were effected beyond those already legislated. Looking from left to

**Table III.1.**  
**Combinations of PIA Decreases and Payroll Tax Increases Adequate to Restore 75-year Actuarial Balance, Three Start Dates**

		<b>Size of social security retirement program</b>		
		Larger.....		Smaller
<b>Start date 2002:</b>				
Percentage cut in benefits	0	10.25	20.5	
Tax rate increase		2.5	1.25	0
<b>Start date 2012:</b>				
Percentage cut in benefits	0	12.75	25.5	
Tax rate increase		3.12	1.56	0

**Start date 2022:**

Percentage cut in benefits	0	16.75	33.5
Tax rate increase	4.04	2.02	0

*Note:* Each proposal is structured so as to restore actuarial balance over the next 75 years, assuming changes implemented as of the start date given and no other changes beyond those already legislated. Computations are based on assumptions and time horizons relevant in 1994.

*Source:* SSA, Office of the Actuary.

right, benefit decreases become larger and tax increases grow smaller. Now the Panel asks how alternative combinations of changes in taxes and benefits would be assessed by policymakers, applying the criteria developed above.

Criterion 1. Adequacy of retirement income. Changing the PIA formula reduces benefits proportionately for all social security claimants. Such a benefit decrease would reduce some retirees' and survivors' benefits and total retirement incomes below a minimally adequate level. The larger the PIA benefit cut, of course, the larger will be the number of people with inadequate incomes. Replacement rates, or the ratio of social security benefits to preretirement earnings, would also be reduced for all retired workers.

One group likely to be affected by PIA cuts is very old widows whose deceased husbands had low lifetime earnings: a proportionate reduction in all social security benefits may eventually produce higher levels of hardship among very elderly widows. To the extent the elderly experiencing benefit cuts apply for and receive Supplemental Security Income (SSI) or food stamps, they would be somewhat protected from poverty. Some are reluctant to apply for means-tested benefits after they have worked and contributed to social security over a lengthy career. The SSI and food stamp amounts are also quite low, currently insufficient to lift the indigent over the poverty line. Finally, older people can qualify for SSI on the basis of age only after age 65, but some of the people affected will be between 62 and 65. In general, then, a reduction in benefits thus reduces adequacy of retirement income.

By contrast, raising payroll taxes threatens retirees' benefit adequacy far less because most are not earning much income subject to this tax (Leonesio 1990). Some people both work (and pay payroll taxes) and receive benefits, but for the most part, this is not a low-income group. In consequence, raising payroll tax rates would do little to harm retirement income adequacy.

Criterion 2. Insurance against income fluctuations. A proportionate cutback in OASI benefits (the baseline scenario) reduces the insurance protection provided by social security for workers and survivors at all income levels. The larger the benefit cut, the greater the loss of income insurance. In contrast, raising payroll taxes threatens retirees' insurance against inadequate incomes far less because most are not earning much income subject to the payroll tax.

Criterion 3. Avoidance of market inefficiencies. If retirement benefits were smaller, older workers with good employment prospects would be less likely to withdraw from the labor force to collect social security benefits. The magnitude of this effect may be modest: research suggests that a 20 percent reduction in the PIA would cause healthy older men to postpone their retirement by fewer than six months (Fields and Mitchell 1984b). Of course, a link exists between labor market inefficiencies and providing insurance against inadequate income. The length of one's earnings career is a critical determinant of lifetime economic well-being, subject both to individual decisions and to random events. An inevitable tradeoff arises between the level of insurance the system provides and the degree to which retirement decisions are distorted.

Social security benefit cuts may also alter the labor-leisure choices of younger workers. Peoples' decisions about work and human capital accumulation patterns can be influenced by the social security payroll taxes they pay and the future benefits they expect to receive. For workers with very low lifetime earnings, additional years of covered earnings might increase the lifetime return from social security, with the expected (present) value of future benefits rising by more than an additional year's taxes. For higher paid workers, working longer often raises future benefits by less than extra taxes paid. Similarly, many two-earner couples (along with middle and high income single workers) tend to earn few extra benefits from the social security system for another year of work at the end of the worklife. As a result, a smaller system offering lower benefits is likely to reduce these potential labor market inefficiencies. In contrast, a larger social security system with higher tax rates makes work less appealing, though greater need for income as a result of higher taxes encourages work. On net, the labor market distortions probably encourage earlier retirement.<sup>59</sup>

Other problems may arise when a larger system influences peoples' saving and consumption choices. One possibility is that because social security benefits are tied to earnings rather than income from saving, the system does not unduly distort saving decisions. Nevertheless, other programs that are means- (or asset-) tested do interact with social security benefits, which produces a similar result. For example, Medicaid coverage for nursing home care is only available to those with limited assets and little



income, all factors that interact with saving and social security benefit policy. How large these effects are is currently not well known, and the topic requires further study.

Another way that social security probably influences saving patterns is that the system forces deferred consumption for the subset of (myopic) people who save too little to live comfortably in retirement. From this perspective, a larger social security system represents an improvement in this group's well-being. Even for these people, however, the fact that benefits are paid as an indexed annuity can affect saving. Those who desire an indexed annuity, but cannot obtain it in the private market, may save less since social security offers such an annuity. On the other hand, social security also forces saving in a way that cannot be offset by some people who already save adequately; for this group, having a smaller system diminishes distortions. On net, whether a smaller system is preferred depends on whether Americans would be more likely to save too little, or adequately, on their own. Many studies have sought to answer which behavior is more prevalent, but as yet the evidence remains controversial.

Criterion 4. Distribution of taxes and benefits. Proportional social security benefit cuts or tax increases leave the relative distribution of both taxes and benefits within a generation unchanged. For instance, if a low-wage worker currently receives two-thirds of the social security benefit received by an average-wage worker, this ratio would continue were PIAs proportionally reduced. However, the absolute difference between the benefits received by low-wage and average-wage workers would obviously decline. Reduced social security benefits would thus have a smaller redistributive impact on the incomes of older Americans than they do under the current formula.

Other dimensions of within-generation redistribution have concerned some analysts. For example, the long-lived elderly would be better served by reforms that raised taxes more and cut benefits less. Conversely, short-lived workers and survivors would favor larger benefit reductions and smaller tax increases. (A single worker who dies at age 60 gains if payroll taxes are reduced and does not suffer any loss in retirement benefits if OASI pensions are scaled back. By contrast, a worker who lives until age 90 gains from the payroll tax reduction but loses a substantial amount of lifetime benefits if pensions are scaled back.)

Social security insures workers and their spouses and dependents against the risk of exhausting their assets due to higher than expected longevity. For this reason, many observers do not think social security's redistribution from the short-lived to the long-lived is redistribution in any meaningful sense. At age 18, when people enter the work force and begin to contribute to social security, workers are uncertain whether they will

live to 60 or to 100. Hence, from the perspective of an 18-year-old worker, a reduction in both social security benefits and taxes does not favor or harm the worker in comparison with other workers of the same age. A problem arises, however, when some entering workers expect to live longer than other workers. Healthy workers on average live longer than unhealthy ones; and higher income workers on average live longer than lower income workers. A reduction in both social security benefits and taxes will thus harm some and benefit others, as compared with the status quo. From this perspective, a smaller social security system would redistribute less within a generation, as compared with a larger system.

Regarding between-generation distribution, a smaller system brought about by a proportional reduction in the PIA (initiated in the future and not made retroactive) would leave the entitlements of older people unchanged, though to the extent that they worked past 2002, they would be subject to lower payroll taxes. This older generation would therefore benefit from changes in the baseline package that embody the smaller tax increase. However, these effects are likely to be small. In contrast, for non-retired persons currently age 54 or younger, the younger the worker, the more that he or she would favor having a lower social security tax and lower benefit because younger cohorts will have more years ahead paying taxes than receiving benefits.

Whether this pattern of redistribution is viewed favorably or unfavorably depends on a number of factors. One of the most important is the prospect for real wage growth. If real wages seem likely to rise, younger workers will enjoy higher living standards than the older generations, irrespective of social security benefit cuts. On the other hand, if wage growth prospects are poor, the living standards of younger workers may be similar to or worse than those of older workers.

In assessing lifetime tax and benefit comparisons, it is worth noting that under current law the normal retirement age will be 67 for workers attaining age 65 after 2024, whereas the normal retirement age is 65 for workers attaining age 65 before 2003. The generation now aged 30-54 can therefore expect to receive larger lifetime benefits than will the generation younger than 30. This effect is somewhat counterbalanced, however, by the expectation that currently younger workers will, on average, have longer lives. Moreover, the increase in the payroll tax rate already legislated will have a larger impact on younger workers than older workers. In general, then, a larger social security system is likely to be viewed more favorably by today's retirees and near retirees, but less so by today's younger workers.

Criterion 5. Encouragement of national saving. A small social security system, with lower tax rates and low benefit levels, would probably boost rates of national saving

above what they would be in a larger system. This effect is likely to be small, however, reflecting differences in propensities to save of people of different ages and different life expectancies. Also, smaller benefits and taxes may not have a clear-cut effect raising national saving. The uncertainty arises because lower benefits could cause workers to retire later, and facing less time in retirement, they might choose to accumulate less retirement saving while at work. This effect would be offset if workers anticipating smaller social security benefits decide that a larger retirement nest egg is needed.

Many studies have attempted to measure the net impact of social security on saving, but the studies remain inconclusive. For example, some believe saving has been substantially depressed by social security, implying that a cutback in benefits will boost private saving. Others show no consistent negative effect of social security on saving. The Panel concludes that a somewhat smaller social security system would have at best a small positive effect on saving.<sup>60</sup>

Criterion 6. Financial integrity of retirement income systems. By this construction, the baseline comparisons in this section produce no difference in the social security system's actuarial balance over the next 75 years. Nevertheless additional considerations for financial integrity are important. One key concern, in the Panel's view, arises from the fact that the system's financial problems do not end in 75 years. Indeed, current projections show larger deficits in the distant future than in the near term. Thus with a rolling 75-year horizon, the model replaces a financially sound year with a less sound year in each new projection for the foreseeable future.

For this reason, the Panel believes that the cash-flow patterns are important on a year-by-year basis, particularly the contrast between early and late years, and beyond the traditional 75-year projection period. The baseline benefit cut examined here affects a smaller fraction of benefits over the next 75 years (by exempting everyone 55 or over), while the baseline tax increase affects all earnings after 2002. As a result, a larger benefit decrease and smaller tax increase produces a better balance over the 75-year horizon.<sup>61</sup>

**Why Timing Matters:** The baseline comparisons discussed above considered tax and benefit changes beginning in 2002. Here the Panel reviews four issues pertinent to timing. First is the question of timing of legislation, as opposed to implementation. Second, are the implications of alternative implementation dates. Third, is whether baseline changes should be phased in smoothly or abruptly. Fourth, the Panel considers adjusting benefits for those already retired.

The Panel finds that any significant changes in social security benefits should be announced with considerable lead time to allow workers to adjust to the changes by adapting their retirement, saving and consumption plans. Implementation delays will require more substantial adjustments in benefits, taxes, or both, which may take a larger economic and political toll in the future.

Delaying legislation does not help people plan for the future. Rather, promptly legislated policy changes combined with delayed implementation of some benefit cuts and tax increases better fulfills this goal. Another reason to make changes sooner rather than later is the increased flexibility that comes from making changes when the national dependency rate is lower--when fewer retired individuals have their immediate livelihoods at stake. The urgency of prompt legislation is increased by the desirability of having implementation lags incorporated in the legislation. Gradual implementation also reduces the magnitudes of notches (different treatment of cohorts close in age) and the perception of unfairness that notches engender.

Having argued that timing is of the essence, the question arises as to when specific changes could be made. Various alternatives include a delayed start of tax increases and/or benefit cuts, and benefit reductions by year rather than by birth date.

Delayed start of tax increases and/or benefit cuts: The baseline tax increases in the Panel's hypothetical scenario are scheduled to begin in 2002, while the baseline benefit decreases started for the cohort turning 62 in 2002. Although this date is relatively near for large changes, it is not too soon for either the financial needs of social security or for the beginning of a phased-in set of changes. The implications of delaying the start of the baseline changes by one or two decades are substantial, as is evident from Table III.1 which depicts alternate starting dates of 2012, and 2022. In each calculation, the proposal is to enact immediate legislation with delayed implementation; as a result, the calculations are undertaken for the current 75-year planning period, not for a 75-year period beginning at the date of change. With an increase in net revenues that happens quickly enough, little concern exists that the Trust Fund will run out of money in the middle of the 75-year projection period. As start-dates for implementation are pushed later and later, insolvency becomes a greater and greater risk.

Evaluating the effects of delayed implementation is facilitated using the criteria described above. The Panel confines its discussion to the half-and-half mix of baseline changes.

Criterion 1. Adequacy of retirement income. Delaying reform in social security taxes and benefits means that even larger benefit cuts will be required, making more widespread the problem of inadequate income replacement. In other words, delay worsens the impact of the reforms by the adequacy criterion.

Criterion 2. Insurance against income fluctuations. Decreasing the size of the social security program decreases its insurance component. Delaying the reforms produces a larger insurance cut for those affected.

Criterion 3. Avoidance of market inefficiencies. Labor market inefficiencies depend on the size of the implicit net taxes on work due to social security benefit and tax rules. Economic analysis implies that market distortions increase more than in proportion with the size of the distortion; in this instance, smaller cuts starting sooner have smaller labor market distortion effects. Conversely, delaying the date when benefits and taxes are altered makes necessary larger system changes, which in turn produces worse market inefficiencies.

Criterion 4. Distribution of taxes and benefits. Delaying a tax increase and making it larger later increases the relative lifetime taxation of those with more of their earnings occurring late in life. Because higher income people, on average, have steeper earnings profiles, such a tax is more progressive within a generation. Delaying a benefit decrease at the expense of having to cut benefits more later has no similar intragenerational effect because each cohort will experience benefit cuts depending on their year of birth, not on when they retire.

Delaying implementation of benefit and tax changes also changes the extent of redistribution between generations. Deferring a tax increase favors older workers near the end of their working lives, and means that younger workers will be subject to the higher tax rates over more years of their worklives. Similarly, delaying benefit cuts favors generations whose benefits are spared the cut and hurts later generations who receive larger cuts. Whether this pattern of redistribution is viewed positively or not depends on several things, including future real earnings growth prospects. If the prospects for future wage growth are good, younger workers will enjoy higher living standards than the older generations, however much social security benefits are scaled back. On the other hand, if the prospects for future wage growth are poor, the living standards of younger workers could be similar to or worse than those of older workers. Also, older workers have paid lower lifetime contributions to social security than younger workers can expect to pay in the future. Although real future wage growth cannot be predicted precisely, actual wage growth in the United States has been very low and for some groups even negative for almost two decades.

In assessing lifetime losses, it is also worth noting that under current law the normal retirement age will be 67 for workers reaching age 65 after 2024, whereas the normal retirement age is 65 for workers reaching 65 before 2003. The generation now aged 30-54 can therefore expect to receive larger real lifetime benefits than the generation younger than 30. This effect is somewhat counterbalanced, however, by the expectation that currently younger workers will have longer lives on average. Moreover, the increase in the payroll tax rate already legislated will have a larger impact on younger workers than older workers.

Criterion 5. Encouragement of national saving. Because these alternative scenarios are designed to have similar impacts on the social security system's actuarial balance over the 75-year accounting period, timing differences should not have a significant effect on public saving over this entire period. Of course delays could increase the extent of uncertainty about what reforms will eventually be passed, which might increase private saving for those losing confidence in the social security system. On the other hand, younger workers face larger, if delayed, increases in taxes which could depress their saving. Although existing research does not definitively prove that a smaller social security system would increase national saving, the Panel believes that delaying needed system reforms would probably not increase saving by very much.

Criterion 6. Financial integrity of retirement income systems. The comparisons made here have been structured so they produce the same actuarial balance over 75 years. Nevertheless, some concerns arise for retirement system financial integrity. One is that the financial problems of social security do not end 75 years hence; indeed, some projections have shown larger deficits in the distant future than in the near term. Thus with a rolling 75-year horizon, a financially sound year will be successively replaced with a less sound year in each new projection. The Panel is also concerned with the pattern of balances on a year-by-year basis, particularly the contrast between early and late years. The later the change in benefits and taxes the greater the annual change has to be. As a result, delay increases the size of annual change and so improves this aspect of long-run financial integrity.

Some concerns also arise about the responsiveness of the system to uncertainties inherent in any forecast. In many recent years forecasts of the social security system's integrity have worsened. It is likely that earlier implementation of needed changes (and the fact that changes implemented sooner would be smaller) would make it easier to respond to future adverse developments, should they occur.

Phase-in benefit reductions by year rather than birth date: For convenience, the discussion thus far has focused on changes in taxes and benefits that begin in

2002. For reasons of equity and macroeconomic impact, however, it may be more appropriate to implement payroll tax increases and benefit decreases in a series of small steps--using a gradual phase-in approach. An appeal of this gradual approach is that it would smooth the treatment of members of nearby generations, both on an annual and a lifetime basis.<sup>62</sup>

### **C. Alternative Means of Lowering Benefits**

This section describes six different methods of reducing the level of social security benefits. Each approach is assessed using the criteria developed earlier in this report, and compared with the baseline benefit cuts. Specifically, the proposals considered are as follows:

- Reducing PIAs of high-wage workers;
- Raising the normal retirement age;
- Adjusting automatic cost-of-living adjustments;
- Means-testing social security benefits;
- A double-decker system; and
- A double-decker system with means testing.

These changes all have at least one feature in common: they will reduce social security outlays below the level that would occur if the current benefit formula and eligibility conditions were left unchanged. The earlier discussion focused on a comparatively neutral form of benefit reduction -- a proportional reduction in the benefits for all future retirees. The remaining discussion focuses on less neutral reforms -- reforms that will impose larger benefit reductions on some classes of new retirees than on others.

The Panel's evaluations consider all but one of the criteria enumerated above. The Panel does not ask how the financial integrity of social security is affected by these reforms, because each of the changes is conceptualized so as to achieve the same reduction in future outlays and hence strengthen the system's integrity. For example, the Panel's evaluation of an increase in the retirement age should be conceptualized as follows: compared with a proportional reduction in social security benefits, what are the effects of a retirement age increase that achieves the same reduction in future outlays over the 75-year planning horizon?

**Reducing PIAs of high-wage workers:** One way to maintain benefit adequacy while reducing benefit outlays is to cut PIAs more for high-wage than for low-wage workers. This change in benefits could be accomplished by reducing the

earnings replacement rate on AIME above the first or second bend points in the PIA formula, while holding the earnings replacement rate below the first bend point unchanged. The earnings replacement rates on are now 90 percent, 32 percent, and 15 percent. A change might lower the 32 percent to 30 percent, and/or the 15 percent to 10 percent.

An alternative that might accomplish the same goal is to reduce the dollar amount of the bend points in the PIA formula, for example by linking the annual adjustment in the bend points to changes in prices rather than changes in economy-wide average wages. Another alternative might be to raise the formula bend points in line with the lesser of price changes and economy-wide wage changes; in this event social security benefits would never be higher and would frequently be lower than under the present system. The actual amount of future benefit reduction would be uncertain, however, and would depend on the exact future relationship between price and average wage changes.

In the following discussion, the Panel points out the similarities and differences between the two simple methods of reducing PIAs of high-average-wage workers, one that reduces the earnings replacement rates in the PIA formula and the second that reduces the bend points in the formula.

Criterion 1. Adequacy of retirement income. Both approaches to cutting benefits fully protect the well-being of retired workers who had very low lifetime wages, most of whom probably have low retirement incomes. But some low/average-wage workers are members of high-income families (for example, the retired spouses of highly paid workers). Neither method protects the benefits of workers who may qualify for average or above average benefits but who have low retirement incomes. On balance, both methods should be preferred to a proportional benefit reduction if the goal is to provide a minimally adequate retirement income.

Criterion 2. Insurance against income fluctuations. Both methods provide better insurance protection for workers earning less than average, and both provide worse insurance protection for higher paid workers.

Criterion 3. Avoidance of market inefficiencies: Both proposals increase labor-market distortions compared with a proportional PIA reduction for all workers. In this respect, reducing the earnings replacement rate(s) above the first or second bend points probably introduces more distortion than the proposal to reduce the bend points.



Distortions are increased relative to a proportional benefit reduction because high-wage workers face a heavier net tax on their lifetime earnings. The marginal net tax imposed on workers by the social security system is (approximately) the difference between the payroll tax they pay on additional earnings and the present value of the extra lifetime benefits they and their survivors will receive as a result of the increase in their AIME. How this net tax changes with additional earnings is the marginal net social security tax, which is relevant for many decisions. Full-career single workers with AIME above the second bend point currently receive an additional \$0.15 in monthly PIA benefits for each additional dollar in AIME.<sup>63</sup> A reduction in PIAs that is targeted on high-wage workers would reduce the increment in benefits that high-wage workers receive as a result of boosting their AIME. It would increase the marginal net tax on their earnings by more than a proportional reduction in PIAs, thus introducing a larger distortion in their labor-leisure choice.<sup>64</sup>

A reduction in the bend points introduces a similar distortion in the labor-leisure choice, but for a narrower class of workers. If the second bend point is reduced, for example, fewer workers would see their PIAs raised by \$0.32 for each \$1.00 increase in AIME; more workers would see their PIAs raised by only \$0.15 for each \$1.00 increase in AIME. The net social security tax faced by the affected workers would rise substantially. Reducing the bend points increases the net social security tax by a very large amount for each affected worker, but the tax rate is increased for a smaller number of workers than would be the case if the earnings replacement rate above the first and/or second bend points were cut.

Of course, a proportional reduction in PIAs raises the net marginal social security tax faced by all workers who expect to collect social security benefits, including low-wage workers. The distortion is larger and more economically significant if the PIA reductions are concentrated on high-wage workers, however. This is true for two reasons. First, many low-wage workers do not presently pay a net marginal social security tax at all. Many workers with average lifetime earnings below the first bend point receive a net subsidy from social security for each \$1.00 increase in AIME -- they will receive more additional discounted benefits than they will pay in additional payroll taxes. A proportional reduction in their PIA will reduce the net subsidy; it will not impose a heavier marginal tax. Second, the amount of the labor supply distortion rises faster with a 1 percentage point change in taxes when the tax rate is initially high than it does when the tax rate is low. High-wage workers currently face higher net tax rates than do low-wage workers. A reduction in PIAs that is concentrated on high-wage workers would yield a larger increase in the net tax increase on those workers than a proportional PIA reduction for all covered workers. Reducing the PIA-formula bend points is slightly favored over reducing the earnings

replacement rate above the second bend point because the top net social security tax is left unchanged by the first reform. A larger distortion does not necessarily imply that high-wage workers will work less than they would if PIAs were reduced proportionally for all workers. They might delay their retirement because they are forced to accept lower social security pensions than they could obtain if PIAs are reduced proportionally. (Low-wage workers on the other hand, would probably retire earlier under the disproportionate cuts, because their benefits would not change.)

Criterion 4. Distribution of taxes and benefits. The previous discussion makes clear that either alternative to a proportional reduction in PIAs favors low-average-wage workers at the expense of high-average-wage workers. So either alternative redistributes more within a generation than does the baseline case. Between generations, all three proposals favor cohorts currently age 60 or older, in comparison with the generations under age 60. Neither proposal, however, favors the older generation any more or less than the proposal to impose proportional reductions in PIAs on future generations of retirees.<sup>65</sup>

Criterion 5. Encouragement of national saving. A reduction in PIAs targeted on high-wage workers might be expected to boost saving if those affected offset lower promised social security retirement benefits with higher personal saving. Moving the PIA-formula bend points places more of the benefit burden on lower earners, as compared with cutting the lowering the earnings replacement rate above the first or second bend point.

**Raising the normal retirement age:** The most common proposal to reduce future social security benefits is to raise the normal retirement age (NRA), that is, the age at which full social security retirement benefits (100 percent of the PIA) can be claimed. The NRA is already scheduled to increase from the current age 65 to 66 (for those reaching age 62 in 2005) and then to 67 (for those reaching age 62 in 2022). What is under discussion here is an additional rise in the NRA. (A proposal to raise the age for early retirement benefit eligibility is discussed in the next section along with eligibility ages for a variety of programs including SSI and DI).

Lifting the retirement age while leaving the early entitlement age (EEA) unchanged produces almost exactly the same effect on retired workers' social security benefits as a proportional reduction in PIAs. (Some differences exist between the two proposals for workers who attain the NRA before 2009. But for workers who attain the NRA after 2008, when the delayed retirement credit will equal 8 percent per year of delay, the difference between the two methods of reducing benefits is small.)

To see why, compare a 7 percent reduction in the PIA with a one-year increase in the NRA for workers who attain age 66 after 2009. If the PIA is reduced 7 percent, all workers claiming benefits will receive a monthly benefit check that is 7 percent smaller than promised under current law. If, instead, the NRA is raised by one year but the PIA formula is left unchanged, persons claiming benefits at age 66 in 2010 will not be able to receive an unreduced pension. Instead, their monthly benefit will be subject to an actuarial reduction and will be approximately 6.67 percent less than their benefits would have been if the NRA had remained unchanged. The percentage reduction in benefits below what benefits would be under current law is similar to the reduction when PIAs are reduced 7 percent. Similar calculations for workers who choose to claim benefits at ages 62, 65, and 70 show that advancing the retirement age by one year has an effect on benefits that is similar to a proportional reduction in PIAs.

Using the Panel's evaluation criteria, raising the retirement age may be seen to be as attractive, or as unattractive, as proportionally reducing PIAs. Two potential noneconomic differences arise between the two proposals. First, raising the NRA signals to workers that the same monthly benefit can be obtained by postponing retirement, encouraging some to delay retirement rather than accept a lower pension. Employer-sponsored pension plans might also be modified to encourage retirement at the later age; on the other hand they might be refashioned to encourage early-outs. Second, many Americans may find increases in the retirement age to be more understandable and perhaps "fairer" than equivalent reductions in PIAs, given increases in life expectancy. The message would be that the benefit amount is appropriate, but the timing no longer is.

An important difference between the two proposals is that under current rules, DI benefits received at any age are linked to the worker's unreduced PIA. If the PIA formula were cut in relation to the AIME, DI benefits would also be reduced. By contrast, raising the NRA while leaving the PIA formula unchanged would not change DI benefits. Instead, early retirees' OASI monthly benefits would fall relative to DI benefits. As a result, older workers below the NRA and in poor health might be more likely to apply for DI benefits, preferring a (relatively larger) DI benefit as compared with a (reduced) OASI benefit. Such workers would be better off if the retirement age were raised and the PIA formula left unchanged. Reducing PIAs versus raising the normal retirement age would therefore affect mainly retirees who could meet the disability criteria of the DI program, and they would prefer the latter option. People in poor health who did not meet the eligibility test for DI would have to accept a reduced early OASI pension, which would be true if the PIA were reduced

or the NRA were increased. A general point worth emphasis is that for a given revenue gain, larger DI cuts imply smaller OASI cuts and vice versa.

Criteria 1 and 2. Adequacy of retirement income and income insurance. Raising the NRA while leaving the EEA unchanged contrasts with the baseline scenario of reducing PIAs uniformly. Workers in good health, ineligible for DI benefits, would receive less adequate protection from the social security system at some ages and better income protection at other ages. Insurance protection against the hazard of very long life is improved, because workers are discouraged from claiming early, but low, OASI benefits. Workers in poor health who can meet the DI eligibility test receive disability benefits unaffected by the NRA; under the baseline scenario, as pointed out above, DI benefits would be reduced by a change in the PIA formula. Hence, raising the NRA decreases income insurance for workers who do not meet the test. An issue about which relatively little is known is whether DI recipients are needier than OASI recipients and therefore less well able to absorb a cut.

Criterion 3. Avoidance of market inefficiencies. In terms of the proposal's effect on the saving-consumption choice, raising the normal OASI retirement ages would require people to rely more on their own earnings, pensions, and private saving to finance consumption if they desired to retire prior to their NRA. In addition, people might work longer, offsetting the need to increase private saving. On the other hand, the increased appeal of DI benefits may produce a more distorted labor-leisure pattern: workers in marginal health might reduce their labor supply so as to enhance their eligibility.

Criterion 4. Distribution of taxes and benefits. Advancing the NRA reduces lifetime benefits paid to workers and survivors who die young, and increases the amount of lifetime benefits available to workers and survivors who live to an advanced age. On the whole, this change favors workers with high lifetime incomes relative to low-wage workers, because higher earners on average live longer than lower earners. Nevertheless, raising the retirement age protects DI payments which helps lower earners in as much as disabled workers tend to have low average and lifetime incomes. As a result, the protection of DI payments tends to favor some workers who have low wages as compared with a plan that reduces PIAs.

Criteria 5 and 6. Encouragement of national saving and strengthening retirement income systems. Compared with a proportional cutback in PIAs, increasing the normal retirement age may boost private and national saving slightly. If DI benefits were made more accessible, this could reduce the need for precautionary saving. To the extent that private and employer-sponsored pension saving would be raised to pay

for retirement prior to the NRA, other non-OASI elements of the retirement income system might be strengthened.

**Adjusting automatic cost-of-living adjustments:** Some policy makers have recently proposed reevaluating the cost-of-living (COLA) mechanism that links annual increases in social security benefits to changes in the Current Price Index for All Urban Wage Earners and Clerical Workers (CPI-W). Critics of the price index believe it is inappropriate as an index for social security benefits because it overstates inflation. One proposed remedy for this bias is to limit social security benefit adjustments to the annual change in the CPI-W minus 1 or 2 percentage points. A preferred remedy, in the Panel's view, is to seek technical improvements in the measurement of price changes and their influence on consumer well-being, with particular attention to the market basket consumed by the elderly.

Reform in the Cost of Living Adjustment (COLA) procedure has also been suggested as a method of reducing social security outlays, regardless of the proposal's technical merits. In the following discussion it is assumed that COLA reform occurs in such a way that benefits fall in real terms, and that the wage indexing method used to calculate workers' PIAs is not altered; only the adjustment in benefits in force is assumed to be affected. Once again, this method of reducing benefits is compared with a proportional reduction in PIAs that achieves the same reduction in the 75-year time frame used by social security.<sup>66</sup> The remainder of this section assesses the comparative effects of permanently reducing COLA adjustments below the amount that would be needed to keep the purchasing power of benefits from falling.

Criterion 1. Adequacy of retirement income. Decreasing the social security COLA reduces benefit adequacy for workers and survivors who collect benefits for many years. Of course, if the real social security benefit declined far enough, some low-income beneficiaries would become eligible for SSI and food stamp benefits. The adequacy of retirement income would be improved during the first few years of disability or retirement, when real benefits would be somewhat higher than they would otherwise be, because the PIA formula was not cut. Poverty and inadequate income appear to be more severe problems among the long-lived than for new retirees, so it is plausible that COLA reductions will increase poverty more, especially among widows, than would a proportional cutback in PIAs that achieved the same total benefit reduction. COLA reduction thus is rated as harmful to the goal of ensuring adequate retirement income, except to the recently retired.

Criterion 2. Insurance against income fluctuations. Economists believe that real annuities are an efficient form of insurance for retirees. Reducing the indexation of

social security benefits makes retirees' income more subject to fluctuations in real value, which reduces retirement well-being.

Criterion 3. Avoidance of market inefficiencies. Because social security is the only CPI indexed annuity available to most workers, those who understand its value have an incentive to work longer to receive more of this valuable insurance. Therefore reducing the indexation of benefits makes this insurance less valuable, and is less of an encouragement for continued work. Workers who are short-sighted might be more tempted to myopically retire with initially high but eroding benefits. Reducing benefit indexation induces more saving among those who have reason to believe that they face a long retirement period, unless they would be willing to accept lower consumption if and when they survived into their 80s and 90s. Conversely, workers in poor health who do not expect to survive much past age 70 might save less.

Criterion 4. Distribution of taxes and benefits. Within a generation, cutting COLAs rather than PIAs probably makes the OASI system more redistributive toward the lifetime poor since reducing COLAs increases the relative benefits paid to those who die young and high-wage workers on average live longer than low-wage workers. Focusing on between-generation changes, if COLAs were reduced immediately, some of the burden would be borne by the current retired generation which has contributed much less to the social security system than it will receive in benefits. Because the proposal achieves some cost-saving from benefit reductions from current elderly, younger cohorts will not have to accept as large a loss in benefits to achieve a target reduction in the 75-year cost rate. In this way, the intergenerational consequences of this proposal differ from those of the proposals discussed earlier; it is the only one to reduce payments (in real, not nominal terms) paid to people now collecting benefits.

Criteria 5 and 6. Encouragement of national saving and strengthening retirement income systems. Compared with a proportional cutback in PIAs, reducing COLAs may increase private and national saving slightly, thus strengthening non-OASI elements of the retirement income system somewhat.

**Means-testing social security benefits:** Another way to reduce social security outlays would be to introduce an explicit means test, which restricts benefits to persons with low or moderate retirement incomes (or wealth). High-income (or high wealth) retirees and survivors would be prevented from receiving benefits or would receive substantially lower benefits than they presently do. One option is to phase out social security as family income (or wealth) rises above a certain threshold, say \$50,000 per year. For example, benefits might be reduced by 40 cents for every dollar of income in excess of the threshold. A person who is entitled to \$10,000 in

social security benefits under current law would receive just \$6,000 in benefits if countable income apart from social security was \$60,000. The same person would receive no social security at all if countable income exceeded \$75,000.

Another option would be to permit people to collect a specified percentage of their entitlement regardless of income, with the remainder of their social security benefits subjected to a means test. This option reduces rather than eliminates benefits available to high-income families.

Some people regard benefit taxation as a means test. Up to 85 percent of social security benefits are already subject to income taxes, so it would be difficult to achieve significant additional tax revenue from this source unless benefits received by lower income families were also taxed. In other words, further increases in social security taxation will come at the expense of moderate income families rather than the well-to-do. The remainder of this discussion assumes that means-testing will involve reductions in social security benefits to persons or families with high incomes apart from their social security benefits.

Criterion 1. Adequacy of retirement income. The adequacy of retirement income will be substantially improved in comparison with a proportional PIA reduction that achieved the same reduction in the 75-year cost rate. By definition, the only people who suffer losses in benefits under a means test are those with high incomes from other sources. In fact, no proposal the Panel considered provides such strong protection against low retirement income, even the proposals that disproportionately reduced PIAs among workers with high lifetime wages. Under those proposals, workers with moderately high lifetime earnings but low retirement incomes from other sources could suffer large proportional reductions in retirement incomes.

Criterion 2. Insurance against income fluctuations. If a higher PIA is accomplished by implementing means testing, all workers who are not subject to the means test would receive better insurance protection. Those who would be means tested because of high levels of income or assets receive less income insurance, though a means-tested benefit still provides insurance to affluent workers if they live to a very advanced age and exhaust their retirement assets.

Criterion 3. Avoidance of market inefficiencies. The effects of means testing on the labor-leisure choice are complicated and depend on a worker's circumstances and age. Some workers would anticipate receiving higher social security benefits under a means-tested system, and consequently would work less and retire earlier than under the current system. On the other hand these same workers might pay lower net

lifetime taxes under social security, because their net benefits are higher than they would be if PIAs were proportionally reduced. Consequently their labor supply decisions as young workers may thus be less distorted than they would be if PIAs were cut. People having assets that place them at or above the means test threshold face a sharply higher tax, and on balance this higher tax could reduce work over the entire lifetime. Additionally, the extent of labor supply distortions would probably be worse, since high earners are already more heavily taxed by social security over their lifetimes and means testing exacerbates this effect.

On the saving-consumption choice, the most serious problem created by a means test is that it strongly discourages employees from saving in any form that generates periodic reported income. People who anticipate being near the threshold might reason that it is better to consume while young so as to fall below the asset threshold when old. Also people might be induced to save in assets that are less likely to count in an asset test, or which are more easily hidden.

One group would certainly face stronger incentives to save under this reform: workers who believe they will have too much non-social security income as retirees to qualify for social security benefits. They would have to save more than they now do to achieve the same level of retirement consumption. Their saving decisions will be less distorted by the availability of social security than they would be if PIAs were proportionally reduced.

Criterion 4. Distribution of taxes and benefits. Within generations, a means test clearly benefits low-income retirees and survivors who would not suffer benefit reductions. High-income retirees and survivors, by contrast, would lose all or a substantial portion of the benefits otherwise available to them.

If means testing were imposed soon, older retirees would be affected in addition to those from younger generations. Such a policy contrasts with most of the other options discussed in this Report, which are structured to affect only the younger cohorts. Whether such targeting makes a proposal politically more appealing is difficult to say. To the extent that the proposal achieves some saving from benefit cutbacks imposed on the current elderly, future generations will not have to accept as large a loss in benefits in order to achieve a target reduction in the 75-year cost rate. In any event, comparing a means-tested option implemented across the board with a proportional reduction in PIAs that affects only future retirees, the means test on social security benefits allocates the burden of social security cost saving more evenly across generations.



Criterion 5. Encouragement of national saving. Compared with a proportional cutback in PIAs, a means test on social security benefits has ambiguous effects on private and national saving. The proposal would depress employer pensions and assets that count in an asset test. Better-off workers who believe they will be eliminated from the means-tested payment will seek to save more privately to achieve the same level of retirement consumption. On the other hand, people expecting to be near the threshold might reason that it is better to consume rather than save while young, so as to fall below the asset threshold in retirement.

Criterion 6. Strengthening the financial integrity of retirement income systems. Compared with a proportional cut in PIAs, means testing would tend to weaken other non-OASI elements of the retirement income system. In addition, means testing might seriously erode political support for the system, although it is unclear whether this would be any more problematic in a means-tested regime than in a regime that cut PIAs at the top.

**A double-decker system:** The final set of benefit reforms the Panel considered involve fundamental restructuring of the PIA formula, restructuring that would probably also require significant changes in the role of SSI in providing income to the old and disabled. Instead of retaining the structure of the current PIA rules, these alternative formulas provide a fixed basic benefit (perhaps subject to a means test, and probably varying with years of service) and a constant rate of increase in the social security benefit for each \$1 increase in a worker's AIME.

Three examples of a non-means-tested benefit formula help illustrate the essential idea of benefit restructuring under this heading. Consider three hypothetical ways of determining the retiree's full benefits:

- 1)  $B1 = \$400 + (0.22 \times \text{AIME});$
- 2)  $B2 = \$550 + (0.15 \times \text{AIME});$  or
- 3)  $B3 = \$800.$

Under each option, part or all of a worker's benefit consists of a flat-rate component. In two of the formulas, (1) and (2), the benefit also includes a component that is strictly proportional to the worker's AIME. Formulas such as 1 and 2 are sometimes referred to as "double-decker" social security systems. (The first "deck" consists of the flat-rate pension; the second consists of a benefit that is strictly proportional to covered earnings.) Formula 1 is the most generous formula for workers with high

lifetime incomes, because it is the formula where the benefit rises fastest with increases in AIME. Formula 3 is the most generous to workers with low lifetime incomes, because the entire benefit consists of the flat-rate component. Of course, formula 3 is also least advantageous for workers with high lifetime earnings because they receive benefits that are no higher than those received by low-wage workers.

Criterion 1. Adequacy of retirement income. Available evidence is sparse, but suggests that adequacy of retirement income under double-decker formulas could improve relative to a proportional cutback in PIAs that achieved the same reduction in the 75-year cost rate. The alternative benefit formulas outlined here ensure all retirees a fixed minimum benefit, regardless of their average earnings, so social security would assure disabled and retired workers and survivors at least a minimal income under all circumstances in which they become entitled to receive benefits. The particular parameters of the system matter a great deal, however, and those at the bottom may or may not do better under a double-decker system, depending on how it is constructed. Replacement rates for low earners would probably increase (depending on the size of the bottom deck), while replacement rates for higher earners would likely fall.<sup>67</sup>

Criterion 2. Insurance against income fluctuations. The double decker benefit formulas would offer better insurance protection to workers with low average earnings, unchanged insurance protection to many workers with low-to-moderate earnings, and worse protection to workers with moderate or high lifetime earnings. The current PIA formula creates a strong link between benefits and average earnings, so that earnings losses after disability, death, or retirement are replaced by benefits that offset a large percentage of the loss, especially in the case of low- and moderate-income workers. Formula (3) completely severs the link between benefits and previous earnings; formulas (1) and (2) retain the link but in many cases reduce the percentage of earnings loss that is replaced by benefits.

Criterion 3. Avoidance of market inefficiencies. A two-tier reform such as this would probably reduce work incentives for low-wage employees when they reach the early or normal retirement age, and also would impose a sharply higher "net" social security tax on earnings when young. This point can be illustrated in the hypothetical case of a worker whose AIME is below the first bend point. On the margin, a \$1 increase in AIME could boost his PIA by \$0.90 under the current formula, by just \$0.22 under alternative formula (1), by \$0.15 under formula (2), and by nothing at all under formula (3).<sup>68</sup> Thus, in comparison with the current formula, all three of the alternative formulas provide a smaller reward on the margin for increases in work

effort and earnings when workers are young, implying that work decisions of low- and moderate-wage workers could become more distorted than if PIAs were cut.

High-wage workers could anticipate receiving substantially lower social security benefits under these double-decker options that will probably increase work incentives around the early and normal retirement ages. These workers may also face higher "net" lifetime taxes for social security (or receive lower net benefits), depending on the alternative formula selected. If the alternative formula offered a marginal replacement rate that is much below 15 percent, the "net" lifetime tax on social security will be higher than it would be if PIAs were proportionally reduced. This is certainly the case under alternative formula (3), where the marginal replacement rate is 0 percent. On the other hand, if the marginal replacement rate in the reformed formula is 15 percent or higher, as it is under formulas (1) and (2), the "net" tax imposed by social security (on the margin) would actually be lower than under a reform with proportional PIA reductions. Labor supply distortions for high-wage workers could be reduced under these circumstances.

On balance, the alternative social security benefit formulas probably lead to larger labor market distortions overall. A larger fraction of social security contributions is used to finance fixed basic benefits that are not linked to workers' contributions into the system. For a much higher percentage of workers, extra contributions into the system are not matched by increases in future benefits that are as large or larger than the increase in contributions. A larger fraction of the social security tax will therefore represent a pure tax on labor earnings, increasing the labor supply distortions caused by the program.

In terms of the saving-consumption choice, little reason exists either to favor or oppose the alternative PIA formulas in comparison with a proportional reduction in all PIAs.

Criterion 4. Distribution of taxes and benefits. The discussion thus far suggests that the double-decker formulas favor low to average-wage workers at the expense of high-average-wage workers, in comparison with the proposal to reduce PIAs proportionally. Also, each of the benefit formulas favors the current generation that is age 60 or older, relative to the generations under age 60, but neither proposal favors the older generation any more or less than the proposal to impose proportional reductions in PIAs on future generations of retirees.

Criterion 5. Encouragement of national saving. Compared with a proportional cutback in PIAs, these alternative formulas might boost private and national saving.

Little evidence exists on the question of whether workers with high lifetime earnings would save more in response to a change in social security benefits than would those with low lifetime earnings. If they did, the highly paid would raise their pension and other saving assuming the reduction in retirement benefits is concentrated on high-wage workers. Among the three, formula (3)--least generous to high-wage workers--might induce the largest increase in national saving.

Criterion 6. Strengthening the financial integrity of retirement income systems. To the extent that pension saving was increased to offset the redistributive formula, other non-OASI elements of the retirement income system might be strengthened. As before, implementing a double-decker system could erode the system's political support, although it is unclear whether political difficulties are any greater than those under a means-tested regime.

**A double-decker system with means testing:** The double-decker PIA formulas considered above (formulas 1 and 2) each include a flat-rate component and a second component proportional to the worker's AIME. To reduce the net cost of the flat-rate component, this portion could be subject to a means test. Retirees with large assets or high current incomes apart from social security might receive reduced flat-rate pensions or no flat-rate pensions at all. The earnings-related component of their pension would not be subjected to a means test.

Such a partial means-testing scheme would substantially reduce the cost of the flat-rate component of the social security benefit. Because fewer retirees would receive this portion of the benefit (and many fewer would receive the full amount of the flat-rate component), at any given contribution rate for social security, the system could afford to offer either a larger flat-rate component in the benefit formula or a larger earnings-related component. If the flat-rate component were made more generous, the income adequacy of social security benefits would be improved. If the earnings-related component were made more generous, the insurance value of social security would be improved for high-wage workers.

An important disadvantage of means-testing has already been mentioned. The labor supply decisions of low to moderate-income retirees would be much more distorted than they are under the current system, and the labor supply decisions of low- to moderate-wage workers would also be more distorted. Work and retirement decisions of high-wage and high-income workers would be less distorted than under the current system, if the earnings-related component of social security benefits gives workers at least \$0.15 in extra benefits for each \$1 in extra AIME; otherwise, the decisions of high-wage and high-income workers would be at least as distorted as

under the current system. The saving decisions of workers would be more distorted than they are under a proportional reduction in PIAs. The larger the flat-rate component in the social security benefit formula, the larger these distortions would be. As a result, national saving would probably fall.

The current system is similar to the means-tested double-decker system in one crucial respect. An elderly or disabled household is eligible for a SSI and food stamp benefits if it has low enough assets and income, and these benefits are phased out as the household's income rises. The current system thus enjoys some of the same advantages that are claimed for the means-tested double-decker system. In particular, it ensures minimal incomes to low-income people who are old enough or disabled enough to claim benefits. Combined SSI, social security, and food stamp benefits currently amount to about 85 percent of the poverty line for a person 65 or older living alone, and more than 100 percent of the poverty line for an aged couple.<sup>69</sup>

Differences arise between the current system and a means-tested double-decker system, of course. SSI and food stamps are currently financed out of general revenues rather than payroll taxes. SSI benefits are phased out quite rapidly as an eligible person's income from other sources (including social security) rises. For that reason, the percentage of old and disabled persons who are eligible for SSI benefits is small. In addition, people who may be eligible for these benefits must apply for them in a process separate from their application for social security. As a result, many eligible people do not apply for SSI or food stamps. (Just over half of the elderly poor participate in the SSI program; some nonparticipants may be asset-ineligible. See U.S. House of Representatives 1994, pp. 241-242) In a means-tested double-decker system, the application for the flat-rate and earnings-related components of social security benefits would occur at the same time and could be combined., resulting in a substantially higher take up rate. Finally, the earnings-related component of the current social security formula is more complicated than the earnings-related component of the formulas we have described.

#### **D. Alternative Means of Increasing Revenues**

An earlier subsection described how social security's long run fiscal gap might be closed either by raising taxes or reducing benefits -- that is, by expanding or reducing the overall size of the system. Here the Panel considers other methods of increasing revenues to the social security trust funds, evaluating them relative to the simple increase in the payroll tax using the criteria described at the outset. Three proposals are considered:

- (1) Raising the earnings limit on which payroll taxes apply;
- (2) Expanding the definition of taxable income; and
- (3) Introducing additional general revenues.

It should be noted that evaluation Criteria 1 and 2 are not particularly relevant in this discussion. Adequacy of retirement income and insurance against income fluctuations are primarily benefit and not tax issues, although higher net lifetime taxes do lower disposable income and therefore diminish households' ability to save for retirement. In addition, the Panel is considering proposals that raise the same amount of revenue over the 75-year projection period, so they will have the same effect on social security financing (Criterion 6). For this reason, the Panel concentrates here on the remaining three criteria.<sup>70</sup>

**Raising the earnings limit on which payroll taxes apply:** The proposal examined here is an increase of the taxable payroll ceiling instead of an increase in the payroll tax rate as described in the baseline case. In 1995, social security OASDI payroll taxes were paid by employers and by employees (6.2 percent each) on the first \$61,200 of each worker's earnings. After this maximum taxable amount, raised annually by the rate of increase of average wages, the OASDI payroll tax rate drops to zero. The HI tax of 1.45 percent each is paid on all earnings. The self-employed pay both parts (12.4 percent for OASI; 2.9 percent for HI) on the same taxable amounts.

The proposal here is to raise the real level of income subject to the taxable limit or to eliminate the tax ceiling altogether. Unless there were a simultaneous change in the benefit formula, increasing the taxable limit would also increase the social security benefits eventually paid to those affected, because benefits are based on average covered earnings, which would rise under this proposal. Benefits would not rise in the baseline case, because covered earnings would not change. Specifically, the Panel compares two payroll tax changes: raising the baseline increase from 6.2 percent (for employer and employee) to something higher for all those earning less than the maximum taxable amount, versus an increase from zero to 6.2 percent (for employer and employee) on all those earning more than the old and less than the new maximum taxable amount (or on everyone earning more than maximum taxable amount, were the ceiling eliminated altogether). How do these two proposals differ?

Criterion 3. Avoidance of market inefficiencies. The baseline case is a pure tax increase because it would not result in higher social security benefits later. In contrast, raising the taxable income limit would be only a partial tax, because individuals' AIMEs and therefore subsequent benefits would also rise. (Most of those

paying the increment would be beyond the 15 percent bend-point, where the return on additional earnings taxed is the lowest.) Moreover, because of the increase in future benefits under this taxable ceiling proposal, more taxes would have to be raised than under the baseline to have the same net effect on social security finances.

The number of people affected at the margin differs significantly under the two scenarios. The baseline case increases the marginal tax rate of all those under the maximum taxable limit. Raising the taxable limit, on the other hand, affects only some of those over it at the margin. Currently, fewer than 15 percent of workers covered by social security earn above the maximum (Steurle and Bakija 1994). Some of them would have their marginal tax rates increased by the full tax rate (depending on how high maximum taxable earnings were raised), but far fewer than the 85 percent or more whose marginal tax rates would be increased by an increase in the payroll tax rate. Also, the magnitudes of the increases in marginal tax rates are very different in the two cases. Raising the taxable pay limit increases the marginal tax rate from 0 to 12.4 percent (assuming the employer's share is eventually taken from workers' pay). This increase is on top of the marginal federal and state taxes these individuals already pay, which tend to be at the high end, given the earnings levels of those affected. By contrast, in the baseline case, the increase in the marginal tax rate would be much more modest, and much of it would fall on those who face lower combined federal and state marginal tax rates.<sup>71</sup>

The trade-off here is between a large marginal tax rate increase on a small number of high earners, and a smaller increase on a much larger number of low- and middle-level earners. Both of these tax increases will probably increase labor-leisure inefficiencies for younger workers. Because the magnitudes of these effects are not firm, it is difficult to quantify the size of the two distortions and decide which of the proposals does more damage. Finally, for people near retirement, the two plans have different effects. Increasing the taxable pay limit reduces net earnings for some highly paid workers, while raising the tax rate lowers net earnings for all workers (though not at the margin for those earning more than the new limit). Both changes would be expected to induce earlier retirement, on net, although more would be affected by the baseline case.

Criterion 4. Equity of lifetime social security taxes and benefits. The distributional impacts of these two proposals are very different. The baseline plan, which raises the payroll tax rate, represents a pure tax increase on all those with taxable earnings since taxes rise but eventual benefits do not. Raising the taxable limit, by contrast, is a tax on some or all of those earning more than the old taxable limit, even factoring in the

eventual increase in benefits. Raising the taxable limit, therefore, is more consistent with the progressive nature of social security's tax and benefit structure.

On the other hand, because of this progressive nature of social security, workers with high earnings are already more likely to be suffering negative expected returns on their social security contributions now and in the future. An increase in the taxable limit would make the returns even more negative, further weakening the link between contributions and benefits for the upper income population. To make the same point at the other end of the income distribution, low wage workers are more likely to receive positive rates of return, both because of the social security benefit structure and because of the Earned Income Tax Credit (EITC), which was specifically designed to compensate for the regressivity of social security taxes. Those preferring that social security imitate a pure insurance scheme, with less intergenerational redistribution, might favor the baseline case (increasing the payroll tax) for this reason.

Criterion 5. Encouragement of national saving. Both tax increase proposals reduce the social security deficit by the amount of the net taxes raised. The question is where these taxes would come from -- peoples' consumption or saving. To the extent that taxes are paid out of private saving, then national saving may not change at all; instead, there is merely a change in the party doing the saving. Alternatively, the loss in disposable income may come from consumption, resulting in a larger increase in net national saving. Some analysts argue that raising the taxable limit will affect saving negatively since upper income households are most targeted by the tax increase, and they do much of the nation's saving. Relatively little is known about this proposition empirically.

**Expanding the definition of taxable income:** Social security payroll taxes are paid only on money income, because employer-provided benefits are (for the most part) not subject to either income or payroll taxes (elective contributions for 401(k) and 403(b) plans are included in the payroll tax base). Total employer payments for benefits amount to roughly one-third of payroll, up from close to zero in the 1920s. The erosion of the tax base over time has meant that payroll taxes on the portion of income that is taxable were set at a higher rate than would be the case otherwise, to raise a given amount of revenue. As a result, some policymakers have proposed expanding the definition of taxable income, subjecting all currently tax-protected employer-provided benefits to both income and payroll tax.

One practical problem is that significant measurement problems arise in evaluating employee benefits. While determining the values of some is relatively



straightforward (for example, an employer's contribution to a 401(k) pension plan), other benefits are more difficult to price, for example, projected benefits in a defined-benefit plan or health insurance premiums for a given employee. Health insurance is particularly problematic to value for younger workers, because many group plans cross-subsidize the high health costs of older workers by charging more for relatively healthy (and hence inexpensive) younger workers. If health insurance costs were simply allocated per capita, young workers would be forced to pay taxes on a health benefit amount that far exceeded their actuarially fair premium. Despite these practical difficulties, the Panel proceeds with an evaluation of this proposal.<sup>72</sup>

Non-taxable employee benefits are more common among higher paid workers, and thus from a vertical equity perspective, many have argued that these benefits should be included in the income tax base. The argument is less persuasive for the OASI payroll tax, because social security benefits were designed to replace money earnings, but not other nonwage benefits. When retirees lose their active-worker benefits by retiring prior to age 65, some replace their former medical coverage by purchasing it, while others receive extended coverage from their previous employers. One might therefore argue that some benefits could be included in the tax base and also in the eventual social security benefit calculation. This proposal would decrease the favorable impact of the tax inclusion on social security system finances, because future benefits would rise as well.

Criterion 3. Avoidance of market inefficiencies. Expanding the definition of taxable income to include employee benefits would raise the covered income of everyone with employee benefits. For those already over the OASI taxable limit, neither total payroll taxes paid nor the marginal tax rate would change. For those with income under the limit, total payroll taxes (and eventual benefits) would increase, but their marginal tax rate would not. Some people, pushed over the limit by the redefinition, would face increases in total payroll taxes (and eventual benefits), but their marginal payroll tax rates would drop to zero. On the whole, this proposal would result in less labor market distortion than the baseline payroll tax increase, because it keeps constant or lowers the marginal tax rate, whereas the baseline proposal increases the tax rate for all those under the taxable limit.

Subjecting benefits to tax could have a more potent effect on peoples' saving and consumption choices. For example, the fact that (many) employee benefits are not subject to payroll and income tax has lowered the price of group health and retirement insurance, encouraging employees to buy more than they would have obtained if they could only be purchased at after-tax prices. The tax subsidy has increased consumption of health insurance, and raised the amount of private saving

held in the form of pensions. Removing the tax protected status of pensions would make pensions less attractive to those under the taxable limit, and would probably decrease the total amount saved. Whether this result is viewed as a beneficial or negative outcome depends to a large extent on whether people would be likely to underconsume the benefit without the subsidy. For example, those believing that retirement saving are too low see the tax qualified status enjoyed by pensions as a beneficial public policy. Others who think there is too much health insurance think that including health benefits in taxable earnings would be reducing a distortion.

Criterion 4. Equity of lifetime social security taxes and benefits. This proposal would reallocate taxes and benefits within a generation, because the costs fall primarily on the middle class (for whom social security taxes would rise). Compared with the baseline increase in the payroll tax, this proposal is more favorable for low-income workers without significant employee benefits and those already earning over the taxable limit, but worse for those in the middle-income category. Within an income bracket, the proposal would tax those with benefits more heavily than those without benefits, probably a move toward horizontal equity. In general, the proposal does not radically change the distribution of taxes and benefits across generations.

Criterion 5. Encouragement of national saving. As noted above, making pension contributions taxable would probably decrease the total amount saved. Whether this effect is larger or smaller than the baseline tax increase is not clear, but the Panel believes that saving would probably be decreased. Taxing health benefits might not have this effect.

**Introducing additional general revenues:** Some portion of OASDHI is currently finance from general revenue, namely Medicare Part B (Supplemental Medical Insurance) for physicians and other care outside of hospitals, and the income tax collected on taxable social security benefits (at each individual's highest marginal tax rate), some of which goes to the OASDI Trust Funds and some of which goes to Medicare. The proposal examined here is to add an extra flow of general revenues from the federal income tax to pay for retirement benefits.

The use of general revenues rather than the payroll tax has certain attractive features. It is administratively simple and is potentially more redistributive within generations than is an increase in the payroll tax. It would also generate a contribution from those already retired, for whom expected benefit payments over the retirement years far exceed payroll taxes over the worklife. On the other hand introducing general revenues to balance the system would substantially change the nature of social security, and it might also eventually erode public support. The

additional use of general revenues would change the public's perception of social security benefits as earned rights, and might further politicize social security by drawing it more explicitly into annual budget debates. There are also analysts who argue that the redistributive component of social security should be explicitly identified and recognized, and funded from the same sources used for other public programs.

Despite these political economy objections, it is useful to employ the Panel's by-now familiar evaluation criteria to this proposal.

Criterion 3. Avoidance of market inefficiencies. This proposal would have labor market consequences because some workers' marginal income tax rates would rise to generate these additional revenues. Exactly whose taxes would rise, and by how much, would affect how this proposal compares with the baseline payroll tax increase.

The baseline payroll tax increase would raise the marginal tax rates of all those under the taxable limit. (Payroll tax payments on earnings below the threshold would rise for those above this limit, but their marginal OASDI tax rate would remain at zero.) By contrast, suppose that new revenues were raised by a proportionate increase on all federal income tax payers. Because the federal tax base is larger than the social security tax base, a smaller rate increase would be required in the federal income tax. Also, unlike the payroll tax, this income tax rate increase would affect those above the social security taxable limit, those whose total marginal tax rates tend to be the highest already. Assessing what effect raising payroll taxes would have on work and retirement is unclear, because higher marginal tax rates not only lower net earnings (encouraging less work and earlier retirement), but also reduce income (inducing more work). On net, the policy might encourage earlier retirement (Fields and Mitchell 1984b), although the effects of both this and the baseline proposal would probably be small.

Other decisions would also be affected by this proposal, including the way people allocate their income to saving versus consumption. Compared with the baseline proposal, raising federal income taxes would probably reduce saving more: the increase in the federal income tax is levied on asset earnings and therefore discourages saving and asset accumulation, whereas the payroll tax does not. The size of this effect is difficult to determine.

Criterion 4. Equity of lifetime taxes and benefits. Raising social security revenue through the federal income tax system increases within-cohort redistribution more

than the baseline approach, inasmuch as the federal income tax system is more progressive than the payroll tax. By using additional revenues unrelated to the earnings base on which social security benefits are calculated, this proposal will probably be seen as weakening the connection between individuals' social security taxes paid and benefits received.<sup>73</sup> This perception would arise because payroll taxes are levied on a tax base directly tied to social security benefits, while increases in general revenue are not. If one turns attention to cross-generational redistribution, it must be concluded that raising the income tax is also more redistributive. The burden of payroll tax increase falls entirely on future earners, exempting those already retired. Raising general revenues would distribute the social security financing burden more widely, requiring support from all those with taxable income, rather than just those with earnings.

Criterion 5. Encouragement of national saving. As mentioned above, this proposal will change the way people allocate their income to saving versus consumption and might reduce private saving more than the baseline case.

### **E. Extending Social Security Coverage to State and Local Workers**

Few groups of employees -- mainly selected state and local government employees -- remain outside the social security system today. An argument in favor of including these is that of attaining universal coverage. Also people with careers spanning both public and private employment would be treated more uniformly. Objections to placing these workers in the social security system are that the federal government would be seen as intruding into the business of states (which may raise constitutional problems) and the fact that covering these workers will generate some additional payroll tax revenue now, at the expense of having to pay them social security benefits later. As a result, this change alone will not solve the social security system's solvency problems.

### **F. Investing Trust Funds in Private Capital Markets**

By law, Social Security Trust Funds are currently invested in special issue Treasury securities. These are government obligations with maturities ranging up to 15 years, and the interest rate paid on them is equal to the average market interest rate for all marketable interest-bearing Treasury obligations that are not due or callable in the next 4 years. Technically, these are redeemable at par. Because these are government securities, interest and principal are virtually free of default risk. (The Treasury obligations are subject to inflation risk since they are not indexed bonds).

Some analysts have proposed that some or all of the Social Security Trust Funds be invested in private capital markets, in particular in the U.S. stock market, on the theory that doing so could earn a higher rate of return. In this discussion the Panel examines some of the pros and cons of this course of action.

A judgment requires an assessment of the opportunities and the costs of this investment strategy, as compared with the current policy. If investing the Trust Funds in stocks carried no risk and provided a higher return in every state of the world, then a stock portfolio would always dominate the current investment portfolio. This argument is made by some analysts who examine long holding period returns over the past 70-190 years in the United States (Siegel 1994). For example, if one examines holding periods of 22 years, stocks outperformed long-term government bonds, intermediate term government bonds, and 3-month Treasury-bills in every 22-year period beginning in 1926 (Zeldes, in progress). If this held true in the future, it would make sense for SSA to hold its entire portfolio in stocks rather than in Treasury securities of any maturity; in fact, the SSA in this case should borrow in order to purchase additional stocks. More generally, under this scenario, the entire government sector -- and in fact every individual with the appropriate length horizon -- would put all available funds in stocks. (Of course liquidity needs would still have to be met).

The fact that all individuals with long horizons do not invest their entire portfolios in stocks suggests that there is a risk-return tradeoff, despite the past history of returns. That is, the future cannot be predicted with much precision, and even if the stochastic processes generating future capital market outcomes were the same as in the past, past outcomes are unlikely to be representative of the entire distribution of potential returns. There are fewer than four independent 22-year historical periods since 1926, and it is difficult to estimate confidently the empirical distribution using four observations. An additional concern is that risk-return characteristics of capital markets could change.

If stocks are not certain to outperform bonds in every possible state of the world, then sensible policy must take into account tradeoffs between risk and return.<sup>74</sup> To analyze this, the Panel must investigate social security's goals and constraints, to assess what the agency would take into account in determining the risk-return tradeoff after which one could derive the optimal portfolio for the SSA-- the ideal fraction of the portfolio to invest in each available asset. Although it seems unlikely that the optimal portfolio would hold 100 percent in nominal intermediate-term government bonds, it is possible that the fraction in equities could be positive or

negative. Only if the optimal fraction were positive would it make sense to invest in the stock market.

There has been little public discussion of SSA's goals and objectives under conditions of uncertainty. One simple way to think about how the agency might make decisions is that it seeks to minimize some function (such as a weighted average) of the mean payroll tax rate and the variation in that tax rate, while at the same time maintaining a constant real average social security benefit level. A large economic literature on tax smoothing shows that the government will tend to smooth tax rates so as to reduce the larger distortions resulting from proportionally higher tax rates (Barro 1979; Bohn 1990). Whether the share in stocks is positive would then depend on the relationship between payroll tax revenue and stock and bond returns over some horizon (as well as liquidity needs).

For example, imagine that, relative to trend, real wages and payroll tax revenues tend to fall at the same time that the excess return of stocks over intermediate term Treasury bonds is low. In this case, investing the Trust Funds in equities rather than current government securities could make it necessary to raise tax rates even further when real wages fall. This positive correlation between wages and the excess return of stocks could increase the variation in tax schedules and add to the risk faced by the system. Conversely, if, relative to trend, real wages rise when the excess return on the stock market is low, then holding stocks in the Trust Funds could reduce the risk. What this correlation has been in the past (and what it might be in the future) remains to be investigated, but more knowledge of this relationship is critical in evaluating the proposal. In addition, the relevant horizon for examining these correlations is not clear. Intuition suggests that what might be relevant is the correlation over long horizons, such as decades.

Whether investing a positive fraction of the social security Trust Funds in stocks is optimal in this model depends both on the risk, as just discussed, and also on the difference between the expected returns on stocks and bonds. If covered earnings and stocks were positively correlated and the risk premium from holding stocks were small enough, then SSA would optimally hold no stocks at all in its portfolio--in fact, it would prefer to short-sell stocks. Alternatively, if covered earnings and stock returns were negatively correlated (or if the risk premium were large enough), the optimal SSA portfolio would include some holdings of stocks. Bohn (1990) explored this risk from the perspective of the government as a whole (rather than that of a single agency), and concluded based on an examination of quarterly data for the U.S. that the covariances are such that the optimal holding of a U.S. stock market index (the Standard & Poor 500) would be negative, at least in the

absence of any risk premium. The government should take a short position in the stock market. Taking into consideration a large equity premium might reverse this theoretical prescription, but the finding makes it clear that the government's optimal holdings of stock are not necessarily positive, and the work gives the Panel an additional reason to question whether stock market investment is appropriate for the Trust Funds.

To determine the optimal portfolio for the Social Security Administration, the agency should explicitly evaluate how it weights risk versus return, something that has not been done systematically to date. More broadly, the agency should undertake explicit stochastic modeling. Currently the agency examines only a handful of different scenarios (low, intermediate, and high cost), a strategy that implicitly assumes each economic and demographic variable can take on only three values and that these variables are perfectly correlated. A more comprehensive treatment of uncertainty would require taking a stand on the joint probability distribution of these variables, including allowing these variables to be less than perfectly correlated, and explicitly writing down the objective function of the agency. Such an undertaking is necessary before deciding whether Trust Funds managers should be encouraged to invest in equities.

A different way to think about the proposal is to realize that the risks and returns in the social security agency's portfolio would be passed on to households, perhaps with some lag. When portfolio returns are high, this improves social security benefits or reduces social security taxes in the future; when returns are low, this approach reduces social security benefits or increases taxes in the future. As a result, households receiving these benefits and paying these taxes may take the Trust Funds portfolio into account in forming their own portfolios. One hypothetical but useful benchmark is the case where households consider SSA's portfolio to be entirely their own. In this instance, as long as households have sufficient private wealth, any change in the SSA portfolio would give rise to an offsetting adjustment in their private holdings. Thus, if the trust fund reduced holdings of Treasury bonds and increased holdings of equities, households could offset this by increasing their holdings of T-bonds and decreasing their holdings of equities. A key implication of such a benchmark scenario is that social security trust fund portfolio investment policy is neutral: that is, it does not change the risk-return characteristics of households' overall portfolios. It follows that, if households behave in this manner, no reason exists to oppose equity investment by the Trust Funds, but there is also no particular reason exists to favor it.

This neutrality result does not hold true if people are prevented from investing in stocks to the extent they would like to: in this instance, holding equities in the Trust Funds could make them better off. One such case would arise if people have no wealth other than expected future social security benefits. Indeed recent evidence suggests that a significant fraction of the population enters retirement with little other than housing and social security wealth (Smith 1994). Another possibility is that trust fund risk will fall on as yet unborn generations, who have no opportunity to hold stocks now on their own accounts.<sup>75</sup> Holding equities in the fund could give future generations exposure to current stock returns, thus improving risk sharing across generations. In both cases, as long as households are not implicitly being exposed to stock market risk through other channels, adding some equities into their social security portfolio would make them better off. Of course, this policy leaves open the question of how large the fraction held in equities should be. Increasing this fraction too much would make some households (those relatively more risk averse) worse off.

The next question that must be addressed is whether investing the Trust Funds in equities will increase national saving. Focusing first on government saving, proponents assert that holding social security funds in private assets will increase pressure on politicians to reduce the government deficit. The importance of this political argument is difficult to gauge. It is plausible, however, that if legislation allowed the Trust Funds to invest in equities, legislation could also require that the purchase of equities would not count as an expenditure and thus would not alter the measured unified budget deficit. Turning next to private saving, whether placing equities in the Trust Funds would alter private household saving is far from clear. People might respond to having a riskier asset in their social security portfolio by increasing precautionary saving, although this effect might be offset by the higher expected return on equities. And for people who have no wealth, investing the Funds in equities would have no effect on saving. They are unable to save any less, and unwilling to save any more. Overall, this change is unlikely to have a large effect on national saving.

Finally, some critics argue that the proposal to have equities in the Trust Funds would expose people to additional political risk, in that government officials would have to select investment options and might not make these decisions purely on risk-return criteria. If the SSA were allowed to choose its investments, it might not remain immune from pressure to direct investments toward economically targeted firms, industries, and nations. This problem becomes more serious the larger is the size of the Trust Funds. One solution is to require SSA to invest in an index fund, thus reducing discretion on the part of the SSA. Another option is to subcontract



with private money managers, although again selection of these managers might not be determined purely on risk-return grounds. Another option would be to transfer these funds to individual accounts, a topic to which the Panel turns in the next section. Several other questions also remain to be investigated in future research, including the matter of how quickly a shift to equities should occur to avoid massively altering capital market prices.

The Panel concludes that a judgment on the proposal to invest some of the Trust Fund in equities should depend on an assessment of its opportunities and its costs. Given the lack of literature on many of these questions, we did not reach a consensus on the proposal, but instead propose that this issue deserves additional study before a clear policy prescription can be made.

### **G. Individual Social Security Retirement Accounts**

In this section the Panel takes up a different policy proposal attracting debate of late, namely that of converting a portion of the social security payroll tax into individual pension accounts. The purpose of the discussion is to identify the most important advantages and disadvantages of such a policy change.

Assuming that the necessary adjustments have been made in order to make the social security system solvent, the system will run a current annual surplus for a number of years. One approach would be to redirect a portion of this social security surplus to individual accounts (Porter, forthcoming). Of course, paying this surplus to workers in the form of individual accounts would require compensating reductions in future social security benefits. The contributions to and income from the private system would replace a portion of the taxes paid to and income promised under social security.<sup>76</sup>

A substantial departure from the existing approach would entail a move to a two-pillar system. As an example of a two-pillar model, the first pillar could be designed to guarantee a minimum flow of retirement income after some age, perhaps an amount that was higher if the retiree had spent more years contributing to the system. This bottom tier would provide minimum or poverty-line income to the aged, and might be payroll tax-financed or perhaps paid for out of general revenue. The second pillar of such a revamped retirement income system could be thought of as a mandatory defined-contribution plan funded by payroll taxes that depended on each worker's earnings. This second pillar would therefore entail a conversion of part of workers' social security payroll taxes into a mandatory individual account system.

Participants' funds in this second pillar plan would be invested in a range of capital market assets, presumably directed by the individual contributors themselves.

Variants of a two-tier system have become popular in this hemisphere over the past decade and a half. The most widely discussed example is that of Chile, where the national pay-as-you-go social security system began to be phased out in 1981, and replaced with a national, mandatory, defined-contribution (DC) system paid for by a new 13 percent payroll tax on covered workers' earnings. Of course even after the old system stopped accruing new benefit promises, retirees had to continue to be paid and vested active workers still held benefit promises from that system. In addition, this DC plan is backstopped by a general-revenue-financed social safety net system that provides a minimum retirement benefit. To bring about the transition, the Chilean government decreed substantial cuts in promised social security benefits, but as it still faced a major revenue shortfall to the social security system, it turned to government budget surpluses totaling about 4 percent of GDP to finance the switchover. This surplus continued since the 1981 startup of the system and is projected to continue for another decade, falling after that for the next fifteen years. The fact that Chile had a budget surplus at the onset of the reform contrasts with the U.S. economic situation where budget deficits have been a fact of life for decades.

Despite the fact that Chile's situation was, and remains, somewhat unique, the rapid growth of Chile's economy and the fact that the pension fund shared in this growth has gained that system many supporters (World Bank 1994). Others following in Chile's footsteps include Argentina, Bolivia, Colombia, Peru and Mexico, and other nations expressing an interest include Brazil and some of the nations of the former Soviet Union (Davis 1995).

One argument offered in support of a privately-managed mandated pension pillar in the United States is that it would be perceived as reducing political risk surrounding retirement income. In the current environment, workers increasingly realize that promised social security benefits are unsustainable, and believe that benefits will fall or taxes rise to maintain system solvency. Giving people individual private plans would probably reduce uncertainty regarding the politics of the future social security system, although it must be recognized that a private system still faces certain political risks as well. If political risk were in fact reduced with a two-tier plan, some of the benefits flowing from this change could be captured by social security to improve the long term solvency of the system. This result could occur, for instance, if middle-aged and younger workers would be willing to pay social security payroll taxes required to maintain a larger system for current retirees, in exchange for some level of contributions devoted to individual plans they could manage themselves. The government might reduce its long term promises to social security

system participants by cutting future retirees' defined-benefit promises, in exchange for individually-managed defined-contribution plans owned by workers themselves.

Another argument in favor of allowing workers to invest part of their payroll tax in an individual retirement savings account is that it affords participants the opportunity to allocate investments as they see fit. Some people have also suggested that this program would promote financial literacy, because households would be given control over some of their social security funds and would have more of an incentive to learn how saving and portfolio choices affect their standard of living in retirement.

There are also those who offer more macroeconomic rationales for favoring the proposal. One is that individual accounts could create political pressure to reduce the deficit, because the unified budget would show a larger measured deficit and thus would put pressure on politicians to reduce it. Another is that a second pillar pension might create a source of new investment funds. For example, advocates of the Chilean pension reform believe that Chile's private pension pillar increased net national saving because the pension system created capital markets that did not previously exist in that nation; this is probably not a potent argument here in the United States. Whether net new national saving would occur in the United States under a mandatory redirection of the payroll tax would depend on whether saving outside of these accounts increased--by both households and governments. If the reduction of future benefits were relatively small, other private saving would likely fall due to a reduction in future benefits relative to what was previously expected.

A number of disadvantages have been noted with the type of two-pillar system described above. One is that the individual account second-tier plan might not provide adequate income to those with low lifetime earnings. This might occur because the two-pillar plan is likely to be less redistributive than the current social security system, or because political support for the first pillar might weaken once it is explicitly separated from the second pillar.

Another concern is that the second pillar plan exposes participants to capital market risk, as do defined-contribution pension plans more generally (see Section II). That is, portfolio allocations yielding low returns reduce the individual's pension account at retirement. Additionally, there is a question as to whether workers are well-equipped to direct their own retirement accounts, particularly if the social safety net of the social security system is weaker than it is now.

A different problem with individual mandated pension accounts is that workers might want to take lump-sum cash-outs prior to retirement, but permitting people to

spend their individual account accumulations while young would no doubt leave some in poor economic condition during their retirement years. There is a related concern that some workers would, if permitted, take lump-sum cash-outs at the time of retirement--perhaps because they would like to include these assets in bequeathable wealth. Unfortunately, allowing such cash-outs erodes the market for retirement annuities. Under current social security system rules, benefits are paid out only as a life annuity and the current risk pool for that annuity is national, mandatory, and multi-generational. People with shorter-than-average life expectancies subsidize via the national risk pool the annuities for those who expect to live past their cohort's life expectancy. If individual pension accounts were permitted to be cashed out, those expecting to die younger than average would not annuitize their pensions, which in turn would lead to a potentially large problem with adverse selection.

Another insurance-related concern regarding individual-account pensions is that social security benefits are currently indexed to the CPI, while private annuities in the United States are typically defined in nominal terms or tied to asset market performance (which does not guarantee real retirement income). In the Panel's view, there are serious risks from replacing indexed social security benefits with mandated individual pensions, unless a mechanism were available to obtain indexed private annuities. One answer might be for the Treasury to offer indexed federal government debt, which would help private insurers create indexed annuities. (Indexed bonds are taken up in Section IV below). It is again interesting to note what happened under the Chilean reform. There, retirees purchasing annuities (rather than making phased withdrawals from their accumulations) are permitted to purchase only CPI-indexed annuities.

Experts discussing the design of a two-pillar retirement system also raise questions about the costs of a mandatory second pillar pension -- costs which could vary depending on the precise way a second-tier individual account plan is formulated. Tax collection costs could rise substantially if contributions had to be collected person by person, as in Chile, instead of by the government as is now the case. Clearly the scale economies enjoyed by the current system, due to the central role of the Internal Revenue Service which oversees collection of the payroll tax, could be eroded under a decentralized collection scheme -- which would also increase the possibility for evasion. Money management costs would also rise in an individual account pension system, inasmuch as the Social Security Administration currently spends little on the money management and investment function. Also it is worth noting that money management costs are often considerably higher for individual accounts, as compared with group pension plans.

A different, and potentially more significant, concern is that of the remaining political risk that a second-tier individual account pension plan might face. A worry is that the individual accounts could become the basis for asset-based means testing for other government programs such as Medicaid or SSI, or even programs that are not currently means tested such as unemployment insurance and Medicare. Accumulations in these accounts could make households ineligible for other government programs, producing incentives for evasion and retirement insecurity (Hubbard, Skinner, and Zeldes, 1995). Also, workers likely to receive first-pillar social security benefits might face a substantial incentive to avoid contributing to the second tier, and evasion is a possibility that cannot be ignored.

The Panel discussed several other points raised by analysts evaluating a two-pillar proposal. One is that making individual accounts more prevalent might crowd out employer-sponsored pensions, though this is less likely if a portion of current payroll taxes were redirected toward a small second-tier pension. A second is that private defined-contribution holdings might fail to provide investors a good inflation hedge. This concern underscores the appeal of government-issued indexed bonds, a topic taken up in Part IV of this report. A third is that people might find individual social security accounts more appealing if they were permitted to deposit their funds into a government-run indexed passively managed mutual fund, which offered a low-cost option competing with private money managers. In addition it seems clear that it would be necessary to require money managers to disclose and report individual investors' costs and returns in a standard format with comparable information across programs to help investors make better-informed retirement account investment decisions.

Some of the disadvantages raised in this discussion could possibly be overcome if the government were to offer a simple indexed, passively managed, low-cost investment option. Concerns arising from imperfections in private annuity markets remain to be resolved. Regarding the distributional concerns mentioned above, it might be feasible to design the second pillar in such a way that, though it was a defined-contribution system, it “credited” a smaller rate of return to high-earners' pension contributions, and a higher return to those earning low wages. Such a modified second pillar plan might be adequate to address concerns about income inadequacy and to some extent income insurance. In addition, mandatory reporting of fund management costs might help alleviate concerns over high administrative costs experienced by some individual account pension plans. On balance, many Panel members find this approach potentially promising, though it urges additional study of all of these issues.

## **H. Conclusions and Assessment**

The Panel was charged with outlining and evaluating a range of options to return the nation's social security system to long term balance. Here we collect our assessment of the various benefit and revenue changes examined in this section of the Report.

First, the Panel believes that some combination of benefit cuts and/or revenue increases is necessary to restore the social security system to actuarial balance. Second, we believe that timing is crucial: appropriate legislation should be enacted promptly. The Panel also suggests that it is important to combine immediate legislation with delayed implementation of some benefit cuts and/or tax increases. Indeed, the urgency of prompt legislation is increased by the desirability of implementation lags. Gradual implementation reduces the magnitudes of notches (different treatment of cohorts close in age) and the perception of unfairness that notches engender. Significant changes in social security benefits should be announced with considerable lead time to allow workers to adjust to the changes by adapting their retirement, saving and consumption plans.

The analysis examines two baseline reform options that span the range of options most commonly discussed in public policy circles. One scenario reduces benefits (PIAs) by a fixed percent for all persons born in and after some year, which we arbitrarily take to be 1940. The size of the PIA cut would have to be sufficient to bring the system into long-term balance. The alternative baseline scenario would impose an across-the-board payroll tax increase beginning in the year 2002, when those born in 1940 turn age 62. These two alternatives frame most of the other reforms currently under discussion, and are useful as comparison standards in assessing several other changes as well.

The Panel finds that the criteria adopted do not unequivocally favor either raising taxes or decreasing benefits. Rather, some criteria -- such as adequate retirement income -- favored tax increases, while others -- such as equity of lifetime social security taxes and benefits between generations -- favored benefit cuts. Thus closing the fiscal imbalance with additional revenues rather than benefit decreases is suggested if one emphasizes the first two criteria, adequate retirement income and insurance against unforeseen income fluctuations. Social security benefit cuts would increase the number of Americans with inadequate retirement income, and lower the insurance protection offered to workers, survivors and dependents. Within a generation, the use of tax increases rather than general benefit cuts favors those with

the longest life expectancies -- those most likely to receive benefits for a long time -- and those with lower incomes for any given life expectancy.

On the other hand, closing the fiscal imbalance with benefit decreases rather than tax increases is suggested if one emphasizes the fourth and fifth criteria, equity between generations and the encouragement of private saving. The expected return on social security contributions is already going to be lower for baby boomers than for past, current, and near-future recipients (and this return will decline even further when either social security taxes are raised or future benefits are cut). Younger participants would pay the higher taxes for many more years than would participants planning to retire soon. A smaller social security system (lower benefits) would also encourage some individuals to offset part of the loss through their own saving behavior (see below).

Focusing on the other criteria, the Panel concludes that social security retirement benefits induce some older workers to leave the labor force earlier than they otherwise would. Benefit cuts, especially if combined with an increase in the early age of entitlement (now age 62), are likely to reduce this effect. In addition, payroll taxes may discourage the labor supply of younger workers, a labor market distortion that is more likely to decline if benefits are cut than if payroll taxes are increased. The Panel finds little professional consensus on the size of the impact of social security on private saving. To the extent that social security benefits substitute for private saving, a smaller system (benefit cuts rather than tax increases) would encourage private saving. But many workers with little or no saving beyond their home equity are unlikely to make significant changes in their saving behavior in response to the changes in social security benefits being contemplated. The Panel concludes that reducing benefits might have a small positive effect on private saving.

The Panel also compares the effects of the baseline benefit cut (an across-the-board decrease in the PIA formula) with those of several alternatives, including reducing disproportionately the benefits of high-wage workers, delaying retirement ages, reducing the cost-of-living adjustment, and means testing benefits. If benefits were to be reduced, strong arguments support increasing the ages of eligibility for early and normal social security benefits. Delaying these retirement ages is a sensible response to increases in life expectancy, and one that prevents lifetime benefits from automatically increasing as recipients live longer. Specifically, if benefits were to be reduced, most Panel members agree that the normal retirement age for social security benefits could be increased and eventually indexed to life expectancy. A suggestion along these lines is to eliminate the scheduled hiatus in the normal retirement age rise to age 66 (2000-2005) and 67 (2017-2022).

If benefits were to be reduced by means other than, or in addition to, increases in the NRA (for example, if the PIA formula became less generous), there is some support for the notion of disproportionate cuts at the top, versus an across-the-board decrease. The Panel also discussed how to allocate the burden of benefit reductions across different cohorts -- those already retired, those about to retire (for example, within 5 years), and those further away from retirement. If benefits were cut, it is difficult to argue that people already retired or about to retire should be exempted entirely; however, there was support for smaller benefit reductions for these groups than for future retirees.

The Panel also studied two other methods of cutting benefits: means testing, and less-than-full inflation indexation. There are strong arguments against means-testing social security benefits on the basis of other retirement income or accumulated wealth. To avoid loss of social security benefits, some workers might reduce their own retirement saving or persuade employers to shift compensation from pension contributions to earnings. Either response would lower saving and private retirement incomes. Focusing on indexing, the Panel recognizes that social security benefits are the only fully indexed annuity available to (nearly) all workers. The threat of inflation would be a very serious concern to retirees, especially those with long lives after retirement, if full indexation were eliminated. For this reason, the Panel opposes permanently indexing social security benefits by less than the cost-of-living. On the other hand, the Panel urges that the Bureau of Labor Statistics investigate whether the specific Consumer Price Index currently used to adjust benefits correctly measures the cost-of-living. If this measure is found to be biased, the Panel would support corrective changes in the method of calculation. There was also extensive discussion on whether a temporary delay or reduction in the cost-of-living adjustment would be desirable; with some arguing that if benefit were decreased for future retirees, a temporary delay in indexation for current recipients would spread the burden more equitably.

The Panel then compared the effects of several different tax increase proposals with the baseline revenue increase (a simple increase in the payroll tax rate). Three options received the most attention: raising the earnings limit on which payroll taxes apply, expanding the definition of taxable income to include employee benefits, and infusing additional general revenues into the Social Security Trust Fund. On the basis of our analysis, most Panel members would favor raising the payroll tax rate rather than increasing the taxable earnings threshold, if additional revenues were to be raised. The threshold increase, unless applied only to the employers' portion or combined with a change in the benefit formula, would increase future benefits for those at the upper end of the income distribution, which a payroll tax increase would



not. There was little enthusiasm for including employee benefits in the taxable wage base primarily due to significant measurement problems. Furthermore, the Panel's review of the evidence suggested little advantage to seeking an additional direct infusion of general revenues, instead supporting the maintainance of a link between social security contributions made and benefits received.

Turning next to the issue of the Trust Funds, the Panel suggests that they should continue to be at least partly funded, meaning that a significant and stable margin of income over annual expenditures should be maintained over the foreseeable future. The Trust Funds currently have assets exceeding one year's outlays, an amount projected to grow for about two decades as revenues exceed benefit payments. The Funds are currently invested in special issue Treasury securities, whose interest and principal are virtually free of default risk. The Panel examined the question of whether the Trust Funds should be invested in private capital markets, in the hope that investments would earn a higher rate of return than if invested solely in Treasury securities. The Panel believes that a judgment on this proposal should depend on an assessment of its opportunities and its costs. Given the lack of literature on some of these questions, the Panel concluded that this issue deserves additional study before a clear policy prescription can be made.

The Panel also discussed the pros and cons of converting all or part of the social security Trust Funds (or the annual surplus) to individual social security accounts, over which participants would exercise some investment discretion. The Panel noted that distributing the annual surpluses to individual accounts would require additional adjustments to benefits and/or taxes beyond what would be required to achieve system solvency without this distribution. Several advantages of this proposal were identified, along with some disadvantages.

Despite these questions and concerns, the Panel is open to the idea of converting part of the Trust Funds to individual accounts, if the remainder of the social security system could be made solvent. The Panel recognizes the need to coordinate the pattern of any benefit cuts with the pattern of benefits that would be received from these individual accounts. Many Panel members would recommend prohibiting access to the funds for any reason other than retirement, and most would recommend mandating that the benefits be wholly or in part distributed in the form of an annuity, rather than permitting a full lump-sum cashout. There is a division of opinion on whether the annuity could be best managed by the government or the private sector, though there are strong arguments for having the government offer one of several possible investment vehicles that workers might chose.



#### **IV. Other Policy Options Regarding Future Retirees' Incomes**

Having considered a series of changes in social security benefits and taxes, we now discuss additional ways to improve retiree well-being including changes in eligibility ages and proposals to alter private pension incentives and regulations. Several other options to improve retiree well-being are also examined, including expanding the role of the SSI program, issuing indexed bonds, and utilizing reverse annuity mortgages. These proposals were not evaluated in as much detail as were the policy options investigated earlier, but the Panel thought it important to go on record on several of these items nonetheless.

##### **A. Integrating Social Security Eligibility Ages**

The Panel believes that several changes in social security are important enough on their own merits that they should be considered as high-priority reform areas whether or not they contribute to improving system balance. The most salient of these is the development of an integrated approach to coordinating the ages at which Americans become eligible for benefits under different components of the social security system, including disability, survivors, early entitlement, and normal as well as delayed retirement benefits, as well as the supplemental income program (SSI). The other topic that the Panel deemed important to discuss was social security rule changes that could equalize the treatment of one- and two-earner couples, widows, and changes in indexation policy after age 60. This section takes up each in turn.

**Integration of eligibility ages in social security benefit calculations:** The normal retirement age (NRA) plays two roles in the process of determining benefits. First, retirement benefits depend on the number of years before or after the NRA that they are first claimed. Second, the NRA is also the maximum age at which a worker can apply for disability benefits; that is, the maximum disability age (MDA) is set to equal the NRA. Under current law, the MDA is scheduled to increase along with the NRA for future cohorts. This lock-step linkage should be contrasted with the way the system handles the earliest eligibility age (EEA) for retirement benefits; under current rules, the EEA will not increase beyond 62. Similarly, the maximum age for applying the earnings test (ETM) does not increase beyond 70 under current legislation, and the minimum age for receipt of SSI (based on age) is scheduled to remain fixed at age 65. Finally, under current law, the earliest age at which survivor benefits (ASB) can be received is age 60.

In this section, the Panel discusses linkages among the NRA, EEA, MDA, SSI, ETM, and ASB. The values for these ages under current rules and currently legislated changes for the future are listed as follows:

<u>Ages</u>	<u>Present</u>	<u>Future</u>
EEA	62	62
SSI	65	65
MDA	65	67
NRA	65	67
ETM	70	70
ASB	60	60

The discussion proceeds by examining why minimum and maximum ages exist at all under the social security system, versus extending benefits to the entire population that now are available to only an age-restricted subsection of the population.

*Normal Retirement Age (NRA):* As noted above, raising the NRA to age 67 or later is a method of reducing benefits for future retirees, and as such was compared with other benefit reduction options in Section III. Nevertheless the Panel agrees that raising the NRA has considerable political appeal since it avoids the vocabulary of benefit cuts, and may alter the public view of the "socially acceptable" age at which to leave the workforce. Because most people do not retire at the NRA, a more potent change in the nation's retirement vocabulary would probably result from raising the early entitlement or early retirement age.

*Early Entitlement Age (EEA):* If there were no minimum age at which one could apply for actuarially reduced social security benefits, then a worker of any age with enough quarters of coverage and sufficiently low earnings could claim and receive retirement benefits. This arrangement would involve a number of differences from the current situation. Lifetime low earners might receive benefits for much of their working lives without cutting back on work very much. Individuals who stopped working (for child care, for example) could receive benefits irrespective of whether single or married (this possibility would hold even though another member of a couple had high earnings). Workers retiring early could choose lower benefits for the rest of their lives rather than having to wait until age 62.

In contrast, under current social security rules, workers with lifetime low earnings (and no saving or pension) must wait until age 62 to receive benefits. If people filing for early benefits received true actuarial reductions, then the only policy

concern would be that some people might have too little income in later years because they had chosen to take benefits too early. It is because of this form of myopia that social security does not permit too-early retirement. There remains the problem that the current system does not reduce benefits exactly actuarially, so that people may retire earlier than optimal in order to benefit from early retirement subsidies. Because recomputation rules are complex, some people may be making early retirement choices erroneously. Additionally, people vary in both their perceived and actuarially calculated life expectancies, which makes it impossible for a uniform actuarial reduction to be actuarially neutral for every single individual. This fact creates retirement incentives that vary across members of the population.

Permitting people to retire early under a non-actuarially neutral benefit formula induces labor market distortions by encouraging earlier retirement than would be the case in a more neutral environment. This effect is offset by the fact that having access to early retirement benefits is a useful form of insurance for those who experience seriously curtailed earnings opportunities through no fault of their own, who cannot qualify for disability benefits, and who have no other sources of saving. The key question is how to weigh the market distortions offered by early retirement against the societal gains of having an early retirement option that is not actuarially neutral. The choice of an early entitlement age (EEA) depends on balancing these two considerations.

No research has estimated the relative size of these two groups, making it in principle impossible to assess the ideal EEA. If health and functioning improve in step with life expectancy, then a healthier population has less need for an early EEA. According to this view, the early entitlement age should be raised over time, although perhaps not in lock-step with life expectancy because morbidity rates probably improve more slowly than mortality rates fall. Analysts agree that much of the long-term trend toward earlier retirement in the United States is probably not attributable to poor health; indeed people in their 60s appear to be at least as healthy, and probably more able to work than in the past. For this reason, increases in the EEA might be feasible. Offsetting this is the view that retirement is a normal good, and a social security system reflective of the preferences of wealthier cohorts over time should allow earlier access to benefits, so that early retirees need not live solely from privately accumulated wealth and pension benefits.

*Eligibility Age for Supplemental Security Income (SSI):* The Supplemental Security Income (SSI) program is a means-tested, federally administered income assistance program authorized by Title XVI of the Social Security Act (U.S. House, 1994). It

provides monthly cash payments in accordance with uniform, nationwide eligibility requirements to needy, aged, blind, or disabled persons. To qualify for SSI payment based on age, a person must be 65 or older and a resident of the United States and either a U.S. citizen or a legal immigrant. SSI currently pays what is necessary to bring an individual to a statutorily prescribed income "floor," and benefits are indexed by statute to the Consumer Price Index (CPI). Most states supplement the federal benefit for at least some participants. SSI plus food stamps ensures an income floor near the official poverty line for most older people. The mix of people receiving program benefits has changed over time, mainly because retirement benefits have increased faster than SSI payments. During the early days of the SSI program, more than half of all SSI recipients were aged; now only about one-quarter are aged, and the majority of SSI recipients are now categorized as disabled.

If SSI benefits could be received at any age without being blind or disabled, SSI would be in effect a guaranteed minimum income program for everyone, but would subject all to very high implicit taxes for work. Such a hypothetical system is not in place for everyone because of the expense, and because of concerns that work would be strongly discouraged. In contrast, SSI is made available to older persons -- currently those age 65 and older -- without being disabled for two reasons. One is that the fraction of the eligible population for whom work is a reasonable alternative is probably smaller than for the population as a whole. Second, the presence of social security benefits makes the program less expensive, because claiming social security benefits is a necessary condition for receipt of SSI benefits.

Some have proposed that this latter argument is just as relevant for people younger than age 65; that is, SSI could be made available earlier -- say, age 62 -- as a mechanism for protecting older people against poverty if the early retirement age were raised. How much would such a change cost, and how large a population would likely apply for SSI if it were made available at a younger age? Approximately 2.5 million people aged 62 to 64 received retired worker benefits in December 1993, and many of these early retirees would probably have been continued working or would have had other income sufficient to rule out SSI eligibility if the early retirement age were raised to, say, age 65. But for others, lowering SSI eligibility to age 62 would increase retirement income adequacy and insurance against low retirement income, because current social security benefits do not guarantee an income floor. Having access to SSI benefits at a younger age might discourage work and possibly private saving because of the high implicit tax rate on earnings and asset accumulation. In terms of the criteria developed earlier, these market distortions and costs would have to be weighed against improved protection against old-age poverty. Also this type of

system reform would probably not raise private saving, and would increase the burden on general revenue.

*Maximum Age for Disability Insurance (MDA):* Under current social security rules, disability benefits are equal to retirement benefits at the normal retirement age. Under current law, as the NRA rises in the future so will the maximum age at which a worker may file for disability benefits (MDA). Thus someone older than the NRA has no reason to apply for DI (unless he or she were to receive DI benefits offsetting an early retirement adjustment for leaving work prior to the NRA). In particular, a worker who retires and then becomes disabled can apply for DI benefits, although not beyond age the NRA (and limited by the need for recent labor force attachment). There is no apparent logic in allowing increased benefits for disabilities that occur after retirement.

One question worth pondering when restructuring the system is whether the NRA is a reasonable age to collapse the disability and regular retirement plans into a single program. Current practice has evolved as a result of having a benefit structure for the disabled that is independent of the age at which the retiree claimed benefits. It may be that the right range for the MDA is between the EEA and NRA.

One rationale for having two separate benefit programs is that it permits the government to give larger benefits to some workers, those for whom the labor disincentives associated with the benefits are believed to be fairly small (Diamond and Sheshinski, 1995). The age at which the programs should be combined should be set by comparing the administrative and economic costs and benefits of running a separate disability program, including labor market disincentives and inequities associated with inevitable errors in classification of applicants, versus the costs and benefits of having them operate separately. Most broadly, the MDA could be set in terms of the social desirability of having people work, at the age where it is difficult to distinguish between people who are truly disabled and those who are not. A problem is that experts disagree about how to measure disability: some focus on health problems, while others wish to include the willingness of people to take available jobs given their age, training, skill level, and working conditions. After that age when a majority of workers chooses retirement, it is not clear that further applications for DI would allocate funds any better than would general benefits. It should be recognized that choosing an age less than the NRA will result in some disabled workers suffering an actuarial reduction, equal to that experienced by those "voluntarily" retiring at that age. Alternatively, all disability benefits could be adjusted for assumed retirement at the MDA.

On balance, the Panel suggests that a comprehensive rethinking of the DI entitlement and benefit structure is necessary, with greater recognition of the wide range of ages at which people claim benefits.

*Maximum Age for the Earnings Test (ETM):* At present, workers attaining age 70 apply for and can begin receiving social security benefits irrespective of their level of earnings. In addition, there is no delayed retirement increment for work beyond age 70, although the AIME may be recalculated for a worker with sufficiently high earnings. Under current law, the maximum age for the earnings test, the ETM, will remain at age 70.

There have been frequent proposals for lowering the ETM to the NRA. To investigate this proposal, the Panel begins by asking why there is an ETM at all. Those continuing work beyond the NRA who earn above the earnings limit are better off, on average, than those retiring earlier. This fact might imply that the ETM should be above the NRA, but does not lead directly to any particular choice of age. Indeed the fact that people employed beyond the NRA are better off seems more relevant for the choice of the delayed retirement credit, than for the choice of the ETM itself. Instead, the focus should probably be on the incentive to continue working. With no ETM, some workers would get little or no benefits if they continued working for as long as they were able. With an ETM, all benefits are being foregone by the decision to work; that is, having an ETM reduces incentives to retire earlier. Thus the choice of an ETM must balance the need for incentives for continued work against the cost of giving benefits to a group with higher than average earnings. The current setting at 70 seems reasonable based on available empirical evidence of these tradeoffs.<sup>77</sup>

Private pension experts also raise the concern that the social security NRA is currently the age at which maximum allowable benefits from a private defined-benefit plan may legally be paid without actuarial reductions. A full review of the links between pension and social security ages should be part of the reform process.



## **B. Reducing Older Widows' Risk of Poverty**

A notable achievement of U.S. social policy over the past three decades has been that of reducing poverty in old age. For most married couples, the risk of poverty is small, even many years after retiring. When one partner dies, however, the surviving spouse often faces a much greater risk of falling into poverty. And this risk disproportionately affects older women, who are nearly three times as likely as older men to be widowed (49 percent vs 14 percent) and can expect to remain widowed an average of 17 years (Population Resource Council, 1994). Currently, older women are more likely to be poor than older men (16 percent versus 9 percent) mainly because the average older woman is older than the average older man. At all ages, women are less likely to be married, and single people in general have lower incomes than do married couples.

One suggestion to diminish widow's high risk of old-age income insecurity, is to redistribute social security benefits across members of a married couple, so as to produce relatively lower incomes while both parties are alive, and relatively higher incomes for widowed survivors. This view is motivated by the observation that work patterns have changed dramatically since the social security system was instituted while benefit payout rules have not. As a result, differences between two- and one-earner households have emerged that become more pronounced after the death of a spouse.<sup>78</sup> One option is an "earnings sharing" approach, in which households allocate social security-covered earnings of a married couple equally between them to calculate retirement benefits (Burkhauser and Holden, 1982; Burkhauser, 1984). At retirement, each married partner would receive a benefit based on his or her individual covered earnings record, and the spouse benefit under current social security rules would be abolished.<sup>79</sup> These benefit reductions could then be used to raise all survivor benefits to three-quarters of total social security benefits while married. A three-quarter survivor benefit is consistent with the official Department of Health and Human Services equivalence scale used to evaluate the needs of two- and one-person families for all its transfer programs. This plan would decrease poverty among older widows and widowers, slightly increase poverty among couples, end the arbitrary relationship between couple benefits and survivor benefits that results in replacement rates of between .5 to .67 for survivors, and treat equally one- and two-earner couples who pay the same amount into the system.<sup>80</sup>

Other proposals to shift benefits from couples to survivors include reducing the spouse benefit as a fraction of the PIA, reducing the PIA for all married couples, and sharing AIMEs instead of earnings. Although the Panel did not review all proposals,

most agree that mechanisms should be considered to raise the ratio of survivor's to couple's benefits.

### **Linkages between the Age for Survivor Benefits (ASB) and Other**

**Ages:** At present, widows (and widowers, although for convenience both will be referred to here as widows) can claim early retirement benefits at age 60, with a benefit reduction factor determined by a linear interpolation between age 60 and the NRA. Benefits are computed as 71.5 percent of the PIA for filing at age 60 and 100 percent at the NRA. For this reason, raising the NRA delays the age at which widows can receive full benefits, and raising the EEA lengthens the period during which widows must receive reduced survivor payments. Both proposals therefore reduce survivor benefit protection, and lower the value of income insurance provided by the system. Labor market incentives for widows are also altered, although the precise effects are difficult to predict. If the early age of entitlement for widows' benefits is increased, then the calculation of actuarial reductions for widows could be changed to preserve benefit levels or limit benefit cuts for this population. In general, the Panel suggests careful attention should be devoted to linkages between other ages used in social security benefit programs and those applying to widows' (and widowers') benefits.

### **C. Expanding the SSI program**

The Panel has discussed above the SSI program in general terms and the pros and cons of lowering the age of SSI eligibility. In addition, other proposals for changing the SSI system have been offered, with the intention of raising the level of income support offered by this plan.

Social security benefits are currently the single greatest source of income for SSI recipients. The SSI program considers social security benefits as "unearned" income and thus counts all but \$20 of it in determining monthly SSI benefit amounts. This policy imposes a 100 percent "tax" on all social security benefits over the \$20 disregard. In contrast, the first \$65 of monthly "earned" income plus one-half of all remaining earnings are excluded from counted income.

One reform some have suggested is to change the SSI's monthly \$20 disregard amount -- established in 1972 for unearned income -- by raising it to its inflation-adjusted equivalent in 1994 (approximately \$70 per month) and then to index this protected amount in the future. This change would increase income adequacy for the

65 percent of aged SSI recipients now receiving social security benefits, and is extremely target efficient because all beneficiaries are in or near poverty. This proposal would also increase the income floor for people with low social security benefits, affording them more retirement income insurance. Because SSI is paid out of general revenues, its revenue burden is the same as all other government expenditures paid via the federal income tax. The benefit increase would also go to social security DI recipients, so that benefits would be spread across age cohorts. It is unlikely to have much of an effect on national saving, but would place a small additional burden on general revenues. If one considers OASDI and SSI as two parts of a system for providing transfers and social insurance to older people and people with disabilities, then an alternative method of payment would be a small decrease in PIA. Any general reduction in PIA that shifted money to SSI would mean a shift from higher to lower income recipients. Transfers (as opposed to benefits linked in an actuarially fair way on contributions) made via SSI rather than social security will always be more target efficient.

A different proposal would entail cutting SSI benefit reduction rates from 100 to 50 percent, by treating social security benefits as earned income. An argument in favor of this proposal is that some believe that work at younger ages "earns" them eventual social security benefits, to which they remain entitled irrespective of SSI reciprocity. All the consequences discussed under the previous reform hold true here as well, but it reduces old-age poverty more effectively than do increases in the first tier of social security benefits (Burkhauser and Smeeding 1981).

#### **D. Mandating Private Employer-Sponsored Pensions**

Americans on the whole save very little; in fact housing and employer-sponsored pensions are the major sources of private saving, and saving in these assets have not increased over the past several decades. As was demonstrated, about half the workforce is not covered by a pension at any given time, and many workers reach retirement with small (or no) pension benefits. Some policy makers suggest that this pattern of uneven coverage would be rectified by mandating employer-sponsored private pensions, and this view has received support as the prospect of cuts in social security benefits looms larger.

Whether mandated private pensions would help increase retirement income security was a topic discussed in Sections III.F and G of this report, where we evaluated arguments for and against converting a portion of the social security system to individual accounts. In this section we focus specifically on the question of

whether employer pensions would be an efficient and/or equitable way to handle pension mandating, if it were deemed beneficial to require additional private saving in the form of a pension. Two foreign experiences relevant in this regard are that of Australia where a system of mandated private pensions is in its early stages, and Switzerland which also has mandated private pensions (Davis 1995). A major contrast between the experiences of pensions in these countries and that of Chile, described above, is that the former countries have placed the mandate on employers to collect the funds, rather than on individual employees. This has the advantage of using current payroll systems to collect the funds, which is presumably easier for the government to monitor and less expensive than having pension plans collect contributions employee-by-employee. If such a system were implemented in the United States, employers might be able to obtain pension group services less expensively than could individual workers, could research and select pension money managers more efficiently, and might resolve contested claims and queries more effectively. On the other hand, small and medium size employers would almost certainly find that overall labor costs would rise under a mandated employer-provided pension system, particularly those firms which do not currently offer a pension plan.

One factor the Panel deems worthy of emphasis is that a mandated employer pension is not a "free lunch". Rather, a pension mandate would raise labor compensation, implying that wages and other benefits would have to fall to offset to the extent this raised labor costs. Hence, after some adjustment period, a pension mandate would be expected to result in a relatively full pass-through to other forms of compensation for most uncovered workers, and some disemployment for employees at or around the minimum wage. Most employers would not experience a change in total labor costs, but on the whole, employees would tend to see work as less attractive. This could result in some net reduction in labor supply (given small estimated labor supply elasticities), and perhaps some decrease in employment.<sup>81</sup> Of course the average impact would not hold for all workers and would depend on whether all employees were uniformly covered. For instance, if employers were exempted from making pension contributions for workers near retirement (e.g. workers older than the normal retirement age under social security), then this group would become relatively less expensive --and might benefit from increased employment opportunities.

Mandating might also have a variety of other effects on the labor market (Gustman, Mitchell, and Steinmeier 1994). Currently, employer-based pensions serve as a sorting device as some employees prefer relatively high nonwage employee benefits, while other employees who have a choice select higher wages and lower

benefits. A pension mandate would shrink cross-employer differences in benefit packages, and would decrease this type of sorting. The extent to which this effect is good or bad for the economy depends on whether workers are making an informed tradeoff between current income and retirement benefits when selecting their jobs and pay/benefits packages, and whether employers can still design compensation packages that attract and keep the most appropriate workers. There is also the possibility that mandating employer-sponsored pensions could strengthen aspects of the private retirement income system--on the assumption that individuals would not be permitted to take lump-sum cash-outs of their pension accumulations prior to retirement (see Section III.G, above).

**An Opt-Out Variant:** An alternative approach popular in some circles would allow voluntary, rather than mandatory, switching from social security to employer-provided pensions. The Panel saw this option as not manageable. This is because a great deal of the implicit taxation that occurs under the existing social security benefit and tax structure would be undermined if voluntary opting out were permitted.

There are two dimensions to the implicit taxation that occurs under the national mandatory social security system. Substantial intragenerational taxation takes place. First, the social security PIA benefit formula is progressive relative to lifetime earnings (AIMEs). As a result, if opting out were permitted, high-wage earners facing relatively high payroll taxes compared with expected social security benefits would be anticipated to opt out of the system. In addition, different groupings for annuitization are part of the system's implicit taxation; that is, people with different expected lengths of lives have different lifetime needs, earning capacity held constant. Therefore, based on optimal social insurance principles, a well-functioning system redistributes toward those with longer expected lives, lifetime earnings held constant. Allowing an opt-out would undermine within-generational redistribution because the funds would simply not be there to ensure retirement benefits for poor people and those likely to live longer than average.

A second type of redistribution in social security occurs across generations. Today's retirees will receive much more in benefits than they paid into the system under current rules, and additional sums have been promised to those near retirement in excess of the (present) value of their contributions. These promises can only be sustained by taxing future enrollees of social security, who, if faced with an opt-out possibility, might bankrupt the system by pulling out. Of course this implicit national debt could be shifted to other groups of taxpayers, but it cannot be made to vanish without wiping out promised benefits in excess of current accumulations.

In general, the Panel believes that an opt-out plan is not manageable without acknowledging and making explicit the implicit tax liability of current and future cohorts from lifetime participation in social security.

### **E. Encouraging Employer Pensions and Private Saving**

As noted in Section II above, many workers reach retirement with little or no employer pension benefits. A full analysis of private pension reform proposals is beyond the scope of this group's charge, but many Panel members find persuasive the argument that tax rules under which employer pension plans operate should be simplified, in order to reduce the administrative costs discouraging small firms interested in establishing company-sponsored pension plans. Many also support the idea of having a streamlined set of regulations that companies can follow when establishing a tax-qualified defined-benefit or defined-contribution plan. Some Panel members favor raising both contribution and benefit limits permitted under employer-provided pensions, as a means to spur pension coverage and saving, and most advocate better coordination between permissible contribution and benefit levels across defined-benefit and defined-contribution pensions offered by the same firm.

In addition, the Panel shares with others a concern about the effect of worker mobility on pension accumulation. In today's labor market, people who frequently change employers suffer reductions in their pension benefits relative to workers who do not. While the Panel does not favor mandating employer pensions for reasons given above, there is reason to believe that people with high turnover rates could benefit from participating in a pension associated with their profession or occupation rather than with a specific employer or job. This would help ensure that job changes would not imply that a worker loses pension rights or changes pension plans. One example of a national occupational pension is TIAA-CREF, a pension plan which allows many college and university staff to move among employers without suffering breaks in coverage or loss in pension benefits. A national pension plan for other types of employees could be established that permitted irregular contributions, contributions from multiple sources and full portability. Employers of part-time, seasonal, temporary, or domestic workers, as well as full-time low-wage workers, could then contribute regularly or irregularly to workers' pension accounts.

In its discussion of possible changes in the pension environment that would enhance retirement income security, the Panel also reviewed the wide range of ages currently used in retirement income policy. These include ages

used for benefit eligibility under social security as well as ages specified in IRS tax code pertaining when people can withdraw payments from tax-qualified pension plans without incurring special penalties. In our view, all of these ages should be coordinated while undertaking social security reforms. For example, tax law specifies that employer-provided pension benefits under qualified plans may not exceed a certain dollar level when the worker attains the social security NRA, and an actuarially reduced amount at earlier ages. These linkages should be considered as the NRA increases. Similarly, tax law requires that workers receive minimum distributions from their private retirement accounts once they attain age 70.5. This age should probably be reevaluated in light of other proposed reforms and increasing life expectancies.

The Panel also examined policies to increase other non-pension forms of private saving. As pointed out above, many experts believe that net saving in the U.S. is alarmingly low, so low as to have negative consequences for the future growth of income and consumption in the U.S. Since current workers' future retirement consumption must ultimately be derived from the output produced by future employees, the Panel agrees that one goal of retirement income policy should be to increase the size of the economic pie available in the next century -- a target which requires higher saving rates today. Some Panel members believe that this goal would be well-served by increasing incentives for individual saving such as raising the limits on 401(k) accounts or IRAs; on the other hand, as noted in Section II, there is doubt about the net effect of 401(k) and IRA plans on overall saving. If withdrawals and lumpsum cashouts were prohibited, and benefits only paid in annuities, this would probably increase eventual retirement saving for those who chose to participate in the plans. Offsetting this is the likelihood that fewer people might contribute to these plans, if the money became less accessible.

## **F. Issuing Indexed Bonds**

One valuable feature of the social security benefit promise is that it is the only inflation-protected life annuity currently available to nearly all private sector employees (some public employees have fully indexed government pensions). If social security benefits must be reduced to achieve system solvency, however, the federal government might respond by offering inflation-indexed bonds which people could be permitted to buy. These bonds could then generate retirement annuities protected from erosion by inflation. In practice, the U.S. Treasury would issue inflation-indexed bonds carrying a real interest rate that would be determined in a competitive

auction, just as the interest rate is determined on existing nominal debt. If the outcome of the competitive bidding was that the real interest rate on long-term debt were 3 percent, then each bond originally issued for \$1000 would pay \$30 in interest the first year. The principal or face value of the bond would increase by the amount of inflation. For instance, if the actual inflation rate in year 1 were 8 percent, the face value would rise to \$1,080 at the end of the year; the following year the bondholder would receive 3 percent of \$1,080 (\$32.40) and the face value would again be marked up for the existing inflation. In this manner, both the face value and interest payments would be fully adjusted for inflation.

One of the primary advantages of inflation-linked bonds is that they would take the place of indexed social security benefits in workers' and retirees' portfolios -- particularly if social security payments may have to be cut to restore system solvency. A useful tradeoff for reduced social security payments may be an inflation-indexed annuity which workers can then elect to place in their pensions both during the accumulation phase and after retirement. It would also be straightforward for private insurers to offer inflation-linked life annuities once inflation-linked bonds are marketed, though some adverse selection would persist.

Another reason that indexed bonds may be appealing is that they offer a safe long-term investment for those who are insufficiently aware of the riskiness of nominal long-term government bonds. As the society moves to an environment where more and more pension assets are directed by participants themselves, it is becoming increasingly important to offer them easy-to-understand investment options.

Inflation linked bonds might have an additional beneficial side-effect: namely, they might reduce the total interest cost of government debt. The interest rate on long-term government bonds currently includes two premiums: one reflecting the expected future rate of inflation, and a second representing uncertainty about future inflation. The cost of indexed bonds should be lower, because the uncertainty premium would be avoided. It is difficult to know how large this premium might be, but estimates range from 0.25 percent to 1 percent. Even with the lower bound estimate, the government would save \$1 billion in interest costs each year if it issued \$400 billion of indexed bonds. It is also likely that the government's commitment to low inflation is more credible when it has indexed debt rather than non-indexed liabilities. Currently the government is issuing new 30-year non-callable bonds with an interest rate of 7.5 percent. If inflation fell to zero, then the real interest cost of that debt would be 7.5; on the other hand if inflation rose to 15 percent, the real cost



is zero. Clearly taxpayers gain (and bondholders lose) with unexpected increases in inflation. If the government issued 3 percent inflation-indexed debt, then the real cost to taxpayers would be independent of the rate of inflation.

Arguments against the issuance of government inflation-linked bonds may be grouped into two general categories. One group contends that any indexation of the economy amounts to giving up on the fight against inflation. The argument is that holders of long-term government nominal debt are a strong political force against accelerating inflation. If these same institutions and people held indexed securities, perhaps they would not exert downward pressure on inflation. An unanswered question, of course, is whether the nominal bondholders or taxpayers are a stronger force. A second objection to inflation-indexed bonds is that they might prove to be thinly traded, so the market will be less liquid than for traditional bonds. This assertion is difficult to assess, although indexed bonds have become a reality in several other countries recently and this problem has not developed. Britain has by far the most developed market and its experience (since 1981) is encouraging. One-fourth of all new U.K. government debt is now indexed, with a real yield on these securities averaging around 3.5 percent; these instruments have been purchased by the pension system.

In sum, having the government sell indexed bonds is an option that some private savers might find appealing, particularly if social security benefit levels were to be reduced. The Panel recognizes that there would be some general equilibrium adjustments to the introduction of this new credit instrument -- for example, the yields on other assets such as non-indexed bonds, stocks, and real estate would likely be altered somewhat -- and these should be further investigated. If they are not be significantly detrimental, it would strengthen the case for these new instruments.

### **G. Encouraging Reverse Annuity Mortgages**

Some analysts have suggested that encouraging wider usage of reverse annuity mortgages (RAMs) might be an answer to the problem of old-age retirement income insecurity. A RAM permits homeowners to sell their homes to a financial institution, in exchange for a monthly sum paid to the resident and permission for the homeowners to continue living in the home until the party dies or must move.

Could converting home equity afford the elderly a reasonable amount of income in retirement? One issue is how much income could be released using this financial mechanism. A study using 1990 survey data found that people age 62 and

older held an average of \$39,000 in home equity (in 1990 dollars); among the 70 percent of homeowners, net equity totaled \$61,000 (Mayer and Simons 1994). A second question is how much of this equity can be accessed via a RAM. In practice, RAMs tend to be restricted to 80 percent of the home's value. Based on these numbers, experts conclude that typical RAM income flows would be fairly small. Thus for the median couple with a head age 55 or older, a RAM payment would equal only about 6 percent of income. Somewhat higher figures are estimated for people age 85 and older -- 35 percent of annual income -- but the dollar value is quite small (about \$3000 per year; Venti and Wise 1991). Among widows, annuity payments might amount to about 20 percent of annual income. RAM dollar values for low-income single men and women are potentially higher, perhaps \$5000 per year, amounting to between a third and a half of their annual income.

To the extent that RAMs are available, they could improve the lot of low-income elderly by giving them access to their home equity. At least two factors appear to limit the growth of the RAM market. One is adverse selection: lending institutions are apparently concerned that elderly who avail themselves of a RAM option will outlive aggregate life tables. A second is that there appear to be limits on the supply of such mortgages (Mayer and Simons 1994), making RAMs costly for individual purchase. On the other hand, the availability of home equity loans in the past decade suggests a limited rationale for government intervention in the housing annuity market.

## **H. Conclusions and Assessment**

This section examines several options for reforming the nation's retirement income system, including the mandating of private pensions, and the possibility of a voluntary opting-out of the social security system using the criteria developed above.

The Panel reviewed the range of ages currently used in retirement income policy including the normal and early retirement ages, the age of entitlement for survivor benefits, ages at which SSI and DI can be paid, and the maximum age at which the earnings test is applicable. The Panel finds that a more coherent and integrated policy is needed concerning these eligibility ages. The evidence suggests that raising the early retirement age would be reasonable, though perhaps it need not be done in precise lock-step with life expectancy and should be accompanied with some provisional steps (such as lowering the SSI or DI age) to offset hardships that might result. Panel members expressed some concern about the well-being of workers in poor health if the early age for social security

benefits were raised, and recognized that both DI and SSI might experience large increases in applications if the age-of-eligibility rules were changed, highlighting the fact that altering one piece of the social security benefit structure can have profound effects on other components of social security and on other programs.

This discussion persuaded some Panel members that persons as young as 62 should be allowed to apply for SSI benefits or face relaxed DI rules if the EEA is raised, in order to provide a safety net for those unable to support themselves until eligible for retirement benefits under the new EEA rules. Some members think that DI benefits should continue to equal 100 percent of PIA, regardless of the age of the disabled recipient, while others feel that DI benefits should be set equal to the early retirement amount, to avoid increased incentives to seek DI benefits if early retirement benefits are reduced. How such a reduction would affect the well-being of young and old disabled beneficiaries is a topic requiring further investigation.

Other non-social security changes were also explored including the introduction of indexed bonds and the expansion reverse annuity mortgages. The Panel notes that ages specified in IRS tax code for tax-qualified pension plans should also be coordinated with any new ages recommended for social security purposes. We also examined proposals to mandate employer-provided pension plans as a way to increase worker saving for retirement, additional tax inducements to save, and simplified pension regulations to reduce the regulatory burden. The Panel sees little positive in mandating employer-provided pensions at the present time, preferring instead that any mandated individual accounts be considered as part of a national retirement system -- rather than employment-based plan. Although not supporting mandated employer pensions, the Panel urges an overhaul and simplification of the tax rules under which pension plans operate. Options for reforming the tax code and nondiscrimination legislation include raising the contribution and benefit limits covering employer-provided pensions, and/or coordinating the very different benefit levels for different types of defined-contribution vehicles. Another was to develop a streamlined set of regulations that companies can follow when establishing a tax-qualified defined-benefit or defined-contribution plan. Finally, some would favor increased incentives for private saving (for example, raising the limits on or 401(k) or Individual Retirement Accounts).

A valuable attribute of social security benefits is that they are the only life annuities that are fully inflation-protected and currently available to (almost) all

workers in the United States. If social security benefits are reduced to achieve system solvency, the federal government could respond by issuing inflation-indexed bonds that firms or individuals could buy. These could be used to generate private sector retirement annuities protected from inflation. Panel members favor government issue of Treasury bonds indexed to price inflation, recognizing that some phasing in of this new credit instrument would be necessary.

## **V. Overview and Conclusions**

The charge of the Technical Panel on Trends and Issues in Retirement Savings (TIRS) was to "assist the 1994-95 [Social Security] Advisory Council with respect to its charge to analyze the relative roles of the public and private sectors in the provision of retirement income, particularly how underlying policies of public and private programs, including relevant tax laws, affect retirement decisions and the economic status of the elderly." This Report represents the Panel's assessment of trends and available options.

The Panel recognizes that the social security system is not in long-term actuarial balance. The Social Security Trustees project that currently legislated OASDI tax revenues will be less than currently legislated benefits after the year 2013 based on their intermediate assumptions. Projected benefits begin to exceed the sum of OASDI taxes and interest earned in 2020, resulting in a decline in the OASDI Trust Funds and projected depletion in 2030. Over the 75-year long-range planning horizon, the difference between the projected income and cost flows is a deficit equal to an annual 2.17 percent of taxable payroll. In addition pressing financing problems confront the Hospital Insurance component of Medicare, whose Trust Fund is projected to run out in 2002. Moreover, Congressional Budget Office analysis of the President's proposed budget for fiscal year 1996 projects continued federal budget deficits through 2000. These trends imply that some combination of benefit decreases and/or revenue increases will be required to solve social security's solvency problem.

In this Report, pursuant to its charge, the Panel devotes the bulk of our attention to the nation's retirement income system. The Panel was not charged with examining the important role of the nation's overall economic health insofar as it affects the social security system's fiscal health. Of course, to the degree that social security encourages, or at least does not discourage, work and savings, it enhances the prospects for economic growth. Nor was the Panel charged with examining how changes in the medical care and health insurance markets will interact with the Medicare and Disability Insurance programs, which were the subjects of reports by previous Social Security Advisory Councils.

This Report's main contributions lie in identifying key evaluation criteria for sound social security policy analysis; using the framework to assess the two baseline benefit cut and tax increase scenarios; using the framework to assess other system-

wide changes; and assessing even more fundamental changes in a consistent framework.

### **Trends in labor markets, pensions, savings, and the well-being of the elderly**

The Panel believes that the next several decades will bring a slow and modest reduction in early retirement, with Americans retiring slightly later. This trend is projected to occur barring other major institutional changes in labor market and other economic forces. It is attributable in part to the already-legislated change in the Normal Retirement Age for social security from 65 to 66 and then to 67, and it will also reflect continuing improvement of workers' health into their 60s. The Panel also believes that there is little hope of a dramatic turnaround in U.S. saving rates unless there is major institutional change, although there is some expectation of modest increases in private savings if future social security benefits were to be decreased. Similarly, unless the regulatory environment changes dramatically, it is unlikely that pension coverage will increase significantly over the next several decades. Benefit entitlement will grow because of faster vesting, and the trend toward more participant-directed, defined-contribution plans will continue.

Given further anticipated increases in life expectancy along with improving health trends, the Panel's consensus is that delayed retirement would be the most likely and easiest response for the majority of older Americans who leave career jobs and the labor market voluntarily and in good health. For others, however, poor health or poor labor market prospects late in life would make this adjustment difficult or impossible.

### **Policy Options for Dealing with Projected Social Security Imbalances**

The Panel arrived at severe conclusions based on its findings. First, prompt legislation is required combining benefit cuts and/or revenue increases to restore the social security system to actuarial balance. The appropriate mix of benefit cuts and revenue increases is an issue for policy makers to decide. This Panel analyzed the pros and cons of achieving balance with different mixes of reduced benefits and increased taxes and compared alternative means of decreasing benefits and increasing revenue.

Second, it is essential to have evaluation criteria for assessing available policy options. The Panel offers six such criteria and uses them throughout the analysis. The Panel compares the effects of a basic baseline benefit cut (an across-the-board decrease in the PIA formula for future retirees) with a basic baseline revenue increase (an increase in the OASI payroll tax rate).

On balance, the Panel finds that the criteria adopted do not unequivocally favor either raising taxes or decreasing benefits. Rather, some criteria (such as adequate retirement income) favor tax increases, while others (such as equity of lifetime social security taxes and benefits between generations) favor benefit cuts. In particular, closing the fiscal imbalance with additional revenues rather than benefit decreases is suggested if one emphasizes the first two criteria, adequate retirement income and insurance against unforeseen income fluctuations. Social security benefit cuts would increase the number of Americans with inadequate retirement income, and lower the insurance protection offered to workers, survivors and dependents. Within a generation, the use of tax increases rather than general benefit cuts favors those with the longest life expectancies -- those most likely to receive benefits for a long time -- and those with lower incomes for any given life expectancy. By contrast, closing the fiscal imbalance with benefit decreases rather than tax increases is suggested if one emphasizes the fourth and fifth criteria, equity between generations and the encouragement of private savings. The expected return on social security contributions is already going to be lower for baby boomers than for past, current, and near-future recipients, and this return will decline even further when either social security taxes are raised or future benefits are cut. Younger participants would pay the higher taxes for many more years than would participants planning to retire soon. Lower benefits would also encourage some individuals to offset part of the loss through their own savings behavior.

### **The OASI Trust Fund**

The OASI Trust Fund currently exceeds one year's outlays, and is projected to grow for about two decades, as long as revenues exceed benefit payments. The Panel concludes that the OASI portion of the social security system should continue to be at least partly funded, meaning that the Trust Fund should maintain a significant and stable margin over annual expenditures over the foreseeable future. On the assumption that a Trust Fund of significant size will continue to exist, the Panel discussed how to invest it. Given the lack of literature on some key considerations, the Panel concludes that proposals to

invest some of the Trust Fund in equities deserves additional study before they are adopted.

### **Individual Accounts within Social Security**

The Panel discussed the pros and cons of converting all or part of the Trust Fund to individual social security accounts, over which participants could exercise some investment discretion. Many Panel members found promising the idea of converting part of the Social Security Trust Fund to individual accounts, if the remainder of the social security system can still be made solvent. The Panel recognizes the need to coordinate the pattern of any social security benefit cuts with the pattern of benefits from and the taxes needed to fund these individual accounts.

### **Other Retirement System Changes**

The Panel addressed several other policy proposals that might help strengthen the national retirement system. The Panel found strong arguments for including all state and local employees in the social security system. In addition, the Panel reviewed the range of ages currently used in retirement income policy, and concluded that much more coherent and integrated policy is needed. Along the same lines, the Panel concluded that ages specified in IRS tax code for tax-qualified pension plans should be coordinated with any new ages recommended for social security purposes.

The Panel devoted substantial attention to the troubling habit of many Americans to save very little, meaning that many workers reach retirement with little or no private savings or employer pension benefits. Mandated employer pensions do not seem desirable at this time; rather any mandated savings in the form of individual accounts should be part of a national retirement system rather than an employment based system. Nevertheless, many Panel members believe that tax rules under which employer pension plans operate should be simplified, and incentives for retirement savings, such as raising the limits on 401(k) and Individual Retirement accounts, should be increased. Finally, the Panel examined in some detail the question of inflation protection of retirement benefits and concluded that the government issue a new type of Treasury bonds that would be indexed to price inflation would be desirable, given some phasing-in of this new credit instrument.

### **SSA Policy Modeling and Research**



Now that the Social Security Administration (SSA) has a new independent agency status, the Panel hopes that it can seize the opportunity to strengthen its policy research and forecasting functions. The Panel also urges SSA to make available to the research and policy community the actuarial and economic models it uses for forecasting and analysis, and urges that the data used in modeling social security system outcomes be made available to the research and policy community, in ways that preserve confidentiality while permitting analysts outside SSA to evaluate forecasts and simulate alternative policy scenarios. Specifically, longitudinal databases like the Health and Retirement Survey should receive support as a means of answering the policy questions raised in this report and others that will confront the system as it continues to evolve.

The Panel suggests that SSA could make more use of outside policy and periodically invite academic and practicing experts to review and advise it on its assumptions and methods and on broader research and policy issues facing the nation's retirement income system.

## **Conclusion**

Social security in the United States has been an extremely successful and popular program since its inception. The program has been instrumental in improving the well-being of millions of American retirees, their dependents, and their survivors. When fiscal problems have been forecast in the past, adjustments have been made to address them. The same is needed now. The earlier the adjustments are legislated, the better, because early warning of impending changes gives people time to adjust their saving and retirement plans accordingly. The system's fiscal problems currently anticipated with the greying of the baby boom generation are manageable, and the Panel urges policy makers and politicians to decide on the appropriate mix of benefit decreases and revenue increases to return the nation's social security fiscal house to order.

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## Endnotes

1. The Health and Retirement Survey is a longitudinal study of the retirement process, funded by an intergovernmental consortium headed by the National Institute on Aging and managed by the Institute for Social Research at the University of Michigan. The initial 1992 sample included approximately 8,000 households with one or more respondents between the ages of 51 and 61 -- about 13,000 interviews with age-eligible respondents and their spouses. A second wave of interviews was conducted in 1994, and additional waves are planned at two year intervals.
2. These estimates consider only the retirement component of social security taxes and benefits; disability and survivors contributions and benefits are excluded, and health benefits are considered separately. These estimates ignore those who died prior to receiving retirement benefits. See U.S. House of Representatives 1993, pp. 1293-1305, for details.
3. The figures shown in these two paragraphs assume survival until age 65, as did the government estimates above. When the probability of death between ages 21 and 65 is considered, the net transferred are all lowered slightly. See Steuerle and Bakija, 1994, tables 5.1 and A.3, for details.
4. Since a married person can claim benefits either on his or her own earnings record, or as a spouse claiming 50 percent of the spouse's record, the relative earnings of the two earners are very important to the calculations. The Steuerle and Bakija calculations assume that high-wage men are married to average-wage women, and that average- and low-wage men are married to low-wage women.
5. The present discounted value of a future income stream depends on the size of the annual benefits, the life expectancy of the recipient and the interest rate used to discount future amounts to the present. Present value calculations tend to use standard life tables (that is, average life expectancies) and a common interest rate for all. In fact, different individuals and groups can have very different life expectancies, and face different interest rates. The PDV concept also ignores the concept of liquidity. In fact, many people are not able to spend income until it actually arrives; that is, they are not able to borrow on the basis of income expected in the future.
6. The delayed retirement credit was 1 percent per year of delay before 1982, and then 3 percent from 1982 to 1989. These rewards were insufficient to compensate

for the benefits initially foregone, and therefore the rules discouraged delay past age 65.

7. The Congressional Budget Office has estimated the impact of eliminating the social security earnings test altogether, and predicted that the labor force response would be small (U.S. House of Representatives 1994:22). Very few older Americans are currently affected by the earnings test; in 1992, only 10 percent of those aged 65-69 and entitled to retired worker benefits had earnings above the exempt amount (73 percent had no earnings, and 17 percent had earnings below the exempt amount). Some of the benefits lost under the test are made up later, because of the delayed retirement credit. Among those few currently losing partial benefits, however, some would increase their labor supply if the penalty were removed. At the same time, however, some of those earning so much that they lose all social security benefits might decrease their labor supply, were the earnings test and the penalty at lower hours removed. All in all, a very small net labor supply effect is predicted. (In fact, little change was observed in 1983, when the earnings test was eliminated for those aged 70 or 71). The primary impact would be higher social security benefits to those already working, who tend to be relatively well off; about half of the net financial gain from eliminating the earnings test "would go to those with family incomes above \$63,500 in 1992. Only 5 percent of the additional benefits would go to those with family incomes below \$28,000." (U.S. House of Representatives 1994:23)

8. In contrast, defined-contribution pensions are basically savings accounts with tax preferences, and do not have the kind of retirement incentives discussed here. These distinctions are discussed in detail in section II-C.

9. The inclusion of discouraged workers adds over a third to the unemployment rate of men aged 55 or older and adds over 70 percent for analogous women, but has only a very small effect on the unemployment rate overall (Herz and Rones 1989).

10. There are no official statistics on the number of contingent workers. An important subset is the temporary help industry, which "has grown from one-third of 1 percent of total employment in the early 1970s to nearly 1.3 percent today (1992). While growth has been explosive, the fraction of the workforce employed on a contingent basis is probably still less than 3 percent." (Council of Economic Advisors 1994:123). See also Belous (1989).

11. The official statistics on the number of self-employed exclude both the owners of incorporated businesses, even when the owner is the only employee or one of very few, as well as wage and salary workers who also own side businesses. Haber, Lamas and Lichtenstein (1987: 18) estimate that the "percentage of workers who owned businesses was 60 percent (SIPP) to 75 percent (CPS) larger than the percentage reported as self-employed."

12. Marcotte (1995) attempts to reconcile the divergent research results on trends in job stability. Among the explanations are changes in the wording of a key CPS question in the early 1980s, and correction techniques for survey non-respondents.

13. Kosters and Ross (1987) challenge this view, arguing that the share of workers in the middle of the distribution has been stable, while the share at the upper end has increased. Levy and Murnane (1992) present a discussion of this debate.

14. The 17 measures of job quality fell into 5 categories: earnings and benefits, institutional setting (percent unionized; percent in the public sector), employment status (including hours and weeks worked), skill requirements and working conditions.

15. These real time series utilize government cost-of-living indices, which some think overstate the true rate of inflation. If true, some growth would appear over the past 2 decades, but the rising inequality story would be unaffected.

16. A recent volume by Danziger and Gottschalk (1993) addresses many of these hypotheses about why the U.S. earnings distribution has become more unequal. In it, Murphy and Welch (1993) argue that changing industrial structure played only a modest role, and that most of the increased returns to skills occurred within industries. Freeman (1993) finds substantial effects of the decline in unionization, and attributes about 20 percent of the increased earnings inequality among men to this factor.

17. Among civilian, nonagricultural wage and salary workers in 1993, nearly 80 percent of those covered by a union contract participated in a pension, compared to only 40 percent of those not covered by a union contract. Less than 20 percent of those in business, personal and entertainment services participated in a pension plan, along with less than a quarter of those in retail trade and 43 percent of those in professional services, compared to 56 and 64 percent of those in non-durable and durable manufacturing, respectively (Yakoboski and Silverman 1994: table 12).

18. For instance, temporary employees are explicitly precluded from participating in employer benefits where they work. Independent contractors and the self-employed are even more dependent upon themselves to provide retirement and health benefits. In cases where an employer has little interest in or expectation of worker loyalty, it is unlikely that deferred compensation (i.e., pensions) will be used to encourage a long-term commitment to the firm.

19. There are many limits on this tax preferred treatment. For example, a qualified defined-benefit plan cannot provide an annual benefit in excess of a certain amount, originally legislated as \$90,000, but indexed, and up to about \$115,000 by 1993. The contribution maximum on defined-contribution plans is the smaller of \$30,000 per year or 25 percent of pay. (This \$30,000 limit will also be indexed at 25 percent of the defined-contribution limit once the latter reaches \$120,000.) If a defined-benefit plan has assets equal to 150 percent or more of liabilities, determined as if the plan were to terminate, additional contributions are not tax deductible. (For details of this type, see Gulotta 1994; Hubbard 1994; or VanDerhei 1994.)

20. There is debate on the size of the federal tax expenditure associated with the preferential treatment of pensions (see Munnell 1989, 1991; Schieber 1990; Clark and Wolper 1993; Goodfellow and Schieber 1993; and Schieber and Goodfellow 1994b). Goodfellow and Schieber (1993:153) argue that at least half of the tax expenditure estimated by the government is attributable to gains due to inflation, and that half of that remaining (i.e., the tax on the real gains) are attributable to public employee plans, where the employers are not taxable entities anyway.

21. For employees earning above this amount, pension benefits or contributions, if left unchanged, would become a greater percentage of deemed compensation. Because of the discrimination test, benefits would have to be increased for the lower paid or decreased for the higher paid (Liston and LaBombarde, 1994).

22. In contrast, the National Income and Product Accounts suggest that employer pensions (federal, state, local and private) were paying out almost exactly as much as social security was in 1990. See Schieber (1995) for a discussion of this discrepancy.

23. Using a very different data source, the Bureau of Labor Statistics Survey of Consumer Expenditure, Hirschler (1993) reports that private pension and annuity income represented 18 percent of income for households with heads aged 65 to 74

in 1990, and 17 percent of income for households with heads age 75 or older. These are increases of 3 to 4 percentage points over the percentages from the same data source in 1980. Hirschler reports that much of this increase is due to the rise in the proportion of households receiving some pension income. Among the younger elderly households (heads aged 65 to 74), the proportion with pension income increased from 35 to 47 percent between 1980 and 1990, while the proportion of those 75 or over with pension income increased from 29 to 40 percent.

24. Concerning coverage, the "Form 5500 active participant count includes nonvested participants who have terminated employment but have not yet incurred a break in service -- generally one year -- under the plan." (Beller and Lawrence 1992: 61) These "participants" would not be counted as covered in the CPS data.

25. All these figures are for workers aged 16 or older.

26. Comparing the pension participation rate for persons in the 1979 Current Population Survey to the participation rate for the same birth cohort a decade later confirms this implication. In 1979, 31 percent of full-time workers aged 15 to 23 were participating in a pension. By 1988 when they were 24 to 32, the participation rate for this cohort had increased to 48 percent (Clark and Wolper 1993).

27. Reno (1993) notes that income from assets has had the largest increase in the share of aggregate income of the aged over the past 15 years, and wonders whether this may be due to the increased importance of defined-contribution plans, whose distributions are typically lump-sum.

28. This data set has problems of its own. It contains almost no information about the characteristics of the tax filer (fortunately, it does identify those units with a filer over age 65), and underrepresents the low income households, who often do not file federal income tax returns.

29. See Schieber (1995) for a discussion of differences between the household unit as defined by Grad and the IRS filing unit, and differences in the definitions of the unit's income.

30. Under 401(k) plans, the employee determines whether or not to participate and the level of contributions.

31. This generalization is not meant to apply on a worker by worker basis in the short run. Rather, it is a long-run, equilibrium contention, that wages and employee benefits are both components of compensation, and that more of one, other things held constant, will mean less of another. Hamermesh (1993: 166-173) reviews the empirical literature on the incidence of payroll taxes, and concludes that "we must tentatively infer that most of the burden of payroll taxes is on wages."

32. The pension data that follow all apply to 1991 and are taken from the U.S. Bureau of Labor Statistics, Employee Benefit Survey of Medium and Large Firms (1993). Trends in these plan characteristics are discussed by Mitchell (1992). Benefit plans in small firms are described in U.S. Bureau of Labor Statistics (1994a).

33. In a defined-benefit plan, it is the firm's responsibility to provide adequate funding for the promised benefits, so the firm bears the rate of return risk. But in the long run, the cost of retirement benefits is a component of labor costs, and higher pension contributions are likely to come at the expense of lower wages. Therefore, a decrease in the long-run rate of return to pension assets (like any other form of financial difficulty by the firm) may well be borne by the workers via lower wages or pension plan amendments that lower the benefit formula.

34. Some analysts (Merton 1969; Bodie 1991; Samuelson 1994) have argued that pension plans should hold portfolios dominated by bonds despite their lower expected returns. This is a hedging argument, that the pension assets should match their liabilities, which are nominal. One counterargument is that these liabilities are only the legal liabilities at a point in time, and that the pension should anticipate the change in liabilities due to future changes in wages. These changes will be affected by inflation, against which nominal assets are not a good hedge.

35. Of course, employer objectives also determine whether the firm offers a pension plan. In most cases, the workers must select an employer and compensation package as a single choice rather than negotiating individually with the employer concerning the pension. Therefore, it is certainly possible that some individuals currently employed by firms that do not provide a pension would be willing to pay for an employer-sponsored pension in the form of reduced wages.

36. Hay/Huggins (1990) estimate that for defined-benefit plans with 75 participants, ongoing administrative costs per participant increased 125 percent in real terms between 1981 and 1991, while similar costs for defined-contribution plans increased only 51 percent. Over this decade, the ratio of defined-contribution

to defined-benefit per participant administrative costs dropped from 70 to 50 percent in small plans (15 or fewer participants), and from 110 to 74 percent in large plans (10,000 or more participants) (see Silverman 1993). One-time costs associated with responding to frequent regulatory changes were also higher for defined-benefit plans.

37. Not enough is known about the allocation of lump-sum distributions. Yakoboski (1994) reports that about three-fifths of all lump-sum total distributions were premature; that is, prior to age 59-1/2, and that these premature distributions accounted for about two-fifths of all the lump-sum funds distributed. Of all these funds (not just the premature portion) about 57 percent was rolled over into Individual Retirement Accounts. Some of the rest may have been used for purposes that enhance retirement well-being (e.g., the purchase of an annuity by a retiree, or the purchase of a house by a worker), some for economic emergencies and some unknown portion for discretionary spending.

Herz (1995: table 3), using the 1993 CPS, estimates that one-third of lump-sum distributions were put into retirement savings, other savings, or investments. Another quarter was put into a business or a house, or used to reduce debts. The proportion rolled over into retirement or other savings instruments increased with the age of the recipient, as did the size of the lump-sum distribution. See also Yakoboski et al (1994), pp. 15-17, who use the 1993 CPS employee benefit supplement to estimate the frequency, size and disposition of lump-sum distributions.

38. In December 1990, the Financial Accounting Standards Board approved Statement No. 106, requiring many employers to record a liability for retiree health benefits on their balance sheet in order to comply with generally accepted accounting standards, beginning with fiscal years after December 15, 1992.

39. These data are heavily weighted toward large employers, who are much more likely than small firms to offer coverage.

40. The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) requires firms that employ 20 or more workers and that have health insurance plans to offer continued access to beneficiaries for up to 18 months (29 months if the beneficiary is disabled) if they lose coverage under the plan as a result of a qualifying event, such as retirement. The employee or dependent may be required to pay up to 102 percent of the premium.



41. The data do not reveal whether or not the insurance is funded by employer. Some respondents may just be reporting their ability to purchase insurance through their employers after they leave.
42. For a 60 year old employed man, for example, the probability of retiring (leaving the labor force) over a 2 year period increased from 12 to 24 percent with the availability of retiree health benefits (Karoly and Rogowski 1994:121). This is liable to be an overestimate, however, because the authors were not able to control adequately for pension and social security wealth, which are likely to be correlated with the availability of retiree health insurance.
43. The net impact of increased annuitization on saving depends also on the consumption behavior of the inheritors of the bequests. If they save more out of their own incomes because they expect to inherit less, then the impact of annuitization on savings is reduced. Unfortunately, the quantitative effect of anticipated and actual bequests on consumption is not known.
44. This lack of agreement results partly from the scarcity of well-measured saving statistics. One issue is that high net worth individuals tend to be reluctant to cooperate with survey questionnaires regarding their assets and liabilities. A second complexity is that researchers ideally want longitudinal information about saving patterns for the same people and employers, to track how policy changes affect retirement accounts, housing, capital asset accumulation, and other financial holdings. In practice, such data are difficult to obtain. In the future, new longitudinal surveys such as the Health and Retirement Survey promise to fill in many of these gaps (Juster and Smith 1994).
45. The Poterba, Venti and Wise (1994) results presented here and below are derived from the Survey of Income and Program Participation (SIPP).
46. See Gravelle (1991) and Hubbard and Skinner (1995) for reviews of this literature. Studies by Feenberg and Skinner (1989), Venti and Wise (1990b, forthcoming), and Poterba, Venti and Wise (forthcoming) suggest that the existence of tax-incentive saving plans has induced significant new saving, while studies by Gale and Scholz (1994) and Engen, Gale and Scholz (1994) suggest the opposite. Joines and Manigold (1995) find an intermediate result.
47. We do not focus on medical insurance during retirement in this discussion, though it is estimated that a lower-bound value of future Medicare benefits would add at least

another equal amount to retiree wealth.

48. The U.S. Department of Labor is developing a public education campaign on pensions and retirement savings. For details, see Employee Benefit Research Institute 1995.

49. See Quinn (1987), Hurd (1990), Radner (1992) and Quinn and Smeeding (1993) for reviews of the economic status of the elderly.

50. A recent National Academy of Sciences volume edited by Citro and Michael (1995) discusses the issue of absolute versus relative poverty extensively.

51. These estimates depend critically on the value assigned to the noncash benefits (see Quinn, 1987). With respect to Medicare and Medicaid coverage, the Census Bureau has adopted a "fungible value" approach -- the benefits are counted as income to the extent they free up resources that could have been spent on medical care (i.e., resources available to the family in excess of basic food and housing needs). If the family's income is less than basic food and housing needs, the coverage is treated as though it has no income value. If family income exceeds these basic needs, the value of Medicare and Medicaid coverage is set equal to this excess, up to the market value of the insurance coverage (U.S. Bureau of the Census 1993b: viii-ix).

52. This is an overestimate of the true effect, because it assumes that retirement patterns would be unaffected by the loss in social security benefits. In fact, as we argue in this report, retirement behavior is very much affected by the existence of the social security system.

53. On the other hand, they will be more likely than their parents were to have living siblings and cousins, who might be a source of support.

54. From 1978 to 1985 the proportion of low income households who spent at least 60 percent of their income on housing grew from 44 to 55 percent, and a substantial number of these households were headed by baby boomers (Leonard et al. 1989: xii-xiv).

55. Bernheim (1994:79) argues that inheritances are unlikely to affect significantly the retirement prospects of the typical baby boomers for several reasons. Sizable bequests are highly concentrated. In addition, the life expectancy of the older generation has increased significantly, meaning that they may use up many of their

resources themselves. Finally, a large proportion of their wealth is in non-bequeathable forms, such as social security and defined-benefit pensions.

56. In addition, Mankiw and Weil (1989) and Fair and Dominguez (1991) document strong effects on housing prices, which drove prices up in the 1970s and 1980s and are now depressing prices.

57. The mean number of conditions in 1982 was standardized to the 1989 age-, sex- and disability-specific population distribution in 1989. Of the 16 conditions studied, the prevalence of seven declined between 1982 and 1989 (arthritis, dementia, stroke, arteriosclerosis, hypertension, circulatory disease and emphysema), four remained about the same ( $t < 1.96$ ; heart attacks, cancer, diabetes and asthma), while five increased (other heart problems, pneumonia, bronchitis, Parkinson's disease and fractures). Overall, the declines outweighed the increases.

59. The point of the present discussion is to compare an across-the-board benefit cut sufficient to achieve long-run system balance, with the alternative, a payroll tax increase generating equivalent revenue. Whether any particular PIA percentage reduction or tax increase will be sufficient to bring the system into long term balance given a particular set of assumptions is a question that is best addressed by the actuaries.

60. We recognize that these distortions do not influence all employees, since the net value of working more years under social security depends on life expectancy, interest rate assumptions, actuarial adjustment factors, and individual earnings patterns that vary from person to person. In what follows we frequently presume that delayed claiming of social security benefits tends to reduce the net value of benefits received, a conclusion which applies to many but not all workers.

61. We also note that by construction, the alternative combinations of taxes and benefits considered here all result in the same level of actuarial balance. Therefore, by this construction, public saving is not noticeably affected over the 75 year forecast period, although there is some effect from the different impacts in timing of the changes in taxes and benefits.

62. Many on the Panel also believe that there is reason to be concerned about the responsiveness of the system to uncertainties that are projected but by no means

accurately forecasted. Nevertheless, it is difficult to assess whether the system would automatically respond to future developments any more or less satisfactorily, comparing these different changes, or whether future modifications would be more or less straightforward.

63. This discussion focuses on cutting real benefits for prospective retirees. A measure of benefit reductions for retired workers would spread the cuts more evenly, and hence warrants serious consideration. Such cuts could be limited by, for example, having them not exceed the COLA adjustment in any year. Obviously benefit increases less than the full cost-of-living adjustment make it difficult for people to adapt to steadily declining real incomes.

64. This abstracts from recomputation of benefits that might take place with increased work.

65. It should be noted that low earners are probably not much more sensitive to incentives than are high earners. Also people pursuing higher paying careers (by investing in education, for instance) change their AIME over a range, which means they face an averaging of the marginal net tax discussed above. The difference between the various proposals is smaller under this scenario.

66. Arguments for and against phasing in a benefit reduction are independent of whether the benefit reductions will be imposed proportionately on all workers or disproportionately on workers with high lifetime earnings. If the changes occur gradually instead of immediately, the burden on the generation under age 30 would rise, and the burden of the generation age 30-59 would decline. (In order to achieve the same change in the 75-year cost rate, workers under age 30 will have to accept a larger reduction in their benefits than they would face if benefits are immediately reduced, including benefits payable to the generation aged 30-59.) The argument against implementing a benefit reduction immediately is that workers who are nearing retirement age are offered little opportunity to adjust their saving or work behavior in response to a significant change in their retirement income prospects.

67. Some observers have proposed that COLA adjustments be trimmed or deferred for one or two years, as a method of temporarily reducing benefit growth. Current and

future retirees would never make up the loss in benefits caused by the temporary suspension of full indexation. This reform is not equivalent to proportionally reducing PIAs, however. Indexation of AIME up to age 60 is based on wages, not prices, so that anyone younger than age 60 when the COLA is deferred will be unaffected. A temporary suspension of COLA adjustments therefore imposes benefit cuts on the retired generation.

68. In order to determine how a double decker system would differ from a change in the PIA formula that tilts toward low earners, it will be necessary to identify precisely the type of low earners helped more or less by the flat amount. Research is required to indicate whether the first deck would raise benefits primarily for short-career or low-age full-career workers, and what the effect would be of linking years of service under the system to entitlement to the full flat amount.

69. Few individuals with a full work career will have an AIME in the 90 percent band, and even for such a person, additional work at higher earnings levels might displace low earnings years so that benefits would be increased with delayed retirement. The point is that additional work generates a lower net increase in benefits under the double decker plans than under alternative plans.

70. SSI benefits are reduced dollar for dollar for social security payments, after a \$20 per month disregard; U.S. House 1994, Tables 6-9 and 6-10.

71. This discussion depends on whether workers view OASDI contributions as "taxes" or as mandatory savings to be returned as benefits later. For some (for example, a working woman planning to claim 50 percent of her husband's benefit), the contributions are pure taxes with no payoff later and would be expected to have the same effects as any other tax on earnings. For many past, current and near-future social security recipients, however, what may have looked like taxes turned out to be subsidies, because the benefits generated were (and still are) multiples of the present value of what the workers and their employers contributed. Nonetheless, the workers might have viewed these taxes as taxes when they paid them, with the attendant economic effects. Calculations of rates of return can help show how workers should have viewed or should now view these taxes, but not how they actually did or do view them. The critical point here is that an increase in taxes, holding benefits constant, is

presumably still viewed by all as a tax increase.

72. But note that the difference in marginal tax rates for those two groups is less dramatic than it first appears, because the current OASDI rate (12.4 percent, if we count both halves) is not part of the marginal tax rate of those earning above the taxable limit; only the 2.9 percent HI tax is. Those under the limit face the full OASDHI tax (15.3 percent) at the margin, through generally lower state and federal taxes.

73. A proposal has been made to lift the taxable ceiling only on the employer half of social security payroll taxes (with self-employed matching), which would raise system revenues without increasing promised benefits. However this option is not considered seriously here since economic analysis implies that this form of tax increase is sooner or later passed on to workers in the form of lower wages and/or lower employment; this is discussed in Part IV, below.

74. If benefits paid are then linked to additional income tax revenue gathered, the connection between taxes paid and benefits received may be strengthened rather than weakened.

75. It is possible that some of the premium for holding stocks arises not because of risk, but because stocks are less liquid than T-bonds. If the SSA did not need this liquidity, this would be an argument in favor of investing some of the portfolio in equities. Unfortunately, this is not something that has been carefully analyzed in the literature.

76. In a world with bequests generated by altruism, this effect would not be present.

77. This analysis assumes that these changes would be mandatory; an alternative would be to make the switch voluntary, but this raises a multitude of implementation problems that are avoided with the mandatory approach.

78. This discussion suggests a possible modification of the earnings test. Recognizing that those working beyond NRA are probably better off than many, one could consider removing the delayed retirement increment, replacing it with the incentive that comes from paying part of benefits without an earnings test. This part could shift smoothly from, say, 20 percent at age 65 to 100 percent at age 70. That is, a 65 year old worker would receive 20 percent of PIA independent of earnings but would have the remaining 80 percent subjected to the current earnings test. Such a modification in the workings of the combination of the delayed retirement increment and the ETM would represent a smoother set of labor market incentives.

79. This becomes clear if one compares two hypothetical couples with identical combined social security covered average yearly earnings of \$60,000, but with a different division of earnings between the wife and the husband. In Couple A, all earnings were the husband's; after retirement both partners receive social security benefits of \$21,600 per year if he retires at 65 (the retired worker receives \$14,400 and his wife receives a spouse benefit equal to one-half of her husband's retired-worker benefit or \$7,200). After the husband's death, his widow receives the husband's worker-benefit of \$14,400 in place of her spouse benefit. In this "traditional family" the survivor's benefit is two-thirds of the total amount previously paid to the couple. In contrast, Couple B has earnings equally split between the (same-aged) husband and wife, pays the same amount of taxes into the system, but receives lower yearly retirement benefits of \$19,272 while the husband is alive (each member of Couple B receives an identical retired-worker benefit of \$9,636). Note that the higher total worker benefits paid to the two members of Couple B relative to Couple A ( $\$9,636 \times 2$  versus \$14,400) is due to the progressive nature of the social security benefit formula. But this advantage is more than offset by Couple B receiving no spouse benefit, because it is less than each person's own retired-worker benefit (\$4,818 versus \$9,636 in this case). Furthermore, if the husband died, Widow B may receive either a survivor benefit of \$9,636 based on her husband's earnings record, or continue to receive her own benefit of \$9,636, but will not receive both. Hence benefits for the widow in the two-earner couple amount to only half of the already lower total benefits paid to both when the husband was alive. This is despite the fact that two-earner couples pay the same amount of taxes into the system as one-earner couples. (See U.S. House of Representatives 1985; Congressional Budget Office 1986; Burkhauser and Holden 1982; Steuerle and Bakija 1994).

80. For Couples A and B, this method of benefit calculation would provide exactly the same benefits (\$19,272 while married) by lowering benefits for the one-earner

couple.

81. Of course ending the spouse benefit will severely reduce benefits for "traditional" households, because the progressive PIA formula would lead to smaller benefits for a single earner couple (\$14,400 in our example) relative to the two-earner couple (\$19,272 in our example). The spouse benefit equalizes payments to one- and two-earner couples.

82. This discussion assumes the mandated pension is of the defined-contribution variety. The analysis becomes significantly more complicated when the mandated pension is of the defined-benefit variety since the expected value of the current cost to the firm is difficult to estimate, and its actual value is random. Future wage growth, job tenure and interest rates are difficult to predict, so under a defined-benefit formula firms' pension costs are uncertain. Further complicating the analysis is the fact that a rise in the market value of pension funds decreases the current cost of past promises. While this might be seen as simply a working out of the allocation of risk inherent in the previous promise, these fluctuations influence ongoing labor/management negotiations. A further complication comes from the impact of the mandate on firms that already have pension plans with voluntary worker contributions. Here a pension mandate will affect some but not all of the workers and will change the relative labor cost of particular employees at the firm. These issues are not satisfactorily resolved in existing research.