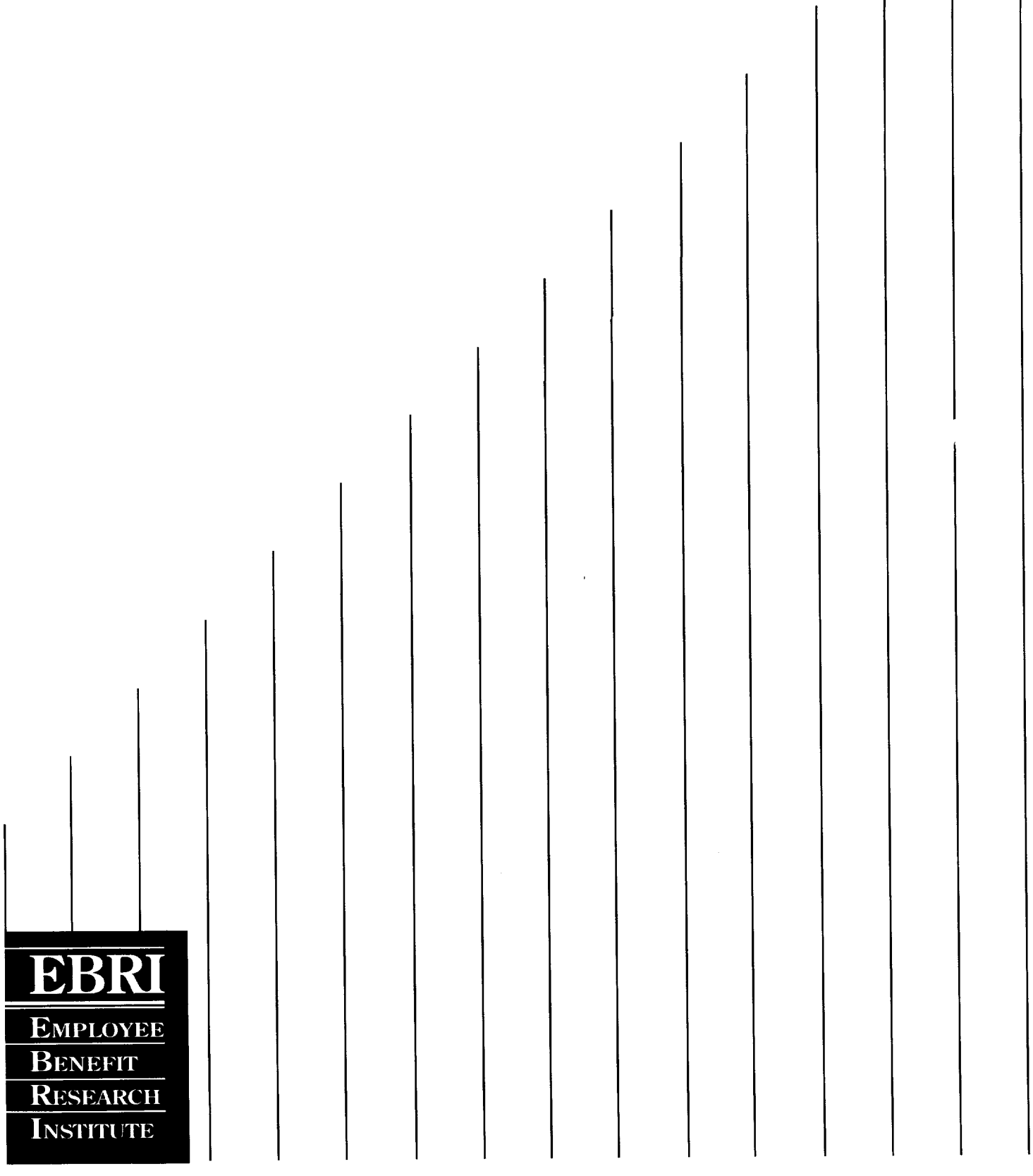
RETIREMENT IN THE 21ST CENTURY... READY OR NOT....

EBRI
EMPLOYEE BENEFIT RESEARCH INSTITUTE

RETIREMENT IN THE 21ST CENTURY. . . READY OR NOT. . .



EBRI
EMPLOYEE BENEFIT RESEARCH INSTITUTE

Education and Research Fund
2121 K Street, NW, Suite 600
Washington, DC 20037-1896
(202) 659-0670

This report was funded in part by Merrill Lynch & Co.

Library of Congress Cataloging-in-Publication Data

Retirement in the 21st century : ready or not? / edited by Dallas L. Salisbury and Nora Super Jones.
p. cm.
Includes index.
ISBN 0-86643-081-4 : $29.95
1. Retirement income—United States—Congresses. 2. Baby boom generation—United States—Retirement—Congresses. 3. Baby boom generation—United States—Economic conditions—Congresses.
I. Salisbury, Dallas L. II. Super Jones, Nora. III. Employee Benefit Research Institute (Washington, D.C.) IV. Title: Retirement in the twenty-first century.
HD7125.R43 1995
331.25'2—dc20

94-24380
CIP

TABLE OF CONTENTS

TABLES AND CHARTS

TABLES

TABLES (CONTINUED)

CHARTS

CHARTS (CONTINUED)

PREFACE

As the baby boom generation begins to approach retirement age, concern over whether or not current workers are financially prepared for retirement has heightened. Several studies have recently been released that try to assess the prospects for baby boomers in retirement—many of which come to sharply different conclusions.

In order to critically evaluate these divergent studies, the Employee Benefit Research Institute's Education and Research Fund (EBRI-ERF) sponsored a policy forum in Washington, DC, on May 5, 1994 on the topic: "Retirement in the 21st Century: Ready or Not?" The policy forum brought together government officials; corporate executives; public opinion analysts; financial managers; and representatives from labor, academia, elderly, and research organizations to discuss these issues.

The forum focused on this question: When all factors are considered, such as the evolution of Social Security and the pension system, in conjuction with the participation and savings decisions of today's workers, what retirement picture are today's workers really facing?

The papers included in this volume were originally prepared for the policy forum. The session included an active discussion among the authors and 100 invited participants with an interest in economic security issues.

This publication integrates the papers and proceedings of the policy forum into a single work. An introductory essay highlights the primary issues that need to be considered as we assess the prospects for retirement in the 21st century. The book is organized into three parts. Each section concludes with selected interactions and comments taken from the policy forum discussion.

Part One explores the retirement income prospects for the baby boom generation. The first paper by Paul Yakoboski and Celia Silverman of EBRI analyzes trends in the elderly's income and pension participation among workers; examines saving behavior and critically evaluates studies of the adequacy of baby boomers' saving; and looks at tenure trends, lump-sum distribution preservation, and changes in Social Security benefits.

Next, Joyce Manchester of the Congressional Budget Office (CBO) presents a paper that summarizes and evaluates CBO's September 1993 study on whether the baby boomers' income and wealth in retirement will exceed that of their parents. The study, which was widely covered in the media, finds that baby boomers, on average, could have at least as much real income and wealth in retirement as their parents' generation now has. In her paper, she defends the CBO study and responds to criticisms.

Douglas Bernheim of Princeton University presents another viewpoint. His paper provides an historical perspective on U.S. saving and reviews the evidence on the adequacy of saving by the baby boomers themselves. Bernheim concludes that baby boomers' retirement preparation falls far short of what is required to avoid a decline in their standard of living in retirement.

Finally, Laurence Kotlikoff of Boston University and Alan Auerbach of the University of Pennsylvania consider the interrelatedness of the the U.S. saving rate and the long-term forecasts of different aspects of U.S. fiscal policy. Their study documents the dimensions of these economic situations, explains their connections to one another, and considers their implications for Americans in general and the baby boom generation in particular.

Part Two explores individual and employer attitudes toward planning, saving, and preparedness. The paper presented by Steve Farkas and Jean Johnson of The Public Agenda Foundation is based on a multiphase study of Americans' attitudes toward planning and saving for retirement. It also investigates the perceptions of experts in the retirement field.

By examining several case studies, Part Three considers whether individual savings and investment behavior can be changed or whether it can be expected to change. The authors in Part Three examine the framework in which individuals make investment choices and what influences them. Those authors representing major employers share their experiences in trying to affect individual behavior.

In the first paper in this section, Robert Birnbaum of J.P. Morgan Investment Management describes a research-based approach to predicting 401(k) plan participant behavior. His paper describes the Participant Preference Model developed by J.P. Morgan to help plan sponsors determine in advance how plan participants would react to alternative plan designs in terms of both satisfaction and investment allocation.

Second, Paul Rivera of the Xerox Corporation suggests a role for the employer in helping employees become alert and aware that they may not be adequately prepared for retirement. He describes one of a number of measures developed and used by Xerox Corporation to help employees

determine their retirement income needs and any corresponding shortfall (the retirement income "gap").

Third, Curtis Mikkelsen of J.P. Morgan discusses the results of his company's increased effort to educate their employees regarding plan investment decisions. Morgan's approach emphasizes the need to educate without offering investment advice.

Fourth, Don Sauvigne of IBM explores the savings dilemma in the U.S. and how IBM has responded. Sauvigne explains that IBM is undergoing a transformation—shifting from a culture of entitlement to one of partnership and responsiblity sharing. He outlines actions taken by IBM in plan design and investment education to change savings and investment behavior.

Finally, Allan Martin of Bankers Trust Company describes a recent study on defined contribution plans conducted by his firm that seeks to determine how plan sponsors can positively affect individual participant behavior. He suggests better plan design, broader participant awareness, and easier access to retirement vehicles as effective means to achieve employer objectives.

With the publication of this book, we share the knowledge gained at the policy forum with a wider range of readers interested in the retirement security of Americans. We wish to thank the speakers and participants and other authors for their substantial contributions to this book. We offer special thanks to the EBRI staff who contributed to the publication of this book: Laura Bos and Kathy Stokes Murray for their role in planning the policy forum; Deborah Holmes for copyediting the papers; Malaika Barnes, Leah Blaugrund, and Cheri Meyer for preparing the papers for publication; Cindy O'Connor for layout and design of the final publication; and Carolyn Pemberton for guiding the book through the last phases of production. Partial funding for this book was provided through a grant from Merrill Lynch & Co.

The views expressed in this book are solely those of the authors and participants. They should not be attributed to EBRI.

Dallas L. Salisbury and Nora Super Jones, Editors
January 1995

About the Authors

Alan Auerbach is professor of economics and law at the University of Pennsylvania. He served as chairman of the economics department at Penn from 1988 through 1990, and since 1978 has also served as a research associate of the National Bureau of Economic Research. During 1992, Dr. Auerbach was deputy chief of staff of the U.S. Joint Committee on Taxation. He received a B.A. from Yale University and a Ph.D. from Harvard University.

B. Douglas Bernheim is a full professor in the department of economics at Princeton University, where he holds the Weinberg Chair in Economics and Business Policy and serves as co-director of the Center for Economic Policy Studies. Dr. Bernheim's research has spanned a broad range of subjects, including the determinants and adequacy of personal saving, insurance issues, pension policy, aspects of taxation and fiscal policy, industrial behavior and antitrust policy, labor market issues, and topics in mathematical economics. He received his A.B. degree in economics from Harvard University and his Ph.D. in economics from M.I.T.

Robert Birnbaum is vice president and head of marketing programs at J.P. Morgan Investment Management. He recently led the team that developed the Participant Preference Model (sm), an innovative research-based tool for defined contribution plan design. Mr. Birnbaum entered the investment management field with The Vanguard Group, where he served as senior product manager for individual retirement accounts. He received his A.B. in anthropology from Columbia University and his M.B.A. in finance from the Wharton School.

Steve Farkas is director of research at the Public Agenda Foundation, a nonprofit, nonpartisan organization that works to enhance citizen understanding of complex public policy issues. Prior to joining the Public Agenda, Mr. Farkas was senior analyst at Penn + Schoen, Inc., a political and corporate consulting firm specializing in survey analysis. Mr. Farkas obtained his B.A. at New York University and his M.A. and M. Phil. at Columbia University's Department of Political Science, where he was awarded a President's Fellowship and a MacArthur Fellowship. He is currently completing his doctoral thesis at Columbia with specializations in American politics, public opinion, and quantitative methods.

Laurence Kotlikoff is professor of economics at Boston University, research associate of the National Bureau of Economic Research, and Fellow of the Econometric Society. Professor Kotlikoff has served as a consultant to the International Monetary Fund, the World Bank, the Organization for Economic Cooperation and Development, several foreign ministries and U.S. government offices, as well as serving as a senior economist with the President's Council of Economic Advisors. He received his B.A. in economics from the University of Pennsylvania and his Ph.D. in economics from Harvard University.

Joyce Manchester is a principal analyst at the Congressional Budget Office in the Macroeconomic Analysis Division. Major projects at CBO include analyses of the economic effects of the savings and loan crisis and of the North American Free Trade Agreement, and a study of baby boomers in retirement. Prior to joining the CBO, Dr. Manchester was an assistant professor at Dartmouth College, writing and teaching in the areas of macroeconomics, money and banking, and finance. She received a B.A. from Wesleyan University and a Ph.D. in economics from Harvard University.

Allan Martin joined Bankers Trust's Management Science staff in July 1969. During his career at Bankers Trust, he has concentrated on pension plan investment management and administration. He is currently unit manager of the Global Assets-Retirement Service Group's Client Advisory Unit, which is responsible for client advisory and service development activities. He is president and director of Bankers Trust Company of California and Bankers Trust of the Southwest and a founding director of Japan Bankers Trust Company, Tokyo. Mr. Martin received a B.S. in mathematics from Stanford University and an M.B.A. from the Stanford Graduate School of Business.

Curtis Mikkelsen is managing director, worldwide benefits of Morgan Guaranty Trust Company of New York. He joined the organization in 1970. Prior to that, he was with Ford Motor Company and in the U.S. Army. Mr. Mikkelsen earned a B.S. from Oregon State University and an M.B.A. from the University of California at Berkeley. He was on the board of the New York Business Group on Health and was a Pew Health Fellow at Boston University.

Donald Sauvigne is program director, retirement and capital accumulation programs, for IBM. During his 24 years with IBM, Mr. Sauvigne has held numerous staff and leadership positions at several locations, including one international unit. His specialty skills lie in the areas of medical plan design, 401(k) development, pension plan design, and related administration. Mr. Sauvigne received a B.S. in business administration from Providence College and an M.B.A. from Syracuse University. He is currently enrolled at the Wharton School.

Paul Rivera is manager of benefits planning and operations with Xerox Corporation. He joined the organization in 1973. Prior to that, Mr. Rivera was with GTE International and Ferrari Electronics. He earned an electrical engineering degree from Manhattan College and received an M.B.A. and doctorate in finance from Pace University. Mr. Rivera is an adjunct professor with The Center for the Study of Financial Services at Pace University among other professional activities.

Celia Silverman, formerly a research analyst with EBRI, specializing in pension finance and retirement security issues. Her major EBRI projects included EBRI's *Quarterly Pension Investment Report* and the *EBRI Databook on Employee Benefits*. Her research efforts focused on pension plan and participation trends and future retirement income security. She has a B.A. in economics from the University of Pennsylvania and is curently working on her M.B.A. from the Darden School at the University of Virginia.

Paul Yakoboski is a research associate with EBRI, specializing in pension and retirement income security issues. His current research focuses on pension coverage and participation trends, lump-sum distributions and benefit preservation, and the future retirement income security of today's workers. He has a B.S. in economics from Virginia Polytechnic Institute and State University and a M.A. and Ph.D. in economics from the University of Rochester. Dr. Yakoboski worked in the Human Resources Division of the U.S. General Accounting Office before joining EBRI in 1991.

CHAPTER I: INTRODUCTION

DALLAS L. SALISBURY

INTRODUCTION

"Retirement in the 21st Century: Ready or Not?" was the thirty-fifth policy forum held by the Institute since 1978.

The purpose of this forum was to take a step beyond the headlines in assessing the status of older Americans today and the prospects for future retirees—particularly those in the baby boom generation. The forum placed a particular focus on the role that pensions play and will continue to play.

The growth of advance funded pension and retirement savings programs has resulted in the accumulation of over $5 trillion in savings. Recent studies have found that pension savings have been a primary form of personal savings in the economy over the past 20 years.[1] Bosworth, et al., found pensions to represent 50 percent of personal savings between 1976 and 1980, 59 percent between 1981 and 1985, and, 51 percent between 1986 and 1990. However, some estimates indicate that to maintain work life living standards in retirement—without selling one's home—would require pension savings to be closer to $12 trillion today.[2] The difference is crucial, as studies of this issue find that boomers are saving one-third of what would be needed if housing wealth is not counted, but over 80 percent if it is.[3] The issues of what is counted, what is assumed about future economic growth, and what is assumed about inflation in such areas as health care are at the center of the apparent contradictions in the findings of different studies of the baby boomers' retirement income prospects.

It is also necessary to look carefully at differences within the population. The baby boomers will be as diverse in economic and social character in retirement as they are today. There cannot be enough emphasis on the difference that future economic growth—including real wage growth—will make in the ultimate accuracy of projections, on the importance of future inflation rates in general, and in health care costs in particular.

Concern over saving adequacy, combined with an aging population, has begun to produce a new focus on saving and financial planning. More financial planning columnists have appeared in newspapers. More magazines have developed with a financial planning focus. More television financial networks and shows have appeared. More attention to encouragement of retirement savings and financial planning by financial services organizations, unions, and employers have begun to appear, including both print and television advertisements. Employers are providing more regular information on employee benefits to workers, along with software for the personal computer that allows regular reality checks: assessing what a worker's savings to date will or will not provide in retirement at different ages. This information has given new meaning to the concept of lifelong learning, as boomers face the prospect of later retirement ages if they have not saved enough. A related issue is whether there will be jobs for those who need to remain employed.

WHAT DO WE COUNT AS SAVINGS?

The concept of savings, although widely discussed, has not been consistently and clearly defined.[4] When considering the issue of whether individuals are saving enough to support themselves in years when they do not work or have emergencies, the traditional measure is the full value of all resources they will have available to them: the value of liquid assets, any real estate they own, the full value of retirement accounts

[1] Jack VanDerhei, "Pensions, Social Security and Savings," *EBRI Issue Brief* no. 129 (Employee Benefit Research Institute, September 1992); Barry Bosworth and Gary Burtless, "Effect of Tax Reform on Labor Supply, Investments, and Savings," *Journal of Economic Perspectives* (Winter 1992): 18; Congressional Budget Office, *Assessing the Decline in the National Savings Rate* (Washington, DC: Congressional Budget Office, 1993); and Barry Bosworth, Gary Burtless, and John Sabelhaus, "The Decline in Saving: Evidence from Household Surveys," *Brookings Papers on Economic Activity*, Vol. 1 (Washington, DC: The Brookings Institution, 1991): 183–241.

[2] Michael Kantor and William B. Madden, "Funding U.S. Retirement Benefits: A 100 Year Perspective," May 1994, mimeograph.

[3] B. Douglas Bernheim, "The Adequacy of Saving for Retirement: Are the Baby Boomers on Track?," presented at Employee Benefit Research Institute policy forum, Retirement in the 21st Century: Ready or Not?, Washington, DC, May 4. 1994; and commentary by Joyce Manchester.

[4] For full discussion of this issue, see Jack VanDerhei, "Pensions, Social Security and Savings," *EBRI Issue Brief* no.129 (Employee Benefit Research Institute, September 1992).

or lump-sum distributions for which they may be eligible, and the value of any other private or government benefits. This method is not consistently used in assessments of future retirees' prospects.

When considering the issue of whether the nation is saving enough to provide for future economic growth, the measure must also take into consideration negative savings by individuals, private entities, and governments as well as the assets noted above. The first step toward increasing the national savings numbers, were that deemed desirable, would be balancing the federal budget. Until that step is taken, all Americans may be getting a regular message that going into debt to live better today is deemed appropriate as a matter of public policy.

America is not a nation of individual savers. This fact led to creation of the Social Security program, the employment-based pension system, and programs such as individual retirement accounts (IRAs). These programs seek to create a level of deferred consumption. Since 1986 we have seen a decline in the traditional measure of personal savings. However, during this same period, net housing wealth increased, as did pension wealth. The Social Security program and federal pension plans have built assets in the form of Treasury securities, but the "surplus" has been spent on other programs, leading to a net deficit for the federal government. The Social Security program, when considered with Disability Insurance and Medicare, will move to a point where benefits exceed new tax revenue within 15 years.[5] However, the trends and data noted above suggest that savings available to individuals will continue to grow through the pension system.

The first issue for policymakers is to determine their respective goals. First, should we focus on absolute income levels such as two times the poverty rate, on replacement of final income, or some combination? The chairman of the Disney Corporation, for example, does not "need" 70 percent replacement to meet "the American dream." Second, should our focus be on what the government views as entitlements programs such as Supplemental Security Income (SSI) and Social Security, or on incentives for saving? Should incentives seek 70 percent replacement in general or only 70 percent for incomes of up to $150,000? The different conclusions reached by analysts are frequently attributable to different goals.

How Much Savings Is Enough?

A second area of definition that leads to apparent disagreements is the concept of adequate savings. How much income does one need in retirement for it to be adequate? A public policy definition based on keeping the retired out of poverty represents a very different standard from one concerned with assuring that those above poverty have 70 percent or 80 percent of final income. Furthermore, should liquid savings be considered or the income potential of all assets, including the income benefits that could come from selling a home? The answer makes a big difference. The answer for the individual may also differ greatly from the one given from the perspective of public policy.

Mandated public action—Social Security, food stamps, SSI—has provided an income base. The federal government has then acted as an employer to augment savings with both defined benefit and defined contribution plans for its employees and has encouraged other employers to do the same. Public policy has been to provide a floor of income with high replacement at low income levels (over 100 percent for the lowest income), and low replacement for those with middle and higher income (27 percent from Social Security for an individual earning $60,600 in 1994), leaving the rest to employers and individuals. All workers are therefore saving enough to survive; many are not saving enough to maintain their final years' income into retirement. Most will want to do more than survive and will have to save more to do so.

A study by the Congressional Budget Office (CBO)[6] compares the income and wealth of the baby boomers with that of their parents' generations at similar points in their lives to assess how well today's workers are preparing for retirement. Essentially, the CBO is answering the question: How well will baby boomers do in retirement compared with their parents, based on their financial circumstances at similar points in their working careers?

CBO finds that both real household income—that in excess of inflation—and the ratio of household wealth to income are higher on average for baby boomers aged 25–44 in 1989 than was true for young adults of the same age in 1959 and 1962, respectively. CBO notes that the boomers' parents, in general, seem to have adequate financial resources in retirement, which is in part due to government transfer programs and higher than normal capital gains on housing assets (rather than systematic financial planning.)

CBO concludes that most baby boomers are likely to enjoy higher real incomes in retirement than their parents,

[5] Board of Trustees, *1994 Annual Report of the Board of Trustees of the Federal Old-Age, Survivors Insurance and Disability Insurance Trust Fund* (Washington, DC: U.S. Government Printing Office, 1994); and Dallas L. Salisbury and Celia Silverman, "Social Security and Medicare Programs Face Reform," *EBRI Notes* (June 1994): 1–6.

[6] See Congressional Budget Office, *Baby Boomers in Retirement: An Early Perspective* (Washington, DC: Congressional Budget Office, 1993); and Congressional Budget Office, Statement of Robert D. Reischauer, director, Congressional Budget Office, before the Subcommittee on Social Security, Committee on Ways and Means, U.S. House of Representatives, September 21, 1993.

assuming that real wages continue to grow, Social Security and private pensions remain intact, and health care expenditures do not outweigh other gains. CBO notes the prospects are not as sanguine for some demographic groups as others, in particular for the single, the less educated, and nonhomeowners.

The relatively optimistic scenario for boomers relative to their parents' generation is dependent on future economic growth, more specifically on the assumption that wages will grow faster than prices over the next 20–40 years. Long-term economic growth may be retarded by low savings and investment and by government fiscal policy.

A study by Lewin-VHI for the American Association of Retired Persons reaches essentially the same conclusions as the CBO, noting that most baby boomers should have higher income in retirement than today's elderly, while stressing that not all will benefit uniformly: "Large numbers will face a retirement of economic risk and deprivation because of a history of low earnings, intermittent employment, poor education, discrimination, and an inability to adjust to changing employer requirements, among other variables."[7]

The study begins with a note that should be applied to the assessment of all such studies: "At the outset, it should be noted that these projections at best reflect certain assumptions about the course of future events, which are incorporated in a mathematical model. Needless to say, these data should not be construed as a prediction of events to come but rather as a probability, based on our knowledge at present."[8]

Another study concluded that "If these trends continue, the baby boom generation will accumulate substantially larger levels of personal financial assets than their older counterparts and thus after retirement will have much larger pools of accessible assets upon which to draw to meet unexpected contingencies." Whether such outcomes actually materialize will depend to a large degree on the preservation of lump-sum distributions received by workers as they change jobs, as will be discussed later.

The evidence indicates that boomers, in general, will enjoy a standard of living in retirement that exceeds that of their parents. Whether they will be able to maintain the standard of living they enjoyed while working once they move into retirement is a different question with a less clear answer. A key role will be played by wealth accumulation through homeownership. To the extent that boomers are willing to tap into this resource to fund their retirement, they would appear at this early stage to be in pretty good shape. In addition, a key role will be played by individual savings, particularly through employment-based savings plans such as 401(k)s. Also, fiscal policy decisions made by the federal government will impact boomers by affecting their disposable income today, and thus their ability to save, as well as benefits they will receive in retirement through Social Security and Medicare. It is important to realize that many of the things that will impact the boomers' retirement, such as economic growth; economic developments involving housing market trends; and government fiscal, savings, and retirement policy, will unfold over a period of decades and are difficult to predict.

Given the heterogeneity of the baby boom generation, more research is needed to identify specifically what subgroups within the generation are currently at risk and what the size of the problem is likely to be for them. This involves moving beyond broad sweeping generalizations regarding the boomers. Groups that would now appear to be at risk to some degree include nonhomeowners, the less educated, the single, and the youngest boomers.

What Should One Save?

The age at which one begins to save makes a great deal of difference. Individuals saving 3 percent of salary on a pretax basis, obtaining a tax deferred investment return exceeding inflation by 2 percent, would be able to purchase an annuity at age 65 worth 5 percent of final salary if they began at age 50; 9 percent of salary if they began at age 40; and 13 percent of salary if they began at age 30. This assumes that salary increases at a constant 1 percent above inflation. [9] Looked at from the opposite direction, to have 60 percent replacement of final salary would require annual contributions of 13 percent of salary from age 30, 20 percent of salary from age 40, and 35 percent of salary from age 50. Because the law limits contributions to 25 percent of salary, waiting to age 50 would not allow the goal to be achieved without saving even more outside the qualified plan.[10]

The worker contributing the maximum of 25 percent allowed from age 30 would replace about 110 percent of final salary, beginning at age 40 about 75 percent of salary, and beginning at age 50 about 43 percent of salary.

These examples highlight some relevant issues. First, the individual who has not saved, and does not settle into a final job until 50, should hope for both a defined benefit and a defined contribution pension plan. Second, the individual who has a defined contribution plan available should contribute as

[7] Lewin-VHI, Inc., *Aging Baby Boomers: How Secure Is Their Economic Future?* (Washington, DC: American Association of Retired Persons, 1994).
[8] Ibid.
[9] This assumes an annuity purchase price of 9.268. This is a function of discount rates and life expectancy, which can fluctuate in the future.
[10] Employee Benefit Research Institute calculations.

much as possible beginning at an early age and preserve distributions at each job change. Third, the individual should seek employment at an organization that offers some type of retirement plan, with the ideal being both defined benefit and defined contribution. Fourth, the older the individual is when making what he or she hopes will be the last job change, the more advantageous it will be to participate in a defined benefit plan.

Pension Coverage and the Changing Work Force

The American economy and work force have continued to change along trend lines in evidence since the 1960s. These changes are beginning to show in pension coverage, participation, and benefit entitlement as well.[11] Among private-sector wage and salary workers, for example, pension participation has been steady since 1972 at between 48 percent (1972, 1983, 1988) and 50 percent (1979, 1993). This rate climbs to 56 percent for all full-time workers. Men have experienced a slight decline, from 54 percent to 51 percent, while women have gained from 38 percent to 48 percent. Participation is highest for men 45–49, at 63 percent. Participation in 401(k) plans has also grown from 3 percent in 1983 to 14 percent in 1988 and 23 percent in 1993. Among those offered the opportunity to participate in such a plan, 67 percent did so in 1993, compared with 39 percent in 1983.

Those who work for employers without any pension plan work predominantly for small employers, where 13 percent of workers are offered a plan, compared with 97 percent among those working for the largest employers.

Among full-time workers not participating in a plan (that their employer sponsors) the most often cited reasons are: not working enough hours to qualify (24 percent); not having worked for the employer long enough (31 percent); chose not to contribute (25 percent); are in a type of job not covered (8 percent); too old (2 percent); too young (1 percent).

Across the work force, 1993 saw gains for the pension system, both in absolute numbers and in percentage terms. Looking at private-sector workers over age 21 with one year on the job and working more than 1,000 hours per year (the ERISA work force), 67 percent worked for an employer with a plan, 56 percent participated in a plan, 48 percent were entitled to a vested benefit, with 86 percent of participants being vested.[12]

The Census documents that female labor force participation has risen dramatically. Women in the work force in 1993 were nearly as likely to have pension savings as men, compared with a 16 percentage point shortfall in 1972.[13] Women were not as likely to be participants but were as likely to be vested when they participated.

The Census documents that more workers are in professional services and retail jobs, and fewer are in manufacturing. Professional service and retail workers have both experienced pension growth since 1988. Twenty-four percent of private-sector pension participants are now in service jobs, up from 19 percent in 1988. Manufacturing now employs 33 percent of all private pension participants.

The baby boom is now aging, with the effect of moving more workers into ages where available research indicates higher job stability, higher pension participation, and higher general savings. For example, when offered a 401(k) plan in 1993, 48 percent of private-sector workers under age 30 elected participation, compared with 72 percent of workers over age 30. The overall 401(k) participation rate among those offered a plan grew from 60 percent in 1988 to 67 percent in 1993.[14]

Changes in the law (5-year vesting) and work force patterns combined to move the number of vested pension participants, that is, those with a nonforfeitable benefit, to 86 percent of all participants from 77 percent in 1988 and 52 percent in 1979.

Pension Participation Over a Lifetime

Workers in the 41–50 age group reported the highest rate of pension coverage for 1993 (72.9 percent). This compares with 58.8 percent of workers aged 21–30 who reported coverage (coverage rates are lower for workers younger than age 21).[15] Plan participation was also greatest among workers aged 41–50 (63.5 percent). Thirty-six percent of workers aged

[11] Employee Benefit Research Institute tabulations of the employee benefits supplement to the April 1993 Current Population Survey (CPS).

[12] The Employee Retirement Income Security Act of 1974, (ERISA), as amended, requires that a worker meeting these requirements who is covered by a pension plan be allowed to participate.

[13] EBRI tabulations of the employee benefits supplement to the April 1993 CPS, and U.S. Department of Labor, Social Security Administration, U.S. Small Business Administration, Pension Benefit Guaranty Corporation, *Pension and Health Benefits of American Workers: New Findings from the April 1993 Current Population Survey*, May 1994.

[14] Ibid.

[15] According to EBRI tabulations of the March 1992 CPS, 33.4 percent of civilian, nonagricultural wage and salary workers under age 25 were covered by an employment-based retirement plan in 1991. The coverage rate for workers aged 45–64 years was 65.5 percent. See Paul Yakoboski and Celia Silverman, "Baby Boomers in Retirement: What Are Their Prospects?", *EBRI Special Report* SR-23/*Issue Brief* no. 151 (July 1994).

21–30 reported participating in their employer's plan.[16] While the low coverage and participation rates among the young hold down the rates for the total work force, it can be assumed, based on past experience, that many of the young will become covered by and participate in employment-based retirement plans as they become older.

For this reason, analysts argue that evaluation of the potential delivery of benefits by the private pension system should focus on workers well established in their careers. In addition, marital status and the pension status of a spouse are important considerations because married individuals are likely to have access to their spouses' pension benefits.

Policymakers should not assign too much importance to relatively low pension participation rates among very young workers when considering future retirement income prospects. Many nonparticipating younger workers will move into covered employment and participate in an employment-based retirement plan as they progress through their working years.

Pension Plan Design Is Changing

It seems that the United States has tended to base public policy on the practices of the largest employers and to attribute the characteristics of those who work for the largest organizations to the rest of the work force. For purposes of savings and retirement planning, the history of small organizations is quite different from that of large organizations.

- Small organizations have not been able to afford—and frequently do not want—to be paternalistic. That is, they have not promised the prospect of life-long employment and a full plate of benefits.
- They have emphasized defined contribution and individual account retirement programs with lump-sum distributions on job termination. Since 1980, we have seen large organizations, public and private, begin to move in this same direction: redesign of defined benefit plans; expansion of defined contribution plans; and payment of lump-sum distributions from both.
- Many large organizations are seeking to be less paternalistic. They are no longer saying: "Focus on work and productivity and you will have a job and we will take care of economic security for you," providing benefits as part of a social contract. Instead, they are saying: "Focus on work and productivity and you might have a job, and we will provide benefit opportunities for you so that you can become self-reliant." A defined benefit pension plan (the sponsor contributes whatever it takes to keep the promise) is being provided when it serves a work force management purpose, but these defined benefit plans are increasingly taking on new forms with a focus on individual accounts and/or lump-sum distributions.
- Large organizations are seeking to be more flexible. Flexibility and reinvention, as now being implemented by the federal government and many others, means more reliance on defined contribution retirement plans, on a smaller work force, and on the use of lump-sum buyouts and pension incentives to achieve that smaller work force. With flexibility comes an end to a psychology of lifetime employment—even though few in this nation have had lifetime employment with one firm, and a significant number move to other employment after leaving their "career" job.[17]
- Large organizations are seeking to change the form of their employee benefit programs to one in which expense is more predictable. The federal government may become the only entity that promises benefits with the presumption that it will always be there. Between 1950 and 1980, this presumption was part of the benefit programs of most large organizations. The recognition of having to innovate and reinvent to survive has contributed to new pension forms with more built-in cost control, expansion of lump-sum payments instead of annuities, reduced retiree medical promises, expanded benefit options requiring worker contributions, enhanced communications programs, and a common emphasis on individual responsibility.

Large organizations are beginning a move from paternalism to an approach that tests concepts of partnership, shared responsibility, and increased individual responsibility. Small organizations have historically been at this end of the spectrum. The federal government took the first step in this direction as an employer in 1984 with the introduction of the Federal Thrift Savings Plan and a significantly reduced defined benefit pension plan.

Congress has been moving social programs in this direction since 1983, as it has taken action that will result in paying full Social Security benefits at later ages, decreasing early retirement benefits, subjecting more of the benefits to income taxes, and making available to workers Social Security

[16]Ibid. According to EBRI tabulations of the March 1992 CPS, 12.5 percent of civilian, nonagricultural wage and salary workers under age 25 participated in an employment-based retirement plan in 1991. The participation rate for workers aged 45–64 years was 58.3 percent.

[17]Robert E. Hall, "The Importance of Lifetime Jobs in the U.S. Economy," *American Economic Review* (September 1982): 720; and Christopher Ruhm, "The Work and Retirement Patterns of Older Americans," *EBRI Issue Brief* no. 121 (Employee Benefit Research Institute, December 1991).

Administration individual statements with projections of what recipients will receive, and when.

These movements, and the societal attention they will command, are likely to motivate more Americans to save more for themselves. These savings are likely to be found increasingly in pension and retirement savings plans due to the aging of the work force; the structure of payroll deductions; employer matching contributions; the convenient packaging of investment options; and public policy, employer, service-sector, and media attention to the need for savings to achieve a dignified retirement. These trends will also increase awareness of the value of saving and beginning financial planning at an early age, as workers' ability to depend on employers to do these things for them continues to decline.

A Closer Look At Plan Types

While the number of private employment-based pension plans and plan participants has been increasing, proportionately fewer are defined benefit plans and defined benefit plan participants. It is often argued that such trends jeopardize retirement income security because defined contribution plans, which typically involve explicit worker decision making, are replacing defined benefit plans. There is concern about workers' ability to make wise decisions regarding their participation in such plans.

The total number of private tax-qualified employment-based plans (both primary and supplemental) more than doubled from 311,000 in 1975, when the Employee Retirement Income Security Act (ERISA) became effective, to 712,000 in 1990. The total number of private defined benefit plans increased from 103,000 in 1975 to 175,000 in 1983, then decreased to 113,000 in 1990. The total number of private defined contribution plans increased from 208,000 to 599,000 between 1975 and 1990. The number of active participants in primary defined benefit plans decreased slightly, from 27 million to 26 million between 1975 and 1990, while the proportion of all active participants in these plans decreased from 87 percent to 62 percent.

Examination of private primary plan trends by plan size demonstrates that the vast majority, 75 percent, of the net decrease in the number of defined benefit plans involved very small plans, consisting of two to nine active participants. Between 1985 and 1990, there was a net decrease in the number of primary defined benefit plans of 33 percent, or 56,651 plans, and the net decrease in plans with two to nine active participants was 42,328. Between 1985 and 1990, the net increase in the number of defined contribution plans with two to nine active participants was 66,425 plans; this accounted for 45 percent of the net increase of 149,078 in the number of primary defined contribution plans. Therefore, the rapid growth in defined contribution plans cannot simply be explained by a replacement of defined benefit plans with defined contribution plans, because the net increase in defined contribution plans is far greater than the net decrease in defined benefit plans.[18]

The implication is that many workers, particularly those in small firms, now have a defined contribution plan, very likely a 401(k) plan, when in the past they likely would have had no employment-based retirement plan.

Such plans do involve explicit decision making on the part of individuals. They must decide whether to participate in the plan, how much to contribute, how the funds should be invested within choices offered by the sponsor, and whether to roll over lump-sum distributions received from such plans on job change. Poor decisions will weaken retirement income security. However, it is important to realize that employees can often receive a higher benefit from defined contribution plans than they would from comparable defined benefit plans, assuming the same investment income, particularly if they are young and mobile. It has been documented that workers with accrued pension benefits (i.e., those in final average defined benefit plans) can experience pension losses if they change jobs prior to retirement.[19] Participants in defined contribution plans do not experience the same losses just by changing jobs. Defined contribution plan participants may have the opportunity to save more for retirement than they would in a comparable defined benefit plan; however, they need to recognize their opportunity for retirement planning and make decisions to maximize their retirement income, such as preserving lump-sum distributions received on job change.

Among workers covered by both defined benefit and defined contribution plans, 60 percent indicated that the defined contribution plan was the most important in 1993. This may well prove to be true for most of them, as the historical turnover rates cause the defined contribution plan to have a larger lump-sum distribution value for many years. When an analysis was conducted for EBRI, looking at both types of plans with an identical cost, I was better off under the defined contribution plan until age 55 (28 years of service).

[18]For a complete analysis of these trends, see Celia Silverman, "Changes in DB and DC Plans Occurring Mainly Among Small Plans," *EBRI Notes* (March 1994): 1–3; and Celia Silverman, "Pension Evolution in a Changing Economy," *EBRI Special Report* SR-17/*Issue Brief* no. 141 (Employee Benefit Research Institute, September 1993).

[19]For a full explanation, see Employee Benefit Research Institute, "*Pension Portability and What It Can Do for Retirement Income: A Simulation Approach*," *EBRI Issue Brief* no. 65 (Employee Benefit Research Institute, April 1987); and Employee Benefit Research Institute, Pension Portability and Preservation: Assuring Adequate Retirement Income into the 21st Century, EBRI Policy Forum, Washington, DC, May 2, 1991.

Will Pensions Be a Savings and Income Source Tomorrow?

Pension plans now provide income to 30 percent of those aged 55 and over, 37 percent of those aged 65 and over, and 50 percent of new retirees.[20]

During 1990, pension plans provided $234.3 billion to retirees in annuity payments, and $125.8 billion in the form of lump-sum distributions was paid from all tax-qualified programs.[21]

The present approach to counting savings does not fully account for the contribution of these programs. Capital gains and investment earnings are not counted, and public defined benefit plan pension contributions are also excluded. Private pension capital gains and investment earnings accounted for net additions to plan assets of $1.062 trillion over the past 10 years. Public plan contributions totaled $524 billion during the period 1987–1991, most of which represented defined benefit plans and thus was not included in savings.[22]

A combination of factors raises questions about the future role of pensions in savings and retirement income.

- What will government policy be toward pensions and what action will that policy bring? Action taken in the 1993 budget act to reduce allowable contributions to pension plans will reduce projected pension benefits for some by over 30 percent, resulting in lower contributions to plans and smaller asset accumulations.[23] Senate Finance Committee staff have suggested in recent speeches that further cuts in the amount that can be saved through pensions are in the offing. Will individuals offset lower pension savings by saving more outside pension plans?
- What types of plans will employers sponsor in the future? Prior to 1984, federal employees had a generous defined benefit pension plan that paid most benefits in annuity form at retirement. Now more than 50 percent of federal employees have a smaller defined benefit plan and a generous defined contribution plan that pays lump-sum distributions. As noted, the private sector has followed this federal lead and has placed more emphasis on defined contribution plans and lump-sum distributions. Changing attitudes of both employees and employers may cause this movement to continue.
- What will individuals and employers be able and willing to save through pension arrangements if health costs continue to absorb increasing levels of compensation? Survey data make it clear that individuals worry about health insurance first, pensions second, and other savings last.[24] Small employers have always moved to establish health benefits ahead of any pension arrangement. Large employers deal increasingly in terms of total compensation and employee flexibility, which may result in lower pension savings by individual choice but with implications for savings.
- What will individuals do with lump-sum distributions? Over $400 billion was paid in distributions between 1987 and 1990. A total of $219.6 billion was rolled over into IRAs, leaving $180.4 billion taken into income or directly transferred to a new employer's plan. The most recent data available indicate that more individuals are saving lump sums for retirement—27 percent in 1987–1993 versus 7 percent prior to 1980—and fewer are spending them—23 percent in 1987–1993 versus 50 percent prior to 1980—but there is still a great deal of money not being preserved for retirement.[25] This is not a judgmental statement, but the numbers make clear that the amount preserved will make a significant difference for both present savings and retirement savings. This is the case for those leaving private plans as well as those leaving federal and other public employment. Pension savings would be much larger today had there never been lump-sum distributions to individuals, rather only rollovers while they were still working and annuity payments on retirement.
- A recent study conducted for the American Association of Retired Persons projects that between 81 percent and 84 percent of baby boomers will have pension income during retirement. The projection is based on two crucial assumptions: first, that nearly all lump-sum distributions are rolled over each time a worker changes jobs; second,

[20]Paul Yakoboski and Celia Silverman, "Baby Boomers in Retirement: What Are Their Prospects?" *EBRI Special Report SR-23/Issue Brief* no. 151 (Employee Benefit Research Institute, July 1994).

[21]Paul Yakoboski, "Retirement Program Lump-Sum Distributions: Hundreds of Billions in Hidden Pension Income," *EBRI Issue Brief* no. 146 (Employee Benefit Research Institute, February 1994).

[22]Employee Benefit Research Institute, *EBRI Quarterly Pension Investment Report, Fourth Quarter 1993* (Employee Benefit Research Institute, March 1994).

[23]Jack VanDerhei, "Analysis of the 1993 Amendments to Section 401(a)(17)," (Employee Benefit Research Institute, forthcoming).

[24]Sarah Snider, "Public Opinion on Health, Retirement, and Other Employee Benefits, *EBRI Issue Brief* no. 132 (Employee Benefit Research Institute, December 1992); Employee Benefit Research Institute/The Gallup Organization, Inc., *Public Attitudes of the Value of Benefits, 1992, G-40* (Washington, DC: Employee Benefit Research Institute, 1992); and Employee Benefit Research Institute/The Gallup Organization, Inc., *Public Attitudes of Benefit Trade Offs, 1993,* G-45 (Washington, DC: Employee Benefit Research Institute, 1993).

that all income is paid out as an annuity.[26] Neither of these assumptions can be relied on due to turnover, workers' propensity to spend lump-sum distributions, and the decreasing rate of annuitization. However, the projection does provide a realistic estimate of the proportion of the baby boomers who will earn pension wealth and benefit from it economically. Direct pension income recipiency during retirement is likely to be little higher than the 50 percent of new retirees we see today, while far more retirees will have asset income that is attributable to pension lump-sum distributions taken in the past. Analysts have recently called this "the pension anomaly."[27] Others comment on the way this anomaly leads to bad data and to misunderstanding of who benefits from the pension system as it functions today.[28]

- There is a significant gap between individual expectations for employer-provided retiree medical benefits and what will actually be provided.[29] Were individuals to become more aware of what they will need to provide for themselves, it could serve to increase the saving incentive. Most of the studies reviewed above assume limited change in the area of health cost for the individual in assessing the future, an assumption that appears unrealistic.

Social Security as an Income Source

Social Security is also an important component of what individuals view as part of their savings for periods of disability and retirement. The program paid $34 billion to the disabled and $264 billion to the retired in fiscal year 1993.[30]

There has been a debate among researchers in the past about the impact of Social Security on individual savings, but they seem to agree that, for some people, knowing that it will provide an income base eliminates the motivation to save. Those working today have watched many parents retire with near total reliance on Social Security and do well at maintaining their standard of living. Among lower income Americans there is a belief that the same can be true for them. Public confidence in the program is weak, however, particularly among the young.[31] As the public begins to understand the benefit implications of increases in the retirement age, it could well encourage added savings. The decline in benefits—10 percent at age 62, when normal retirement moves to 67; 25 percent were normal retirement age to increase to 70—will clearly increase the need for supplemental savings for those who choose to retire early, and for added years of work for those who do not wish to take a lower benefit than that which is now available at age 65.[32]

Were Social Security benefits reduced by this further increase in retirement age, through greater benefits taxation, or through a direct reduction in the benefit formula, larger individual and pension savings would be needed to achieve the same standard of living. Were benefits maintained by finding more revenue—through increases in payroll tax rates and/or expansion of the taxable wage base—the portion of the total compensation package available for pension contributions and savings would be reduced, with a likely negative effect on both individual and pension savings.

What the federal government does with Social Security and Medicare benefit levels and financing will directly impact both the ability of employers and individuals to engage in retirement savings and on the amount of savings they will need to maintain a targeted lifestyle in retirement.

---

[25]U.S. Department of Labor, Social Security Administration, U.S. Small Business Administration, Pension Benefit Guaranty Corporation, *Pension and Health Benefits of American Workers: New Findings from the April 1993 Current Population Survey,* 1994.

[26]Lewin-VHI, Inc., *Aging Baby Boomers: How Secure Is Their Economic Future?* (Washington, DC: American Association of Retired Persons, 1994).

[27]Gordon P. Goodfellow and Sylvester J. Schieber, "The Role of Tax Expenditures in the Provision of Retirement Income Security," in Employee Benefit Research Institute, *Pensions in a Changing Economy* (Washington, DC: Employee Benefit Research Institute, 1994).

[28]Paul Yakoboski, "Retirement Program Lump-Sum Distributions: Hundreds of Billions in Hidden Pension Income," *EBRI Issue Brief* no. 146 (Employee Benefit Research Institute, February 1994); and Celia Silverman and Paul Yakoboski, "Public and Private Pensions Today: An Overview of the System," in Employee Benefit Research Institute, *Pension Funding & Taxation: Implications for Tomorrow* (Washington, DC: Employee Benefit Research Institute, 1994).

[29]Employee Benefit Research Institute/The Gallup Organization, Inc., *Public Attitudes on Retiree Health and Medicare, 1993,* G-51(Washington, DC: Employee Benefit Research Institute, 1993); U.S. Department of Labor, Social Security Administration, U.S. Small Business Administration, Pension Benefit Guaranty Corporation, *Pension and Health Benefits of American Workers: New Findings from the April 1993 Current Population Survey,* 1994: and Sarah Boyce, "Questions and Answers on Employee Benefit Issues, *EBRI Issue Brief* no. 150 (Employee Benefit Research Institute, June 1994).

[30]Board of Trustees, *1994 Annual Report of the Board of Trustees of the Old-Age, Survivors and Disability Insurance Trust Fund* (Washington, DC: U.S. Government Printing Office, 1994).

[31]Employee Benefit Research Institute/The Gallup Organization, Inc., *Public Attitudes on Social Security, Part 1,* G-56 and *Public Attitudes on Social Security, Part II,* G-57 (Washington, DC: Employee Benefit Research Institute, 1994); and Robert B. Friedland, "When Support and Confidence Are at Odds: The Public's Understanding of the Social Security Program" (Washington, DC: National Academy of Social Insurance, 1994).

[32]Dallas L. Salisbury and Celia Silverman, "Social Security and Medicare Programs Face Reform," *EBRI Notes* (June 1994): 1–6; Paul Yakoboski and Celia Silverman, "Baby Boomers in Retirement: What Are Their Prospects?" *EBRI Special Report SR-23/Issue Brief* no. 151 (Employee Benefit Research Institute, July 1994). Note: calculations assume an AIME (average indexed monthly earnings) of $2,000 per month.

Work Force Patterns and Pensions

A great deal has been written and said in recent years about the tremendous changes in the nature of employment. One reads constantly about a more job-mobile society. The higher mobility hypothesis is used to argue for defined contribution plans, portability, lump-sum distributions, and preservation. Based on census data from 1963 to 1979, an article written in 1982 noted job patterns that more readily support a hypothesis that our society has been job mobile for decades:

> The typical worker is currently on a job which will last about eight years in all, counting the years it has already lasted. An important minority—about 28 percent—are currently employed in near lifetime jobs lasting 20 years or more, and 17 percent are in jobs which will last 30 years or more. An equally important minority are at work in what will turn out to be very brief jobs—about 23 percent will have eventual tenure of less than two years. A clear majority of workers—58 percent— are currently holding reasonably long jobs, those which will last five years or more.[33]

This is significant for a discussion of individual and pension savings in a number of ways.

- In what we refer to as the "good old days" from a job perspective, only 58 percent of workers were expected to be in jobs long enough to meet the current general pension vesting standard of five years (e.g., the federal employee pension plan). This tells us that job turnover has interfered with pension accumulation for a long time. As a result, a requirement for mandatory participation would not significantly increase pension receipt of meaningful benefits, that is, benefits of significant cash value. And portability would only be a clear contributor to retirement savings if preservation were part of the system.
- Given the high turnover rate for 42 percent of workers, one might have anticipated a higher savings rate to accommodate transitions. It did not and has not developed. The 28 percent of workers who are in jobs lasting 20 years or more are most likely to be affected by the retirement incentives, buyouts, and downsizing about which we read so much. Will workers assume such patterns are permanent and save more? Available data indicate that continuing to work after one's longest career job ends was the rule prior to 1979, and it likely still is.[34]
- The notion that until recently workers could assume early attachment to a lifetime job is not supportable by the numbers. As Hall stated: "At no age is the probability very high of a given job becoming a lifetime job."[35] More and more workers have historically found good job matches by their late thirties. After age 40, about 40 percent in any given age group could expect to remain in that job for 20 years or more.[36] This raises the question of whether this number is now on the decline, but there are no data yet to show it. Since 1979, however, female job tenure has been on the increase as labor force participation has risen (nearly 75 percent today, compared with about 40 percent in 1960 and 62 percent in 1980).[37] This has brought with it much higher rates of pension vesting and pension savings and the promise of many more dual pension households in retirement.
- The number of jobs held in a lifetime does appear to be increasing for the young, but there are no data to show any change in older worker patterns. Hall reported that "job shopping is most intense in the early twenties—by age 24, the average worker has held 4 jobs out of the 10 they will hold in an entire career. The next 15 years, from age 25 through 39, will contribute another 4 jobs. Then, less than three more jobs will be held on average."[38] A 1992 Bureau of Labor Statistics report found that between 1978 and 1990 those between age 18 and age 29 held 7.6 jobs, compared with the 5 reported by Hall for the earlier period.[39]

In 1980, 51 percent of baby boomers were counted as being in the labor force at ages 16–24. All boomers were under the age of 35. All, in short, were at a stage of life characterized

[33]Robert E. Hall, "The Importance of Lifetime Jobs in the U.S. Economy," *American Economic Review* (September 1982): 720.
[34]Christopher J. Ruhm "The Work and Retirement Patterns of Older Americans, *EBRI Issue Brief* no. 121 (Employee Benefit Research Institute, December 1991).
[35]Robert E. Hall, "The Importance of Lifetime Jobs in the U.S. Economy," *American Economic Review* (September 1982): 720.
[36]Ibid.
[37]Paul Yakoboski and Celia Silverman, "Baby Boomers in Retirement: What Are Their Prospects? *EBRI Special Report* SR-23/*Issue Brief* no. 151 (Employee Benefit Research Institute, July 1994).
[38]Robert E. Hall, "The Importance of Lifetime Jobs in the U.S. Economy," *American Economic Review* (September 1982): 720.
[39]U.S. Department of Labor, Bureau of Labor Statistics, *Work and Family: Jobs Held and Weeks Worked by Young Adults,* Report 827 (Washington, DC: U.S. Government Printing Office, 1992). The numbers are not fully comparable, but they appear to show an increase in mobility of the young.

by a high turnover rate and represented such a large proportion of the total labor force that they created the impression of a more mobile work force in general. As of 1990, 22.7 percent of boomers were over age of 40, the age at which job change begins to slow. History indicates that, on average, this older group will still hold three more jobs. The legitimate question arises of whether this average will increase as the boomers age—due to changes in the economy—or whether they will continue the mobility of early years. If it does, it could increase the motivation to save on the one hand, and, on the other, make it more difficult. On their 30th birthday, over 40 percent of the young had held their jobs for two years or less, with about one-quarter at more than six years.[40] The low savings and voluntary pension participation rates of the young may well be explained by decisions to change jobs frequently. At the older end of the age spectrum it is worth considering that in 1979, 26.3 percent had left their career job by age 50, 38.9 percent by age 55, 58.2 percent by age 60, and 70.6 percent by age 62.[41] New data to assess whether this has changed significantly will allow new savings assessments.

Conclusion

A consensus exists in America that we do not save enough as a nation. A review of the elderly's income today indicates a population that is doing well relative to prior generations. It also suggests that the retired would be doing better had they saved more, and that most would have had to save more to maintain the income levels they had prior to retirement.

A review of available evidence indicates that, on a total wealth basis and on a pension savings basis, those in the work force today are doing better than previous generations. However, a minority are building the individual and pension savings that will allow them to meet the goal of maintaining final employment income throughout retirement, without using real estate to produce income.

Should the timing and value of Social Security benefits, Medicare, and employer-based defined benefit pension and retiree medical benefits continue to be reduced, the levels of necessary saving will increase, not decline. Should the movement toward voluntary pension participation and lump-sum distributions continue, increases in participation rates and rates of rollover will be necessary to achieve the income levels projected by the studies reviewed above.

It should be stressed that the factors and trends reviewed here are present among both public-sector and private-sector employers and workers. Public opinion surveys indicate that individuals realize that they should be saving but do not believe they have the capacity or self-discipline to save enough. They favor savings through Social Security, employer pensions, and possibly, mandatory salary reduction.

The demographic, economic, work force, and workplace changes now taking place combine to require savings now, more than ever.

The papers presented at this policy forum and the active debate and discussion that took place provide many insights into future retirement income prospects and set forth a number of challenges and opportunities for the nation.

[40]U.S. Department of Labor, Bureau of Labor Statistics, *Work and Family: Turning Thirty —Job Mobility and Labor Market Attachment,* Report 862 (Washington, DC: U.S. Government Printing Office, 1993).

[41]Christopher J. Ruhm, "The Work and Retirement Patterns of Older Americans," *EBRI Issue Brief* no. 121 (Employee Benefit Research Institute, December 1991).

Part One

Baby Boomers' Retirement Income Prospects

CHAPTER 2: *Baby Boomers in Retirement: What Are Their Prospects?*

Paul Yakoboski and Celia Silverman

EXECUTIVE SUMMARY

What will the retirement experience of the baby boom generation be like? Will their standards of living be lower, higher, or the same as those they maintained during their working years? Will they be better or worse off than previous generations of retirees? Questions such as these are generating increased research and debate as members of the leading edge of the baby boom generation moves into their late forties, approximately 17 years from retirement age.

This article examines the baby boomers' retirement income prospects by analyzing trends in the elderly's income and pension participation among workers; examining saving behavior and critically evaluating studies of the adequacy of the boomers' saving; and looking at tenure trends, lump-sum distribution preservation, and changes in Social Security benefits. Although it cannot delve into any of these topics in exhaustive detail, the discussion will explain what is known and highlight issues needing further analysis.

Different signals point in different directions. Answers to the question of the adequacy of the boomers' finances in retirement often depend on exactly what question is asked, i.e., should this group be compared with previous generations in retirement or should their standard of living in retirement be compared with the standard they enjoyed while working or with some other criterion. In general, it is too early and research on the topic is too incomplete to make sweeping generalizations about the adequacy or inadequacy of the baby boomers' retirement income security.

Before evaluating the baby boom generation's prospective retirement income security, it is important to gain perspective by examining current retirees' economic security . In 1992, there were 52.1 million individuals in the United States aged 55 and over and 30.9 million individuals aged 65 and over. Individuals aged 55 and over received a higher average income ($17,779) than individuals aged 65 and over ($14,901). Among older individuals, most received below average income, as evidenced by a median income below the mean income. The sources of income received by individuals varies dramatically with age. Earnings represent 43 percent of the income of individuals aged 55 and over, compared with 15 percent of the income of individuals aged 65 and over. On the other hand, Social Security represents 41 percent of the income of individuals aged 65 and over, compared with 23 percent of the income of individuals aged 55 and over. Seventy-one percent of individuals aged 55 and over and 95 percent of individuals aged 65 and over received some form of retirement income (i.e., Social Security, pensions, individual retirement accounts (IRAs), annuities, etc.) in 1992. Among individuals aged 65 and over, 93 percent received Social Security benefits, and 38 percent received income from a public or private pension or an IRA.

- Median income received by elderly males and females has increased dramatically since the late 1940s. Median real income received by elderly females increased at a slightly slower rate on average than that received by elderly males between 1947 and 1991. During the last decade, median real income received by elderly females increased at a faster rate than that received by elderly males for individuals aged 55–64 and at a slightly slower rate than the rate for elderly males among individuals aged 65 and over.
- Mean real income increased for all elderly age cohorts between 1974 and 1989, and then decreased in 1992. While aggregate mean real income decreased for these cohorts, Social Security income and pension and annuity income increased. The decrease in mean real income between 1989 and 1992 was driven by a decline in real mean income from assets and a decline in real mean earnings.
- The percentage of the elderly receiving income from various sources has shifted over time. The percentage of elderly persons receiving Social Security and employment-based pensions and annuities has increased since 1974, while the percentage of the elderly receiving income from assets increased dramatically between 1974 and 1979, remained relatively constant until 1989, and dropped between 1989 and 1992. The percentage of elderly receiving income from earnings and other income sources decreased.

- The composition of the elderly's income also has shifted over time. Social Security and employment-based pensions represented an increasing percentage of the elderly's income between 1974 and 1992. Income from assets increased dramatically as a percentage of the elderly's income between 1974 and 1984 and has since declined. Earnings have decreased, and income from other sources has remained relatively constant.
- The percentage of individuals receiving income from earnings and the proportion of income from earnings decreases with age. In general, the percentage of individuals receiving income and the proportion of income from other sources, including pension plans, Social Security, income from assets, etc. increases with age until age 70 or 80.
- Total median income among the elderly declines with age. Median earnings for those individuals receiving earnings and median pension and IRA benefit payments among recipients generally decrease with age. Median Social Security benefits remain relatively constant, increasing slightly for those aged 65 and over, and median income from assets increases with age.
- While income is an important determinant of the economic status of the elderly, wealth also plays a major role in individuals' well-being. In general, wealth increases with income for elderly households; however, there is a wide disparity of wealth among individuals within income levels. This disparity emphasizes the importance of viewing income and wealth jointly, as individuals receiving the same income levels may have dramatically different wealth profiles, resulting in different levels of economic stability.

The financial situation of the baby boomers once they reach retirement will to a large degree be a function of their participation in employment-based retirement plans today. Participation rates in such plans have generally risen over the decades since 1940. While participation rates did fall during the mid and latter 1980s, recent evidence indicates that this decline has ceased if not actually reversed.

- In 1993, 62 percent of all civilian nonagricultural wage and salary workers worked for an employer where a retirement plan was sponsored. Among these workers, 76 percent actually participated in the plan. Among all plan participants, 86 percent were vested in the plan.
- Between 1940 and 1974, the participation rate among all private non-agricultural wage and salary workers rose from 15 percent to 47 percent.
- After decreases in the proportion of workers covered by an employment-based retirement plan, the proportion participating in such a plan, and the proportion vested in an employment-based plan over the time period 1984–1987, all three percentages increased between 1987 and 1991. The pension coverage rate among workers aged 25 and over fell from 67.1 percent to 66.4 percent and then rose to 67.6 percent. The participation rate among workers fell from 55.1 percent to 52.7 percent and then rose to 53.1 percent. The vesting rate among workers fell from 45.1 percent to 44.8 percent and then rose to 47.4 percent.

A general perception exists that the U.S. work force has become increasingly mobile over the years, with one potential ramification being that workers will not accumulate meaningful retirement benefits as they move from job to job. An examination of job tenure figures for prime age (25–64) workers, both male and female, reveals that tenure levels in the 1980s and the beginning of the 1990s were actually higher than those of the 1950s, 1960s, and 1970s.

- For male workers in general, tenure fell between 1983 and 1987 and then remained stable to 1991. This followed a period of consistent increase between 1966, when tenure levels were at their lowest since 1951, to 1983, when they peaked. Therefore, while tenure levels in 1991 were lower than in 1983, they were still higher than at any point in the 1950s, 1960s, or 1970s.
- Female tenure levels show generally consistent growth from 1978 to 1991 after a period of relative stability between the early 1960s and the latter 1970s.

The wealth that individuals accumulate through saving and investing will be a critical determinant of many baby boomers' financial situation in retirement. The fall in saving rates over the 1980s has generated concern among analysts. At the micro level, low saving may mean, in particular, that individuals will not be able to retire when they desire with the lifestyle they desire. While there is a popular perception that the saving rates of baby boomers are much lower than those of previous generations, the data do not support such a contention.

Different studies have reached different conclusions regarding the adequacy of the baby boom generation's financial preparation for retirement. It is important to realize that these studies ask different, though related, questions and then employ differing methodologies in answering the respective questions.

A recent study by B. Douglas Bernheim for Merrill Lynch & Co. asked whether current workers are saving at a

rate sufficient to allow them to maintain the same level of consumption during retirement as they have during their working years. It was calculated that baby boomers are saving at only one-third the rate necessary to maintain their level of consumption in retirement. However, these calculations discounted housing wealth; if housing wealth is taken into account, then the study found that baby boomers are saving at 84 percent of the rate necessary to maintain their level of consumption in retirement. Similar studies have come to similar conclusions that the baby boom generation is not preparing adequately for retirement.

Other studies have taken a different angle in assessing the baby boomers situation and have reached different conclusions. A study by the Congressional Budget Office (CBO) compared the income and wealth of the baby boomers with that of their parents' generation at similar points in their lives to assess how well today's workers are preparing for retirement. CBO found that both real household income and the ratio of household wealth to income were higher on average for baby boomers aged 25–44 in 1989 than for young adults of the same age in 1959 and 1962, respectively. CBO concluded that most baby boomers are likely to enjoy higher real incomes in retirement than their parents, assuming that real wages continue to grow, Social Security and private pensions remain intact, and health care expenditures do not outweigh other gains. CBO noted the prospects are not as sanguine for some demographic groups as for others, in particular for the single, the less educated, and nonhomeowners.

The evidence indicates that boomers, in general, will enjoy a standard of living, i.e., real level of consumption, in retirement that exceeds that of their parents. Whether they will be able to maintain the standard of living they enjoyed while working once they move into retirement is a different question with a less clear answer. A key role will be played by wealth accumulation through homeownership. To the extent that boomers are willing to tap into this resource to fund their retirement, they would appear at this early stage to be in pretty good shape.

It is important to realize that many of the factors that will impact the boomers' retirement, such as developing trends in employment-based retirement plan participation rates, changes that are likely to occur in the level of Social Security benefits and the taxes that support these benefits, other developments in government fiscal policy, and macroeconomic developments such as economic growth and changes in the value of housing will unfold over decades and are impossible to predict. These items are all in addition to the planning, saving, and investing decisions made by individuals and often will impact these decisions. The oldest boomers are still 17 years away from age 65, and the youngest boomers are 35 years away from the same age. Many unforeseen events lie ahead that will have a large impact on the baby boomers.

Continued economic growth would be a positive development, while economic stagnation would be a negative for boomers. The continued increase in the proportion of women in the work force earning their own retirement benefits is a positive development. Inheritances received by boomers from their parents' generation will be a plus, although they are likely to be concentrated among a small portion of the baby boom generation. Any innovations in housing finance that improve homeowners' access to their housing equity will be a positive development. Federal budget deficits and prospective fiscal adjustments loom as a negative. The generosity of Social Security benefits is already being scaled back, and further cuts remain a real possibility. In addition, there is the possibility of payroll tax increases to fund these benefits and increased income taxes on the recipients of Social Security benefits.

Given the heterogeneity of the baby boom generation, more research is needed to identify which specific subgroups within the generation are currently at risk and the likely size of the problem. This involves moving beyond broad sweeping generalizations regarding the boomers. Groups that would now appear to be at risk to some degree include nonhomeowners, the less educated, the single, and the youngest boomers.

Introduction

What will the retirement experience of the baby boom generation[1] be like? Will their standard of living be lower, higher, or the same as those during their working years? Will they be better or worse off than previous generations of retirees? Questions such as these are generating increased research and debate as the leading edge members of the baby boom generation move into their late forties, approximately 17 years from retirement age.

Factors impacting the baby boomers' retirement income security are numerous, complex, and often interrelated. Their situation in retirement directly depends on their situation during their working years. Among the important factors are their work histories. On the surface, it seems reasonable to assume that workers in steady, good-paying jobs should have reasonable prospects for a comfortable retirement, while individuals currently living under marginal circumstances are likely to face similar conditions in their later years. However, closer examination reveals the complexity of this issue.

Boomers' participation in employment-based retirement plans during their working years will directly impact their retirement income prospects. It is of interest to know the demographic characteristics of individuals who are participating and those who are not participating in such plans. Among nonparticipants, have they participated in the past or are they likely to participate in the future? Among participants, what are the types of plans in which they are participating? What levels of retirement income are these plans likely to generate? The answer to this last question depends on the answer to other questions. Did individuals receiving lump-sum distributions during their working years roll them over and preserve them for retirement? What were the tenure patterns of individuals during their working years?

Boomers' savings and wealth accumulation during their working years will also directly impact their retirement income security. Much attention has been focused on the drop in U.S. saving rates over recent years and its multiple impacts. Here it needs to be asked what are the saving patterns of baby boomers, and, in particular, how much are they saving for retirement and how adequate is this saving? How exactly have saving patterns changed over time? What are the implications of saving for retirement through employment-based vehicles such as 401(k) plans? What about wealth accumulation in other forms such as equity in housing?

Benefits received from Social Security and Medicare will directly affect baby boomers' financial status in retirement and proportionately more so the status of those who were relatively low-income earners during their working years. Relevant questions center around likely changes in benefit levels over time and also changes in payroll tax rates, as these will directly impact boomers' disposable income while they are still working and thus may affect their saving patterns.

Mortality and morbidity rates will have financial impacts for the boomers. Longer lives may mean longer periods of retirement that must be funded. Increased well-being, should it accompany longer living, may mean more work in "retirement" and thus more income from earnings during this period. This also raises the question of what will happen to retirement patterns in the future, i.e., will workers continue to retire at earlier ages or will retirement ages begin to rise (especially in light of the increase in the normal retirement age for full Social Security benefits to 67 years)?

Developments in the macroeconomy and government fiscal policy will also impact the baby boom generation's retirement. In general, economic growth would improve their retirement prospects, while economic stagnation would hinder these prospects. Government fiscal policy decisions will affect both the taxes boomers pay while working, and thus their disposable income, and the transfer payments (Social Security, Medicare, Medicaid) they are likely to receive during their retirement years.

This paper provides an overview of most of these questions and issues. Although, it does not delve into any in exhaustive detail, it will explain what is known and highlight issues needing further analysis. Different signals point in different directions. Answers to the question of the adequacy of the boomers' finances in retirement often depend on exactly what question is asked, i.e., should this group be compared with previous generations in retirement, to their standard of living while working, or to some other criterion? In general, it is too early and research on the topic is too incomplete to make sweeping generalizations about the adequacy or inadequacy of the baby boomers' retirement income security.

Furthermore, often lost in these discussions is the heterogeneity of the baby boom generation. Outcomes, in general, are likely to differ between early boomers and late boomers, single boomers and married boomers, white boomers and nonwhite boomers, well-educated boomers and less educated boomers, etc. Issues of heterogeneity are therefore highlighted in the following discussion.

This paper first discusses what constitutes an adequate retirement income. Then it examines the current elderly's income in terms of its level and sources and how it has changed over time. Finally, it explores the issues raised above.

[1] The term baby boom generation is used to refer to the cohort of people born between 1946 and 1964.

Retirement Income Adequacy

What constitutes an adequate retirement income? There is no one simple standard of reference to answer what seems to be a basic question. The answer depends on the question's context, i.e., the purpose behind the question. For example, adequacy can be considered in the context of what constitutes the minimal acceptable standard of living in society for its members. In this case, determination of adequacy is likely to involve some comparison with the official poverty level.

Moving beyond what is minimally acceptable, questions of adequacy often involve some type of comparison of standards of living.[2] Some of the studies discussed in this paper seek to compare, either explicitly or implicitly, the likely standard of living of baby boomers once they reach retirement with the standard experienced by current retirees, to reach some conclusion about the likely adequacy of the boomers' retirement finances. If baby boomers' standard of living in retirement does not meet or exceed that experienced by their parents, their retirement income and wealth could in some sense be considered inadequate.

From a personal financial planning perspective, determination of adequacy often involves a comparison of a person's retirement living standard with that he or she experienced while still working. If an individual is not or will not be able to maintain the same standard of living in retirement as he or she experienced while working, then retirement income could be judged inadequate.

A level of income that is judged adequate under one standard for one particular purpose may be judged inadequate when held to a different standard. For example, an income may be above the poverty level but inadequate in that it provides a standard of living below what an individual expects or became accustomed to during his or her working years. Or a group of retirees may have an adequate retirement income in the sense that their standard of living exceeds that of a previous generation of retirees but inadequate in the sense that their standard of living falls below the one they experienced during their working years. It is entirely possible that what is judged to be adequate from a public policy perspective may be considered inadequate when viewed in the context of personal financial planning. Even from a personal planning perspective, what constitutes adequacy is likely to be very individual specific. While some will expect their standard of living to remain exactly the same after retirement, others may be willing to accept something less once they move into retirement, still while others may very well expect a significant improvement in their standard of living.

Measures of retirement income security and adequacy are typically based on replacement ratios: the percentage of end-of-career pay that is received as retirement income. However, determining what replacement ratio will provide an adequate level of retirement income depends on many factors, particularly individuals' needs and expectations for their lifestyle in retirement relative to that of their final working years, as discussed above. The fraction of preretirement income needed in retirement to maintain a standard of living generally rises as preretirement income falls. However, it may be more useful at times to focus on real levels of consumption needed and desired in retirement than on the percentage relationship of retirement income to preretirement income, when discussing what constitutes adequate retirement income, especially for lower-income workers. Some expenses, such as those for medical care and travel, may rise in retirement, while others, such as work-related and child care expenses will likely fall. Depending on the individual situation, it may be more or less expensive to maintain the same standard of living in retirement.

Older Persons' Current Status

Before evaluating the prospective retirement income security of the baby boom generation, it is important to examine current retirees' economic security. Since the mid 1970s, the income of individuals aged 55 and over has increased in real terms, although it decreased slightly between 1989 and 1992. Sources of income have also shifted, with Social Security and employment-based pensions representing a greater proportion of income and earnings and income from assets representing a smaller proportion in recent years.

The Census Bureau produces an annual demographic survey, the March Current Population Survey (CPS), that includes an income supplement.[3] Because it is not possible to gain an accurate picture of retired individuals' income due to differing definitions of retirement, this section discusses trends in income of the population aged 55 and over and that

[2] Standard of living is a commonly used term that is not really well defined. In this discussion, it refers to a subjective evaluation of an individual's quality of life, which is a function of his or her level of income, wealth, and consumption.

[3] Data on sources of income are comparable through 1979 in the broad categories of Social Security income, pension and annuity income, earnings, income from assets, and other income. Census data for 1974 are comparable in these broad income categories; however, the data tape obtained by the Employee Benefit Research Institute (EBRI) for this research had only broader income categories that still allowed for some comparison. More detailed information on sources of income are available for 1988 and later years. The survey also contains detailed demographic information in addition to income data. This allows the examination of the level and sources of elderly income by demographic variables.

Table 2.1

Sources of Income of the U.S. Population Aged 55 and Over, Percentage Distribution of Population and Income by Income Source, Mean Income, and Median Income, by Age, 1992

	Total Aged 55+				Total Aged 65+			
	Percentage distribution of income by source	Percentage receiving income by source	Median[a] income	Mean income	Percentage distribution of income by source	Percentage receiving income by source	Median[a] income	Mean income
Total	100.0%	100.0%	$11,858	$17,779	100.0%	100.0%	$10,200	$14,901
Earnings	42.9	35.0	15,840	7,630	14.8	14.9	7,000	2,207
Retirement Income	38.0	71.0	7,500	6,755	61.1	95.3	7,512	9,102
OASDI[b]	23.1	64.9	6,280	4,113	40.8	92.7	6,382	6,082
Private pensions[c]	7.1	19.1	4,337	1,259	9.8	24.6	3,960	1,457
former worker	6.5	16.9	4,600	1,163	8.9	21.7	4,040	1,331
survivor	0.5	2.5	2,846	96	0.8	3.3	2,700	126
Public pensions[c]	7.2	10.6	10,000	1,284	9.7	12.7	9,000	1,447
former worker	6.5	9.0	10,704	1,150	8.4	10.7	9,600	1,258
survivor	0.8	1.7	6,378	135	1.3	2.3	6,372	189
IRA[d]/Keogh/401(k)	0.4	0.6	4,160	68	0.5	0.8	3,520	75
Annuities[e]	0.1	0.4	2,142	15	0.2	0.6	2,020	23
Other retirement	0.1	0.3	3,000	15	0.1	0.3	3,000	18
Income from Assets	14.8	68.9	969	2,627	20.1	68.8	1,200	2,989
Interest	9.5	66.7	587	1,694	13.2	66.7	750	1,960
Dividends	2.9	19.2	762	516	4.1	18.6	1,000	607
Rent, royalties, estates and trusts	2.4	10.9	1,500	418	2.8	10.0	1,750	421
Financial Assistance[f]	0.1	0.4	1,800	13	0.1	0.4	1,200	9
Nonpension Survivors' Benefits	0.8	1.3	4,694	149	0.9	1.6	4,500	133
Disability	0.7	1.6	5,835	125	0.5	1.1	4,596	77
Unemployment Compensation, Workers' Compensation, and Veterans' Benefits	1.5	6.1	2,640	265	1.3	4.8	2,400	200
Public Assistance/SSI[g]	0.8	5.3	2,232	142	0.9	6.0	1,836	135
Other[h]	0.4	1.8	1,200	74	0.3	1.5	2,274	50

Source: Employee Benefit Research Institute tabulations of the March 1993 Current Population Survey.
[a]Median income by source includes only individuals receiving income from the source being measured.
[b]Old-Age, Survivors and Disability Insurance; includes railroad retirement.
[c]Does not include disability benefits.
[d]Individual retirement account.
[e]Does not include survivor or disability payments.
[f]Includes regular financial assistance from friends or relatives not living in the individual's household.
[g]Supplemental Security Income.
[h]Includes educational assistance, child support, alimony, and other sources of income.

of the population aged 65 and over. The appendix at the back of this report includes further detail on these individuals' income over time. Throughout this section and the appendix, mean income calculations by income source include all individuals, whether or not they receive income from the source, while median income calculations are based on income source recipients only, excluding those with no income from that source.

Sources of Income

In 1992, there were 52.1 million individuals in the United States aged 55 and over and 30.9 million individuals aged 65 and over. Individuals aged 55 and over received a higher average income ($17,779) than individuals aged 65 and over ($14,901) (table 2.1). Among older individuals, most received below average income as evidenced by a median income below

the mean income. The sources of income received by individuals varies significantly with age. Earnings represent 43 percent of the income of individuals aged 55 and over, compared with 15 percent of the income of individuals aged 65 and over. On the other hand, Social Security comprises 41 percent of income of individuals aged 65 and over, compared with 23 percent of the income of individuals aged 55 and over. These differences in income indicate that a much greater percentage of individuals over age 65 are retired than individuals over the age of 55. Seventy-one percent of individuals aged 55 and over and 95 percent of individuals aged 65 and over received some form of retirement income (i.e., from Social Security, pensions, individual retirement accounts (IRAs), annuities, etc.) in 1992. Among individuals aged 65 and over, 93 percent received Social Security benefits, and 38 percent received income from a public or private pension or an IRA.

Table 2.2
Sources of Retirement Income of the U.S. Population Based on March Current Population Survey and National Income and Product Accounts, 1992

	March Current Population Survey	National Income and Product Accounts	Net Difference
		($billions)	
OASDI[a]	235.7	$289.5	$ (53.8)
Private Pensions	72.6[b]	182.0[c]	(109.4)
Public Pensions	75.7[b]	108.2[c]	(32.5)
IRA[d]/Keogh/401(k)	4.3	e	e

Source: Employee Benefit Research Institute tabulations of the March 1993 Current Population Survey and U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, August 1993, Vol. 73, No. 8 (Washington, DC: U.S. Department of Commerce, Bureau of Economic Analysis, 1993).
[a]Old-Age, Survivors and Disability Insurance; includes railroad retirement.
[b]Does not include disability benefits.
[c]Includes disability benefits.
[d]Individual retirement account.
[e]Data not available.

One shortcoming of the CPS as an income measure is that income generated from lump-sum distributions, paid out by many pension plans on job change and retirement, may not be accurately accounted for in the income statistics. Individuals receiving a lump-sum distribution may or may not report it as pension income; however, these pension distributions, if preserved, generate income in retirement.[4] Depending on how an individual preserves a distribution, it may be reported as pension income; income from IRAs, Keoghs, and 401(k)s; or as income from annuities. In 1990, 12.2 million people received lump-sum distributions of $125.8 billion, $71.4 billion of which were rolled over into an IRA (Yakoboski, 1994).

Furthermore, the March CPS significantly underestimates the elderly's income, particularly the role of the pension system in providing retirement income. The Bureau of Economic Analysis (BEA) reports benefit payments from various sources in the National Income and Product Accounts (NIPA). The benefit payments from retirement plans and Social Security should equal the amount of income received by individuals as reported in the CPS. However, in 1992 the March CPS underestimated Social Security (including railroad retirement) by $53.8 billion, private pensions by $109.4 billion, and public pensions by $32.5 billion (table 2.2). If the March CPS reflected all pension benefits as reported in the NIPA, the percentage of elderly income provided by pensions and Social Security would be nearly equal in the aggregate. In 1992, Old-Age, Survivors, and Disability Insurance (OASDI) benefits totaled $289.5 billion and private and public pension benefits totaled $290.2 billion. The March CPS reflects that, among individuals aged 65 and over in 1992, Social Security provided 41 percent of income and public and private pensions, excluding IRAs, Keoghs, and 401(k)s, provided 20 percent of income (table 2.1). It appears that the NIPA does not fully account for lump-sum distributions either, and if these pension distributions were included, retirement benefits would represent an even greater percentage of retirement income. In 1990, there were $148.8 billion in private pension benefits, according to the NIPA, and $125.8 billion in lump-sum distributions, according to Employee Benefit Research Institute/Internal Revenue Service (EBRI/IRS) data. If the NIPA included lump-sum distributions, the majority of which were from private plans, that would imply that most private pension benefits are paid out in lump-sum distributions—an implication that does not seem reasonable.

Income of the Older Population Over Time

Median income received by both males and females aged 55 and over has increased dramatically since the late 1940s

[4] Individuals were asked if they received any pension or retirement income and if they received regular payments from an individual retirement account (IRA). Therefore, preserved lump-sum distributions may be classified as income from IRAs, Keoghs, and 401(k)s or as income from annuities or income from assets, depending on how it was preserved and how it is received in retirement. In addition, distributions that are preserved in a vehicle that does not allow for regular payments (i.e., an IRA in which individuals may draw money as they desire rather than in regular payments) may not be reflected as income but play an important role in individuals' economic status.

(table 2.3). Median real income for males aged 65 and over increased from $5,542 in 1947 to $14,789 in 1991 (an average of 2.3 percent annually), and median real income received by females aged 65 and over increased at a slightly slower rate, from $3,194 to $8,436 (an average of 2.2 percent) over the same period (all figures in 1992 dollars). During the last decade, female median real income increased at a faster rate than male income for individuals aged 55–64 and at a slightly slower rate than male income for individuals aged 65 and over. Between 1990 and 1991, there was a slight decrease in median income for all males and older females (table 2.3).

Table 2.3
Median Elderly Income by Gender, Selected Years 1947–1991

	Males		Females	
	55–64	65+	55–64	65+
		($1992)		
1947	$13,589	$ 5,542	$ 5,577	$3,194
1950	13,355	5,280	4,916	2,843
1955	16,586	6,446	6,060	3,375
1960	18,688	7,398	6,165	3,578
1965	21,537	8,681	8,283	4,037
1970	26,083	10,449	10,007	5,170
1975	26,562	12,380	9,737	6,596
1980	27,129	12,516	8,397	7,205
1985	26,413	14,212	9,353	8,232
1990	26,626	15,225	10,091	8,634
1991	26,226	14,789	10,200	8,436

Source: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, *Money Income of Households, Families, and Persons in the United States: 1991*, Current Population Reports Consumer Income Series P-60, no. 180 (Washington, DC: U.S. Government Printing Office, 1992).

Sources of income vary by age cohort and over time (table 2.4). Median real income of individuals aged 55 and over increased between 1974 and 1989 from $11,425 to $12,509, and then decreased to $11,842 in 1992. While aggregate median real income for individuals aged 55 and over decreased 2 percent between 1989 and 1992, Social Security and pension and annuity income stayed relatively flat, increasing 0.1 percent and 0.5 percent respectively. The decrease in median real income between 1989 and 1992 was driven by the 11.7 percent decline in real median income from assets and the 2.3 percent decline in real median earnings.

Similar trends occurred for individuals aged 65 and over and for each age cohort of individuals aged 65 and over. There was some decrease in real median income for individuals aged 55–64 between 1974 and 1984 that was likely due to the decrease in earnings, because a high percentage of these individuals relied on earnings for a substantial percentage of their income (table 2.4).

The percentage of the older population receiving income from various sources has shifted over time. Between 1974 and 1992, the percentage of persons aged 55 and over receiving Social Security increased from 58.2 percent to 65.4 percent, and the percentage of these individuals receiving employment-based pensions and annuities increased from 18.2 percent to 30.2 percent. The percentage of older individuals receiving income from assets increased dramatically between 1974 and 1979, from 46.1 percent to 70.4 percent and has remained relatively constant since then. The percentage receiving income from earnings and other income sources (i.e., public assistance, unemployment insurance, workers' compensation, veterans' benefits, financial assistance from individuals outside the household, etc.) decreased. Trends in income recipiency of individuals aged 65 and over followed the same general patterns, although the percentages of these individuals receiving income from various sources differed greatly from those of individuals aged 55 and over (table 2.5).

The composition of the older population's income has also shifted over time. Among individuals aged 55 and over, Social Security and employment-based pensions represented an increasing percentage of income between 1974 and 1992, with the contribution from Social Security rising from 19.5 percent to 23.6 percent and that of employment-based pensions increasing from 8.5 percent to 15 percent (table 2.5). Income from assets increased significantly as a percentage of income between 1974 and 1984 and has since declined. Earnings have decreased 14 percentage points, from 57 percent of income in 1979 to 43 percent in 1992. Income from other sources has remained relatively constant, contributing roughly 3 percent of elderly's annual income. The composition of income of individuals aged 65 and over followed similar trends. However, Social Security as a percentage of income remained relatively flat for these individuals, indicating that the increase in the proportion of income represented by Social Security for individuals aged 55 and over is due to more individuals aged 55–64 claiming Social Security benefits.

Trends in the older population's income also vary by income quintile. Most individuals aged 65 and over receive income from Social Security, ranging from 87 percent in the highest income quintile to 97 percent in the middle income quintile in 1992 (table 2.6). A greater percentage of the middle and higher income older population receive pension income than those with lower income. For example, 37 percent of individuals in the third income quintile and 63 percent of individuals in the fourth income quintile received income from

Table 2.4
Median Income of the Population Aged 55 and Over by Age and Income Source, Selected Years 1974–1992

	Total Aged 55+	Total Aged 65+	55–61	62–64	65–69	70–79	80+
				Total			
1974[a]	$11,425	$8,674	$20,490	$14,653	$ 9,676	$ 8,600	$7,492
1979	10,793	8,795	17,812	13,214	10,127	8,743	7,517
1984	11,349	9,659	16,536	13,039	11,081	9,657	7,977
1989	12,509	10,765	18,356	14,478	12,423	10,749	9,083
1992	11,842	10,200	18,043	13,620	11,302	10,361	8,947
				OASDI[b]			
1974	5,854	6,033	5,601	4,778	5,806	6,306	5,746
1979	5,674	5,798	5,598	4,522	5,643	5,989	5,691
1984	6,045	6,234	5,757	4,710	6,118	6,270	6,121
1989	6,332	6,504	5,884	5,011	5,886	6,789	6,618
1992	6,348	6,420	6,000	5,143	6,015	6,514	6,681
				Pensions and annuities[a,c]			
1974[a]	5,464	5,123	8,538	6,010	5,362	5,123	3,961
1979	5,658	4,824	9,025	6,957	5,338	4,638	4,402
1984	5,476	4,694	8,733	7,025	5,476	4,350	3,896
1989	5,920	5,211	9,504	7,673	6,291	4,874	4,073
1992	6,000	5,076	10,000	8,000	6,204	5,024	3,600
				Income from assets			
1974	1,423	1,821	1,110	1,352	1,708	1,958	1,779
1979	966	1,353	696	966	1,248	1,366	1,353
1984	1,499	2,067	987	1,362	1,831	2,213	2,283
1989	1,436	1,923	987	1,245	1,707	2,086	1,980
1992	989	1,200	572	750	1,083	1,210	1,300
				Earnings			
1974	17,075	6,113	22,767	19,921	6,830	5,123	4,354
1979	17,393	6,646	21,654	18,939	7,730	5,539	3,247
1984	15,647	5,858	19,559	16,905	6,817	4,564	3,260
1989	16,972	7,694	22,063	16,972	9,052	5,657	4,526
1992	15,840	7,000	20,200	15,000	8,300	6,000	5,000
				Other[a,d]			
1974[a]	2,739	2,669	3,039	2,869	2,732	2,598	2,732
1979	2,213	2,125	2,319	2,763	1,980	2,114	2,300
1984	2,086	1,956	2,477	2,086	2,034	1,964	1,784
1989	2,263	1,989	2,715	2,608	2,172	1,926	1,901
1992	2,400	2,264	2,628	3,334	2,400	2,172	2,100

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Median pension income in 1974 may be overstated, and median "other" income may be understated. Total private pension income of individuals aged 55 and over in 1974 was $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[b]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[c]Includes pension, annuity, survivors,' and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Table 2.5
Sources of the Older Population's Income Over Time, Selected Years 1974–1992

	1974[a]	1979	1984	1989	1992
	Percentage of the Older Population Receiving Various Income Sources				
			Aged 55+		
Total Income	100.0%	100.0%	100.0%	100.0%	100.0%
OASDI[b]	58.2	59.4	61.7	64.4	65.4
Pensions and annuities[a,c]	18.2	20.6	24.2	28.8	30.2
Income from assets	46.1	70.4	70.2	70.8	69.0
Earnings	46.4	39.4	36.4	36.0	35.0
Other[a,d]	16.0	15.7	14.2	13.7	13.9
			Aged 65+		
Total Income	100.0	100.0	100.0	100.0	100.0
OASDI[b]	88.6	91.0	92.6	92.5	93.4
Pensions and annuities[a,c]	24.0	26.6	30.1	34.7	37.2
Income from assets	47.4	68.9	69.4	70.3	68.8
Earnings	21.9	17.5	15.2	16.4	14.9
Other[a,d]	17.3	15.3	13.6	13.4	12.9
	Distribution of the Older Population's Income by Income Source				
			Aged 55+		
Total Income	100.0	100.0	100.0	100.0	100.0
OASDI[b]	19.5	20.3	21.4	21.7	23.6
Pensions and annuities[a,c]	8.5	10.0	11.1	13.5	15.0
Income from assets	11.5	14.1	20.0	18.5	15.2
Earnings	57.2	52.5	44.6	43.4	42.9
Other[a,d]	3.3	3.1	2.8	2.8	3.2
			Aged 65+		
Total Income	100.0	100.0	100.0	100.0	100.0
OASDI[b]	42.0	42.7	40.5	38.6	41.7
Pensions and annuities[a,c]	14.0	14.8	15.0	17.5	20.1
Income from assets	18.2	21.5	28.2	25.2	20.5
Earnings	21.3	17.3	13.3	15.8	14.8
Other[a,d]	4.5	3.6	2.9	2.9	3.0

Source: Employee Benefit Research Institute tabulations of the March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]In 1974, the percentage of older individuals receiving pension income and the percentage of income represented by pension income may be overstated, and the percentage of people receiving "other" income and the portion of income represented by "other" income sources may be understated. Total private pension income of individuals aged 55 and over in 1974 totaled $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[b]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[c]Includes pension, annuity, survivors,' and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

private pensions, compared with 5 percent of individuals in the lowest income quintile and 12 percent of individuals in the second income quintile. The percentage of individuals receiving earnings and income from assets generally increased with income.

The percentage distribution of the income of the population aged 65 and older also varies by income. Earnings, income from assets, and pensions and annuities were a larger source of income for higher-income individuals in 1992, while Social Security benefits generally contributed more to the total income of low-income individuals. While all individuals aged 65 and over rely on Social Security for 42 percent of

Table 2.6

Sources of Income of the U.S. Population Aged 65 and Over by Income Quintile, Selected Years 1974–1992

	Total	Lowest	2	3	4	Highest
	Percentage of the Older Population Receiving Various Income Sources					
			OASDI[a]			
1974	88.6%	82.0%	90.4%	94.8%	94.3%	79.6%
1979	91.0	82.5	95.5	96.6	95.6	83.9
1984	92.6	87.7	96.1	96.9	95.6	86.7
1989	92.5	89.7	95.7	96.5	95.5	85.1
1992	93.4	89.5	96.7	97.4	96.4	87.1
			Pensions and annuities[b,c]			
1974[b]	24.0	2.2	5.0	14.5	40.0	50.8
1979	26.6	2.4	6.6	21.0	45.2	54.6
1984	30.1	3.2	10.5	29.0	52.3	53.5
1989	34.7	4.9	13.0	35.8	58.3	59.9
1992	37.2	5.4	11.9	37.2	62.5	66.2
			Income from assets			
1974	47.4	16.6	23.4	42.1	62.8	81.6
1979	68.9	43.9	51.8	70.2	82.8	92.3
1984	69.4	42.1	49.1	73.2	85.2	95.0
1989	70.3	44.6	53.1	72.6	85.4	94.3
1992	68.8	46.1	50.7	70.1	82.1	92.7
			Earnings			
1974	21.9	8.8	8.6	13.6	25.8	48.1
1979	17.5	4.5	5.9	10.8	23.1	41.4
1984	15.2	4.6	5.7	12.0	19.8	33.0
1989	16.4	4.5	6.1	12.8	20.0	37.8
1992	14.9	3.6	5.3	10.9	17.7	35.4
			Other[b,d]			
1974[b]	17.3	14.5	27.2	21.8	13.8	8.3
1979	15.3	18.7	24.7	16.3	9.7	8.0
1984	13.6	20.0	21.6	11.7	7.5	7.7
1989	13.4	18.2	18.6	9.9	9.7	11.1
1992	12.9	15.9	17.9	9.7	9.6	11.7
	Distribution of the Older Population's Income by Income Source					
			OASDI[a]			
1974	42.0	88.6	77.7	74.6	55.4	19.9
1979	42.7	79.1	78.7	71.9	51.9	20.5
1984	40.5	80.2	79.7	68.1	48.0	19.6
1989	38.6	81.5	78.8	65.2	45.8	17.9
1992	41.7	82.6	81.1	69.6	50.5	20.4
			Pensions and annuities[b,c]			
1974[b]	14.0	1.5	2.3	4.6	14.4	18.8
1979	14.8	1.1	2.1	5.5	15.7	20.6
1984	15.0	1.2	2.8	8.2	18.5	18.9
1989	17.5	2.0	3.8	10.6	21.1	21.6
1992	20.1	2.1	3.2	10.6	22.9	25.9
			Income from assets			
1974	18.2	3.8	4.4	7.4	14.1	25.7
1979	21.5	7.1	9.1	13.1	19.5	28.4
1984	28.2	7.4	8.5	16.5	23.5	38.6
1989	25.2	6.7	9.1	16.1	22.4	33.2
1992	20.5	6.6	8.0	12.6	16.6	27.5

(continued)

Table 2.6 (continued)

	Total	Lowest	2	3	4	Highest
				Earnings		
1974	21.3%	–3.2%	2.8%	4.8%	11.4%	33.8%
1979	17.3	0.3	1.6	3.9	9.9	28.8
1984	13.3	0.2	1.5	3.7	8.2	21.3
1989	15.8	0.2	1.7	5.0	8.6	25.3
1992	14.8	–0.4	1.5	4.3	7.6	24.1
				Other[b,d]		
1974[b]	4.5	9.3	12.8	8.6	4.7	1.7
1979	3.6	12.3	8.5	5.5	3.0	1.7
1984	2.9	11.0	7.5	3.6	1.8	1.7
1989	2.9	9.7	6.6	3.1	2.1	2.0
1992	3.0	9.1	6.1	2.8	2.4	2.2

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[b]In 1974, the percentage of income of the older population represented by pension income may be overstated and the percentage of income represented by "other" income sources may be understated. Total private pension income of individuals aged 55 and over in 1974 was $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between
7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[c]Includes pension, annuity, survivors,' and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

income, individuals in the lowest income quintile receive 83 percent of their income from Social Security, compared with individuals in the highest income quintile, who receive 20 percent of their income from Social Security (table 2.6).

Relationship between Wealth and Income

Measuring the economic well-being of the elderly by income measures alone does not give a complete picture of the older population's economic situation. Individuals with the same income levels may have dramatically different wealth profiles resulting in different levels of economic security. Resources available by drawing on assets or reduced expenses resulting from living in owner-occupied homes reduce the amount of income necessary for the elderly to live comfortably in retirement. Furthermore, interest and dividends, which are directly related to wealth, comprise 28 percent of the income of elderly who are above the poverty line, compared with only 4 percent of the income of those who are in poverty (Quinn and Smeeding 1993). Financial wealth is also a determinant of participation in entitlement programs for the elderly, such as Medicaid.

The Survey of Consumer Finance provides wealth and income data and allows evaluation of the relationship between wealth and income. In general, wealth holdings are positively correlated with income. According to Congressional Budget Office tabulations of the Survey of Consumer Finance, in 1989, median household wealth among individuals aged 55–64 ranged from no wealth for unmarried individuals in the lowest income quintile to $425,000 for married individuals in the highest income quintile (table 2.7). Median wealth of households in which the head of household was married was far greater than that of households in which the head was unmarried. Households with the lowest incomes had the lowest median wealth-to-income ratios, indicating that they are relying more on income than wealth, compared with higher-income groups. These individuals are of most concern in evaluating the future of the Social Security program, as on average they have little wealth and rely on Social Security for the major part of their income.

Factors in addition to wealth, such as transfer payments, may improve economic status in retirement. Altering the definition of income to include realized capital gains, government noncash income, imputed rent for owner-occupied housing, employer-provided health insurance and Medicare greatly increases measures of income received by the

Table 2.7
Median Elderly Household Wealth and the Ratio of Median Household Wealth to Income, by Income Quintiles, 1989

	Median Ratio of Wealth to Income		Median Wealth	
	Aged 55–64	Aged 65–74	Aged 55–64	Aged 65–74
All Households				
Lowest	0.55	1.84	$ 8,100	$ 10,400
2	3.70	5.23	50,000	51,000
3	3.67	6.36	98,200	96,700
4	2.88	4.15	109,300	108,300
Highest	3.62	6.00	331,200	333,200
Median	3.07	4.83	97,200	81,500
Unmarried Head of Household				
Lowest	0.00	0.94	0	3,700
2	2.58	2.60	19,200	20,900
3	2.48	5.92	46,100	60,600
4	3.92	5.75	97,200	79,600
Highest	2.92	7.19	182,000	228,400
Median	2.58	3.99	43,100	50,800
Married Head of Household				
Lowest	3.90	3.95	39,900	44,500
2	3.83	6.36	97,700	88,000
3	3.18	2.89	116,200	67,800
4	2.76	4.67	162,900	158,200
Highest	4.86	6.83	425,000	491,000
Median	3.51	5.23	119,500	130,200

Source: Congressional Budget Office tabulations using the Survey of Consumer Finances in 1989, *Baby Boomers in Retirement: An Early Perspective* (Washington, DC: Congressional Budget Office, 1991).

elderly relative to measures of income based on cash income only (table 2.8). Mean pretax income of elderly households with individuals aged 65 and over as a percentage of all household pretax income was 70 percent in 1991 (unadjusted for family size). Using an expanded definition of income[5] results in a ratio of elderly to nonelderly mean income of 81 percent. If implicit rental income of owner-occupied homes is added to the income measure, the ratio increases to 86 percent.

Baby Boomers and Pension Plans

The financial situation of the baby boomers once they reach retirement will to a large degree be a function of their participation in employment-based retirement plans today. This section examines sponsorship, participation, and vesting rates of workers today in such plans by worker demographic and work-related characteristics. Today's figures are put into context by examining trends in pension participation rates both over the long term and within the last decade. Attention is also focused on the types of plans employers are sponsoring for workers today. The relative growth of defined contribution plans has received much attention and is considered by some to have been a negative development for retirement income security. The validity of such arguments is considered here.

Historical Trends

Over the past five decades, the trend in participation rates in employment-based retirement plans has been upward. In that sense, successive generations of workers have become better off. Participation rates in private employment-based retirement plans among nonagricultural wage and salary workers increased steadily over the period 1940 to 1974 (the latest year for which data are available for this particular series), rising from 14.6 percent to 46.5 percent (table 2.9). The number of workers participating in these plans rose from 4.1 million to 29.8 million over this same time period.

Recent Trends

Much attention has been focused on the well-documented drop in pension sponsorship and participation rates over the

[5] The expanded income definition includes realized capital gains, employer-provided health insurance, noncash transfers of health insurance, including Medicare and Medicaid, food stamps, and public housing, and subtracts federal and state income taxes and payroll taxes.

Table 2.8
Ratio of Mean Household Income of Elderly Aged 65 and Over to Mean Household Income of All Households, 1991

Income Concept	Unadjusted for Family Size	Adjusted for Family Size[a]
Ratio of Means		
Money income before taxes[b]	0.70	0.85
Expanded income[c]	0.81	0.99
Expanded income plus implicit rents[d]	0.86	1.05

Source: Joseph F. Quinn and Timothy M. Smeeding, "The Present and Future Economic Well-Being of the Aged," *Pensions in a Changing Economy* (Washington, DC: Employee Benefit Research Institute, 1993).
[a]Adjusted incomes were computed by using the U.S. Census Bureau's poverty line equivalence scale to transform unadjusted income. The average household size for families was 2.63 persons, compared with 1.65 for all households headed by a person aged 65 and over in 1991.
[b]Money income before taxes is the traditional U.S. Census Bureau measure of income used to generate annual income and poverty statistics.
[c]Expanded income adds realized capital gains, employer-provided health insurance, and noncash transfers of health insurance taxes. Medicare and Medicaid are measured at their fungible value, i.e., they are counted as income only to the extent that they free up resources over and above basic food and housing requirements that could have been spent on health care.
[d]Expanded income plus implicit rent adds a measure of the implicit rental income of owner-occupiers' rate of return (6.89 percent in 1991) applied to the net equity in owned homes and subtracts property taxes owed on these homes from the expanded income measure defined in footnote c above.

Table 2.9
Historical Private Pension Plan Participation Trends of All Private Nonagricultural Wage and Salary Workers, Selected Years 1940–1974

	Private Wage and Salary Workers (thousands)	Workers Participating in Private Pension Plans (thousands)	Percentage of Workers Participating in Private Pension Plans
1940	28,159	4,100	14.6%
1945	34,431	6,400	18.6
1950	39,170	9,800	25.0
1955	43,727	14,200	32.5
1960	45,836	18,700	40.8
1965	50,689	21,800	43.0
1970	58,325	26,100	44.7
1974	64,095	29,800	46.5

Source: Alfred Skolnik, "Private Pension Plans, 1950–74," *Social Security Bulletin* (June 1976): 3–17; and U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings* (Washington, DC: U.S. Government Printing Office, March issues).

1980s.[6] However, many people are not aware of the trends since the latter 1980s into the beginning of the 1990s. Specifically, pension trends appear to have reversed direction or, at minimum, ceased their decline.[7] After decreases in the proportion of workers who work for an employer where a plan is sponsored for any of the employees, actually participating in a plan, and vested in a plan over the time period 1984–1987, all three percentages increased between 1987 and 1991, according to Bureau of the Census tabulations of the Survey of Income and Program Participation (SIPP).[8]

[6] See Joseph S. Piacentini, "Pension Coverage and Benefit Entitlement: New Findings from 1988," *EBRI Issue Brief* no. 94 (Employee Benefit Research Institute, September 1989).

[7] See Paul Yakoboski and Sarah Boyce, "Pension Coverage and Participation Growth: A New Look at Primary and Supplemental Plans," *EBRI Issue Brief* no. 144 (Employee Benefit Research Institute, December 1993); and U.S. Department of Labor, Social Security Administration, U.S. Small Business Administration, and Pension Benefit Guaranty Corporation, Pension and Health Benefits of American Workers: New Findings from the April 1993 Current Population Survey, May 1994.

[8] Workers were asked if their employer or union had a retirement plan for any of its employees. A worker who answered yes was counted as working for an employer where a plan was sponsored. These workers then were asked if they were included in the retirement plan. Workers who answered yes were counted as participating in an employment-based plan. Respondents reporting that they were a plan participant were asked if they could eventually receive some benefits from this plan on reaching retirement age if they were to leave the present employer now or in the next few months. They were also asked if their retirement benefits from this plan could be received in a lump-sum payment. If they answered yes to either question, they were counted as vested.

Table 2.10
Pension Eligibility—Wage and Salary Workers Aged 25 and Over: 1984, 1987, and 1991

Year	Workers	Sponsorship Rate	Employer Sponsors a Plan	Participation Rate	Workers Participating in a Plan	Vesting Rate	Workers Vested in Plan
	(thousands)		(thousands)		(thousands)		(thousands)
All Workers							
1984	78,619	67.1%	52,727	55.1%	43,290	45.1%	35,479
1987	83,962	66.4	55,738	52.7	44,297	44.8	37,604
1991	90,785	67.6	61,402	53.1	48,204	47.4	43,059
Males							
1984	43,467	69.8	30,351	61.0	26,496	50.3	21,865
1987	45,047	68.8	31,006	57.8	26,040	48.9	22,045
1991	48,381	68.5	33,136	56.6	27,368	50.3	24,345
Females							
1984	35,152	63.7	22,376	47.8	16,793	38.7	13,614
1987	38,916	63.5	24,731	46.9	18,239	40.0	15,559
1991	42,404	66.7	28,266	49.1	20,836	44.1	18,714

Source: Unpublished tabulations of the Survey of Income and Program Participation by the U.S. Department of Commerce, Bureau of the Census.

The pension sponsorship rate among wage and salary workers aged 25 and over went from 67.1 percent in 1984 down to 66.4 percent in 1987 and then rose to 67.6 percent in 1991 (table 2.10). The participation rate went from 55.1 percent to 52.7 percent to 53.1 percent. In 1984, 52.7 million workers worked for an employer where a retirement plan was sponsored, compared with 55.7 million in 1987 and 61.4 million workers in 1991. The number of workers participating rose from 43.3 million in 1984 to 44.3 million in 1987 to 48.2 million in 1991. The proportion of workers vested in a plan was greater in 1991 than in 1984; the vesting rate fell slightly from 45.1 percent in 1984 to 44.8 percent in 1987 and then rose 2.6 percentage points to 47.4 percent in 1991. The number of workers vested rose from 35.5 million to 37.6 million to 43.1 million over this time period (table 2.10).

These trends were driven by sizable increases in the sponsorship rates, participation rates, and vesting rates of female workers between 1987 and 1991. After a slight drop from 63.7 percent in 1984 to 63.5 percent in 1987, the sponsorship rate among female workers rose over 3 percentage points to 66.7 percent in 1991 (table 2.10). After falling from 47.8 percent to 46.9 percent between 1984 and 1987, the participation rate among female workers rose over 2 percentage points to 49.1 percent in 1991. The vesting rate among female workers rose from 38.7 percent in 1984 to 40.0 percent in 1987 to 44.1 percent in 1991 (table 2.10).

By comparison, both sponsorship rates and participation rates for male workers fell between 1987 and 1991, although by smaller increments than the fall between 1984 and 1987. The male sponsorship rate fell from 69.8 percent in 1984 to 68.8 percent in 1987 to 68.5 percent in 1991 (table 2.10). The male participation rate fell from 61.0 percent in 1984 to 57.8 percent in 1987 to 56.6 percent in 1991. After falling from 50.3 percent in 1984 to 48.9 percent in 1987, the vesting rate among male workers rose back to 50.3 percent in 1991 (table 2.10).

More recent data from the April 1993 CPS employee benefit supplement reinforces the upward trend in sponsorship, participation, and vesting rates since the late 1980s (table 2.11). Between 1988 and 1993, the pension sponsorship rate among all civilian workers aged 16 and over stayed flat, at 57 percent, while the total number of individuals working for an employer where a plan was sponsored increased from 65 million to 67 million.[9] The participation rate and vesting rates increased from 43 percent to 44 percent and from 34 percent to 38 percent, respectively.

The percentage of male workers working for an

[9] Data for 1988 are tabulated under two methodologies to allow for comparability with earlier years' surveys. Workers who reported that their employer or union did not have a pension plan or retirement plan for any of its employees were not counted as working for an employer where a plan was sponsored in the first line of 1988 data reported in table 11 even if they did report that their employer offered a profit sharing plan or a stock plan in a follow up question. Additionally, participants who reported not being able to receive some benefits at retirement age if they were to leave the plan now were not counted as vested, even if they later responded that they could receive a lump-sum distribution if they left their plan now. Data for 1988 reported above, and in the second line of 1988 data in table 2.11 includes these individuals.

Table 2.11
Trends in Pension Sponsorship, Participation, and Vesting Among Civilian Workers Aged 16 and Over, 1979, 1983, 1988, 1993

	Workers (millions)	Employer Sponsors a Plan (millions)	Workers Participating in Plan (millions)	Workers Vested in Plan (millions)	Sponsor-ship Rate	Partici-pation Rate	Sponsored Participation Rate	Vesting rate	Participant Vesting Rate
All Civilian Workers									
1979	95	53	44	23	56%	46%	81%	24%	52%
1983	99	52	43	24	52	43	83	24	57
1988[a]	114	62	47	32	55	42	76	28	68
1988[b]	114	65	49	38	57	43	75	34	77
1993	118	67	51	44	57	44	76	38	86
All Males									
1979	56	33	29	16	59	51	87	28	55
1983	56	30	26	16	54	47	88	28	60
1988[a]	63	35	28	20	55	45	81	31	70
1988[b]	63	36	29	23	58	46	80	36	78
1993	64	36	30	25	56	45	81	39	86
All Females									
1979	39	21	15	7	52	38	73	18	46
1983	43	21	16	8	50	38	76	20	52
1988[a]	51	27	19	13	54	38	70	25	66
1988[b]	51	29	20	15	57	40	70	30	76
1993	54	32	23	19	58	42	72	36	86
Nonagricultural Wage and Salary									
1979	85	52	42	21	61	50	81	25	51
1983	88	50	41	22	56	46	82	25	55
1988[a]	102	60	45	30	59	44	75	29	67
1988[b]	102	63	47	36	62	46	75	35	76
1993	106	66	50	43	62	47	76	40	86

Source: Employee Benefit Research Institute tabulations of the May 1979, May 1983, May 1988, and April 1993 Current Population Survey employee benefit supplements.

[a]Workers who reported that their employer or union did not have a pension plan or retirement plan for any of its employees were not counted as working for an employer where a plan was sponsored, even if they reported that their employer offered a profit-sharing plan or a stock plan in a followup question. Participants who reported not being able to receive some benefits at retirement age if they were to leave the plan now were not counted as vested, even if they later responded that they could receive a lump-sum distribution if they left their plan now. This allows comparability with the tabulations from earlier years.

[b]Workers who reported that their employer or union did not have a pension plan or retirement plan for any of its employees were counted as working for an employer where a plan was sponsored, if they reported that their employer offered a profit-sharing plan or a stock plan in a followup question. Participants who reported not being able to receive some benefits at retirement age if they were to leave the plan now were counted as vested if they later responded that they could receive a lump-sum distribution if they left their plan now. This allows comparability with the tabulations from 1993.

employer where a plan was sponsored decreased between 1988 and 1993, from 58 percent to 56 percent (table 2.11). Over the same period the male participation rate fell from 46 percent to 45 percent, but the male vesting rate rose from 36 percent to 39 percent. Female sponsorship rates increased from 57 percent to 58 percent between 1988 and 1993. Over the same period the female participation rate rose from 40 percent to 42 percent and the female vesting rate increased from 30 percent to 36 percent (table 2.11).

The overall increases between 1988 and 1993, although not always sizable, are notable in view of the attention that has been focused on the decline in pension sponsorship rates and participation rates during the 1980s. Especially notable is the strong growth rates for females, a group that has historically received relatively little income from employment-based retirement plans in their older years (Grad and Foster, 1979, and Grad, 1992, 1990, and 1981-1985). These figures indicate that the situation of many female boomers is likely to be very different from that of their mothers and grandmothers in that they will receive meaningful benefits from such employment-based plans. These trends will be further enhanced by legally improved survivors' benefits.

Sponsorship, Participation, and Vesting, 1993

Individuals who work for an employer that sponsors a retirement plan will receive retirement income from that plan provided they meet the plan's age and service requirements for participation and vesting. Examining the demographic and work-related characteristics of those workers who work for an employer where a plan was sponsored for any of the employees, participate in a plan, and are vested in such plans provides insight into who will benefit from pension income in their retirement.

According to EBRI tabulations of the April 1993 CPS employee benefit supplement, 62.1 percent of all civilian nonagricultural wage and salary workers aged 16 and over in 1993 were working for an employer where a retirement plan was sponsored (table 2.12). In 1993, 75.9 percent of those workers working for an employer where a retirement plan was sponsored participated in the plan. Thus, 47.1 percent of all civilian nonagricutural wage and salary workers actually participated in an employment-based retirement plan in 1993 (table 2.12). A worker becomes vested in a plan, i.e., earns the right to receive nonforfeitable and nonrevocable benefit payments from the plan, generally only after having worked for the sponsoring employer for a minimum number of years.[10] In 1993, 85.5 percent of these workers participating in an employment-based plan were vested in that plan, and 40.3 percent of all workers were vested in a plan (table 2.12).

The incidence of pension sponsorship and participation varied with worker demographics (table 2.12). Sponsorship and participation rates generally rose with earnings, firm size, and tenure. Sponsorship and participation rates were higher in the public sector than the private sector and increased with the number of hours worked. Within the private sector, workers in the communications and utilities; manufacturing; finance, insurance, and real estate; and mining sectors were most likely to be working for an employer that sponsors a plan and participate in the plan. Also, workers covered by a union contract were more likely to be working for an employer where a retirement plan was sponsored and participate in the retirement plan. Employment-based retirement plan sponsorship and participation rates increased and then decreased with worker age, with sponsorship rates peaking for workers aged 41–50 and participation rates peaking for workers aged 51–60.

While sponsorship and participation rates increased for women and decreased for men during the recent past, men were still more likely than women to be working for an employer where a retirement plan was sponsored and participate in a pension plan. In 1993, the sponsorship rate for male civilian nonagricultural wage and salary workers (62.3 percent) was slightly greater than that for their female counterparts (61.8 percent), and the sponsorship participation rate for males (80.2 percent) was greater than that for females (71.2 percent) (table 2.12).

Given that vesting is a function of employment tenure, it is not surprising that vesting rates among plan participants were positively related to those job-related and demographic characteristics most correlated with tenure, i.e., earnings and age. Plan participant vesting rates did not vary greatly with other worker and job-related characteristics (table 2.12).

Pension Participation Over a Lifetime

Workers in the 41–50 age group reported the highest rate of pension sponsorship for 1993 (70.6 percent). This compares with 56.6 percent of workers aged 21–30 and 32.2 percent of workers aged 16–20 who reported working for an employer who sponsored a retirement plan. Plan participation was also greatest among workers aged 41–50 (61.5 percent). Thirty-four percent of workers aged 21–30 and 3.5 percent of workers aged 16–20 reported participating in their employer's plan. While the low sponsorship and participation rates among the young hold down the rates for the total work force, it can be assumed, based on past experience, that many of the young will move into jobs where the employer sponsors a retirement plan and participate in such plans as they become older.

For this reason, Schieber and Goodfellow (1993) argue that, when evaluating the potential delivery of benefits by the private pension system, workers well established in their careers should be focused on. In addition, marital status and the pension status of a spouse are important considerations, because married individuals are likely to have access

[10]The Employee Retirement Income Security Act of 1974 (ERISA) requires a plan to adopt vesting standards for the employee's benefit (the account balance under a defined contribution plan or the accumulated benefit under a defined benefit plan) at least as liberal as one of the following two schedules: full vesting (100 percent) after five years of participation in the plan (with no vesting prior to that time, known as cliff vesting) or graded (gradual) vesting of 20 percent after three years of service and an additional 20 percent after each subsequent year of service until 100 percent vesting is reached at the end of seven years of service. These rules apply to employer contributions to a single-employer pension plan. Employee contributions to either defined contribution or defined benefit plans and investment income earned on employee contributions to defined contribution plans are immediately vested. Multiemployer plans may also use a 10-year cliff vesting schedule, which means that employees do not attain vested rights to employer contributions until they have completed 10 years of service but become 100 percent vested at that time. Multiemployer plans may provide for cancellation of part of a vested benefit when the participant's employer "withdraws." Public plans, which are included in these tabulations, are not required to adhere to ERISA standards.

Table 2.12

Pension Sponsorship, Participation, Vesting Among Civilian, Nonagricultural Wage and Salary Workers, Aged 16 and Over, 1993

	Total Workers (thousands)	Sponsorship Rate	Participation Rate	Sponsored Participation Rate	Vesting Rate	Participant Vesting Rate
Total	105,815	62.1%	47.1%	75.9%	40.3%	85.5%
Annual Hours						
1–499	3,436	32.1	5.0	15.5	3.9	78.9
500–999	5,025	41.8	9.9	23.6	8.7	87.7
1,000–1,499	8,085	47.8	22.5	47.1	17.6	78.0
1,500–1,999	12,335	59.5	42.9	72.0	35.7	83.3
2,000 or more	68,614	70.3	58.5	83.2	50.4	86.1
Tenure						
Less than 1 year	19,643	39.3	10.9	27.7	6.4	59.2
1–4 years	34,345	55.5	35.2	63.5	25.9	73.5
5–9 years	21,167	68.9	60.3	87.5	51.9	86.1
10–14 years	11,380	77.1	72.1	93.5	67.1	93.1
15 or more years	17,552	83.9	80.0	95.3	76.1	95.2
Age						
16–20	6,634	32.2	3.5	11.0	1.6	45.6
21–30	26,359	56.6	33.8	59.8	25.8	76.2
31–40	31,047	65.8	52.7	80.1	45.0	85.3
41–50	23,459	70.6	61.5	87.1	54.5	88.7
51–60	13,164	66.8	59.3	88.8	53.3	89.9
61–64	2,781	62.4	51.3	82.3	47.7	92.9
65 and up	2,371	46.1	29.0	63.0	26.6	91.6
Firm Size						
Fewer than 25	22,499	18.8	14.2	75.6	12.5	87.8
25–99	12,901	46.3	33.7	72.8	29.0	86.0
100 or more	62,484	82.5	63.6	77.1	54.7	86.0
Annual Earnings						
Less than $5,000	2,207	29.3	3.0	10.3	2.2	71.2
$5,000–$10,000	4,261	39.5	12.9	32.8	9.8	75.5
$10,001–$14,999	7,657	48.7	29.3	60.1	22.2	75.8
$15,000–$19,999	9,349	62.7	45.2	72.0	36.1	79.9
$20,000–$24,999	9,403	73.4	60.6	82.6	51.7	85.2
$25,000–$29,999	7,620	75.6	64.4	85.2	54.5	84.6
$30,000–$49,999	16,949	82.6	75.1	90.9	67.0	89.2
$50,000 or more	7,542	85.2	79.6	93.5	73.4	92.2
Sex						
Male	55,582	62.3	50.0	80.2	42.8	85.6
Female	50,233	61.8	44.0	71.2	37.6	85.3
Union Status						
Union covered	18,498	88.4	78.7	89.0	67.0	85.1
Not union covered	87,317	56.5	40.5	71.6	34.7	85.7
Industry						
Federal government	3,268	90.0	79.0	87.7	70.4	89.2
State and local government	15,228	89.3	74.4	83.3	66.0	88.7
Mining	648	73.3	66.9	91.3	60.4	90.2
Construction	4,868	35.4	29.7	84.0	25.2	84.8
Manufacturing-nondurables	8,095	68.2	55.5	81.3	45.8	82.5
Manufacturing-durables	10,714	76.5	63.5	83.0	54.9	86.5
Transportation	4,064	60.4	47.0	77.8	39.0	83.1
Communications, utilities	2,426	89	77.9	87.5	69.7	89.4
Wholesale trade	4,426	56.6	45.4	80.3	38.2	84.1
Retail trade	18,175	42.2	24.1	57.0	19.3	80.0
Finance, insurance, real estate	6,927	70.4	52.6	74.7	45.6	86.7
Business, personal entertainment services	10,629	30.3	19.0	62.8	15.8	83.0
Professional services	16,346	63.2	42.5	67.3	35.3	83.1

(continued)

Table 2.12 (continued)
Pension Sponsorship, Participation, Vesting Among Civilian, Nonagricultural Wage and Salary Workers, Aged 16 and Over, 1993

	Total Workers (thousands)	Sponsorship Rate	Participation Rate	Sponsored Participation Rate	Vesting Rate	Participant Vesting Rate
Race						
White	90,654	62.2%	47.7%	76.6%	41.0%	86.1%
Black	11,622	62.7	45.3	72.3	36.8	81.3
Other	3,539	57.1	40.1	70.2	32.7	81.7

Source: Employee Benefit Research Institute tabulations of the April 1993 Current Population Survey employee benefit supplement.

to their spouses' pension benefits. Table 2.13 presents their tabulations of the March 1991 CPS for the age group 45–59. The table presents pension status by marital status for all individuals in this age group, not only workers.

According to the Schieber and Goodfellow study: "Among the single individuals, 3.9 percent were receiving a benefit, and another 35.7 percent of them were participating in a retirement pension or saving plan sponsored by their employer. Another 22.3 percent of these single individuals had not received any earned income during the year in 1990. In other words, among those single individuals who had worked in the prior year, or who had previously retired with a benefit 51 percent were receiving some form of benefit from the tax preferences favoring pensions.

"Among the married individuals, 69.4 percent were receiving some benefit from the pension system. Among them, 5.6 percent already appeared to have fully retired on some form of pension, reporting that either they, their spouse, or both were receiving a pension, and had no earned income in 1990. For another 6.9 percent of them, one or both spouses is already receiving a pension, and one or both of them is still employed and actively participating in a retirement plan. For 38.0 percent of the married individuals in this age group neither member of the couple is yet receiving a pension but, one or the other spouse is participating in a pension, and in 18.5 percent of the cases, both members of the couple were participating in a pension plan. Among those not covered or not receiving a pension benefit of any sort, 2.4 million individuals reported no earnings in the prior year. If the people who had not worked in the prior year and were not already receiving a pension are removed from the basis for calculating the share of the population benefiting from a pension program, 75.3 percent of the remaining married individuals were receiving some benefit.

"Looking at everyone within the age bracket being considered, 22.3 million out of 36.4 million total people in the population, or 61.3 percent were participating in an employer-sponsored pension or saving program in some fashion. If the base population is narrowed to those already retired and receiving a pension plus those still working, 22.3 million out of 31.8 million, or 70.1 percent are included in such a retirement program. These levels of exposure to employer-sponsored retirement benefits far surpass those that simply look at current participation rates across the whole population that are generally cited by critics of the current tax

Table 2.13
Marital and Pension Status of Individuals Aged 45–59 in 1990

	Single	Married
Total Persons (in millions)	9.86	26.50
	Percentage	Percentage
Neither Participating nor Receiving	60.4%	31.5%
Respondent Only Receiving	2.8	1.9
Spouse Only Receiving		3.7
Both Receiving		0.4
Respondent Only Participating	35.7	19.5
Respondent Participating and Receiving	1.1	1.0
Respondent Participating and Spouse Receiving		1.0
Respondent Participating and Both Receiving		1.4
Spouse Only Participating		18.5
Spouse Participating and Respondent Receiving		0.8
Spouse Participating and Spouse Receiving		1.4
Spouse Participating and Both Receiving		0.0
Both Participating and Neither Receiving		18.5
Both Participating and Respondent Receiving		0.6
Both Participating and Spouse Receiving		0.7
Both Participating and Both Receiving		0.0
Total Percentage with Some Benefit	39.6	69.4
Total Number Getting Some Benefit	3.90	18.39

Source: Sylvester J. Schieber and Gordon P. Goodfellow, *Pension Coverage in America: A Glass Two-Thirds Full or One-Third Empty?* Presentation at U.S. Department of Labor, Pension and Welfare Benefits Administration Conference, Pension Coverage: Where Are We Going?, Washington, DC, April 16,1993.

Table 2.14

Summary of Private-Sector Qualified Defined Benefit and Defined Contribution Plans and Participants, 1975–1990

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
								(thousands)								
Total Plans	311	360	403	443	471	489	546	594	603	601	632	718	733	730	731	712
Defined benefit[a]	103	114	122	128	139	148	167	175	175	165	170	173	163	146	132	113
Defined contribution[a]	208	246	281	315	331	341	378	419	428	436	462	545	570	584	599	599
Defined contribution as percentage of total	67%	68%	70%	71%	70%	70%	69%	71%	71%	73%	73%	76%	78%	80%	82%	84%
								(millions)								
Total Participants	45	48	50	52	55	58	61	63	69	74	75	77	78	78	76	77
Defined benefit[b]	33	34	35	36	37	38	39	39	40	41	40	40	40	41	40	39
Defined contribution[b]	12	13	15	16	18	20	22	25	29	33	35	37	38	37	36	38
Defined contribution as percentage of total	26%	28%	30%	31%	33%	34%	36%	39%	42%	45%	47%	48%	49%	48%	48%	50%
Active Participants	31	32	33	34	35	36	37	37	39	40	40	41	42	42	43	42
Primary plan is defined benefit	27	27	28	29	29	30	30	29	30	30	29	29	28	28	27	26
Primary plan is defined contribution	4	5	5	5	6	6	7	8	9	10	12	13	13	14	15	16

Source: Employee Benefit Research Institute tabulations based on John A. Turner and Daniel J. Beller, eds., *Trends in Pensions,* second edition (Washington, DC: U.S. Department of Labor, 1992); U.S. Department of Labor, Pension and Welfare Benefits Administration, *Private Pension Plan Bulletin* (Winter 1993 and Summer 1993).

[a]Excludes single participant plans.

[b]Active, separated vested, survivors, and retired. Not adjusted for double counting of individuals participating in more than one plan.

treatment of pension programs."

This indicates that policymakers should not be too fixated by relatively low pension participation rates among very young workers when focusing on future retirement income prospects. Many nonparticipating younger workers will move into jobs where the employer sponsors a retirement plan and participate in such a plan as they progress through their working years.

Plan Types

While the number of private employment-based pension plans and plan participants has been increasing, proportionately fewer are defined benefit plans and defined benefit plan participants. It is sometimes argued that such trends jeopardize retirement income security because defined contribution plans, which typically involve explicit worker decisionmaking, are replacing defined benefit plans. There is concern as to whether workers are typically in a position to make wise decisions with regard to their participation in such plans.

The total number of private tax-qualified employment-based plans (both primary and supplemental) more than doubled from 311,000 in 1975, when the Employee Retirement Income Security Act (ERISA) became effective, to 712,000 in 1990 (table 2.14). The total number of private defined benefit plans increased from 103,000 in 1975 to 175,000 in 1983, then decreased to 113,000 in 1990. The total number of private defined contribution plans increased from 208,000 to 599,000 between 1975 and 1990. The number of active participants in primary defined benefit plans decreased slightly, from 27 million to 26 million between 1975 and 1990, while the proportion of all active participants in these plans decreased from 87 percent to 62 percent (calculated from table 2.14).

However, there is no evidence of a widespread "shift" from defined benefit to defined contribution plans. While undoubtedly some plan sponsors, particularly small employers, have replaced defined benefit plans with defined contribution plans, such replacements are not driving the trends in defined benefit and defined contribution plans. Examination of private primary plan trends by plan size demonstrates that the vast majority, 75 percent, of the net decrease in the number of defined benefit plans involved very small plans, consisting of two to nine active participants (table 2.15). Between 1985 and 1990, there was a net decrease in the number of primary defined benefit plans of 33 percent, or 56,651 plans, and the net decrease in plans with two to nine active participants was 42,328. Between 1985 and 1990, the net increase in the number of primary defined contribution plans with two to nine active participants was 66,425 plans; this accounted for 45 percent of the net increase of 149,078 in

Table 2.15
Primary Defined Benefit and Defined Contribution Plan and Active Participant Trends

Active Participants	Primary Plans					Active Participants (thousands)				
	1985	1989	1990	Net change 1985–1990	Net change 1989–1990	1985	1989	1990	Net change 1985–1990	Net change 1989–1990
					Defined Benefit Plans					
2–9	88,124	59,966	45,796	–42,328	–14,170	353	246	189	–164	–57
10–24	24,267	17,791	15,624	–8,643	–2,167	369	271	244	–125	–27
25–49	14,178	9,736	8,605	–5,573	–1,131	491	340	304	–187	–36
50–99	11,303	9,013	8,346	–2,957	–667	808	645	599	–209	–46
100–249	9,534	7,109	6,563	–2,971	–546	1,498	1,135	1,040	–458	–95
250–499	4,670	4,022	3,647	–1,023	–375	1,651	1,430	1,293	–358	–137
500–999	3,149	2,701	2,463	–686	–238	2,222	1,910	1,751	–471	–159
1,000–2,499	2,360	2,220	2,090	–270	–130	3,636	3,434	3,221	–415	–213
2,500–4,999	847	833	798	–49	–35	2,930	2,940	2,802	–128	–138
5,000–9,999	455	450	434	–21	–16	3,141	3,153	3,015	–126	–138
10,000–19,999	198	213	223	25	10	2,749	2,956	3,134	385	178
20,000+	175	178	161	–14	–17	8,985	8,792	8,711	–274	–81
None or None Reported	10,280	18,485	18,139	7,859	–346	a	a	a	a	a
Total	169,540	132,717	112,889	–56,651	–19,828	28,834	27,252	26,303	–2,531	–949
					Defined Contribution Plans					
2–9	199,704	334,762	266,129	66,425	–68,633	852	1,410	1,127	275	–283
10–24	70,424	107,113	94,054	23,630	–13,059	1,056	1,637	1,476	420	–161
25–49	31,406	48,351	45,748	14,342	–2,603	1,091	1,680	1,585	494	–95
50–99	17,620	29,997	27,434	9,814	–2,563	1,224	2,081	1,909	685	–172
100–249	8,878	13,334	13,658	4,780	324	1,331	1,991	2,070	739	79
250–499	2,552	3,599	4,144	1,592	545	868	1,239	1,428	560	189
500–999	1,185	1,675	1,838	653	163	808	1,151	1,266	458	115
1,000–2,499	784	1,148	1,103	319	–45	1,194	1,709	1,671	477	–38
2,500–4,999	219	265	310	91	45	752	907	1,072	320	165
5,000–9,999	97	107	130	33	23	683	726	869	186	143
10,000–19,999	34	59	44	10	–15	460	788	626	166	–162
20,000+	29	36	27	–2	–9	1,100	1,329	1,151	51	–178
None or None Reported	13,082	38,839	40,473	27,391	1,634	a	a	a	a	a
Total	346,014	579,285	495,092	149,078	–84,193	11,420	16,647	16,250	4,830	–397

Source: Employee Benefit Research Institute tabulations of 1985, 1989, and 1990 Form 5500 annual reports filed with the Internal Revenue Service.
[a]Not applicable.

the number of primary defined contribution plans (table 2.15). Therefore, the rapid growth in defined contribution plans cannot simply be explained by a replacement of defined benefit plans with defined contribution plans, because the net increase in defined contribution plans is far greater than the net decrease in defined benefit plans.[11]

The implication is that many workers, particularly those in small firms, now have a defined contribution plan, very likely a 401(k) plan,[12] when in the past they likely would have had no employment-based retirement plan. Arguments that defined contribution plan trends jeopardize retirement income security implicitly assume that if 401(k) plans were not allowed, all workers with these plans would instead have a defined benefit plan. This assumption is incorrect; many likely would have no employment-based plan at all. Therefore, they cannot be worse off because of these developments.

[11]For a complete analysis of these trends, see Celia Silverman, "Changes in DB and DC Plans Occurring Mainly Among Small Plans," *EBRI Notes* (March 1994): 1-3; and Celia Silverman, "Pension Evolution in a Changing Economy," *EBRI Special Report* SR-18/*Issue Brief* no. 141 (Employee Benefit Research Institute, September 1993).

[12]Previous research indicates the growth in defined contribution plans was largely driven by the introduction of 401(k) plans. See Celia Silverman, "Pension Evolution in a Changing Economy," *EBRI Special Report* SR-18/*Issue Brief* no. 141 (Employee Benefit Research Institute, September 1993).

Whether they are utilizing these plans in such in a manner as to maximize their potential is a separate question.

Such plans do involve explicit decisionmaking on the part of individuals. They must decide whether to participate in the plan, how much to contribute, how the funds should be invested within choices offered by the sponsor, and whether to roll over lump-sum distributions received from such plans on job change. Poor decisions will weaken retirement income security. However, it is important to realize that employees can often receive a higher benefit from defined contribution plans than they would from comparable defined benefit plans, assuming the same investment income, particularly if they are young and mobile. It has been documented that workers with accrued pension benefits (i.e., those in final average defined benefit plans) can experience pension losses if they change jobs prior to retirement.[13] Participants in defined contribution plans do not experience the same losses just by changing jobs. Defined contribution plan participants may have the opportunity to save more for retirement than they would in a comparable defined benefit plan; however, they need to recognize their responsibility for retirement planning and make decisions to maximize their retirement income, such as preserving lump-sum distributions received on job change as discussed in the next section.

Retirement Plan Income

Several factors affect the amount of income individuals may receive from employment-based retirement plans. These factors include job tenure throughout an individual's career and the receipt and preservation of lump-sum distributions.

Job Tenure Trends and the Importance of Career Jobs

Recent increases in pension participation, sponsorship, and vesting do not insure that pension income in retirement will increase for the baby boom generation. The pension benefits ultimately received by individuals in retirement often depend on years of service with an employer. A general perception exists among the public that the U.S. work force has become increasingly mobile over recent years. Among the potential ramifications of such a trend, if it does exist, is the possibility that mobile workers will not accumulate meaningful retirement benefits as they move from job to job. This may be due to a failure to vest fully in an employer's plan, to serving few years under a defined benefit plan where benefit payments are partly a function of tenure, or to a failure to preserve lump-sum distributions that are received from retirement plans on job change.

An examination of job tenure figures for prime age (25–64 years) workers, both male and female, reveals that tenure levels in the 1980s and beginning of the 1990s were actually higher than those of the 1950s, 1960s, and 1970s. For male workers in general, tenure fell between 1983 and 1987 and then remained stable until 1991. This followed a period of consistent increase between 1966, when tenure levels were at their lowest since 1951, and 1983, when they peaked. Therefore, while tenure levels in 1991 were lower than those in 1983, they were still higher than at any point in the 1950s, 1960, or 1970s (chart 2.1).

Female tenure levels show generally consistent growth from 1978 to 1991 after a period of relative stability between the early 1960s and latter 1970s (chart 2.2). In addition, median job tenure increased with worker age in all years for which data were available, and males had longer tenure than their female counterparts by age in all years.

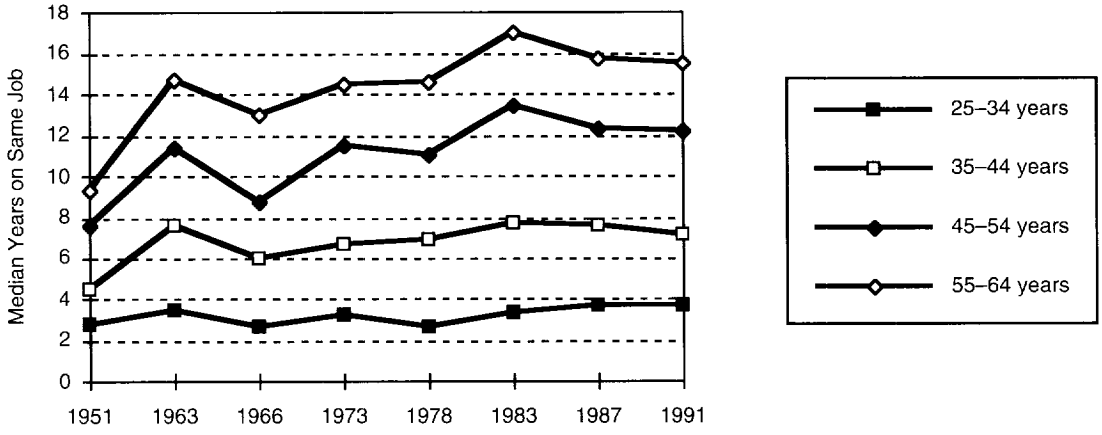
The baby boomers fell into the age groups 25–34 and 35–44 in 1991. Their current tenure at these ages was generally higher than that of previous generations of workers at the same ages (table 2.16). The tenure of older male boomers, i.e., those aged 35–44 in 1991, was 7.2 years—longer than that for male workers of the same age in the 1950s, 1960s, and 1970s (with the exception of 1963), although male workers of the same age in the 1980s had longer tenure by about one-half year. The tenure of young male boomers (aged 25–34 years) in 1991 was 3.7 years—longer than that of any previous generation at the same age. Similarly, the tenure of female boomers in 1991—5.0 years for older boomers and 3.2 years for younger ones—was longer than that of previous generations of female workers at the same point in their lives (table 2.16).

Tabulations of the Retirement History Survey (RHS)[14] provide evidence of the long-term nature of career jobs for workers aged 58–63 in 1969—the generation prior to the baby boomers. Focusing on the duration of the longest job held, as opposed to tenure on a current job, by these workers in the years shortly before retirement age, Quinn, et al. (1990) found that 55 percent of men and 28 percent of women held a job that lasted 20 or more years (table 2.17). Furthermore,

[13]For a full explanation, see Employee Benefit Research Institute, "Pension Portability and What It Can Do for Retirement Income: A Simulation Approach," *EBRI Issue Brief* no. 65 (Employee Benefit Research Institute, April 1987).

[14]The Retirement History Survey was a 10-year longitudinal survey of older Americans conducted by the Social Security Administration. Over 11,000 respondents aged 58–63 were interviewed in 1969 and again every two years until 1979 to study the retirement process.

Chart 2.1
Prime Age Male Job Tenure Trends, by Worker Age, 1951–1991

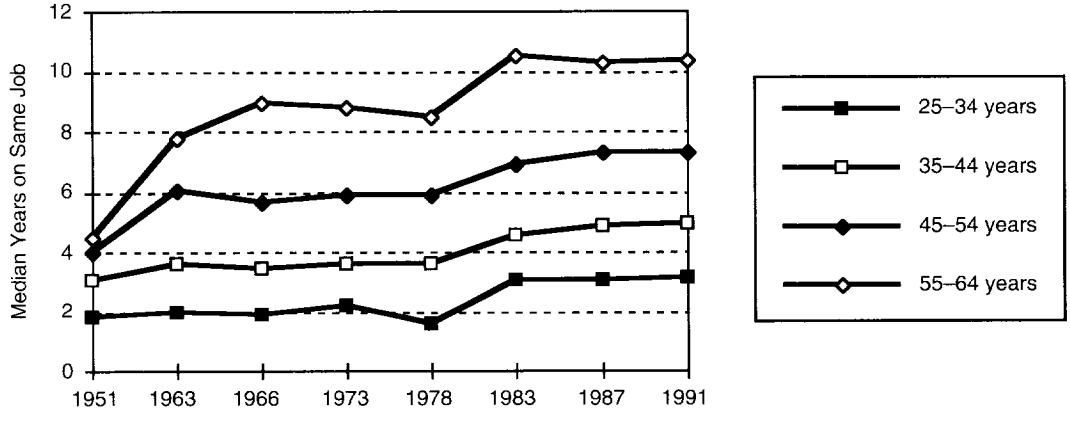


Source: Employee Benefit Research Institute compilation: (for years 1951, 1963, 1966, and 1979), U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review September 1952, October 1963, January 1967, December 1974, and December 1979* (Washington, DC: U.S. Government Printing Office, 1952, 1963, 1967, 1974, and 1979); (for years 1973 and 1987), The Wyatt Company, *The Compensation and Benefits File: January 1989*, Vol. 5, no. 1; (for years 1983 and 1991), U.S. Department of Labor, Bureau of Labor Statistics, *Employee Tenure and Occupational Mobility in the Early 1990's*, News release USDL 92-386, June 26, 1992.

31 percent of men and 11 percent of women held a job that lasted 30 or more years at some point during their career, and 13 percent of men and 5 percent of women held a job that lasted 40 or more years. Moreover, among this generation prior to the boomers, a nontrivial percentage had relatively short longest job tenure. Twenty-two percent of males and 44 percent of females had a longest job tenure of less than 10 years (table 2.17).

This last point is of importance in that it indicates that perceptions held today regarding paternalistic employers, lifetime employment, and limited job mobility among previous generations of workers often exaggerate reality. According to a study of the importance of lifetime jobs in the latter 1970s: "The typical worker is currently on a job which will last about eight years in all, counting the years it has already lasted. An important minority—about 28 percent—are currently em-

Chart 2.2
Prime Age Female Job Tenure Trends, by Worker Age, 1951–1991



Source: Employee Benefit Research Institute compilation: (for years 1951, 1963, 1966, and 1979), U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review September 1952, October 1963, January 1967, December 1974, and December 1979* (Washington, DC: U.S. Government Printing Office, 1952, 1963, 1967, 1974, and 1979); (for years 1973 and 1987), The Wyatt Company, *The Compensation and Benefits File: January 1989*, Vol. 5, no. 1; (for years 1983 and 1991), U.S. Department of Labor, Bureau of Labor Statistics, *Employee Tenure and Occupational Mobility in the Early 1990's*, News release USDL 92-386, June 26, 1992.

Table 2.16
Median Years with Current Employer, Selected Years 1951–1991

Age and Gender	1951	1963	1966	1973	1978	1983	1987	1991
Both Genders	3.4	4.6	4.2	3.9	3.6	4.4	4.2	4.5
14–17	0.7	0.7	0.6	0.7[a]	b	b	0.5[a]	b
18–19	0.6	0.5	0.5	0.6	b	b	0.5	b
20–24	1.3	1.1	1.0	1.3	b	b	1.6	b
16–24	b	b	b	b	0.7	1.1	b	1.2
25–34	2.6	3.0	2.7	2.8	2.6	3.3	3.4	3.5
35–44	3.2	6.0	6.0	5.2	5.0	5.8	6.1	6.0
45–54	6.3	9.0	8.8	8.6	8.3	10.3	9.6	10.0
55–64	8.0	11.8	13.0	11.9	11.0	13.6	12.7	12.4
65 and over	10.0+	13.8	13.7	12.6	11.0	13.2	12.4	11.1
Males	3.9	5.7	4.2	4.6	4.5	5.1	5.0	5.1
14–17	0.8	0.7	0.6	0.6[a]	b	b	0.5[a]	b
18–19	0.6	0.5	0.5	0.6	b	b	0.5	b
20–24	1.2	1.1	1.0	1.2	b	b	1.7	b
16–24	b	b	b	b	0.7	1.1	b	1.4
25–34	2.8	3.5	2.7	3.2	2.7	3.4	3.7	3.7
35–44	4.5	7.6	6.0	6.7	6.9	7.7	7.6	7.2
45–54	7.6	11.4	8.8	11.5	11.0	13.4	12.3	12.2
55–64	9.3	14.7	13.0	14.5	14.6	17.0	15.7	15.5
65 and over	10.0+	16.6	13.7	13.9	13.5	14.6	15.0	13.1
Females	2.2	3.0	2.8	2.8	2.6	3.3	3.6	3.8
14–17	0.5	0.6	0.6	0.6[a]	b	b	0.5[a]	b
18–19	0.6	0.5	0.5	0.6	b	b	0.5	b
20–24	1.4	1.1	1.1	1.2	b	b	1.5	b
16–24	b	b	b	b	0.7	1.1	b	1.1
25–34	1.8	2.0	1.9	2.2	1.6	3.1	3.1	3.2
35–44	3.1	3.6	3.5	3.6	3.6	4.6	4.9	5.0
45–54	4.0	6.1	5.7	5.9	5.9	6.9	7.3	7.3
55–64	4.5	7.8	9.0	8.8	8.5	10.5	10.3	10.4
65 and over	4.9	8.8	11.2	10.9	8.4	11.9	10.8	10.4

Source: Employee Benefit Research Institute compilation (for years 1951, 1963, 1966, and 1979); U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review: September 1952, October 1963, January 1967, December 1974, and December 1979* (Washington, DC: U.S. Government Printing Office, 1952, 1963, 1967, 1974, and 1979); (for years 1973 and 1987): The Wyatt Company, *The Compensation and Benefits File: January 1989*, vol. 5, no. 1; (for years 1983 and 1991) Bureau of Labor Statistics News Release, *Employee Tenure and Occupational Mobility in the Early 1990's*, News release USDL 92-386 (Washington, DC: U.S. Department of Labor, June 26, 1992).
[a]The data represent individuals aged 16–17.
[b]Data not available.

ployed in near-lifetime jobs lasting 20 years or more, and 17 percent are in jobs which will last 30 years or more. An equally important minority are at work in what will turn out to be very brief jobs—about 23 percent will have eventual tenure of less than two years. A clear majority of workers—58 percent—are currently holding reasonably long jobs, those which will last five years or more" (Hall, 1982).

Thus, while lifetime jobs have been an important part of the labor market experience (Hall estimated that among workers aged 30 and over in 1978, about 40 percent were in jobs that would eventually last 20 or more years), it can also be argued that the work force has been fairly mobile for decades. For example, in the late 1970s, over 40 percent of workers could expect to remain in their current job for less than five years, the current general pension vesting standard.

It is currently estimated that between the ages of 18 and 30 the average number of jobs held is 7.5 (the median number is 7.0) (U. S. Department of Labor, 1993). Males have had a slightly higher number of jobs on average by age 30 than females (7.6 versus 7.3), but the median for both is 7.0. Over one-quarter of workers have had 10 or more jobs by age 30. Hall estimated that in 1978, by age 29 the average worker had held 5.5 jobs since age 16. While the number of jobs held by very young workers appears to have increased over the last decade and a half, it remains an open question whether the same is true among older workers and whether it will be true of the baby boomers as they advance through their working careers.

Table 2.17
Job Tenure on Longest Job, Workers Aged 58–63 in 1969

	Men	Women
0–4 Years	12%	29%
5–9 years	10	15
10–19 years	23	27
20–29 years	24	17
30–39 years	18	6
40 or more years	13	5

Source: Joseph F. Quinn, Richard V. Burkhauser, and Daniel A. Myers, *Passing the Torch: The Influence of Economic Incentives on Work and Retirement* (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1990).

Available data do not support the widely held perception that the U.S. work force is becoming increasingly mobile. It seems reasonable to assume that once the boomers move into the years shortly before retirement age, they will have longest job tenure figures similar to those discussed above, given the current tenure rates of the boomers and how these compare favorably with the tenure of previous generations at similar points in their working lives. It is possible that, while tenure rates today compare favorably with those of the past, there are more workers involuntarily terminated from their jobs than before; however, better data are needed to evaluate this hypothesis and its potential impact on retirement income security.

Lump-Sum Distributions and Benefit Preservation

Lump-sum distributions and subsequent benefit preservation through rollovers are an issue of growing importance for retirement income security. In 1990, there were 10.8 million lump-sum total distributions[15] from tax-qualified plans, totaling $126 billion.[16] Over the four year period, 1987–1990, there were 46.0 million such distributions, totaling over $406 billion (table 2.18).[17]

[15]A total distribution is one or more distributions within one tax year in which the entire balance of the account is distributed. Some readers might be more familiar with the term lump-sum distribution (LSD). LSDs are a subset of total distributions. An LSD is a total distribution that is the result of one of the following: (1) the employee's death, (2) the employee attains age 59 1/2, (3) the employee's separation from the service of the sponsor, or (4) the employee has become disabled. In addition to LSDs, a total distribution may be the result of a prohibited transaction, Internal Revenue Code Sec. 1035 exchange, excess contributions plus earnings/excess deferrals, and PS 58 costs. Most total distributions are LSDs; in 1990, 90 percent of all total distributions were LSDs and 79 percent of all funds distributed as a total distribution were due to a LSD.

[16]These numbers include not only preretirement distributions on job change but also other distributions such as retirement distributions. These distributions are from defined benefit and defined contribution pension plans as well as from IRA and simplified employee pension (SEP) accounts. (See Yakoboski, 1994).

[17]Data are the result of Employee Benefit Research Institute/Internal Revenue Service (EBRI/IRS) tabulations of IRS Form 1099-R filings. IRS Form 1099-R, Statement for Recipients of Total Distributions From Profit-Sharing, Retirement Plans, Individual Retirement Arrangements, Insurance Contracts, Etc., is filed by plan trustees for each person to whom any designated distribution that is a total distribution has been made from profit-sharing or retirement plans, IRAs, annuities, etc. A total distribution is defined as one or more distributions within one tax year in which the entire balance of the account is distributed. Information reported on the 1099-R includes gross distribution amount, taxable amount, amount eligible for capital gain, and type of distribution (i.e., normal, premature, death, disability, etc.). This information can be broken out by distributions from defined benefit and defined contribution plans (non-IRA/SEP accounts) and by those from IRA/SEP accounts. EBRI was not directly or indirectly provided with any individually identifiable tax return information.

Table 2.18
Lump-Sum Total Distributions from Tax Qualified Plans, 1987–1990

	1987	1988	1989	1990	1987–1990 Total
Number of Distributions			(millions)		
Aggregate	11.4	12.2	11.6	10.8	46.0
Nonindividual retirement account/simplified employee pension	8.8	a	a	8.2	
Individual retirement account/simplified employee pension	2.6	a	a	2.6	
Total Amounts Distributed			($ billions)		
Aggregate	$80.3	$85.2	$115.3	$125.8	$406.6
Nonindividual retirement account/simplified employee pension	65.9	a	a	107.2	
Individual retirement account/simplified employee pension	14.4	a	a	18.6	
Average Amounts Distributed			($ thousands)		
Aggregate	$7.0	$7.0	$10.0	$11.7	$8.8
Nonindividual retirement account/simplified employee pension	7.5	a	a	13.2	
Individual retirement account/simplified employee pension	5.7	a	a	7.0	

Source: Employee Benefit Research Institute/Internal Revenue Service (IRS) tabulations of IRS Forms 1099-R, Statement for Recipients of Total Distributions From Profit-Sharing, Retirement Plans, Individual Retirement Arrangements, Insurance Contracts, Etc., 1987–90.
[a]Not available

These distributions, a large proportion of which are accounted for by preretirement distributions, represent a tremendous pool of financial resources. Recipients' decisions regarding the use of these funds is a significant public policy issue; recipients may roll this money over and preserve it for retirement on a tax-deferred basis, they may save it on a nonpreferred basis, or they may consume it. Some consumption, such as home purchase or increased education, may enhance retirement income security. Some consumption may be necessitated by current economic hardship, i.e., a worker is laid off and needs the money to cover his or her family's current living expenses. Other consumption may be the result of the desire for current gratification combined with shortsightedness on behalf of the worker, i.e., a worker is changing jobs and decides to use some of the money to take a vacation rather than preserve it for retirement. Consumption of such distributions, particularly among current workers, whether as a result of financial hardship or shortsightedness, entails the sacrifice of funds that would otherwise be available for retirement. This entails the risk of workers not being able to retire in the lifestyle they desire or being forced to remain active in the labor force longer than desired.

Such issues are heightened by ongoing developments within the employment-based retirement system. While defined benefit plans have remained the primary type of retirement plan offered by large employers, there has been significant growth, as discussed previously, in the number of defined contribution plans both as primary plans for smaller and mid-size employers and as supplemental plans for mid-size and larger employers. The growth in defined contribution plans has been accompanied by a growth in the availability of lump-sum distributions, as nearly all defined contribution plans provide for such distributions. In addition, a significant number of defined benefit plans now offer lump-sum distributions. In a recent survey, 34 percent of the surveyed companies with defined benefit plans for salaried employees had a lump-sum option in the plan, and of these 67 percent made the option available to terminated employees who were vested in their plan, 72 percent to early retirees, and 75 percent to normal retirees (Hewitt, 1992). Thus, lump-sum distributions and their preservation are an issue with both defined benefit and defined contribution plans.

In 1990, there were 3.1 million IRA rollover contributions, totaling $71.4 billion (table 2.19).[18] Thus, 29 out of every 100 lump-sum total distributions in 1990 resulted in an IRA rollover contribution. This compares to 23 out of 100 in 1987, 21 out of 100 in 1988, and 25 out of 100 in 1989 (chart 2.3). The 1990 figure indicates that over 70 percent of all distributions were not even partially rolled over into an IRA in that year. Focusing on the money involved, 57 out of every 100 dollars distributed in a lump-sum in 1990 was rolled over into an IRA. This compares with 49 out of 100 dollars in 1987, 54 out of 100 dollars in 1988, and 55 out of 100 dollars in 1989 (chart 2.3). The 1990 figure indicates that 57 percent of all money distributed in a lump-sum total distribution was rolled over into IRAs.

Both the fraction of distributions rolled over and the proportion of dollars distributed that are rolled over have trended upward over the limited period for which data are available; however, a sizable fraction of lump-sum total distributions is not preserved on a tax-deferred basis. These figures are consistent with recent government tabulations of the employee benefit supplement of the April 1993 CPS (U.S. Department of Labor, Social Security Administration, U.S. Small Business Administration, and Pension Benefit Guaranty Corporation, 1994). Over 11 percent of the experienced labor force[19] aged 25–64 reported previous receipt of a lump-sum distribution from a pension or retirement plan. Twenty-nine percent of recipients spent all the money they received; 21 percent rolled it all over into retirement savings; and another 35 percent saved or invested it all in some other form. The older the recipient and the larger the amount received, the more likely it was to be saved. The study also noted that the trend over time has been toward more saving and less spending of such distributions. Of distributions received before 1980, 6 percent were put in retirement saving; of distributions received between 1980 and 1986, 15 percent were put in retirement saving; and since 1986, the retirement saving rate has been 27 percent.[20]

To the extent that current workers do not or cannot think long term with their lump-sum distributions, they are sacrificing funds that would otherwise be available to fund consumption in retirement and thus may be jeopardizing to some degree their retirement income security.

[18]Data are the result of EBRI/IRS tabulations of IRS Form 5498 filings. IRS Form 5498, Individual Retirement Arrangement Information, is filed by plan trustees for each person for whom an IRA or SEP is maintained. Information reported on Form 5498 includes regular contributions, rollover contributions, and fair market value of the account. EBRI was not directly or indirectly provided with any individually identifiable tax return information.

[19]Includes the currently unemployed with previous work experience and the currently employed.

[20]The Tax Reform Act of 1986 imposed a 10 percent penalty tax on lump-sum distributions received before age 59 1/2 that are not rolled over into another tax-qualified retirement plan. This likely explains a large part of the increased preservation of lump-sum distributions since 1986.

Table 2.19
Regular and Rollover Contributions to Individual Retirement Accounts, 1987–1990

	1987	1988	1989	1990	1987–1990 Total
Number of Contributions			(millions)		
Regular	12.8	10.9	10.1	9.3	43.1
Rollover	2.6	2.6	2.9	3.1	11.2
Total Amounts Contributed			($ billions)		
Regular	19.7	17.1	16.0	15.6	68.4
Rollover	39.3	45.9	63.0	71.4	219.6
Average Amounts Contributed			($ thousands)		
Regular	1.5	1.6	1.6	1.7	1.6
Rollover	14.9	18.0	21.5	22.8	19.6

Source: Employee Benefit Research Institute/Internal Revenue Service (IRS) tabulations of IRS Forms 5498, Individual Retirement Arrangement Information, 1987–90.

Individual Saving and Wealth

The wealth that baby boomers accumulate through saving and investing will be a critical determinant for many of them of their financial situation in retirement. Not only does wealth continue to generate earnings during retirement years, but it is also a store of purchasing power that can be drawn down over the years to fund consumption and cover unexpected expenses that may arise. Such saving occurs in many forms; some is through employment-based retirement saving plans such as 401(k) and 403(b) plans, some is through IRAs, some is through the purchase of tax-deferred annuities, some is through mutual funds and other vehicles like saving accounts, and still other wealth is accumulated through investments in housing, which is a significant store of wealth for many individuals.

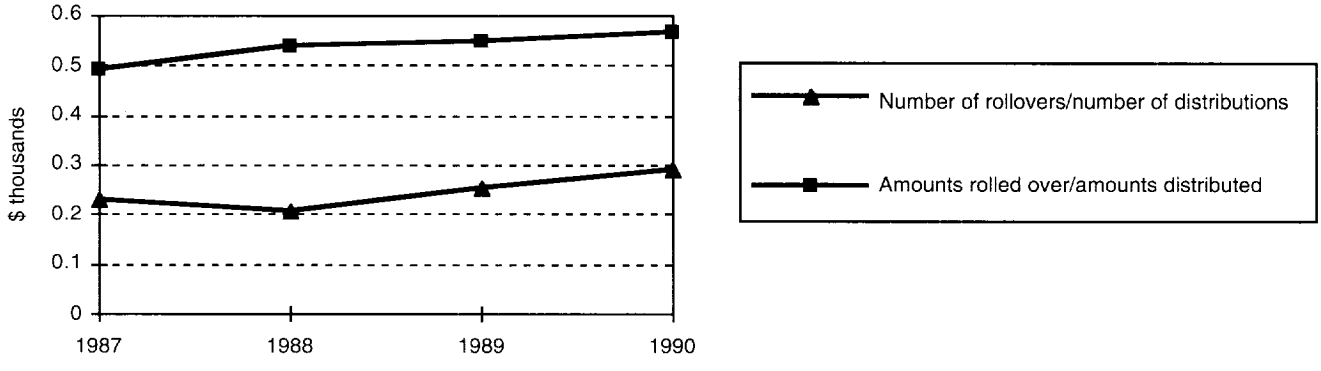
Trends in Saving Rates

The fall in saving rates over the 1980s has generated concern among analysts at both the macroeconomic level and the microeconomic level. At the macro level, low saving implies low investment and therefore lower productivity growth in the future and stagnating standards of living. At the micro level, low saving may mean, in particular, that individuals will not be able to retire when they desire with the lifestyle they desire.

The Congressional Budget Office (CBO) published a report analyzing the decline in the saving rate since the 1980s.[21] The report cites NIPA data indicating that the net

[21]See Congressional Budget Office, Assessing the Decline in the National Saving Rate (Washington, DC: Congressional Budget Office, 1993).

Chart 2.3
Ratio of Individual Retirement Account Rollover Contributions to Lump-Sum Total Distributions, 1987–1990



Source: Employee Benefit Research Institute (EBRI)/Internal Revenue Service (IRS) tabulations of IRS Forms 1099-R, Statement for Recipients of Total Distributions From Profit-Sharing, Retirement Plans, Individual Retirement Arrangements, Insurance Contracts, Etc., 1987–90; EBRI/IRS tabulations of IRS Forms 5498, Individual Retirement Arrangement Information, 1987–90.

national saving rate fell from 7.1 percent during the 1970s to 3.8 percent during the 1980s and to 1.8 percent thus far in the 1990s. Federal deficits accounted for more than one-half of the decline in the net national saving rate between the 1970s and 1980s. Business and personal saving each accounted for about one-fourth of the decline.[22] During the 1980s, personal saving provided $1.24 for each dollar of national saving, compared with $0.59 in the 1960s and $0.77 in the 1970s, thus becoming a more important source of national saving. By the end of the 1980s, the personal saving rate was at an all-time low of about 4 percent. The CBO study concluded that increased wealth and improved income prospects resulted in the decrease in personal saving rates. In particular, the (unexpected) booms in the stock markets and real estate market during the 1980s were likely responsible for much of the decrease.

It is not known whether the drop in personal saving rates is indicative of a long-term change in behavior or whether these rates will rebound to previous levels. If they do not rebound, does this mean that current workers will not be adequately prepared financially for retirement? Not necessarily. Saving rates are a flow measure of activity in a given year. Just as important are measures of the store of wealth accumulated by a given point in time. Of course, increased savings lead to increased wealth.

Measuring Savings—The concept of saving, although widely discussed, has not been consistently and clearly defined. In this discussion, personal saving is defined as disposable personal income (i.e., personal income less personal tax and non-tax payments) less personal outlays, including all expenditures for durable goods, nondurable goods, services, interest, and transfers to foreigners.[23] Saving rates, as constructed, are a less than perfect measure of asset accumulation for retirement.

Private and public defined benefit and defined contribution plans represent a substantial store of wealth for retirement. Annual accumulations (i.e., contributions and investment income) in such plans are not fully captured in traditional measures of personal saving. The NIPA are perhaps the most widely used source for measuring personal saving. Contributions to private defined benefit plans and private and public defined contribution plans, including 401(k) plans, are included in their measure of personal saving. However, contributions to public defined benefit plans are not included. Public defined benefit pension plan benefits are not included in personal income until benefit payments are made. Investment income is partially reflected in the NIPA, which include imputed interest, dividends, rent, and royalties but not capital gains.

From the individual's perspective, personal saving rates through a defined benefit plan are best measured by benefit accruals, not contributions or investment income. Existing data do not fully capture benefit accruals, which are only imperfectly reflected in the level of contributions made each year to these plans. Personal saving rates through a defined contribution plan are best measured by contributions and investment income, which are captured in the NIPA, excluding capital gains. (Table 2.20 summarizes what is and is not included in overall saving measures from public and private pension plans in the NIPA.) Extensive data are available regarding the store of wealth in pension plans and other retirement saving vehicles such as 401(k) plans and IRAs.[24]

Personal saving measures also do not include expenditures for home ownership, the single biggest investment many individuals will make. For many individuals a home represents a significant store of wealth that can be tapped during their retirement years to fund living expenses. After consistent growth since 1960 (the first year for which such data are available), per household net worth in housing (derived by adding the value of owner-occupied housing to the value of owner-occupied land and then subtracting home mortgage liabilities) fell steadily from its peak of $52,500 (measured in 1992 constant dollars) in 1979 to $39,600 in 1992 (chart 2.4). Whether average per household net housing worth will remain in this range (as it has the past three years), rise to previous levels, or fall further remains to be seen.

While there is a popular perception that baby boomers' saving rates are much lower than those of the previous generations, the data do not support such a contention. Tabulations of the Survey of Consumer Finances (SCF) and the Consumer Expenditure Survey (CES) indicate that the saving rate for those aged 25–44 in the early 1980s (the baby boomers) was only slightly lower than that for those of the same age in 1963 and 1972–1973 (Bosworth, Butless, and Sabelhaus, 1991). In fact, the study noted that the relative decline in saving over these time periods was smaller among the younger households. Between 1963 and 1983–1985, the saving rate fell about 1 percentage point for households aged

[22]Alternative measures of national saving that adjust for consumer durable expenditures, government nonmilitary investment, the inflation component of interest flows, the market value of federal debt, and defined benefit pension plans of the private sector suggest that government's share of the decline was about two-thirds of the decline in national saving.

[23]This definition is from the U.S. Department of Commerce.

[24] See Celia Silverman and Paul Yakoboski, "Public and Private Pensions Today: An Overview of the System," in Dallas L. Salisbury and Nora Super Jones, eds., *Pension Funding and Taxation: Implications for Tomorrow* (Washington, DC: Employee Benefit Research Institute, 1994).

25–44 years and 7 percentage points for those aged 45 and over, according to the SCF. Between 1972–1973 and 1982–1985, the saving rate fell about 1.7 percentage points for households aged 25–44 and 6 percentage points for those over age 45, according to the CES. Allowing for saving through employment-based retirement plans, the 1.7 percentage point decrease in baby boomer saving between 1972–1973 and 1982–1985 becomes a 1.7 percentage point increase.[25]

Table 2.20
Inclusion of Pension Plans in Personal Savings

	Included in Personal Savings?
Private Pension Plans	
Defined benefit plans	
employer contributions	Yes
investment income	Partially
interest, dividends, rent, and royalties (imputed)	Yes
capital gains	No
benefit payments	No[a,b]
Defined contribution plans	
individual contributions	Yes[b]
employer contributions	Yes
investment income	Partially
interest, dividends, rent, and royalties (imputed)	Yes
capital gains	No
benefit payments	No[b]
Public Pension Plans	
Defined benefit plans	
employer contributions	No
individual contributions	No
investment income	No
benefit payments	Yes
Defined contribution plans	
individual contributions	Yes[b]
employer contributions	Yes
investment income	Partially
interest, dividends, rent, and royalties (imputed)	Yes
capital gains	No
benefit payments	No[a]

Source: Employee Benefit Research Institute, interview with National Income and Product Accounts (NIPA) source.
[a]Benefit payments are not included in private plans and public defined contribution plans because that would create double counting in the NIPA of the contributions and investment income that are reported during the period that they occur.
[b]Individual contributions to private defined contribution plans are included in personal savings to the extent that they are included in wage and salary disbursements in employers' reports for unemployment insurance. Virtually all states require employers to report employee contributions.

Worker Attitudes Regarding Saving Adequacy

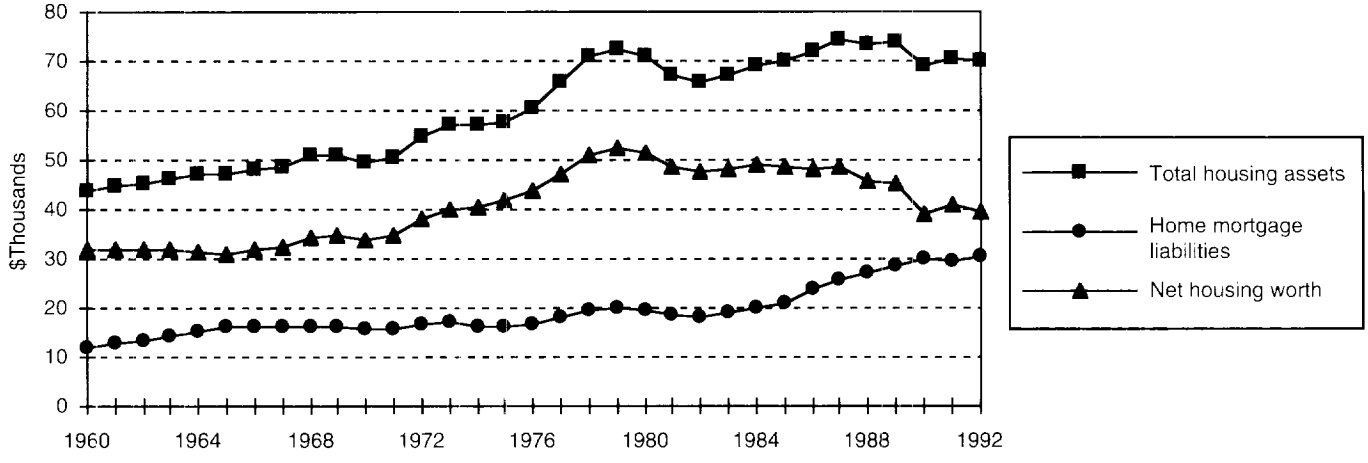
While it does not necessarily give a true indication of how adequately or inadequately current workers are preparing for retirement or current retirees prepared for retirement, it is nonetheless illuminating to examine what individuals say regarding their planning and saving behavior. Especially interesting are comparisons of what current workers say they are and are not doing with what current retirees say they did and did not do while still working.

Who is Saving and When Did They Begin—Among the studies that have examined the attitudes of individuals toward planning and preparing financially for retirement, a recent survey focuses on the attitudes of nonretirees versus retirees (Mathew Greenwald & Associates, 1993). In this survey, 64 percent of nonretirees said that they had started saving for retirement in ways other than through tax payments to Social Security or employer-funded plans. Among retirees, 78 percent reported saving for retirement. Among current workers not saving, 68 percent said it was because of a lack of money, while 71 percent of current retirees who did not save cited the same reason. When it comes to investing for retirement, 76 percent of nonretirees who were saving said that they were doing very well or somewhat well at getting a good rate of return. This is very close to the 78 percent of retirees who felt they did very well or somewhat well in terms of a good rate of return on their retirement savings. It is not possible with the survey to judge whether nonretirees who felt good about their rate of return were actually doing well or whether retirees who feel similarly about what they achieved did do well in this regard. Nonetheless, it is interesting that the two groups have such similar subjective judgments.

In a recent survey, 66 percent of respondents not currently retired indicated they had begun to save for retirement (Employee Benefit Research Institute/The Gallup Organization, Inc., 1994a). This compares with 65 percent in 1993, 63 percent in 1992, and 66 percent in 1991 of nonretired respondents who said they had begun to save for retirement. The higher a respondent's income, the more likely he or she was to have begun saving. A positive correlation also exists between education and the likelihood of having begun to save. In addition, married individuals are more likely than nonmarried individuals to have begun to save for retirement. Among those already saving and those already retired, the mean age at which they began to save was 33 and the median

[25]The authors caution that this is likely an artifact of their imputation procedure because they assume that the contribution rate is identical for all wage and salary workers, regardless of age. However, younger workers are less likely to be covered by a plan, and, if covered by a defined benefit plan, the required employer contributions are likely to be smaller.

Chart 2.4
Per Household Value of Owner-Occupied Housing, 1960–1992 (in 1992 Constant Dollars)



Source: Board of Governors of the Federal Reserve System, Balance Sheets for the U.S. Economy 1945–92 (Washington, DC: U.S. Board of Governors of the Federal Reserve System, 1993).

age was 30. Twenty-four percent reported beginning saving before age 25.

A different picture is painted by another survey that found fewer than one-half of American households are saving for retirement (Merrill Lynch, 1994). Among respondents to this survey, 46 percent of preretirees (aged 45–64) and 35 percent of baby boomers reported currently saving for retirement, with an additional 25 percent and 39 percent, respectively, reporting saving for other goals. Baby boomers are beginning to prepare for retirement earlier than preretirees began. The average age at which preretirees first began to prepare was 35. Baby boomers, by comparison, first began preparing at age 26 (among those who say they feel prepared to any extent and have taken some action to prepare for retirement).

How Much Is Being Saved—In the Greenwald survey, 67 percent of nonretired savers said they were trying to save a specific amount of money for retirement each month or pay period, and among these, 90 percent reported that they are usually able to save that amount. By comparison, among current retirees who saved for retirement, only 43 percent tried to save a specific amount of money on a regular basis, and of these, 78 percent were able to do so. Therefore, it would appear that current workers are doing a somewhat better job of putting away money for retirement on a periodic basis than current retirees did while working. However, among both groups there has been little effort to calculate the funds needed in retirement. Thirty-five percent of nonretirees report ever having tried to figure out how much money they will need to save so that they can live comfortably in retirement. This is more than double the percentage of retirees who report ever having tried the exercise. Therefore, while a large fraction of workers may be saving for retirement on a regular basis, in fact more so than current retirees did while working, this survey does not answer the question of whether they are saving enough. Among nonretirees who have done the calculation, 73 percent say they are very confident or somewhat confident that they will be able to save the amount necessary. Eighty-four percent of retirees who did the calculation reported that they were able to save that amount.

According to the 1994 EBRI/Gallup survey, among those who were saving money for retirement, the average amount saved the previous year was $6,759. Fourteen percent did not know how much they saved last year. Thirteen percent saved less than $1,000, 11 percent saved $1,000–$1,999, 17 percent saved $2,000–$2,999, 12 percent saved $3,000–$4,999, 14 percent saved $5,000–$7,999, 3 percent save $8,000–$9,999, and 11 percent saved $10,000 or more.

Respondents to a recent survey of current nonretired individuals with total household income of $25,000 or more were asked if they were saving more, less, or about the same for retirement as they did last year (Fidelity Investments, 1993). Among those aged 30–54, 35 percent said they saved more, and 47 percent said they saved the same. Among those aged 55 and over, the corresponding percentages were 31 percent and 49 percent. A little less than one-half (49 percent) of those aged 30–54 said they saved as much for retirement as they expected to in 1993, while 54 percent of those aged 55 and over said they saved as much as expected.

Fifty-three percent of those aged 30–54 and 53 percent of those aged 55 years and over said they would be willing to reduce some of their personal spending to save for retirement.

Among those aged 30–54, the mean amount saved for retirement each year was reported to be $6,700, with 35 percent saving less than $3,000 annually and 37 percent saving more than $5,000 annually (17 percent responded "don't know"). Among those aged 55 and over, the mean amount saved for retirement each year was reported to be $8,600, with 23 percent saving less than $3,000 annually and 47 percent saving more than $5,000 annually (31 percent responded "don't know").

The EBRI/Gallup survey also asked individuals how much they will need to save by the time they retire. On average, respondents felt they need to save $278,500 by the time they retire. The median amount was $150,000. Twenty-seven percent did not know how much they would need to save. Twenty-one percent responded less than $100,000, 16 percent responded $100,000–$199,999, 13 percent responded $200,000–$299,999, 12 percent responded $300,000–$599,999, 2 percent responded $700,000–$899,999, and 9 percent responded $900,000 or more. While the public apparently has realized that they need to save for retirement, Americans may not understand the extent to which they need to save. $150,000 may not give people as much purchasing power in the future as they think, when inflation is factored into the equation. Today, $150,000 in savings can purchase a monthly annuity for life of $1,060 at age 62 and $1,134 at age 65.

The Merrill Lynch survey found that preretirees (aged 45–64) allocated 8 percent of income, on average, to a retirement account in 1992. This was down from 10 percent in the previous year and 14 percent in 1988. Among those saving, a gap was reported between what they are saving and what they think they need to be saving. Preretirees are saving 8 percent annually but think they need to save 29 percent to live comfortably in retirement. Baby boomers are saving 7 percent on average and think that they need to be saving 26 percent. However, most survey respondents felt prepared for their eventual retirement. Seventy-three percent of respondents in 1992 felt prepared, down from 80 percent in the previous year. Among preretirees, 58 percent anticipate having the same standard of living in retirement as they have while working, and 7 percent anticipate a higher standard of living. Among baby boomers, 53 percent anticipate the same standard of living, and 22 percent anticipate a higher one.

Confidence in Savings Behavior—In the Greenwald survey, most workers thought they are doing a good job of preparing financially for retirement. When asked how confident they were that they were doing a good job of preparing financially for retirement, 23 percent reported being very confident and 46 percent reported being somewhat confident. Thirty-five percent of retirees were very confident about their financial preparation for retirement, and 41 percent were somewhat confident. Eighty-three percent of nonretirees were very confident or somewhat confident that they will have enough money to take care of their basic expenses during retirement, but a somewhat smaller percentage, 74 percent, was confident that they will have enough money to live comfortably throughout their retirement years. By comparison, 83 percent of retirees also are very confident or somewhat confident that they will have enough money to take care of their basic expenses during retirement, and 76 percent were confident that they will have enough money to live comfortably throughout their retirement years. Both nonretirees and retirees were less confident that they will be able to handle medical expenses in retirement. Fifty-five percent of nonretirees are very confident or somewhat confident that they will have enough money to take care of medical expenses when they retire, while 68 percent of current retirees were confident of their ability to do so.

The Fidelity study found that 76 percent of those aged 30–54 were satisfied with the amount they had saved for retirement thus far. Among those aged 55 and over, 80 percent were satisfied. Among those aged 30–54, 34 percent reported having saved under $20,000 for retirement, 14 percent have saved $20,000–$30,000, 16 percent have saved $30,000–$50,000, 15 percent have saved $50,000–$100,000, and 12 percent have saved over $100,000. Among those aged 55 and over, 17 percent report having saved under $20,000 for retirement, 4 percent have saved $20,000–$30,000, 9 percent have saved $30,000–$50,000, 19 percent have saved $50,000–$100,000, and 30 percent have saved over $100,000.

While today's workers apparently believe that they are preparing adequately, in general, for their eventual retirement, the question remains whether they actually are saving enough, or their apparent confidence is unjustified by their planning and saving behavior. The following section discusses various empirical studies that have sought to answer this question.

Empirical Analysis of Savings Adequacy

Different studies have reached different conclusions regarding the adequacy of the baby boom generation's financial preparation for retirement. It is important to realize that these studies ask different, though related, questions and employ different methodologies in answering them.

A recent study asked whether current workers are

saving at a rate sufficient to allow them to maintain the same level of consumption during retirement as they have during their working years (Bernheim, 1992 and 1993). To answer this question, a microsimulation model was developed that calculates how much baby boom households with varying characteristics need to save throughout their adult lives to accumulate enough for retirement at age 65. The model accounted for probable economic developments over the course of a lifetime and took account of Social Security, private pensions, taxes, interest rates, inflation, economic growth, family composition, and employment prospects. Savings prescriptions generated by the model were then compared with actual savings deduced from a survey of 3,800 baby boom households. It was calculated that baby boomers are saving at only one-third the rate necessary to maintain their level of consumption in retirement.

However, these calculations discounted housing wealth, which many households likely regard as their most important financial asset. This exclusion has a dramatic effect on the findings; if housing wealth is taken into account, then the study found that baby boomers are saving at 84 percent of the rate necessary to maintain their level of consumption in retirement. The study argues that it is inappropriate to treat homeownership as a form of saving for retirement consumption, because previous research suggests that the elderly have an aversion to paying living expenses during retirement by drawing on the equity in their homes (Venti and Wise, 1989). However, other research indicates that dissaving does occur out of housing wealth, but that housing assets are consumed later than other assets (Sheiner and Weil, 1992). Whether baby boomers will have such an aversion in their retirement years is an unanswered question. The use of home equity loans today and the advent of reverse mortgages suggest that they may not be as averse as past retirees. The relevant question for policy purposes is whether housing wealth should be taken into account when evaluating the adequacy of the baby boomers' prospective retirement finances.

The study also assumed a goal of maintaining a steady level of consumption after retirement. However, it is not clear that the same level of consumption will be necessary to maintain the same standard of living. Expenditures change as individuals move into their retirement years. Some expenditures are likely to fall, such as work-related expenditures for clothing, transportation, and lunch. Also, as children move into adulthood, retirees may no longer have expenses related to their care. On the other hand, if children enter college as parents enter retirement, such expenses can rise during the first years of retirement. Other expenses, such as for travel and medical care, may also rise during retirement. How individuals' desired consumption in retirement relates to consumption during their working years will vary from household to household.

Similar studies have come to the same conclusion that the baby boom generation is not preparing adequately for retirement. One study estimated the annual income individuals will need after retirement and compared this with estimates of income they will have in retirement (Arthur D. Little, Inc., 1993).[26] Income needed at retirement was defined as 70 percent of the average of an individual's income in the final five years in the labor force. The study found that households without pension plans typically will have 20 percent to 30 percent of what they need to retire. Households with pension plans typically will have 50 percent to 60 percent of what they need to retire. Households headed by single women are least likely to retire comfortably. Women with pensions will have as little as 37 percent of what they need to retire, while women without pensions will have as little as 14 percent of what they need. The study also concluded that saving more, shifting assets into equity investments, or drawing down home equity after retirement have positive effects on asset accumulations available to meet retirement income needs.

Other studies have taken a different angle in assessing the baby boomers' situation and have reached different conclusions. A CBO study compared the income and wealth of the baby boomers with that of their parents' generation at similar points in their lives to asses how well today's workers are preparing for retirement (Congressional Budget Office, 1993a). Essentially, this study answered the question: How well will baby boomers do in retirement compared with their parents, based on their financial circumstances at similar points in their working careers?

Using data from the 1960 Census, the 1990 CPS, and the SCF in 1962 and 1989, CBO found that both real household income and the ratio of household wealth to income were higher on average for baby boomers aged 25–44 years in 1989 than was true for young adults of the same age in 1959 and 1962, respectively. CBO noted that the parents of the boomers, in general, seem to have adequate financial resources in retirement, which is in part due to government transfer programs and unanticipated capital gains on housing assets (rather than systematic financial planning.) CBO concluded that most baby boomers are likely to enjoy higher real incomes in retirement than their parents, assuming that real wages continue to grow, Social Security and private pensions remain intact, and health care expenditures do not outweigh other gains. CBO noted the prospects are not as sanguine for some

[26]This study actually covered individuals aged 20–64 years in 1993, of which the baby boomers are a subset.

demographic groups as others, in particular for the single, the less educated, and nonhomeowners.

One criticism of this work concerns the assumed standard of comparison, i.e., the adequacy of future retirees' finances was judged by comparison, in real terms, with previous generations. This may be especially important in a society that is accustomed to and expects increased standards of living over time. In this sense, adequacy of retirement income would be judged by comparing an individual's living standards in retirement with those he or she enjoyed while still working, or maybe even comparing the individual's standard of living in retirement with that of those currently working. A retiree may have higher real income in retirement than his or her parents but still have a lower standard of living than when he or she was working. Would this retirement income be considered in some sense inadequate? This question may very well have different answers, depending on whether it is considered from a personal financial planning or a public policy perspective.

It is also important to note, as discussed in the CBO report, that the relatively optimistic scenario for boomers relative to their parents' generation depends on future economic growth, more specifically on the assumption that wages will grow faster than prices over the next 20 years–40 years. Long-term economic growth may be retarded by low savings and investment and by government fiscal policy.

Other studies with similar methodology have reached the same basic conclusions as the CBO study. Another study assessed the retirement outlook of the baby boomers relative to their parents with regard to wealth, income, and family status (Easterlin, Schaeffer, and Macunovich, 1993). Specifically, this study compared the boomers' status with the experience of their parents' generation at similar points in their working years and then assessed the likelihood that the observed differences would continue to retirement. It found that, on average, boomers are doing considerably better economically than their parents at similar points in their lives, and their living levels in retirement are likely to be considerably better, with the possible exception of the poorest segment of the youngest boomers. Balanced against these findings was the likelihood that a smaller percentage of boomers will have a spouse or adult children in retirement, and a larger percentage will live alone than current retirees. These outcomes are the result of boomers raising their economic status over that of their parents by making demographic decisions to remain single longer, have fewer children, and combine mothers' marketplace work with childbearing. The study therefore concluded that while boomers will be better off economically in retirement than their parents, it is at the price of decreased availability of personal care in old age through a spouse or children.

Reaching essentially the same conclusions as CBO and Easterlin, et al., another study noted that most baby boomers should have higher income in retirement than today's elderly, while stressing that not all will benefit uniformly (Lewin-VHI, 1994). The study projected that between 81 percent and 84 percent of baby boomers will have pension income during retirement. However, this projection was based on two crucial assumptions: first, that nearly all lump-sum distributions are rolled over each time a worker changes jobs; second, that all income is paid out as an annuity. Neither of these assumptions can be relied upon due to job turnover, the propensity to consume lump-sum distributions, and the decreasing rate of annuitization. However, the projection provides a realistic estimate of the proportion of the baby boomers who will earn pension wealth and benefit from it economically.

The study begins with a note of caution that should be applied to the assessment of all such studies: "At the outset, it should be noted that these projections at best reflect certain assumptions about the course of future events, which are incorporated in a mathematical model. Needless to say, these data should not be construed as a prediction of events to come but rather as a probability, based on our knowledge at present."

Another study projects the average resource and consumption levels among retirement of early, middle, and late baby boomers to determine how well prepared these groups are for retirement relative to current retirees (Auerbach and Kotlikoff, 1994 and Merrill Lynch, 1994). The study projects that all three groups of boomers will be able to sustain a level of total consumption in retirement greater than that of current retirees. However, the authors argued that Medicare and Medicaid transfers should be excluded from consumption.[27] With such an adjustment, the consumption of early and middle boomers remained greater than that of current retirees, although by a smaller margin, and the consumption of late boomers in retirement is projected to be just under that of current retirees. The authors note that when medical transfers are excluded, only the oldest boomers will have a level of consumption in retirement exceeding that of previous retirees to the extent expected with economic growth. However, it is not clear, given the importance of

[27]The reasons cited for such exclusion are that such transfers "do not provide individuals with the same command over resources that cash or otherwise fungible transfers would," and that "given the sharp increases in the share of medical spending over the next couple of decades, it is inappropriate to equate the large associated increases in medical transfers received, particularly by the elderly, with other increases in consumption."

medical expenditures to the well-being of the elderly, that such transfers should be excluded from consumption when making these projections. Once adjustments are made in prospective government fiscal policy, i.e., tax increases and transfer payment reductions, to counter what the authors see as the long-term unsustainability of current fiscal policy, the prospects for the baby boom generation's retirement financial security dim, i.e., their level of consumption in retirement is reduced through increased taxes and decreased transfers. Such fiscal adjustments would have a relatively greater negative impact on younger baby boomers.

Another study focuses on the effects of personal targeted retirement accounts (IRAs, 401(k)s, and Keoghs) on the financial status of recent retirees and on persons approaching retirement (Venti and Wise, 1993). Based on a comparison of age cohorts across time, it concludes that the real personal financial assets of younger cohorts are substantially larger than those of their predecessors due to increasing contributions to personal retirement accounts and to the fact that such contributions have not displaced other forms of saving. While families that are aged 76 or over currently have $43,000 in personal financial assets (including assets in addition to personal retirement accounts), the study projected that families with a head of household aged 76 or over 18 years from now will have approximately $25,000 more in assets (this includes both contributors and non- contributors to personal retirement accounts). The difference among participating families is projected to be even greater: $93,000 versus $160,000.

The study concludes that "If these trends continue, the baby boom generation will accumulate substantially larger levels of personal financial assets than their older counterparts and thus after retirement will have much larger pools of accessible assets upon which to draw to meet unexpected contingencies." Whether such outcomes actually materialize will depend to a large degree on the preservation of lump-sum distributions received by workers as they change jobs. Furthermore, other research has indicated the opposite, i.e., vehicles such as IRAs and 401(k)s increase private savings by a marginal amount, at best (Engen, Gale, and Scholz, 1994).

In conclusion, the evidence indicates that boomers, in general, will enjoy a standard of living, i.e., real level of consumption, in retirement that exceeds that of their parents. Whether they will be able to maintain the standard of living they enjoyed while working once they move into retirement is a different question with a less clear answer. A key role will be played by wealth accumulation through homeownership. To the extent that boomers are willing to tap into this resource to fund their retirement, they would appear at this early stage to be in good shape. In addition, a key role will be played by individual savings, particularly through employment-based saving plans such as 401(k)s. Also, fiscal policy decisions made by the federal government will impact boomers by affecting their current disposable income and thus their ability to save, as well as the benefits they will receive in retirement through Social Security and Medicare. Many of the things that will impact the boomers' retirement, such as economic growth, trends in housing values, and government fiscal policy, will unfold over a period of decades and are impossible to predict.

Social Security

Social Security, which comprised 42 percent of income of the population aged 65 and over in 1992, will provide a smaller benefit for the same amount of lifetime earnings for the elderly in the future. This is of particular interest for the poorest of the elderly population, because Social Security comprised 83 percent of income for those in the lowest income quintile and 81 percent of income for those in the second lowest income quintile. As discussed previously, these individuals also have the lowest median wealth-to-income ratios, meaning they rely on income to provide for most of their-well being during retirement. The status of future benefit levels and the level of future payroll taxes to support Social Security is uncertain.

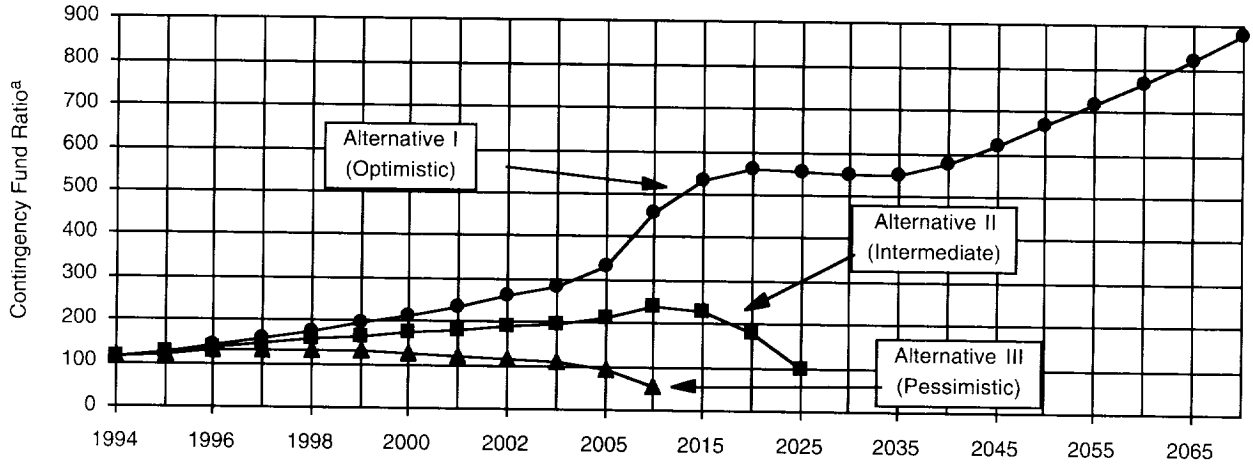
The Social Security system operates on a pay-as-you-go basis, with income generated primarily from payroll taxes, income tax on Social Security benefits, and interest on the Social Security trust fund in a given year covering benefit payments and expenses during that year. Any excess in income over disbursements during the year is put in the Social Security trust fund, which is invested exclusively in U.S. Treasury securities or bonds. In this manner, the federal government borrows from the trust fund to cover general operating expenses. When Social Security expenditures exceed income, the Treasury will be required to appropriate funds from the general budget to redeem the bonds and securities to make payments to Social Security beneficiaries. The annual reports issued by the board of trustees of the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds (which together form OASDI, commonly called Social Security), include projections based on three sets of actuarial economic and demographic assumptions that predict the amount of income and disbursements of the OASDI trust fund over a 75-year period. The OASDI trust fund is considered to be insolvent when the funds are exhausted.

Projections of Social Security's Solvency

According to the 1994 board of trustees report, under the

Chart 2.5

Ratio of Assets to Disbursements in the Old-Age and Survivors Insurance and Disability Trust Fund, by Alternative Assumptions, Calendar Years 1994–2070



Source: U.S. Department of Health and Human Services, Social Security Administration, *1994 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors and Disability Insurance Trust Funds* (Washington, DC: U.S. Government Printing Office, 1994).
[a]Represents assets at the beginning of the year as a percentage of disbursements during the year. These data include interest income.

intermediate set of assumptions the projected date of insolvency for the OASDI trust fund is 2029; seven years earlier than the year projected in the two prior annual reports, and just as the oldest of the baby boom generation begins reaching retirement age (chart 2.5). The cash flow of the combined OASI and DI programs is expected to be positive until 2019, when expenditures are projected to exceed income and interest earnings. The Treasury would be required to appropriate funds from general revenue income to redeem the special securities at that time. The Social Security program's cash flow would be negative even sooner if the interest on the special issue Treasury securities were not included in income. In actuality, the Treasury would have to appropriate funds at the point when income excluding interest income (i.e., payroll tax revenue and income tax on Social Security benefits) falls short of disbursements, because the principal and the interest of the Treasury securities are not accessible without an appropriation of general revenues from the Treasury.

These projections are based on current law, and further changes to the Social Security program may be made to increase OASDI income or to reduce benefit payments. The 1983 amendments to Social Security included a provision to increase the normal retirement age (the age at which individuals are entitled to a full Social Security benefit) incrementally from 65, the current normal retirement age, to age 67 for those attaining this age in years 2027 and later. The Omnibus Budget Reconciliation Act of 1993 increased Social Security revenue by increasing the amount of Social Security benefits that are subject to federal income taxation from 50 percent to 85 percent for single individuals with incomes above $34,000 ($44,000 for married individuals filing jointly). This provision increased Social Security's income from 12.4 percent to 12.6 percent of taxable payroll and is projected to gradually increase to 13.3 percent of taxable payroll by the end of the 75-year projection period.

Impact of Changing the Retirement Age

Increasing Social Security's normal retirement age will decrease the value of the benefit to older Americans. Taking a simplified example, table 2.21 shows the monthly benefit individuals of various ages, with the same salary history, would receive if the normal retirement age were changed today to age 67 or age 70 and compares that benefit to the average benefit payment received by an individual under current law. Under current law, an individual claiming Social Security payments at age 65, with average indexed monthly earnings of $2,000, will receive $884 per month in Social Security retirement benefits (William M. Mercer, 1994). If the normal retirement age for Social Security were changed to age 67, assuming the monthly benefit at the new normal retirement age would be the same, $884 per month, individuals who still wished to claim Social Security payments at age 65 would receive a monthly benefit of $766, or 13 percent less than the benefit at age 65 under current law. If normal retirement age were age 70, an individual

wishing to retire at age 65 would receive $636 per month, or 25 percent less than the benefit at age 65 under current law.

Individuals choosing to claim Social Security payments prior to normal retirement age receive reduced benefits, which under current law would be $707 a month at age 62 under the same scenario (table 2.21). An individual claiming Social Security benefits at age 62 would receive 10 percent less ($636) if normal retirement age were age 67 and 25 percent less ($530) if normal retirement age were age 70.

Table 2.21
Monthly Social Security Retirement Benefits[a] Under Different Normal Retirement Ages

	Assumed Normal Retirement Age (NRA)		
Age Retired	Age 65 (Current NRA)	Age 67 (Eventual NRA)	Age 70[b] (Alternative NRA)
62	$ 707	$636	$530
65	884	766	636
67	955	884	707
70	1,039	977	884

Source: Employee Benefit Research Institute simulation based on monthly benefits calculated in William M. Mercer, *Guide to Social Security and Medicare* (Louisville, KY: William M. Mercer, 1993).
[a]Assumes individuals in each scenario will reach normal retirement age on January 1, 1995 and begin receiving benefit payments on their 62nd, 65th, 67th, or 70th birthday. Normal retirement benefits are based on average indexed monthly earnings of $2,000.
[b]The reduction in benefits for early retirement and the increase in benefits for late retirement are calculated according to current law.

Individuals who wait longer to claim Social Security benefits because they do not want to retire or cannot afford to stop working, receive an increased benefit. Under current law, an individual claiming Social Security benefits at age 67 would receive $955 per month, and an individual waiting until age 70 would receive $1,039 per month (table 2.21). If normal retirement age were 67, an individual claiming Social Security benefits at age 67 would receive $884 per month; the monthly benefit a similar individual would receive under current law at age 65. If normal retirement age were age 70, the monthly benefit at age 67 would be $707, which is equal to the early retirement benefit under current law at age 62.

The effect of an increase in normal retirement age would be somewhat mitigated by the increase in benefits for those claiming retirement benefits after normal retirement age. For people born after 1930, the percentage increase in the annual benefit is scheduled to increase one-half percent every two years, reaching 8 percent per year for those born after 1942. Currently, individuals claiming Social Security benefits at age 67 in 1995 would receive a 4 percent increase for each year they defer benefits and those beginning benefits at age 70 in 1995 would receive a 3.5 percent increase for each year they defer benefits. Using the example in table 21, if the 8 percent benefit increase were in affect now, the individual initiating Social Security benefits at age 67, where normal retirement age is age 65, would receive $1,025 per month rather than $955 under current law. Similarly, the individual receiving Social Security benefits at age 70 would receive a monthly benefit of $1,238.

Public Opinion

Current workers, while not likely to be knowledgeable regarding the specific issues discussed above, nonetheless have limited expectations regarding the level of benefits they will receive from Social Security in their retirement. In a recent public opinion survey that asked respondents to rate their confidence in Social Security on a scale of one to five, with five indicating extremely confident and one not at all confident, the mean confidence score was 2.8 (Employee Benefit Research Institute/The Gallup Organization, Inc., 1994b). More than two-thirds of Americans (69 percent) said they expect the level of Social Security benefits to decrease (38 percent) or be eliminated (31 percent) in the future. One-quarter of Americans said they expect benefits to increase in the future, and 4 percent said benefits will stay the same.

Lower-income individuals were more likely than higher income individuals to say Social Security benefits would increase, while higher-income individuals were more likely than lower-income individuals to say benefits would decrease. The lower-income individuals are also less likely to be saving on their own for retirement. Currently, lower-income individuals receive the majority of their retirement income from Social Security, but it appears that many younger lower-income individuals are not aware that Social Security benefits have decreased and may decrease further. Without this knowledge, it is unlikely they will make up for a loss in Social Security benefits with increased personal savings.

Twelve percent of respondents to another public opinion survey stated they expect Social Security benefits to increase more than the rate of inflation or at the same level (Employee Benefit Research Institute/The Gallup Organization, Inc., 1994c). Twenty-one percent expected Social Security to increase for some individuals but to decrease for others, while 21 percent expected benefits to stay the same for everyone. Forty-nine percent of those surveyed expected Social Security benefits to decrease (33 percent) or be eliminated (16 percent). When asked if they believed that taxes will have to be raised dramatically to pay for the program in the future,

only 46 percent agreed, and the remaining 54 percent disagreed.

Conclusion

What will the situation of the baby boom generation be once they reach their retirement years? Generally, workers themselves are fairly optimistic regarding their preparation and their likely retirement lifestyles. They say that they are saving and are generally pleased with the amount they are saving. However, the question remains whether such confidence is justified.

Expert opinion on the question of the boomers' likely financial situation in retirement is divided, and answers will depend on the specifics of the question being asked. To summarize, the evidence indicates that boomers, in general, will enjoy a standard of living, i.e., real level of consumption, in retirement that exceeds that of their parents. Whether they will be able to maintain the standard of living they enjoyed while working once they move into retirement is less clear. A key role will be played by wealth accumulation through homeownership. To the extent that boomers are willing to tap into this resource to fund their retirement, they would appear at this early stage to be in good shape. Of course, should the value of housing drop significantly and the housing market remain depressed into the boomers' retirement years, their financial situation would be hurt. The exact extent would depend on the magnitude of the drop, its timing, and its duration.

Many of the factors that will impact the boomers' retirement, such as developing trends in employment-based retirement plan participation rates, likely changes in the level of Social Security benefits and the taxes that support these benefits, other developments in government fiscal policy, and macroeconomic developments such as economic growth and changes in the value of housing, will unfold over a period of decades and are impossible to predict. These factors are all in addition to the planning, saving, and investing decisions made by individuals, and often will affect these decisions. The oldest boomers are still 17 years away from age 65 and the youngest boomers are 35 years away from the same age. Many unforeseen events lie ahead that will have a large impact on the baby boomers.

Continued economic growth would be a positive development, while economic stagnation would be negative for boomers. The continued increase in the proportion of women in the work force earning their own retirement benefits is a positive development. Inheritances received by boomers from their parents' generation will be a plus, though likely concentrated among a small portion of the baby boom generation. Any innovations in housing finance that improve homeowners' access to their housing equity will be a positive development. Federal budget deficits and prospective fiscal adjustments loom as a negative. The generosity of Social Security benefits is already being scaled back and further cuts remain a real possibility. In addition, there is the possibility of payroll tax increases to fund these benefits and increased income taxes on the recipients of Social Security benefits.

This paper has not discussed the issues surrounding retiree medical expenses and health insurance. To the extent that boomers, once they are in retirement, have adequate insurance coverage and to the extent that health care inflation is brought under control, they will be that much better off. To the extent that their out-of-pocket expenditures for medical care in retirement increase, they will be that much worse off. In response to Financial Accounting Standard FAS 106[28] employers have reevaluated their retiree health benefits. Some firms have dropped the provision of retiree health benefits for future retirees entirely, while others have no intention of changing their existing plans. Some employers have placed limits on their postretirement medical benefit promises by linking the promise to tenure or by comprehensively restructuring the plan design, often using a defined contribution approach (A. Foster Higgins, 1993).

The reduction in retiree health coverage places additional financial burdens on retirees, at least until they reach age 65 and qualify for Medicare benefits. However, the Medicare program is accounting for an increasing proportion of the federal budget, and the federal government is considering passing health reforms that would reduce future Medicare expenditures. Constraints on federal spending for Medicare and reduced employment-based benefits may mean a greater portion of the elderly's health care costs will be shifted to individuals. It remains to be seen how such issues will be dealt with by health care reform, but they have obvious implications for retirement income security.

Given the heterogeneity of the baby boom generation, more research is needed to identify specifically what subgroups within the generation are currently at risk and what the size of the problem is likely to be for them. This involves moving beyond broad generalizations regarding the boomers. Groups that would now appear to be at risk to some degree include nonhomeowners, the less educated, the single, and the youngest boomers.

[28]FAS 106 went into effect for most companies with the start of their fiscal year after December 15, 1992. Companies that sponsor retiree health plans are required to record unfunded liabilities for future retiree health expenditures on their balance sheet.

BIBLIOGRAPHY

A. Foster Higgins & Co., Inc. *1992 Health Care Benefits Survey: Report 2, Retiree Health Care.* New York, NY: A. Foster Higgins & Co., Inc., 1993.

Auerbach, Alan J., and Laurence J. Kotlikoff. *The United States' Fiscal and Saving Crises and Their Implications for the Baby Boom Generation.* Report to Merrill Lynch & Co., Inc., 1994.

Arthur D. Little, Inc. *America's Retirement Crisis: The Search for Solutions.* Final Report to Oppenheimer Management Corporation, June 24, 1993.

Bernheim, B. Douglas. *The Adequacy of Saving for Retirement: Are the Baby Boomers on Track?* Prepared for the Employee Benefit Research Institute-Education and Research Fund Policy Forum, Retirement in the 21st Century: Ready or Not?, Washington, DC, May 4, 1994.

_____. *Is the Baby Boom Generation Preparing Adequately for Retirement? Summary Report.* Merrill Lynch & Co., Inc., 1993.

_____. *Is the Baby Boom Generation Preparing Adequately for Retirement?, Technical Report.* Merrill Lynch & Co., Inc., 1992.

Bosworth, Barry, Gary Burtless, and John Sabelhaus. "The Decline in Saving Evidence from Household Surveys." *Brookings Papers on Economic Activity*, Vol. 1. Washington, DC: The Brookings Institution, 1991.

Congressional Budget Office. *Babyboomers in Retirement: An Early Perspective* (Washington, DC: U.S. Government Printing Office, 1993a)

_____. *Assessing the Decline in the National Saving Rate* (Washington, DC: U.S. Government Printing Office, 1993b).

_____. CBO Testimony. Statement of Robert D. Reischauer, Director, Congressional Budget Office. U.S. House of Representatives, Subcommittee on Social Security, Committee on Ways and Means, September 21, 1993b.

Easterlin, Richard A., Christine M. Schaeffer, and Diane J. Macunovich. "Will the Baby Boomers Be Less Well Off Than Their Parents? Income, Wealth, and Family Circumstances Over the Life Cycle in the United States." *Population and Development Review* (September 1993). Reprint.

Easterlin, Richard A., Christine Macdonald, and Diane J. Macunovich. "Retirement Prospects of the Baby Boom Generation: A Different Perspective." *Gerontologist* (December 1990): 776–783.

Employee Benefit Research Institute. "Pension Portability and What It Can Do for Retirement Income: A Simulation Approach." *EBRI Issue Brief* no. 65 (Employee Benefit Research Institute, April 1987).

Employee Benefit Research Institute/The Gallup Organization, Inc. *Public Attitudes on Retirement Income, 1994,* EBRI Report no. G-55 (Washington, DC: Employee Benefit Research Institute, 1994a).

_____. *Public Attitudes on Social Security: Part I,* EBRI Report no. G-56 (Washington, DC: Employee Benefit Research Institute, 1994b).

_____. *Public Attitudes on Social Security: Part II,* EBRI Report no. G-57 (Washington, DC: Employee Benefit Research Institute, 1994c).

Engen, Eric M., William G. Gale, and John Karl Scholz. "Do Saving Incentives Work?" Prepared for the Brookings Panel on Economic Activity. Washington, DC, April 7–8, 1994.

Fidelity Investments. *Retirement Planning Research, 1993.* Unpublished survey. 1993.

Grad, Susan. *Income of the Population 55 or Older, 1988,* U.S. Department of Health and Human Services, Social Security Administration. Pub. no. 13-11871. Washington, DC: U.S. Government Printing Office, 1990.

_____. *Income of the Population 55 or Older, 1990.* U.S. Department of Health and Human Services, Social Security Administration. Pub. no. 13-11871. Washington, DC: U.S. Government Printing Office, 1992.

_____. *Income of the Population 55 and Over,* 1978, 1980, 1982, and 1984. U.S. Department of Health and Human Services, Social Security Administration. Pub. no. 13-11871. Washington, DC: U.S. Government Printing Office, selected years 1981–1985.

Grad, Susan, and Karen Foster. *Income of the Population 55 and Over, 1976.* U.S. Department of Health, Education, and Welfare. Pub. no. 13-11865. Washington, DC: U.S. Government Printing Office, 1979.

Greenwood, Daphne T., and Edward N. Wolff. "Changes in Wealth in the United States, 1962–1983: Savings, Capital Gains, Inheritance, and Lifetime Transfers." *Journal of Population Economics* (Spring 1992): 261–288.

Hall, Robert E. "The Importance of Lifetime Jobs in the U.S. Economy." *American Economic Review* (September 1982): 716–724.

Hewitt Associates. *Early Retirement Windows, Lump Sum Options, and Postretirement Increases in Pension Plans, 1992.* Lincolnshire, IL: Hewitt Associates, 1992.

Ippolito, Richard A. "Towards Explaining the Growth of Defined Contribution Plans." *Industrial Relations* (forthcoming).

John Hancock Financial Services. *John Hancock's Retirement Savings Study.* Boston, MA: John Hancock Mutual Life Insurance Company, 1991.

Kingson, Eric. *The Diversity of the Baby Boom Generation:*

Implications for Their Retirement Years. Washington, DC: American Association of Retired Persons, 1992.

Lewin-VHI, Inc. *Aging Baby Boomers: How Secure Is Their Economic Future?* Washington, DC: American Association of Retired Persons, 1994.

Mathew Greenwald & Associates, Inc. *National Taxpayers Union Foundation Survey of Retirement Confidence, Wave III.* Washington, DC: Mathew Greenwald & Associates, Inc., 1993.

Merrill Lynch. *Retirement Savings in America: The Fifth Annual Merrill Lynch Retirement Planning Survey.* Princeton, NJ: Merrill Lynch, Pierce, Fenner & Smith, Inc., 1993.

_____. *Saving the American Dream: An Economic and Public Opinion Study.* Merrill Lynch, Pierce, Fenner & Smith, Inc., 1994.

Oppenheimer Management Corporation. *America's Retirement Crisis: The Search for Solutions.* Arthur D. Little, Inc., 1993.

Palmer, Bruce A. *1993 GSU/A&ACG RETIRE Project Report.* Atlanta, GA: Center for Risk Management and Insurance Research, Georgia State University, 1994.

Piacentini, Joseph S. "Pension Coverage and Benefit Entitlement: New Findings from 1988." *EBRI Issue Brief* no. 94 (Employee Benefit Research Institute, September 1989).

_____. "Preservation of Pension Benefits." *EBRI Issue Brief* no. 98 (Employee Benefit Research Institute, January 1990).

Poterba, James M. "The Growth of 401(k) Plans: Evidence and Implications." Presented at APPWP/CEPR conference, Public Policy Toward Pensions, Washington, DC, October 7–8, 1993.

Quinn, Joseph F., Richard V. Burkhauser, and Daniel A. Myers. *Passing the Torch: The Influence of Economic Incentives on Work and Retirement.* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1990.

Quinn, Joseph F., and Timothy M. Smeeding. "The Present and Future Economic Well-Being of the Aged." *Pensions in a Changing Economy.* Washington, DC: Employee Benefit Research Institute, 1993.

Rogers, Doug. "Americans Backslide on Retirement Goals." *Investor's Business Daily.* 15 February 1994, p. 25.

Ruhm, Christopher J. "Career Jobs, Bridge Employment, and Retirement." In Peter B. Doeringer, ed., *Bridges to Retirement: Older Workers in a Changing Labor Market.* Ithaca, NY: ILR Press, Cornell University, 1990.

Salisbury, Dallas L. "Individual Saving for Retirement—The 401(k) and IRA Experiences." *EBRI Issue Brief* no. 95 (Employee Benefit Research Institute, October 1989).

Schieber, Sylvester J., and Gordon P. Goodfellow. *Pension Coverage in America: A Glass Two-Thirds Full or One-Third Empty?* Prepared for U.S. Department of Labor, Pension and Welfare Benefits Administration conference, Pension Coverage: Where Are We Going? Washington, DC, April 16, 1993.

Schieber, Sylvester J., and John B. Shoven. *The Consequences of Population Aging on Private Pension Fund Saving and Asset Markets,* Prepared for the ACCF-CEPR conference, Public Policy Towards Pensions, Washington, DC, October 7-8, 1993.

Sheiner, Louise, and David N. Weil. "The Housing Wealth of the Aged." NBER Working Paper No. 4115. Cambridge, MA: National Bureau of Economic Research, July 1992.

Silverman, Celia. "Changes in DB and DC Plans Occurring Mainly Among Small Plans." *EBRI Notes* (March 1994): 1–3.

_____. "Pension Evolution in a Changing Economy." *EBRI Special Report* SR-17 /*Issue Brief* no. 141 (Employee Benefit Research Institute, September 1993).

Silverman, Celia, and Paul Yakoboski. "Public and Private Pensions Today: An Overview of the System." In Dallas L. Salisbury and Nora Super Jones, eds., *Pension Funding and Taxation: Implications for Tomorrow* Washington, DC: Employee Benefit Research Institute, 1994.

Skolnik, Alfred M. "Private Pension Plans, 1950-74. *Social Security Bulletin* (June 1976): 3–17.

Smeeding, Timothy M. "The Economic Well-Being of the Elderly: Past, Present, and Future." *EBRI Issue Brief* no. 96 (Employee Benefit Research Institute, November 1989).

Towers Perrin. *After the Paychecks End: Financing the Retirement Years.* Boston, MA: Towers Perrin, 1991.

U.S. Department of Labor. Bureau of Labor Statistics. *Work and Family: Turning Thirty—Job Mobility and Labor Market Attachment.* Report 862. Washington, DC: U.S. Government Printing Office, 1993.

U.S. Department of Labor, Social Security Administration, U.S. Small Business Administration, and Pension Benefit Guaranty Corporation. *Pension and Health Benefits of American Workers: New Findings from the April 1993 Current Population Survey.* May 1994.

U.S. Department of Labor. Bureau of Labor Statistics. *Employment and Earnings.* Washington, DC: U.S. Government Printing Office, March issues.

The Wyatt Company. "New Findings Show Job Tenure on the Rise." *The Compensation and Benefits File* (January 1989): 12–15.

William M. Mercer. *Guide to Social Security and Medicare.* Louisville, KY: William M. Mercer, 1993.

Venti, Steven F., and David A. Wise. "The Wealth of Cohorts: Retirement Saving and the Changing Assets of Older

Americans." NBER Working Paper No. 4600. Cambridge, MA: National Bureau of Economic Research, 1993.

_____. "Aging, Moving, and Housing Wealth." In David A. Wise, ed., *The Economics of Aging*. Chicago, IL: University of Chicago Press, 1989.

Yakoboski, Paul. "Retirement Program Lump-Sum Distributions: Hundreds of Billions in Hidden Pension Income." *EBRI Issue Brief* no. 146 (Employee Benefit Research Institute, February 1994).

Yakoboski, Paul, and Sarah Boyce. "Pension Coverage and Participation Growth: A New Look at Primary and Supplemental Plans." *EBRI Issue Brief* no. 144 (Employee Benefit Research Institute, December 1993).

APPENDIX

Appendix Table 2.1
Distribution of the Population Aged 55 and Over by Age, Annual Income, Gender, and Marital Status, 1992

Total Older Population	Total (thousands)	Percentage Distribution
By Age		
55+	52,117	100.0%
65+	30,870	59.2
55–61	12,887	24.7
62–64	8,360	16.0
65–69	9,832	18.9
70–79	14,499	27.8
80+	6,539	12.5
By Gender and by Marital Status		
	Population Aged 55+	
Total Male	23,037	100.0
Married	17,703	76.8
Widowed	2,210	9.6
Divorced	1,486	6.4
Separated	400	1.7
Never married	1,239	5.4
Total Female		
Married	14,788	100.0
Widowed	10,173	68.8
Divorced	2,403	16.2
Separated	453	3.1
Never married	1,264	8.6
	Population Aged 65+	
Total Male	12,832	100.0
Married	9,716	75.7
Widowed	1,830	14.3
Divorced	582	4.5
Separated	136	1.1
Never married	568	4.4
Total Female	18,038	100.0
Married	7,439	41.2
Widowed	8,578	47.6
Divorced	1,054	5.8
Separated	172	1.0
Never married	795	4.4

Source: Employee Benefit Research Institute tabulations of the March 1993 Current Population Survey.

Appendix Table 2.2

Sources of Income by Gender and Marital Status, Population Aged 55 and Over, 1992

	Total	Married	Widowed	Divorced	Separated	Never Married
			Mean Income			
Total Male	$24,829	$26,587	$17,512	$22,952	$21,783	$15,994
Earnings	12,142	13,538	3,727	12,066	13,307	6,922
Retirement income	8,876	9,232	9,868	6,835	4,624	5,829
OASDI[a]	4,563	4,603	6,129	3,390	2,439	3,290
private pensions[b]	2,124	2,260	2,239	1,667	415	1,077
public pensions[b]	2,004	2,160	1,293	1,750	1,746	1,423
IRA[c]/Keogh/401(k)	135	153	177	1	19	6
other retirement (including annuities)[d]	50	56	30	28	6	34
Income from assets	2,851	2,893	3,170	2,620	1,948	2,257
Other[e]	960	924	747	1,432	1,904	986
Total Female	12,194	10,862	12,711	16,502	10,744	15,955
Earnings	4,055	4,587	1,898	8,657	5,061	6,075
Retirement income	5,074	3,430	7,554	4,303	2,655	6,688
OASDI[a]	3,757	2,554	5,782	2,952	2,111	3,653
private pensions[b]	574	368	769	670	121	1,394
public pensions[b]	715	492	956	659	414	1,585
IRA[c]/Keogh/401(k)	15	7	29	4	3	11
other retirement (including annuities)[d]	15	10	17	18	6	47
Income from assets	2,450	2,535	2,458	2,173	839	2,492
Other[e]	615	309	802	1,370	2,189	700
			Median Income[f]			
Total Male	$17,729	$19,095	$12,562	$16,154	$11,428	$12,154
Earnings	22,000	23,000	12,000	20,000	19,049	14,925
Retirement income	10,462	10,800	9,358	9,900	7,800	8499
OASDI[a]	7,894	8,020	7,413	7,183	6,240	6,278
private pensions[b]	5,808	6,000	4,950	6,480	5,844	4,722
public pensions[b]	13,200	13,793	9,600	13,368	13,217	11,642
IRA[c]/Keogh/401(k)	7,245	7,245	9,500	768	8,000	3,000
other retirement (including annuities)[d]	3,000	3,174	1,479	12,000	1,224	16,000
Income from assets	1,000	951	1,500	800	399	1,231
Other[e]	3,038	3,000	2,616	3,600	4,476	3,050
Total Female	8,500	7,016	9,392	11,439	6,400	11,500
Earnings	11,000	11,000	8,375	16,000	9,784	15,000
Retirement income	5,976	4,545	7,354	6,344	4,533	7,719
OASDI[a]	5,335	4,296	6,696	5,586	4,497	6,000
private pensions[b]	2,632	2,400	2,605	3,400	1,000	3,000
public pensions[b]	6,876	6,968	6,114	9,007	7,000	12,000
IRA[c]/Keogh/401(k)	2,136	2,000	3,200	1,627	579	13,000
other retirement (including annuities)[d]	1,680	1,452	2,100	983	538	2,460
Income from assets	950	922	1,028	423	349	1,007
Other[e]	2,400	2,000	2,400	3,000	3,665	3,775

Source: Employee Benefit Research Institute tabulations of the March 1993 Current Population Survey.

[a]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[b]Does not include disability benefits.

[c]Individual retirement account.

[d]Does not include survivor or disability payments.

[e]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

[f]Median income by source includes only individuals receiving income from the source being measured.

Appendix Table 2.3

Median Elderly Income from Major Sources, Married Couples and Unmarried Individuals Aged 65 and Over, Selected Years 1976–1990

Source and Marital Status	1976	1978	1980	1982	1984	1986	1988	1990
Married Couples[a]								
Median total family[b] income	c	$10,150	$12,830	$16,310	$18,670	$20,520	$22,063	$25,654
Median aged unit[d] income	$7,890	9,460	12,020	15,130	17,250	18,890	20,305	23,352
Median income from major sources, aged units[d] with income from								
Social Security benefits	4,090	4,820	6,030	7,560	8,470	9,070	9,751	10,715
earnings	4,060	5,360	5,990	7,270	7,120	9,040	9,534	10,502
private pension or annuity	2,150	2,540	2,980	3,160	3,750	4,090	4,374	5,409
government employee pension	4,990	4,270	6,280	7,320	c	c	c	10,795
assets	1,120	1,230	1,700	2,160	3,010	3,020	3,319	3,295
Unmarried Individuals								
Median total family[b] income	c	5,730	6,690	8,190	9,580	10,100	11,179	12,638
Median aged unit[d] income	3,360	3,910	4,780	5,880	6,690	7,180	7,928	9,147
Median income from major sources, aged units[d] with income from								
Social Security benefits	2,410	2,880	3,580	4,450	4,830	5,260	5,589	6,219
earnings	2,100	2,590	3,370	4,060	3,800	4,700	5,271	5,261
private pension or annuity	1,500	1,700	1,760	1,880	1,870	2,230	2,616	2,833
government employee pension	3,070	3,580	3,440	4,360	c	c	c	7,066
assets	680	740	760	1,120	1,550	1,520	1,517	$1,887

Source: Susan Grad and Karen Foster, *Income of the Population 55 and Over, 1976*, U.S. Department of Health, Education, and Welfare, pub. no. 13-11865 (Washington, DC: U.S. Government Printing Office, 1979); Susan Grad, *Income of the Population 55 and Over*, 1978, 1980, 1982, and 1984, U.S. Department of Health and Human Services, Social Security Administration, pub. no. 13-11871 (Washington, DC: U.S. Government Printing Office, 1981–1985); and Susan Grad, *Income of the Population 55 or Older, 1988*, U.S. Department of Health and Human Services, Social Security Administration, pub. no. 13-11871 (Washington, DC: U.S. Government Printing Office, 1990); and Susan Grad, *Income of the Population 55 or Older, 1990*, U.S. Department of Health and Human Services, Social Security Administration, pub. no. 13-11871 (Washington, DC: U.S. Government Printing Office, 1992).

[a]Couples are included if they are married, living together, and at least one is aged 65 or over.

[b]A family includes all persons related by blood, marriage, or adoption and residing together.

[c]Not reported.

[d]Aged units include unmarried individuals aged 65 or over and married couples if at least one spouse is aged 65 or over.

Appendix Table 2.4

Sources of Income of the Population Aged 55 and Over by Income Quintile, 1992

	Total	Lowest	2	3	4	Highest
		Distribution of the Elderly by Receipt of Income Source				
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Earnings	35.0	13.4	13.9	27.6	44.0	71.5
Retirement Income	71.0	64.0	86.3	82.8	72.0	50.0
OASDI[a]	64.9	61.3	84.3	78.7	64.0	37.1
Private pensions[b]	19.1	3.5	8.8	27.2	33.8	19.9
Public pensions[b]	10.6	1.5	3.6	10.5	17.5	18.1
IRA[c]/Keogh/401(k)	0.6	0.1	0.1	0.4	1.1	1.2
Other retirement (including annuities)[d]	0.7	0.3	0.3	0.7	1.0	1.0
Income from Assets	68.9	53.0	51.0	69.0	80.0	88.6
Other[e]	15.6	15.5	20.3	14.3	12.8	15.3
		Distribution of Elderly Income by Income Source				
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Earnings	42.9	6.2	8.8	18.5	32.8	59.1
Retirement Income	38.0	69.9	73.9	64.1	49.3	20.9
OASDI[a]	23.1	66.8	69.6	50.6	27.1	6.6
Private pensions[b]	7.1	1.8	2.4	7.8	11.8	6.0
Public pensions[b]	7.2	1.3	1.7	5.5	9.9	7.6
IRA[c]/Keogh/401(k)	0.4	0.0	0.0	0.1	0.3	0.6
Other retirement (including annuities)[d]	0.2	0.1	0.1	0.1	0.2	0.2
Income from Assets	14.8	11.6	9.0	12.4	14.4	16.4
Other[e]	4.3	12.3	8.3	5.0	3.6	3.5

Source: Employee Benefit Research Institute tabulations of the March 1993 Current Population Survey.

[a]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[b]Does not include disability benefits.

[c]Individual retirement account.

[d]Does not include survivor or disability payments.

[e]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Appendix Table 2.5

Sources of Income of the U.S. Population Aged 55 and Over by Income Quintile, Selected Years 1974–1992

	Total	Lowest	2	3	4	Highest		Total	Lowest	2	3	4	Highest
	Percentage of the Older Population Receiving Income from Various Sources							Distribution of the Older Population's Income by Income Source					
				OASDI[a]							OASDI[a]		
1974	58.2%	54.1%	80.5%	77.7%	54.2%	22.5%	1974	19.5%	76.9%	69.6%	53.7%	23.0%	3.9%
1979	59.4	51.7	82.4	79.2	59.0	24.0	1979	20.3	65.8	67.5	51.3	24.3	3.8
1984	61.7	55.4	81.6	76.4	60.9	33.8	1984	21.4	65.9	66.5	47.9	24.8	5.7
1989	64.4	63.3	83.5	77.0	61.5	37.1	1989	21.7	65.9	66.4	45.8	23.6	6.1
1992	65.4	61.4	84.8	79.5	64.8	37.5	1992	23.6	67.2	70.2	51.7	28.1	6.8
				Pensions and annuities[b,c]							Pensions and annuities[b,c]		
1974[b]	18.2	2.9	5.4	19.9	33.9	20.5	1974[b]	8.5	3.0	2.8	7.2	14.1	7.3
1979	20.6	2.3	7.6	26.3	38.1	24.5	1979	10.0	2.0	2.8	8.9	15.8	9.2
1984	24.2	3.7	10.4	31.5	42.6	29.2	1984	11.1	2.5	3.5	11.4	17.3	10.1
1989	28.8	4.9	15.9	39.6	47.4	36.5	1989	13.5	2.8	5.5	14.4	19.6	12.8
1992	30.2	5.4	12.9	38.5	51.5	38.8	1992	15.0	3.2	4.2	13.4	22.0	14.8
				Income from assets							Income from assets		
1974	46.1	22.3	22.5	44.1	57.3	70.7	1974	11.5	9.6	4.7	9.0	11.3	13.0
1979	70.4	58.2	51.2	70.9	80.0	88.5	1979	14.1	18.2	10.6	15.4	15.5	13.6
1984	70.2	54.5	49.8	72.3	81.9	89.6	1984	20.0	17.4	10.9	17.8	19.7	22.1
1989	70.8	51.0	55.0	74.1	83.1	90.6	1989	18.5	12.3	11.6	16.9	19.2	20.0
1992	69.0	53.1	51.0	69.2	80.0	88.7	1992	15.2	11.7	9.0	12.5	14.5	17.1
				Earnings							Earnings		
1974	46.4	25.8	16.5	31.8	60.1	85.8	1974	57.2	−2.8	9.9	22.1	48.3	74.9
1979	39.4	13.5	12.8	27.8	53.5	82.9	1979	52.5	3.2	8.0	18.9	41.5	72.0
1984	36.4	14.6	14.0	28.8	48.5	71.8	1984	44.6	3.1	8.7	19.1	36.0	60.7
1989	36.0	13.7	16.0	30.0	47.1	72.6	1989	43.4	6.4	9.6	19.9	35.2	59.4
1992	35.0	13.4	13.9	27.6	44.1	71.5	1992	42.9	6.2	8.8	18.5	32.9	59.1
				Other[b,d]							Other[b,d]		
1974[b]	16.0	13.7	24.7	20.4	11.5	8.3	1974[b]	3.3	13.3	13.1	8.0	3.2	1.0
1979	15.7	13.4	25.3	16.2	11.9	11.7	1979	3.1	10.9	11.1	5.5	2.8	1.4
1984	14.2	14.6	24.7	12.3	10.7	8.9	1984	2.8	11.2	10.4	3.9	2.2	1.4
1989	13.7	17.8	18.1	10.6	11.3	10.8	1989	2.8	12.6	7.0	3.0	2.5	1.7
1992	13.9	15.1	19.3	12.0	10.5	12.8	1992	3.2	11.8	7.8	3.9	2.6	2.2

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[b]In 1974, the percentage of the older population receiving pension income may be overstated and the percentage of people receiving "other" income may be understated. Total private pension income received by individuals aged 55 and over in 1974 was $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[c]Includes pension, annuity, survivors, and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Appendix Table 2.6

Mean and Median Income of the Population Aged 55 and Over, by Income Quintile, Selected Years 1974–1992

	Total	Lowest	2	3	4	Highest
Mean Income						
Total						
1974[a]	$16,109	$ 790	$5,473	$ 9,846	$18,376	$45,826
1979	16,760	1,874	6,094	10,419	18,497	45,885
1984	17,304	2,212	6,534	11,026	19,041	19,041
1989	18,987	2,918	7,562	12,611	21,235	52,115
1992	17,767	2,496	6,864	11,501	19,347	47,436
OASDI[b]						
1974	3,141	608	3,808	5,287	4,232	1,777
1979	3,394	1,234	4,115	5,343	4,499	1,749
1984	3,700	1,457	4,344	5,276	4,727	4,727
1989	4,118	1,924	5,019	5,771	5,010	3,187
1992	4,201	1,676	4,816	5,947	5,432	3,215
Pensions and annuities[a,c]						
1974[a]	1,367	24	153	713	2,598	3,325
1979	1,678	37	171	929	2,926	4,222
1984	1,929	55	230	1,253	3,294	3,294
1989	2,570	82	414	1,819	4,155	6,657
1992	2,671	79	290	1,544	4,253	7,004
Income from assets						
1974	1,854	76	255	882	2,077	5,947
1979	2,367	340	647	1,605	2,876	6,222
1984	3,467	384	715	1,963	3,743	3,743
1989	3,516	360	879	2,127	4,070	10,433
1992	2,697	291	620	1,438	2,809	8,105
Earnings						
1974	9,215	(22)	540	2,176	8,882	34,314
1979	8,794	59	485	1,969	7,676	33,044
1984	7,725	69	567	2,107	6,861	6,861
1989	8,246	187	724	2,516	7,476	30,939
1992	7,630	154	605	2,128	6,360	28,054
Other[a,d]						
1974[a]	532	105	717	789	587	463
1979	526	204	676	573	520	650
1984	483	247	678	427	416	416
1989	536	366	526	379	524	899
1992	568	295	533	443	494	1,059

	Total	Lowest	2	3	4	Highest
Median Income						
Total						
1974[a]	$11,425	$2,391	$5,522	$ 9,562	$17,957	$37,565
1979	10,793	2,765	3,032	1,623	387	1,353
1984	11,349	3,129	3,239	1,252	391	1,369
1989	12,509	3,830	7,488	12,512	20,790	42,041
1992	11,842	3,420	6,840	11,407	19,002	38,478
OASDI[b]						
1974	5,854	2,728	4,694	7,069	7,786	7,911
1979	5,674	5,994	4,978	1,716	626	3,894
1984	6,045	6,520	5,383	1,486	699	4,313
1989	6,332	3,630	6,137	7,693	8,208	8,486
1992	6,348	3,495	5,800	7,643	8,422	8,664
Pensions and annuities[a,c]						
1974[a]	5,464	1,449	2,391	2,937	6,651	13,660
1979	5,658	10,233	6,957	2,759	1,202	7,730
1984	5,476	10,859	7,081	3,064	1,565	7,823
1989	5,920	1,268	1,650	3,883	8,024	14,935
1992	6,000	1,263	1,500	3,245	7,200	15,000
Income from assets						
1974	1,423	498	632	1,283	1,918	2,561
1979	966	18,129	7,630	6,841	1,546	15,460
1984	1,499	18,648	7,833	6,978	2,704	15,647
1989	1,436	381	792	1,608	2,829	3,889
1992	989	267	500	1,000	1,500	2,300
Earnings						
1974	17,075	1,138	3,566	7,115	15,652	34,150
1979	17,393	38,650	7,478	13,914	1,824	34,785
1984	15,647	37,878	7,855	12,877	4,107	33,901
1989	16,972	1,810	4,526	9,052	17,539	37,338
1992	15,840	1,530	4,950	8,310	15,600	35,000
Other[a,d]						
1974[a]	2,739	1,679	2,610	3,210	3,757	2,388
1979	2,213	1,546	2,190	2,899	2,788	1,987
1984	2,086	1,627	2,159	2,503	2,608	2,026
1989	2,263	1,901	2,037	2,851	2,715	2,715
1992	2,400	1,802	2,064	2,880	3,000	3,915

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Mean and median pension income in 1974 may be overstated and mean and median "other" income may be understated. Total private pension income of individuals aged 55 and over in 1974 was $10,451 million; however, because some sources of income in the "other" category are included in private pension income the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[b]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[c]Includes pension, annuity, survivors, and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Appendix Table 2.7

Mean and Median Income of the Population Aged 65 and Over, by Income Quintile, Selected Years 1974–1992

	Total	Lowest	2	3	4	Highest		Total	Lowest	2	3	4	Highest
				Mean Income							Median Income		
				Total							Total		
1974[a]	$12,239	$1,857	$5,549	$ 8,252	$12,950	$32,417	1974[a]	$ 8,674	$3,159	$5,576	$ 8,203	$12,806	$24,958
1979	12,673	3,102	5,984	8,764	13,458	31,524	1979	8,795	3,620	5,933	8,678	13,296	24,705
1984	14,347	3,520	6,529	9,672	15,295	36,204	1984	9,659	3,971	6,520	9,550	15,107	28,248
1989	15,942	3,678	7,091	10,744	16,918	41,099	1989	10,765	4,222	7,085	10,657	16,689	32,226
1992	14,899	3,436	6,730	10,183	15,712	37,483	1992	10,200	4,020	6,684	10,085	15,473	28,527
				OASDI[b]							OASDI[b]		
1974	5,142	1,645	4,313	6,157	7,169	6,467	1974	6,033	3,113	4,849	6,884	7,581	8,135
1979	5,412	2,455	4,708	6,298	6,982	6,471	1979	5,798	3,252	5,054	6,903	7,322	7,730
1984	5,817	2,822	5,202	6,585	7,345	7,080	1984	6,234	3,476	5,585	7,010	7,822	8,063
1989	6,148	2,997	5,588	7,010	7,748	7,343	1989	6,504	3,647	5,998	7,565	8,161	8,554
1992	6,206	2,838	5,460	7,092	7,929	7,642	1992	6,420	3,600	5,846	7,534	8,248	8,842
				Pensions and annuities[a,c]							Pensions and annuities[a,c]		
1974[a]	1,709	29	127	378	1,871	6,093	1974[a]	5,123	1,605	2,224	2,151	4,013	9,904
1979	1,875	35	124	493	2,115	6,489	1979	4,824	1,353	1,480	1,836	4,360	9,647
1984	2,158	43	180	790	2,822	6,847	1984	4,694	981	1,252	2,112	4,930	10,030
1989	2,794	72	269	1,139	3,574	8,886	1989	5,211	1,109	1,358	2,636	5,567	11,812
1992	2,991	71	218	1,081	3,597	9,703	1992	5,076	1,000	1,272	2,280	5,194	12,000
				Income from assets							Income from assets		
1974	2,230	70	243	611	1,821	8,340	1974	1,821	484	598	953	1,931	5,265
1979	2,727	221	546	1,150	2,621	8,947	1979	1,353	291	580	966	2,019	4,831
1984	4,039	262	557	1,593	3,590	13,968	1984	2,067	317	652	1,408	3,260	10,431
1989	4,018	245	643	1,734	3,784	13,631	1989	1,923	311	623	1,513	3,337	8,969
1992	3,051	226	539	1,286	2,603	10,297	1992	1,200	217	500	1,000	1,904	4,924
				Earnings							Earnings		
1974	2,607	(59)	155	400	1,476	10,962	1974	6,113	1,025	1,423	2,627	5,692	17,075
1979	2,199	9	99	341	1,330	9,090	1979	6,646	773	1,193	2,899	5,798	15,847
1984	1,912	7	100	356	1,260	7,710	1984	5,858	652	1,398	2,712	6,259	15,256
1989	2,513	7	120	534	1,450	10,415	1989	7,694	1,018	1,697	3,734	6,789	22,629
1992	2,207	(12)	104	434	1,201	9,024	1992	7,000	350	1,204	3,581	6,018	18,000
				Other[a,d]							Other[a,d]		
1974[a]	552	172	711	706	613	554	1974[a]	2,669	1,568	2,459	2,698	3,835	5,078
1979	461	382	507	481	409	526	1979	2,125	1,739	1,855	2,435	3,989	3,479
1984	421	387	490	348	277	600	1984	1,956	1,674	1,833	2,347	2,608	3,502
1989	468	357	470	328	361	824	1989	1,989	1,582	1,738	2,675	2,738	3,575
1992	445	313	408	290	382	818	1992	2,264	1,656	1,704	2,640	3,000	4,200

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Mean and median pension income in 1974 may be overstated, and mean and median "other" income may be understated. Total private pension income for individuals aged 55 and over in 1974 was $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[b]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[c]Includes pension, annuity, survivors', and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Appendix Table 2.8

Sources of the Older Population's Income by Age, Selected Years 1974–1992

	Total Aged 55+	Total Aged 65+	55–61	62–64	65–69	70–79	80+
Percentage of the Older Population Receiving Various Income Sources							
				OASDI[a]			
1974	58.2%	88.6%	10.8%	47.5%	83.8%	91.4%	91.6%
1979	59.4	91.0	10.7	51.3	86.8	93.7	92.3
1984	61.7	92.6	9.0	55.0	88.8	95.2	93.3
1989	64.4	92.5	9.3	55.6	87.1	95.6	94.7
1992	65.4	93.4	9.1	55.7	89.7	94.8	95.9
				Pensions and annuities[b,c]			
1974[b]	18.2	24.0	9.1	16.7	26.1	24.8	17.4
1979	20.6	26.6	10.8	20.1	29.0	27.3	20.1
1984	24.2	30.1	13.1	25.0	33.2	30.8	23.0
1989	28.8	34.7	16.3	29.6	36.8	35.8	28.6
1992	30.2	37.2	15.8	28.0	37.0	40.0	31.4
				Income from assets			
1974	46.1	47.4	44.5	44.6	45.3	48.7	48.2
1979	70.4	68.9	72.6	71.2	69.8	69.4	65.7
1984	70.2	69.4	71.3	71.1	71.3	70.0	64.3
1989	70.8	70.3	71.6	71.6	71.5	70.7	67.2
1992	69.0	68.8	69.3	69.1	69.8	69.8	65.1
				Earnings			
1974	46.4	21.9	81.9	61.3	33.3	18.0	7.8
1979	39.4	17.5	70.8	51.4	28.6	14.2	3.3
1984	36.4	15.2	70.0	47.1	25.1	12.7	3.6
1989	36.0	16.4	71.5	48.8	28.6	12.4	4.5
1992	35.0	14.9	72.4	49.2	25.7	12.4	4.1
				Other[b,d]			
1974[b]	16.0	17.3	15.7	11.0	15.1	17.4	21.9
1979	15.7	15.3	16.9	14.4	13.4	14.7	20.7
1984	14.2	13.6	15.4	13.9	12.1	13.3	17.1
1989	13.7	13.4	14.7	12.6	13.2	13.2	14.4
1992	13.9	12.9	16.1	13.8	12.3	13.2	13.0
Distribution of the Older Population's Income by Income Source							
				OASDI[a]			
1974	19.5%	42.0%	2.5%	11.6%	33.7%	47.5%	50.2%
1979	20.3	42.7	2.6	13.3	35.8	45.9	52.2
1984	21.4	40.5	2.2	14.5	34.5	43.5	46.6
1989	21.7	38.6	2.3	14.5	29.3	43.2	48.2
1992	23.6	41.7	2.4	15.8	33.6	43.8	52.6
				Pensions and annuities[b,c]			
1974[b]	8.5	14.0	4.0	7.7	14.2	14.7	11.0
1979	10.0	14.8	5.7	10.4	15.2	15.4	11.8
1984	11.1	15.0	6.3	12.3	16.4	15.3	11.2
1989	13.5	17.5	7.8	14.9	19.4	17.3	13.5
1992	15.0	20.1	8.1	15.7	20.6	21.4	15.3
				Income from assets			
1974	11.5	18.2	6.6	8.6	15.7	19.3	22.7
1979	14.1	21.5	8.4	11.6	18.3	22.7	27.0
1984	20.0	28.2	12.2	16.2	23.3	29.8	35.3
1989	18.5	25.2	11.1	15.1	21.3	26.5	31.2
1992	15.2	20.5	9.0	12.6	18.5	20.5	24.6
				Earnings			
1974	57.2	21.3	84.3	69.8	32.7	13.9	9.5
1979	52.5	17.3	80.5	61.6	27.7	12.6	2.6
1984	44.6	13.3	76.5	54.3	23.2	8.6	2.9
1989	43.4	15.8	76.2	52.7	27.1	10.1	3.6
1992	42.9	14.8	77.2	52.0	24.6	11.3	3.9
				Other[b,d]			
1974[b]	3.3	4.5	2.6	2.2	3.7	4.6	6.7
1979	3.1	3.6	2.7	3.0	3.0	3.3	6.5
1984	2.8	2.9	2.7	2.7	2.6	2.8	4.0
1989	2.8	2.9	2.7	2.9	2.9	2.8	3.5
1992	3.2	3.0	3.3	3.8	2.7	3.0	3.5

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[b]In 1974, the percentage of older individuals receiving pension income and the percentage of income represented by pension income may be overstated, and the percentage of people receiving "other" income and the portion of income represented by "other" income sources may be understated. Total private pension income of individuals aged 55 and over in 1974 totaled $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[c]Includes pension, annuity, survivors', and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Appendix Table 2.9

Mean Income of the Population Aged 55 and Over by Age and Income Source, Selected Years 1974–1992

Age	1974[a]	1979	1984	1989	1992
			($1992)		
			Total Income		
55–59	$21,382	$22,942	$22,002	$24,604	$23,565
60–64	19,096	19,596	19,692	21,867	20,274
65–69	14,104	14,251	16,059	18,282	16,922
70–74	11,863	12,700	14,646	16,190	15,100
75+	10,614	11,089	12,586	13,728	13,172
			OASDI[b]		
55–59	451	482	393	448	497
60–64	1,554	1,829	1,929	2,125	2,096
65–69	4,760	5,104	5,546	5,363	5,683
70–74	5,401	5,716	6,157	6,715	6,195
75+	5,343	5,487	5,819	6,450	6,624
			Pensions and annuities[a,c]		
55–59	799	1,164	1,097	1,636	1,525
60–64	1,222	1,796	2,246	2,873	2,899
65–69	2,007	2,165	2,627	3,546	3,488
70–74	1,862	2,073	2,295	2,970	3,351
75+	1,582	1,437	1,635	2,018	2,354
			Income from assets		
55–59	1,270	1,846	2,484	2,545	2,077
60–64	1,643	2,088	3,085	3,083	2,291
65–69	2,209	2,603	3,739	3,888	3,130
70–74	2,204	2,724	4,257	4,129	2,942
75+	2,271	2,853	4,156	4,057	3,063
			Earnings		
55–59	18,275	18,858	17,471	19,351	18,705
60–64	14,254	13,273	11,872	13,148	12,254
65–69	4,612	3,950	3,726	4,963	4,167
70–74	1,909	1,767	1,498	1,930	2,140
75+	1,074	788	569	767	711
			Other[a,d]		
55–59	588	592	557	623	760
60–64	423	609	559	638	734
65–69	517	429	422	522	455
70–74	488	420	438	446	472
75+	346	524	408	436	420

Source: Employee Benefit Research Institute tabulations of the March 1970, March 1975, March 1980, March 1985, March 1990, and March 1993 Current Population Surveys.

[a]Mean pension income in 1974 may be overstated, and mean "other" income may be understated. Total private pension income of individuals aged 55 and over in 1974 was $10,451 million; however, because some sources of income in the "other" category are included in private pension income, the actual pension total is overstated by between 2 percent and 12 percent, or is between $9,221 million and $10,243 million. Similarly, public pension income in 1974 totaled $13,603 but is potentially overstated by between 7 percent and 18 percent, falling in the range of $11,226 million and $12,638 million. Income from "other" income sources is understated by the amount pension income is overstated.

[b]Old-Age, Survivors and Disability Insurance; includes railroad retirement.

[c]Includes pension, annuity, survivors,' and disability benefits.

[d]Includes public assistance, Supplemental Security Income, unemployment compensation, workers' compensation, veterans' benefits, nonpension survivors' benefits, nonpension disability benefits, educational assistance, child support, alimony, regular financial assistance from friends or relatives not living in the individual's household, and other sources of income.

Discussion After Yakoboski/Silverman Presentation

MR. SCHIEBER: I guess the way I look at this isn't so much that tenures have been going up. It's that we've all held this myth for the last 15 or 20 years that they've been going down, and they really haven't been.

MR. BERNHEIM: Whether the transitions in the labor market are voluntary or involuntary strikes me as an extremely important issue. If they were moving to better opportunities, that completely changes the interpretation of these data. So I think that that's a vital issue to resolve.

MR. WRAY: The Profit Sharing Council of America (PSCA) has begun reviewing the impact of the recently passed legislation that imposes a 20 percent withholding tax on lump sums in qualified retirement plans that are not rolled over into IRAs or a subsequent employer's plan.

At PSCA's request, Hewitt Associates did a study of its 1993 distributions. Hewitt Associates is a consulting firm that does recordkeeping for a wide variety of qualified plans throughout the United States.

In 1993, there were approximately 141,000 lump-sum distributions from Hewitt Associates' client plans. Thirty-one percent of those electing to take a lump-sum distribution from their plan rolled the distribution into an IRA. Five percent transferred their distribution into their new employer's plan. Sixty-four percent took their distribution in cash. However, 70 percent of the total dollar amount of the distributions was rolled over into an IRA, and 10 percent was transferred to a new employer's plan. Twenty percent of the value of distributions was taken in cash.

The Vanguard Group, one of America's largest mutual fund families, did a similar study, with results similar to those found by Hewitt Associates. These studies encompass a very large number of participants, and I believe that their results are typical for plans generally.

This does not account for those who choose to leave their distributions in their former employer's plan. As you know, the law provides that participants have the right to leave their account balances in their plan at termination of employment if the balance is over $3,500. PSCA is currently evaluating ways to determine the number of participants who choose this option and the amount of money they are deferring in this way.

Chapter 3: Baby Boomers in Retirement: An Early Perspective

Joyce Manchester

Introduction

Many people are concerned that, in retirement, the baby boom generation will place unduly large demands on private and public resources. One reason is the sheer number of Americans born between 1946 and 1964. This bulge is expected to raise the share of the population that is aged 65 and over from about 12 percent in 1990 to about 20 percent in 2030, when the youngest baby boomer is 66 years old. Pressures will be felt in funding Social Security and private pensions and in providing health care to older people. A second reason for the concern is the lower saving rates of recent years, which reduce the odds that sufficient resources will be available to provide for the baby boomers' retirement.

The Congressional Budget Office (CBO) released a study in September 1993 that finds baby boomers, on average, could have at least as much real income and wealth in retirement as their parents' generation now has. Their saving to date is similar to that of their parents as young adults. As a whole, baby boomers have higher real incomes and more wealth than their parents had as young adults, although some demographic groups have not fared as well as others. For the most part, the parents of baby boomers, now close to or just past retirement age, seem to have adequate financial resources in retirement, reflecting in part transfer programs available to essentially all of them and unanticipated gains on housing assets rather than systematic financial planning. As long as real wages continue to grow, Social Security and private pensions remain intact, and health care expenditures do not swamp other gains, most baby boomers are likely to enjoy higher real incomes in retirement than their parents.

Of course, it is far too soon to predict the financial situation of baby boomers in retirement. Even though the older boomers have completed almost one-half of their working years, they are just entering the period of life when most of the financial preparations for retirement take place. It would not be surprising to find different wealth profiles of baby boomers 10 years to 20 years from now as they get much closer to their retirement years and have more information on which to base their saving decisions. Indeed, most of the pension benefits and private assets of the current retirees were acquired after they were older than the boomers are now. Moreover, baby boomers could inherit substantial amounts of wealth from their parents over the next 20 years to 30 years.

Recognize, however, that CBO is asking a restricted question in this study—whether the baby boomers' income and wealth in retirement will exceed that of their parents. The answer to that restricted question appears to be yes, but that does not imply that baby boomers are saving enough. If boomers simply reach the income of their parents' generation, the economy will show no progress and the standard of living will stagnate. The way to increase growth is for baby boomers, their parents, and the generation following the boomers to save more, through lower government deficits and higher rates of saving.

Other studies of future retirement incomes have used higher standards, although they are not related to any specific concern about overall national saving. Some suggest that baby boomers might try to maintain some proportion of their preretirement standards of living when they retire, with the proportion ranging up to 100 percent. Full replacement of preretirement incomes is probably a higher standard than current retirees have met, and we have no way of knowing what replacement ratio boomers would find acceptable. The CBO study does not examine how boomers' retirement income might relate to their preretirement income.

These concerns notwithstanding, CBO's findings stand in contrast to the claims of some that the baby boomers will certainly face hard times in retirement. Such assertions focus on the slowing of real wage growth, the future financial deterioration of the Social Security system, the decline in defined benefit pension plans, low private saving rates, and possible declines in the value of housing. CBO acknowledges those trends but also recognizes that real wages are still growing, the work force is more highly educated, and the participation rate of women in the labor force has increased. All of these factors portend increases in household incomes of baby boomers in retirement, in part by making greater accumulation of assets possible during their working years.

How Do Baby Boomers Compare with Their Parents as Young Adults?

CBO's findings show that baby boomers in general are finan-

cially better off than their parents' generation was as young adults. Both real household income and the ratio of household wealth to income are higher, on average, for baby boomers aged 25–44 in 1989 than was true of young adults aged 25–44 in 1959 and 1962.[1]

The advantage of older boomers is even greater than that of younger boomers. For the group aged 25–34, median household income in 1989 dollars is 35 percent higher than it was for a similar group in 1959—$30,000 in 1989 and $22,300 in 1959 (table 3.1). The slightly older group, aged 35–44, reports substantially larger gains, with median inflation-adjusted household income 53 percent above that of the corresponding group in 1959, rising from $25,100 to $38,400. Median household wealth in real terms is about 50 percent higher in 1989 than it was in 1962 for the younger group and about 85 percent higher for the older group.

Even more striking is the finding that the median ratio of wealth to income is higher now than it was for young adults in 1962. Among households in the 25–34 age bracket in which the head of household is not married, the median ratio of wealth to income has more than tripled. Among married couples in that age bracket, the median ratio has more than doubled. The rise in the median ratio is less pronounced for those in the 35–44 age bracket, but an increase is still evident. The median ratio rises 11 percent for unmarried heads of households and 16 percent for married couples.

These gains in household income and wealth have come despite changes in household composition that in some cases work against the betterment of household finances. For example, a much larger share of households is now headed by unmarried people who may be divorced, widowed, or never married. In 1959, an unmarried person headed just 14 percent of households in the 25–34 age group. By 1989, that proportion had more than tripled to 46 percent.

At the same time, the increased number of women in the labor force and higher educational attainment among baby boomers help to increase household incomes and wealth. The proportion of married couples with two earners has risen from 39 percent to 69 percent among households headed by a married person aged 35–44. Also, many more baby boomers are completing high school or college. The proportion of households headed by a person aged 35–44 with a high school degree has risen from 40 percent to 58 percent. For the same age group, the share of households headed by a person with four years of college has risen from 11 percent to 30 percent.

Exceptions to the general improvement in the financial situation of young adults point to those groups that have not shared in the economic prosperity of the past 30 years. Those households with heads aged 25–34 without a high school degree report lower median household income in 1989 than in 1959 after adjusting for inflation, although today's dropouts probably have fewer skills than did those of the early 1960s (table 3.2).[2] Households headed by unmarried individuals aged 25–34 with children report median income about one-third the size of married couples with children and about one-twentieth as much wealth. Married couples aged 25–34 with only one earner report about two-thirds as much wealth in 1989 as in 1962. Wealth among nonhomeowners aged 25–34 has not changed much since 1962 and has actually declined among nonhomeowners aged 35–44.

CBO has analyzed only changes in financial well-being as measured by income and wealth. Thus, our study does not address many "quality of life" issues that surely are

[1]Congressional Budget Office analysis of the 1960 Census, the 1990 Current Population Survey (CPS), and the Survey of Consumer Finances (SCF) in 1962 and 1989. The unit of observation used throughout this study is the household, defined to include all people living in a dwelling unit in the Census and the CPS. In the SCF, boarders are not included as members of the household.

Table 3.1
Median Income and Wealth, by Age and Marital Status with and without Children, 1959 and 1989, in 1989 Dollars.

	Aged 25–34		Aged 35–44	
	1959	1989	1959	1989
All Households				
Median income	$22,300	$30,000	$25,100	$38,400
Median wealth	6,100	9,000	29,300	54,200
Not Married				
Median income	13,000	21,900	14,200	25,300
no children	17,000	26,000	16,800	28,700
with children	8,100	13,300	10,900	20,900
Median wealth	400	1,800	6,300	16,700
no children	900	3,100	13,500	17,700
with children	0	700	1,900	7,900
Married				
Median income	23,300	36,700	26,700	46,800
no children	26,500	44,500	28,000	50,500
with children	22,700	34,600	26,300	46,200
Median Wealth	7,900	17,300	36,500	70,100
no children	7,800	17,200	43,100	71,900
with children	8,000	18,800	35,500	70,100

Source: Congressional Budget Office tabulations using the 1960 Census and 1990 Current Population Survey for income and the 1962 and 1989 Survey of Consumer Finances for wealth.

[2] A much smaller percentage of the population does not complete high school today. In 1959, 42 percent of household heads aged 25–34 had not completed high school. This proportion fell to 13 percent in 1989.

of great importance when comparing how baby boomers live today with how their parents lived three decades ago or with how the boomers will live 30 years or 40 years into the future.

The large increase in women's participation in the labor force in recent decades may mean more family income and many more opportunities for women today and in the future. At the same time, this development also imposes strains on families who must set up child care arrangements outside the home and juggle the needs of all family members during the few hours of family time that remain each week. Moreover, improvements in medical care, automobile safety, housing, and consumer electronics have been remarkable, but they cannot be measured in a study such as this. Similarly, deterioration of the environment and an increase in crime rates cannot be quantified but may have high costs in terms of health, safety, and enjoyment.

Table 3.2
Median Income and Wealth, by Age and Number of Earners and by Education, 1959 and 1989, in 1989 Dollars

	Aged 25–34		Aged 35–44	
	1959	1989	1959	1989
	By Number of Earners			
Median Income				
Married, one earner	$21,900	$28,100	$24,700	$38,500
Married, two earners	25,500	41,500	29,600	50,400
Median Wealth				
Married, one earner	12,600	8,100	40,700	53,400
Married, two earners	5,600	28,300	34,600	92,400
	By Education of Head of Household			
Median Income				
No high school degree	18,600	16,300	20,700	20,800
High school degree	23,900	29,000	27,500	35,600
Four years of college	29,200	41,800	38,500	53,400
Median Wealth				
No high school degree	800	1,600	13,900	6,100
High school degree	8,600	8,300	43,200	45,600
Four years of college	23,100	28,300	68,400	102,700

Source: Congressional Budget Office tabulations using the 1960 Census and 1990 Current Population Survey for income and the 1962 and 1989 Survey of Consumer Finances for wealth.

What Is the Financial Situation of Those Close To or Just Past Retirement Today?

The cohort that includes parents of the baby boomers, defined to be older people aged 55–74 in 1989, in general has considerable income and wealth. These older people benefited from strong economic growth and real wage growth until 1973, although real wages have grown only a little since then. Social Security benefits have expanded greatly over the last few decades, pension coverage and benefits for recent retirees have been rising, and unexpected capital gains on housing and financial gains on fixed rate mortgages have given many older households a welcome financial boost. For those aged 65 and over, the government covers a large percentage of medical expenses through the Medicare program.

One indicator of the financial circumstances of older adults is the relatively low share of total income from earnings—perhaps a signal that the elderly do not find it necessary to have a job in order to make ends meet. In 1990, just 18 percent of the total income of households of persons aged 65 and over came from earnings, down from 37 percent in 1958.

That decline in the share of income from earnings can be associated with both the rise in Social Security benefits and with declines in participation in the labor force. In 1990, 36 percent of the total income of the elderly came from Social Security, up from 22 percent in 1958. The relative importance of other sources of income has not changed much since 1958. The share of income from assets has risen from 23 percent to 25 percent, while the share from pensions has increased from 14 percent to 18 percent. The share of public assistance dropped from 5 percent to 2 percent.

Closely related to the decline in the share of income from earnings over the past few decades is the decline in the rate of participation in the labor force among people aged 55 and over. In 1965, 85 percent of men aged 55–64 were in the labor force, but that proportion had dropped to 67 percent by 1991. Among men aged 62–64, participation in the labor force fell from 73 percent in 1965 to 46 percent in 1991. For men aged 65 and over, participation rates fell from 28 percent in 1965 to 16 percent in 1991. Women aged 55–64 show small increases in labor force participation over this same period, from 41 percent to 45 percent. Among women aged 65 and over, the rate fell slightly from 10 percent in 1965 to 9 percent in 1991.

Some notable exceptions mar that optimistic picture of recent and soon-to-be retirees. Those who are aged 55–64, not married, and not working report substantially lower median incomes and wealth than does the median household in the cohort. Households with heads holding less than a high school degree report about one-third of the median income and less than one-quarter of the median wealth of households with heads of household who completed four years of college. Median wealth for nonhomeowners in the 55–64 age group is less than one-hundredth of the median wealth (including housing equity) of homeowners in this age group. In the 65–74

age group, median wealth for nonhomeowners is less than one-fiftieth of the median wealth of homeowners.

Looking Ahead to the Financial Circumstances of Baby Boomers in Retirement

Overall, CBO expects that baby boomers will have higher real retirement incomes than older people today for a variety of reasons.

- First, as long as real wage growth is positive, on average, during the next 20 years to 40 years, boomers will have higher real preretirement earnings than today's older people had in their working years. Under current law, this growth will increase the level of boomers' Social Security benefits. Pension benefits will be higher as well, and higher earnings now will enable them to save more for retirement.
- Second, increases in women's participation in the labor force imply that more boomers will have acquired more years of work experience before retirement. Not only will more women be eligible for their own Social Security and pension benefits, but also their income from these sources in some cases will be higher.
- Third, boomers will be more likely to receive income from pensions as a result of recent changes in the pension system.
- Finally, baby boomers may inherit substantial wealth from their parents.

Several caveats must accompany these optimistic findings. One of the most important assumptions leading to these results is that wages will grow more rapidly than prices during the next 40 years. Although most growth in real wages in the long run comes from technical progress, low saving and capital investment will reduce the growth of real wages. In addition, changes in government tax and benefit policies could affect these conclusions. Changes that increase taxes or reduce benefits could leave retirees with lower discretionary income. For example, during the next three or four decades, as the proportion of retirees in the population rises, Social Security taxes could be raised or benefits could be reduced. In addition, benefits and financing of Medicare may be altered as part of the current effort to reduce the deficit and possibly as part of general health care reform.

Although the future looks bright for those who are well educated, it is somewhat gloomy for those with few marketable skills. The baby boomers are one of the most highly educated cohorts in history, with one of every four completing four years of college as of 1989. Those with a college education can expect higher incomes, faster wage growth, and more resources available for saving. However, the prospects of earning a decent wage are much poorer for those without skills valued by the marketplace. The job opportunities for those without a college education or technical skills will probably continue to shrink in the future as the workplace places a growing premium on advanced skills and training.

Marital status is also important in determining financial well-being both before and after retirement, especially for women. Being married today usually means having two incomes and sharing many expenses, with housing among the most significant. Fringe benefits, particularly health insurance coverage, are usually better for married couples than for single people because the gaps in one spouse's benefits are often filled by the other. These financial benefits continue in the retirement years, and under current law a significant percentage of wives also receive more generous Social Security payments based on their husband's work history rather than their own. Widows especially gain from their husband's more extensive work history.

Homeownership may be an important indicator of the potential for lifetime earnings and at least in the past has contributed to wealth through sizable capital gains on housing assets. Homeowners to date have accumulated significantly more wealth than nonhomeowners. Their wealth is in nonhousing assets as well as in housing, although this may reflect the relationship between income and wealth rather than between homeownership and wealth. If this continues to be true in the future, those who are unable to buy a home as young adults might be less financially well off in retirement than those who could afford to become homeowners. Although CBO cannot forecast whether housing will continue to be a good investment in the years to come, we have found that households headed by older people who own their homes tend to be financially better off in retirement.

Two implications emerge. The first is that single, poorly educated baby boomers may face a bleak economic future, depending heavily on public programs. The current cohort of retirees also faces this prospect. The second is that nonhomeowners may be unable to accumulate wealth at a rate that is sufficient to give them a comfortable lifestyle in retirement. Although most baby boomers will enjoy higher incomes and more wealth than their parents, some types of households will be struggling to make ends meet.

Special Factors That Will Affect the Financial Situation of Retired Baby Boomers

The rate at which the economy grows over the next few decades and the provision of baby boomers for their own

retirement will have a large influence on the financial circumstances of baby boomers in retirement.

Trends in Economic Performance and Social Support Programs

Sluggish economic growth in this country over the next 20 years to 40 years could reduce the ability of households to save for retirement, both privately and through employment-based pension plans. Slow economic growth together with the changing demographic composition of the population could also endanger the ability of the government to maintain social support programs.

Productivity growth, which is the main factor determining real wage growth, has slowed in recent decades relative to the 1950s and 1960s, and no clear sign of a pickup is in sight. Households may save less as a result of slower growth in national income, and firms will find it more difficult to provide jobs with high wages and significant fringe benefits such as pension plans and health insurance.

At the same time, sluggish economic growth in the long term will make reducing the federal government deficit more difficult and funding for social support programs more problematic. Tax revenues are lower during periods of slow growth, and demands for government support programs are higher. Lower revenues and increased expenses will push federal deficits higher and further impinge on long-term economic growth. Government programs such as Social Security and medical services for the elderly could face stiff fiscal opposition even before most baby boomers reach retirement age.

The changing age composition of the population may also imply trouble ahead for maintaining social support programs for older people. Programs such as Social Security and Medicare rely on payroll taxes on current workers to support retirees. The ratio of the retired to the working population (proxied by the ratio of those aged 65 and over to those aged 20–64) is projected to rise from 0.21 in 1990 to 0.27 in 2020 and then reach a high of 0.37 in 2035, when the oldest baby boomers are almost 90 and the youngest boomers are just past 70. Fewer workers supporting more retirees may generate pressure to reduce benefits or increase payments made by elderly recipients. However, such pressure could be countered in part as the elderly become an even stronger voting block. On the bright side, the overall dependency ratio—both the aged and the young relative to workers—will rise much more slowly.

Private Efforts to Provide for Retirement

Declines in household saving rates over the past decade or two and uncertainty about the availability of housing wealth to finance retirement expenses have been a source of concern about how well prepared households are for retirement.

In recent years, saving out of disposable income—the personal saving rate—declined to levels well below those of earlier decades. The adjusted personal saving rate fell from 7.1 percent in the 1960s to 6.1 percent in the 1980s. Results from household surveys suggest a significant drop in saving rates in the 1980s by households with heads aged 45–64, the cohort that is now close to or just past retirement age.

Whether or not baby boomers are saving enough to provide for their retirement depends to a great extent on the standard of comparison. A recent study of saving claims that, on average, baby boomer households are saving only 34 percent as much as they should to maintain their preretirement level of consumption in retirement. The study assumes that Social Security benefits will continue at current levels, ignores housing wealth as a component of total wealth, and carefully models job changes, pension benefits, and family composition.

Although the findings about the adequacy of saving may be valid under the assumptions of that analysis, the question posed in this study is whether baby boomers will have higher real incomes in retirement than their parents. Even though baby boomers are not accumulating assets fast enough to maintain their preretirement levels of consumption, they may do better than their parents in retirement.

Response to Criticisms of the CBO Study

Now let me deal with two criticisms of the CBO study. First, some people might argue that even if the saving behavior of baby boomers is comparable to that of their parents, this doesn't mean much since their parents didn't save adequately themselves but have benefited from fortuitous circumstances. Yet the evidence shows that the parents' generation was saving at a moderately high rate prior to the 1970s and 1980s. Only after receiving good news regarding Social Security benefits, housing capital gains, and Medicare expansion did they reduce their saving rates. Indeed, a paper by Attanasio argues persuasively that the age-saving profile shifted downward for those aged 45–60 in the 1980s.[3] Boomers are behaving the way their parents did *before* their elders learned about the windfalls from housing and Social Security, so it seems wrong to assume they will follow in their parents'

[3] Orazio P. Attanasio, "A Cohort Analysis of Saving Behavior by U.S. Households," Working Paper No. 4454 (Cambridge, MA: National Bureau of Economic Research, 1993).

footsteps the rest of the way toward retirement if we expect them to be confronted by different economic circumstances.

This line of reasoning reinforces the need for more information, education, and counseling in financial matters for boomers and for people of all ages. But recognizing that behavior does change in response to economic circumstances, both good and bad, is important.

Second, CBO has included housing wealth in the measure of household wealth, even though some research finds that older people do not wish to use housing equity to finance expenses in retirement. The relevant question, however, is not whether people desire to spend down their housing equity but whether policymakers should ignore it when evaluating the adequacy of resources to finance retirement living. CBO believes that policymakers should include housing in household wealth because households can use that wealth when needed. Indeed, recent research shows that households do in fact reduce housing equity in the year or two before death. At the very least, homeownership means more discretionary income in retirement since the household need not pay rent and most older households have paid off the mortgage. And baby boomers are likely to find innovative ways to tap their home equity without moving, perhaps through reverse mortgages, home equity loans, or some new kind of loan.

Finally, the CBO study does not address the likelihood that baby boomers will pay higher tax rates or receive reduced benefits in the future as this country faces up to its fiscal problems. Without a doubt, policymakers will have to pay more attention to resolving fiscal imbalances projected for the future. As illustrated by the recent proposal by Rep. Dan Rostenkowski (D-IL) to shore up the finances of Social Security, policymakers recognize that changes must be made soon to avoid more severe cuts in later years.

Conclusion

It is much too early to predict the financial circumstances of baby boomers in retirement with any accuracy. Nevertheless, for the average boomer, the early signs are moderately encouraging. As long as the economy continues to grow so that real incomes continue to rise, public and private pension systems remain intact, and health care costs do not explode, baby boomers should enjoy higher real incomes in retirement than their parents' generation currently does. But for some, as discussed above, the outlook is considerably worse.

Discussion after Manchester Presentation

MR. SCHIEBER: First, the most recent Social Security trustees' report shows that for the baby boom generation the program is underfunded by roughly 30 percent to 40 percent. If we were to repeat the '77 amendments and the '83 amendments, half of the underfunding is going to be made up out of benefit reduction.

Second, their parents had a fortuitous experience in terms of housing appreciation, but it's awfully hard to conceive that they are going to have a similar experience. When the baby boomers sell, they may face depressed housing values.

Third, a paper that John Shoven and I did last fall suggests that when the baby boomers begin to liquidate their retirement assets, it could potentially cause equity or bond prices to drop. You mentioned that there are some caveats to your conclusions, but it seems to me they are fairly substantial.

MS. MACUNOVICH: You mentioned about the baby boomers selling when the baby busters are buying. That's already started to happen. That means we're probably seeing one of the lowest price points right now.

I think it's important to go back to Joyce's [Manchester] point that people do change their patterns of savings in response to other stimuli. So if the baby boomers don't have the benefit of the housing market that their parents did, then they will tend perhaps to adjust their savings rate.

The question is whether the baby boomers should be happy just being better off than their parents, or will they want to be as well as off as they were before they retired? These reports are really showing us the price of constantly trying to increase our standard of living.

MR. SCHIEBER: I think if they begin to understand their circumstance, baby boomers may pick up their savings rate. My own sense is that most people have a relatively simple model for retirement planning. They plan by looking around. They look at the generations ahead of them. They look at their parents' generation. They know what their income stream was throughout their life. They know what kind of firms they worked in. They know what they accumulated in terms of their assets. They watch the generation immediately ahead of them. I think that the baby boom generation is going to be poorly served by that model. I think it's the model they are

using, because they have watched the generations ahead of them have windfall gains, and they're not going to be there for them. So I think that's an important issue.

MS. MANCHESTER: On the other hand, if you look at public surveys of what people think about Social Security benefits—will they be there for them—overwhelmingly they say, no.

MR. SCHIEBER: But they're not changing their behavior.

MS. MANCHESTER: That's not what the numbers say. The numbers say that their saving relative to their income is above that of their parents' saving at the same age. So it's very difficult to argue that they're not saving as they should.

MR. KOTLIKOFF: I think that benchmark you're using is not a benign choice. I think it really is a benchmark that says that the American dream is over, and that it's acceptable to have the American dream be over. The American dream is that every generation be better off than past generations. I think your benchmark sends a message that is a very dangerous one for the baby boomers.

I have concerns about details of the analysis. Whether, for example, the data were benchmarked against the national income account aggregates and also whether the wealth data were benchmarked against the Federal Reserve aggregates, so that we're not looking just at differences in misreporting over time.

The Federal Reserve survey of consumer finances differently underestimates aggregate wealth in the different years. Federal Reserve data should be taken with large grains of salt.

The other issue concerns saving rates. I think the notion of income is dramatically different now than it was back in 1960. It used to be that we didn't have a 15.5 percent payroll tax heading towards who knows what level. In 1960, we had a payroll tax of 3.0 percent.

The point is that some people may view that payroll tax contribution as part of their income that the Social Security system is saving for them. So the notion of what is income and what is a saving rate out of that income is really very much of an arbitrary choice here as to how you define income. I think there are more appropriate ways to define lifetime resources that need to be examined, rather than looking at current income, which is really up for anybody's definition.

MS. MANCHESTER: I want to respond to Larry Kotlikoff on the benchmarking of the Survey of Consumer Finance (SCF).

The first point to make is that the flow of funds accounts from the Federal Reserve Board are not very accurate as a measure of wealth in the United States, especially in the household sector, where they are calculated as a residual.

Second, we have new information from the Federal Reserve Board. They have recently completed a paper that looks at the '89 SCF compared with the '89 flow of funds, and they claim that, if you do all the fixes correctly—and apparently there are a lot of fixes and people outside the Fed might not be able to do all of those—you come to the conclusion that the wealth measures in the two data sets are very, very close.

MR. KOTLIKOFF: How about for 1962?

MS. MANCHESTER: For 1962, that same careful comparison has not been done. At the moment, there are no plans to do it. An earlier study by Avery, Elliehausen, and Kennickell[4] showed that wealth in the SCF was underreported compared with the flow of funds, but he no longer will say that he has confidence in those numbers. So we don't know about '62, but we do know that the '89 survey is just about right on.

MR. GREENWALD: I think it is important to consider that the cost of retirement is not a constant. It has gone up, especially as life expectancy has gone up and the average age of retirement has gone down. For generations now working, I feel the cost of retirement will be considerably higher than it is now. Their retirement will be longer, especially due to continued increases in life expectancy. The cost of their medical care will be higher, especially with new medical technologies and new drugs entering the market. Finally, they are very likely to have less free support from their offspring in terms of services, such as help if they become disabled in old age and need long-term care. With less help from their children, they will have to buy additional services, such as long-term care services, and this will add to the cost of being retired.

MS. MANCHESTER: Part of changing behavior is changing the age at which people retire. It's quite possible baby boomers will find themselves retiring later.

MR. BERNHEIM: I wanted to address the issue of what people expect from Social Security. First, I'm not sure how much I trust the survey answers because I think people express cynicism when they're asked that question. They want to make a statement about how they feel about where the government is headed.

[4] Avery, Elliehausen, and Kennickell, *Review of Income and Wealth* (December 1988): 339–369.

Second, there's a more important policy issue tied into this. Beginning in 1995, the Social Security Administration is going to begin to distribute to every worker a statement that looks very much like the statements workers get from private pension plans—a forecast of future Social Security benefits based on current statutes. There was a time when I supported this because I thought it would be a good idea in terms of informing workers about what they could expect to get.

I think the statement is going to have a profound effect on what people expect from Social Security. They're going to get a very official looking statement saying here's what you're going to get. Now the fine print will say, by the way, this isn't guaranteed, and the law may change; but that isn't what's going to be emphasized. For political reasons, the Social Security Administration will not put in forecasts based on fiscal realism.

They will not say, by the way, this is unrealistic, we're going to run out of money, and here's a more realistic number. They can't do that. So people are going to get statements that assure them that this is coming. I think that if they are skeptical somewhat about Social Security now, unfortunately, this will be reducing their skepticism quite a lot. The benefit statements may therefore induce many people to save even less than they're saving now.

MR. FARKAS: First, I found the point about the Social Security projected benefit notices very interesting. I think that the first time people get a sense of what they can expect from the benefit, they might react in exactly the way that Dr. Bernheim said; but as soon as somebody puts out the warning that this is not actually reliable, then there will be further cynicism.

Second, it strikes me that there are many contradictions and questions about how much of a problem overall savings is in this country. Is there a macroeconomic problem for America, regardless of whether specific segments are in trouble? Is the nation in trouble overall because it's not saving enough? Is there consensus on that I've missed?

MR. KINGSON: I think one of the strengths of the CBO study is that it emphasizes the heterogeneity of the baby boomers. We constantly hear talk about "the baby boom generation" as if they are a homogeneous group. But we're really talking about a generation that is 76 million different people—some born in 1946 and some in 1964, some well-off, some poor, etc.

I think CBO talks to their diversity and, in doing so, provides a basis for us to think further about which groupings of people can potentially gain the most from private pension and other private savings mechanisms. Similarly, it's most important to identify the groups that are at greatest risk and probably not in a position to substantially improve their retirement prospects through various private savings mechanisms.

MR. MADDEN: It was a long winter in Philadelphia. Somewhere between the seventh and fifteenth snowstorm one of my colleagues and I developed a bottom-up approach to this whole problem and assessed the present value for all Americans of a benefit of 70 percent of whatever their final pay might be. You can come up with a number that's anywhere from $10 trillion–$15 trillion, depending on the assumptions. Making other assumptions about the dynamics of the future, we can bring the whole system to its knees, unhappily, anywhere between 2025 and 2050. Every asset is gone. Beyond that, I like to look beyond the baby boomers. Assuming there were some assets left after the last baby boomer dies—assuming that's 115 years old in the year 2079—we're left with a system that has benefit paths that are 1.7 times those of today in real terms.

So normalizing out the baby boomer impact, which I think we're focusing a little too much on, we've still got a system that's broke.

MS. MITCHELL: The really important contributions of the work the CBO and others have done is to make it very clear that we have to do these forecasts, and we have to look at the variation around some sensible assumptions. Additionally, Bill Madden's work demonstrates the role of the retirement age and shows how reasonable increases in the retirement age can help a lot. None of us wants to think about working a great deal longer and, certainly, when I talk to my bright young students, they all want to retire at age 45; but I think the message has to be that this is one of the safety valves that we really ought to be looking at, in addition to trying to get people to save more.

Expectations are also of key importance. In the Health and Retirement Survey we asked people what their anticipated longevity would be. Results show they're not so far off compared to life tables for the probability of living to age 75. They're pretty far off for the probability of living to age 85. This is what we have to confront when we're talking about saving for retirement. Forget about projecting Social Security. Just how long do you think you're going to live? I'd like to put expectations of all kinds on the table.

MR. JACKSON: First of all, I'm not sure it's entirely a positive development to have the Congressional Budget Office, which has been advising the Congress of the United States on

how to conduct and budget its affairs, turn off into the private sector to help individuals and families do their budgeting, because I think the families have done a much better job than the Congress over an extended period of time.

Second, I have not heard one comment so far on the subject of inflation. Some 20 years ago, my wife turned to me at a point when I suggested saving some money, and she said, "Paul, everybody knows that a dollar saved is 50 cents lost." The Congress of the United States has not given us a currency that is a store of value. It has given us a leaky bucket. Compound that with the taxation of savings, and the taxation of capital gains, including the portion of capital gains that comes from increases in the cost of living. The same is true of interest on savings accounts.

Thirty years ago there was concern about inflation because it hurt people. It hurt people who were on fixed incomes. It hurt people who saved in savings accounts. It hurt people who bought government bonds.

You don't hear that concern today because people don't save that way. Inflation has absolutely destroyed a good many of the mechanisms that individuals could use to save for retirement. I think, if you don't focus on inflation, you're missing a real bet here.

MR. FLUHR: As long as we're making a list of things we haven't heard, we're hearing about the retirement needs being moved out because of a longer life expectancy, and we're hearing that family income has gone up. However, it's gone up because, for many households, it takes two wage earners, not one, to get along.

I'm wondering, when we're all hanging around in our late sixties, what we're going to be doing. I don't see any reason to believe that there are going to be employment opportunities. It seems to me that we're headed in the other direction.

CHAPTER 4: Adequacy of Saving for Retirement and The Role of Economic Literacy

B. Douglas Bernheim

EXECUTIVE SUMMARY

Economists and policymakers have, for some time, been alarmed by steep declines in the U.S. saving rates. Aggregate statistics on the decline of saving, coupled with anecdotes of profligate yuppies, have raised concern that most members of the enormous baby boom generation are not saving enough to provide themselves with adequate financial security in retirement. The accumulated empirical evidence overwhelmingly supports the conclusion that, unless their behavior changes dramatically, baby boomers will be forced to accept a significantly reduced standard of living in retirement.

The typical baby boom household is saving at one-third the rate required to finance a standard of living during retirement comparable to the one it enjoys before retirement. There is even some risk that baby boomers will fail to achieve the standard of living enjoyed by their parents during retirement, despite the fact that they currently appear to be better prepared than their parents were at comparable ages.

This conclusion is based on a computer model that calculates how much baby boom households with varying characteristics need to save throughout their adult lives to accumulate enough for retirement at age 65. The model accounts for probable economic developments over the course of a lifetime and takes account of Social Security, private pensions, taxes, interest rates, inflation, economic growth, family composition, and employment prospects. The savings prescriptions generated by the model were compared with actual saving, which was deduced from a survey of 3,800 baby boom households conducted in 1992. An important feature of this analysis was its focus on flows of wealth rather than on stocks of net wealth. In other words, it focused on rates of accumulation—the trajectory.

This analysis is based on a "best case" scenario and may overstate the adequacy of savings by a wide margin. For example, other survey data indicate that roughly 60 percent of this baby boomer saving is intended for purposes other than retirement, such as sending children to college.

The Congressional Budget Office's (CBO) report, *Baby Boomers in Retirement: An Early Perspective*, an analysis of income and assets of baby boomers in 1989 and of individuals of similar ages in 1962, found that baby boomers have higher real incomes than their parents did at similar ages, and that relative to income, baby boomers have at least as much wealth as their parents.

However, typical baby boomers would need to save more than their parents, even relative to income, to prepare adequately for retirement. It is unlikely that they will be as fortunate as their parents, who experienced a huge expansion of the Social Security system, a large expansion of the private retirement benefit system, very high inflation that wiped out their most significant liabilities such as fixed rate mortgages, and, most importantly, rapid economic growth that translated into real growth in wages.

Baby boomers will probably face reductions in Social Security benefits and increases in taxes, reduced retirement benefits, the absence of large windfalls on their homes, and inflation rates that are not high enough to erode the value of their liabilities.

The CBO's discussion of wealth accumulation focuses on the level of savings rather than the rate of saving. This is important because cross sectional comparisons based on CBO data indicate that young workers saved at a more rapid rate during the late 1950s and early 1960s than workers saved in the late 1980s and early 1990s.

This finding is unsettling when considered along with the fact that, according to my analysis, no significant acceleration of the rate of saving occurs as the baby boomers move into their 40s. I find no evidence that they are changing their behavior; rather, they are beginning to fall behind.

It has been suggested that baby boomers will bridge the gap between what they need to save and what they are actually saving through inheritances. This generation as a whole may stand to inherit a significant sum of money, but the important point is that the distribution of bequests—like the distribution of wealth—is extremely skewed. The typical baby boomer will be lucky to inherit a sum in excess of $20,000.

Unfortunately, the average member of the baby boom generation lacks sufficient knowledge of financial issues to fully understand his or her vulnerabilities. Eighty-six percent of baby boomers think that retirees will face financial crises in the future, but less than one-half think that they personally will face a financial crisis. There is certainly a gap there. Baby boomers seem to be in a state of denial on this issue. What they need are incentives and sound guidance. What they do not need is a false sense of security.

Introduction

Economists and policymakers have, for some time, been alarmed by steep declines in the U.S. saving rate. During the 1950s and 1960s, the rate of national saving averaged more than 9 percent. It declined slightly during the 1970s, and then plummeted to an average of just over 4 percent in the 1980s. For 1992, the rate of national saving stood at just 2.2 percent.

Low saving rates have alarming implications for macroeconomic performance. However, the most acute consequences of low saving are personal. The failure to save jeopardizes a household's basic financial security. Following retirement, illness, or job loss, those who fail to save adequately often find that their resources are insufficient to maintain an acceptable standard of living. In some cases, low savers experience significant hardship.

Aggregate statistics on the decline of saving, coupled with anecdotes of profligate yuppies, have raised concern that most members of the enormous baby boom generation—those born between 1946 and 1964—are not saving enough to provide themselves with adequate financial security. This topic has recently been the focus of considerable research. The accumulated evidence overwhelmingly supports the conclusion that, unless their behavior changes dramatically, baby boomers will be forced to accept a significantly reduced standard of living during retirement.

This article reviews the evidence on the adequacy of retirement saving by members of the baby boom generation. It provides a historical perspective, emphasizing that low saving has become something of an American tradition, in that the baby boomers' parents also saved relatively little. However, the parents of the baby boomers benefitted from a variety of fortuitous developments, which left the majority of them in relatively good shape for retirement. The article then reviews the evidence on the adequacy of saving by the baby boomers themselves. Despite some suggestions to the contrary, when properly interpreted, this evidence uniformly supports the conclusion that baby boomers' retirement preparation falls far short of what is required to avoid a steep decline in their standard of living after retirement. There is even some risk that baby boomers will fail to achieve the standard of living enjoyed by their parents during retirement, despite the fact that the boomers currently appear to be better prepared than their parents were at comparable ages. I also examine the possibility that baby boomers might achieve financial security by inheriting substantial resources from their parents. The available evidence does not support this conclusion. Although some will receive substantial inheritances, the typical baby boomer will inherit very little. Finally, the article relates low rates of saving to the state of economic and financial literacy. There is growing evidence that the majority of Americans do not fully appreciate their financial vulnerabilities and poorly understand the implications of financial decisions. This observation raises the possibility that programs designed to educate, inform, and advise the public may be effective tools for increasing rates of saving.

A Historical Perspective on Personal Saving

The experience of elderly individuals demonstrates that, in the past, a large fraction of the population has done a relatively poor job of preparing themselves for retirement. According to Diamond (1977), during the 1960s, approximately 40 percent of couples and more than 50 percent of unmarried individuals reported that they received no money income from assets after retirement. At age 60, nearly 30 percent of middle-class individuals lacked sufficient wealth to replace 2 years' worth of income. Likewise, according to Hamermesh (1984), during the 1970s, most elderly individuals had not accumulated sufficient resources to sustain their accustomed standard of living. Hamermesh concluded that consumption shortly after retirement exceeded the highest sustainable level of consumption by an average of 14 percent. This study also found that most retirees were forced to reduce their expenditures substantially within a few years of retirement.

The typical individual retiring in the 1960s experienced the Great Depression as an adult. This same statement applies to many individuals retiring in the 1970s. These Depression cohorts have a widespread reputation for financial conservatism. The relative conservatism of these cohorts is supported by hard evidence. The fact that so many members of the Depression cohorts failed to provide adequately for retirement bodes ill for the more profligate generations that followed.

The evidence shows that the oldest cohorts achieving adulthood after the Great Depression were significantly less frugal at comparable ages than the Depression cohorts. For example, Attanasio (1993) found a steep decline in age-specific saving rates for those born between 1925 and 1940 (similar findings are reported in Bosworth, Burtless, and Sabelhaus, 1991). These cohorts preceded the baby boom generation and include the parents of many baby boomers. All else equal, one would expect the retirement prospects for these cohorts to be significantly worse than those of the Depression cohorts.

However, all else was not equal. The parents of the

baby boomers benefitted from a number of fortuitous developments. First, real Social Security benefits increased dramatically during the 1970s. Second, private retirement benefits were significantly expanded and improved during this same period. Third, the baby boomers' parents experienced a prolonged period of high inflation that wiped out much of their real liabilities (by reducing the real value of fixed-rate mortgages). Fourth, a sharp increase in the relative price of housing (most likely driven by baby boom population dynamics) created enormous windfalls for many members of these cohorts.

Once one recognizes the importance of these developments, it is less surprising that those retiring in the 1980s have, on average, done reasonably well during retirement (Hurd, 1993 and Congressional Budget Office, 1993). Hurd (1993) attributes this finding in large part to the real increase in Social Security benefits during the 1970s. Likewise, an earlier study concluded that the adequacy of savings for most retirees resulted from fortuitous and unexpected developments (Kotlikoff, Spivak, and Summers, 1982). In short, the typical member of the post-Depression, pre-baby boom generation has achieved a satisfactory degree of financial security through luck rather than through careful planning and prudent saving.

Retirement Prospects for the Baby Boomers

To evaluate the adequacy of retirement preparation by members of the baby boom generation, one must first establish a quantitative standard of adequacy. There are many possible choices. For example, one can evaluate adequacy relative to some notion of "absolute" need (e.g., the poverty level), relative to prevailing standards of living among the nonelderly, relative to the standard of living enjoyed by the elderly of a previous generation, relative to the standard of living enjoyed by the elderly in other countries, or relative to an individual's own lifetime standards. There is no "right" or "wrong" standard of adequacy; rather, the use of different standards corresponds to different questions about retirement prospects. The appropriateness of a given standard must be judged within the context of a particular issue. A standard that is appropriate in one context may be inappropriate in another.

In this article, I adopt a measure of adequacy that evaluates a retiree's living standard relative to his or her own preretirement living standard. With this measure, inadequate saving implies that a household will be forced to accept a lower standard of living during retirement; if the savings shortfall is severe, the decline in living standard will be precipitous. This measure is appropriate in a variety of contexts. Suppose, for example, that the object is to provide households with financial guidance. Since most households wish to avoid sharp declines in their living standard, prescriptions based on equalization of preretirement and postretirement living standards are appropriate. In contrast, it would be entirely inappropriate to base financial recommendations on an absolute measure of adequacy, such as avoiding poverty. The majority of households would, upon finding themselves living just above the poverty level after retirement, conclude that they had saved inadequately. Similarly, those who had achieved lifetime earnings substantially in excess of their parents' earnings might be severely disappointed if their standard of living in retirement did not also exceed that of their parents.

The measure of adequacy adopted here may be somewhat more controversial in the context of public policy issues. Yet the salience of this standard is unavoidable. When the baby boomers retire, they will wield enormous political power, which they will presumably use to further policies that promote their interests. It is therefore likely that future Social Security policy will be dictated in large part by the baby boomers' own expectations about their retirement, which will in turn be driven by their preretirement experiences. A failure to assist them in reaching this standard is therefore likely to produce untenable political and fiscal pressures in the next century.

Studies of Baby Boomers' Retirement Prospects

During the last few years, several studies have addressed adequacy of saving by members of the baby boom generation. The authors of these studies have compiled several different kinds of evidence. Despite some assertions to the contrary, the implications of these studies are uniform: without fundamental changes in either the economic environment or attitudes toward saving, baby boomers will be forced to accept a significant reduction in their standard of living after retirement.

According to my own research, the typical baby boom household is saving at one-third the rate required to finance a standard of living during retirement comparable with the standard of living that it enjoys before retirement (Bernheim, 1993). To conduct this study, I developed an elaborate computer model that calculates how much baby boom households with varying characteristics need to save throughout their adult lives to accumulate enough for retirement at age 65. The model accounts for probable economic developments over the course of a lifetime and takes account of Social Security,

private pensions, taxes, interest rates, inflation, economic growth, family composition, and employment prospects. I then compared savings prescriptions generated by the model with actual saving, which was deduced from a survey of 3,800 baby boom households, conducted in 1992. I have since corroborated these findings with data gathered in the fall of 1993.[1]

It is important to emphasize that my calculations assume a "best case" scenario. If anything, they overstate the adequacy of retirement preparation. In particular, my analysis assumes that every penny of saving will be available for retirement—that households do not have any other savings objectives, such as paying for college education. (More recent survey data indicate that 60 percent of savings are intended for purposes other than retirement). It ignores the fact that baby boomers will probably live longer than current retirees. It assumes that taxes will not rise in the future, that Social Security and other retirement benefits will not be scaled back, and that health care costs will not rise. According to more recent calculations, realistic assumptions about the future of Social Security would more than double required rates of saving, widening the gulf between needs and resources.

Another, more recent, study reached similar conclusions (Arthur D. Little Inc., 1993). For this study, income needed at retirement was defined as 70 percent of the average of an individual's income in the final five years in the labor force. While this standard is somewhat *ad hoc*, it is a common rule of thumb used by financial planners, and it delivers on average a standard of living during retirement that is roughly comparable to that enjoyed before retirement. This study also considers economic projections, demographic trends, and data on household financial behavior. It concludes that households without pension plans typically will have 20 percent to 30 percent of what they need to retire, and that those with pension plans typically will have 50 percent to 60 percent of what they need to retire comfortably.

Several other studies adopt a different standard of adequacy and evaluate retirement prospects for baby boomers by comparing their economic circumstances with those of previous generations, such as their parents and/or current retirees (Congressional Budget Office, 1993; and Kingson, 1992). I have already argued that this may not be the most appropriate standard of adequacy in many contexts. Nevertheless, the evidence contained in these studies still sheds considerable light on the questions of interest. When properly interpreted, this evidence corroborates the finding that baby boomers are saving far too little to avoid a precipitous drop in their standard of living after retirement. Moreover, since the economic environment of the late 1980s is very different from that of the early 1960s, there is even some risk that baby boomers will fail to achieve the standard of living enjoyed by their parents during retirement.

The CBO study provides a comprehensive analysis of income and assets for baby boomers in 1989 and for individuals of similar ages in 1962. This study found that baby boomers have higher real incomes than their parents did at similar ages, and that, relative to income, baby boomers have at least as much wealth as their parents. Specifically, the median value of the ratio of wealth-to-income for 35–44 year olds was 1.23 in 1989, compared with 1.19 in 1962. The CBO's findings may, at first, appear encouraging—after all, the baby boomers' parents seem to be doing reasonably well during early retirement. However, these findings are actually cause for considerable alarm. The baby boomers certainly are not on track to replace their preretirement standard of living and may even fail to achieve the living standards enjoyed by their parents during retirement. This conclusion follows from five separate considerations.

First, it is important to evaluate the CBO's finding in the context of the historical perspective on personal saving previously discussed. In particular, the baby boomers' parents were, on average, profligate as well, and in most cases managed to achieve satisfactory preparation for retirement only because of unexpected, fortuitous developments. It is highly unlikely that the baby boomers will be equally lucky. In particular:

- Most analysts project reductions in Social Security benefits and increases in taxes. A recent study illustrates the importance of this factor (Auerbach and Kotlikoff, 1994). They note that current U.S. fiscal policy will become unsustainable during the next century. This observation leads them to consider a variety of alternative, sustainable fiscal policy scenarios, achieved through increases in tax rates, reductions in Social Security benefits, and/or cuts in health benefits. Auerbach and Kotlikoff find that fiscal realism reverses the findings of the Congressional Budget Office and Kingson—with a sustainable fiscal policy, most baby boomers would have a lower standard of living in retirement than their parents *even in absolute terms.*

[1] The data were collected through telephone interviews. In order to achieve a high level of compliance and to assure accuracy, questions on demographics, assets, and economic status were deferred until the end of the survey, following a lengthy series of less personal questions. This permitted interviewers to establish credibility, to place respondents at greater ease, and to engage respondents in dialogue prior to posing questions of an invasive nature. As a result, response rates on financial questions were extremely high, and comparisons with data contained in the Survey of Consumer Finances give no indication that the key economic variables were either underreported or overreported.

- Many private companies have taken steps to reduce retirement benefits, partly in response to the increasing complexity of federal regulation. In many instances, these steps have been subtle and indirect. For example, there has in recent years been a dramatic shift from traditional pension plans to 401(k) plans. Participation in 401(k) plans is voluntary. According to KPMG Peat Marwick (1993), the typical plan has a participation rate of only 61 percent of eligible employees, who are permitted to defer up to 13 percent of their compensation but who actually defer only 5 percent. Since 80 percent of employers offer matching contributions, low participation rates save employers money. In addition, many defined contribution plans—which have grown in importance—permit participants to withdraw a lump sum on termination of employment, and many workers exercise this option, consuming the proceeds.

- Baby boomers are unlikely to earn large windfalls on their homes. Indeed, it is generally believed that demographic trends will drive real housing prices down as the baby boomers approach retirement (see, e.g., Mankiw and Weil, 1989).

- It is doubtful that inflation will significantly erode the value of the baby boomers' liabilities. Even if we experience a return to high inflation, many baby boomers have opted for adjustable rate mortgages.

Second, even ignoring the foregoing considerations, typical baby boomers would still need to save significantly more than their parents, even relative to income, to prepare adequately for retirement. This is because economic and social conditions changed dramatically between 1962 and 1989. In particular:

- During the 1960s, real wages (for the economy as a whole) grew at the rate of roughly 2 percent to 3 percent per year. Yet this changed dramatically in the mid-1970s. Over the past 19 years, real wages have been essentially stagnant. Thus, the baby boomers' parents benefitted from substantial aggregate wage growth during the 1960s and early 1970s, which left their earnings during their 50s and 60s much higher than those in their 30s and 40s. Baby boomers cannot expect their earnings to grow as rapidly as their parents' earnings. This means that the baby boomers' real incomes just before retirement may not turn out to be much higher than their parents'. It also means that the baby boomers need to start saving sooner. Unlike their parents, they cannot afford to wait. Computer simulations demonstrate that a 2 percentage point difference in the projected rate of wage growth has an enormous impact on appropriate rates of saving. To be on track for retirement, by age 45 baby boomers need to have saved substantially more, relative to income, than their parents.

- Two-earner households are much more common among the baby boomers than among their parents. Single-earner households have historically received significant windfalls from Social Security, in the form of spousal benefits. For this reason, Social Security replaces a smaller fraction of preretirement earnings for two-earner households. This means that two-earner households need to save at higher rates, and to accumulate more wealth relative to earnings, than single-earner households.

- Baby boomers are having children later than their parents did. As a result, they need to save more resources earlier in life, because they will have fewer years to save after the child-rearing years are over. Baby boomers are also having fewer children than their parents. This implies that children are currently less of a drain on their incomes, and that, consequently, the end of child rearing will have less of a salutary effect on their ability to save.

- Baby boomers will live significantly longer than their parents, so their savings need to go further. There is growing evidence that official mortality projections may significantly understate the longevity of those retiring in the next century. According to Vaupel (1992), "If current rates of progress in reducing mortality at advanced ages continue or accelerate, children alive today may live 90 or even 100 years on average."

- Baby boomers' pension assets are invested much more conservatively than their parents' pension assets (due to the growth of defined contribution pension plans and 401(k) plans, which give workers more control over their portfolios).[2] This means that they can expect to receive, over the long haul, much lower returns. Even if they are doing as well at age 35, they are likely to fall far behind by age 65.

- Baby boomers will exhaust a larger fraction of their wealth sending their children to college, both because

[2] According to Arthur D. Little, Inc. (1993), individuals put only 25 percent of their 401(k) plan assets in equity investments.

their children are more likely to attend college and because the real costs of college have risen. This consideration may be offset to some extent by the fact that baby boomers are having fewer children than their parents did.

Third, the CBO's discussion of wealth accumulation focuses on the level of savings rather than on the rate of saving. In other words, it indicates where households are, without attempting to determine where, or how fast, they are going. This is important because young workers may have saved at a more rapid rate during the late 1950s and early 1960s than in the late 1980s and early 1990s. Indeed, cross-sectional comparisons based on the CBO's data confirm this pattern.[3]

Fourth, it is important to bear in mind that the two surveys used in the CBO study were taken 27 years apart, and that they differ in a variety of important respects. The CBO's findings must be interpreted in light of these differences: it is not at all clear that the CBO has compared apples to apples. For example, in 1962, the Survey of Consumer Finances reports roughly 85 percent of the assets tallied in the Federal Reserve's Flow of Funds data. In contrast, in 1989, assets in the Survey of Consumer Finances are roughly equal to the Flow of Funds tally. There are many potential explanations for this difference. One possibility is that baby boomers are much more forthcoming about their assets than their parents were, perhaps because the boomers have grown up during the "information age" and tend to place less importance on privacy. Another possibility is that the ascendence of materialistic norms during the 1980s led more households to acknowledge or exaggerate their resources.

To illustrate the importance of this third consideration, one can adjust the CBO numbers by "benchmarking" the 1962 and 1989 surveys to the Flow of Funds data. With this adjustment, the data indicate that median wealth-to-income ratios have fallen from 1.40 in 1962 to 1.23 in 1989—a decline of more than 12 percent.

Fifth and finally, the measures of wealth used to calculate the wealth-to-income ratios mentioned above include equity in homes. This is appropriate only if baby boomers expect to cash in all of their housing equity and use it to finance spending during retirement. Yet previous research has shown that the elderly have a strong aversion to drawing down the equity in their homes to pay for retirement (Venti and Wise, 1989). Indeed, a 1993 survey by the American Association of Retired Persons found that 84 percent of persons aged 55 and over wish to stay in their homes and never move.[4] Merrill Lynch recently sponsored a survey that sheds light on attitudes toward housing among baby boomers. Fully 62 percent of baby boomers intend to stay in a house of equal or greater value after retirement. Moreover, since retirees must live somewhere, downsizing will make only a fraction of this equity available for financing other living expenses. In the Merrill Lynch survey, those who indicate a willingness to downsize do have homes of greater value but only by about 20 percent (controlling for income). Thus, it is unlikely that a significant fraction of housing equity will be used to defray other living expenses during retirement for the majority of baby boomers.[5]

The inclusion or exclusion of housing wealth is significant because housing is a larger fraction of net wealth for the baby boomers than it is or was for their parents. Indeed, according to the CBO's figures, the ratio of median nonhousing wealth to median income among 35–44 year olds is approximately 7 percent *lower* for the baby boomers than for their parents.[6]

Thus, the existing evidence uniformly supports the conclusion that retirement preparation by baby boomers falls far short of any reasonable standard of adequacy. Baby boom households that fail to become significantly more frugal will be forced to accept dramatically lower standards of living during retirement.

[3] Rates of saving can be inferred from the CBO's cross-sectional data by examining the difference between wealth-to-income ratios for 35–44 year olds and for 25–34 year olds in the same year. For the typical married couple, this comparison indicates net accumulation equal to 97 percent of one year's earnings for the baby boomers' parents, compared with 82 percent of one year's earnings for the baby boomers (see Congressional Budget Office, 1993). This comparison is all the more striking when one considers the fact that the baby boomers' parents were experiencing much higher real wage growth. With higher real wage growth, a higher saving rate is required to achieve the same change in the wealth-to-income ratio. Assuming 2.5 percent real wage growth for the baby boomers' parents and 0 percent real wage growth for the baby boomers, the observed cross-sectional changes in the wealth-to-income ratios imply that the baby boomers' parents were saving 8.4 percent of earnings (in addition to reinvested capital income), compared with only 4.4 percent for the baby boomers.

[4] It is sometimes suggested that the elderly could access their housing equity without moving, through the use of reverse annuity mortgages. Despite their availability, these financial instruments have remained relatively unpopular. There are many possible explanations for this. Financial institutions must set rates to compensate for the fact that a reverse annuity mortgage significantly reduces incentives to maintain and repair residences. Annuity markets for the elderly are also notoriously plagued with problems of adverse selection. Alternatively, the elderly may also regard their housing equity as an "emergency fund" of last resort (i.e., the accumulation of housing equity may represent saving for a purpose other than retirement).

[5] I found that saving would still be inadequate even if it was assumed that all housing equity would be available to finance other living expenses during retirement. The inclusion of housing equity significantly narrows the gap between needs and resources. However, few if any baby boomers would be able to tap all of their housing equity without creating offsetting living expenses (such as rent). In addition, it should be recalled that the target rates of saving in my analysis are derived under highly optimistic assumptions (Bernheim, 1993).

[6] Author's calculations, based on figures appearing in Congressional Budget Office (1993).

The Inheritance Myth

It is sometimes suggested that baby boomers can look forward to receiving substantial inheritances from their parents, and that this may help to address the savings shortfall. For example, CBO notes that "baby boomers could inherit substantial amounts of wealth from their parents over the next 20 to 30 years." However, it is very unlikely that inheritances will significantly affect the adequacy of retirement preparation for the typical baby boomer, for several reasons.

First, and perhaps most importantly, bequests are very highly concentrated. The typical member of any generation receives next to nothing. There is little reason to believe that the baby boomers will be any different in this respect. Second, the baby boomers' parents are likely to live much longer than their predecessors. In the process, they may well exhaust all or most of their resources, either through normal living expenses or through large end-of-life expenses such as nursing home care. Third, in comparison with previous generations, the parents of the baby boomers hold a larger fraction of their wealth in forms that are not bequeathable. For example, annuities, such as Social Security or corporate pensions, generally cannot be passed on to children. According to Auerbach, Kotlikoff, and Weil (1992), the increasing annuitization of the elderly has already reduced the flow of aggregate bequests to children and grandchildren by 20 percent. Fourth, because the parents of the baby boomers, by definition, had more children per family than other generations, their bequests will be divided among a larger number of heirs. In short, a small number of baby boomers can probably count on inheritances to bail them out. The rest would be foolish to do so.

Recent evidence supports this conclusion (Avery and Rendall, 1993). Avery and Rendall forecast aggregate bequests to baby boomers of $10.4 trillion (1989 dollars), coming in 115 million bequests. This implies an average bequest of $90,167. For the typical family, $90,167 would go some distance toward closing the gap between actual and required retirement saving. However, it is important to keep in mind that this figure is a mean, not a median. It is well known that the distribution of wealth is highly skewed due to the existence of a relatively small number of very wealthy households. Moreover, the distribution of bequests, of necessity, closely resembles the distribution of wealth. As a result, the mean bequest significantly overstates the likely inheritance of the typical household.

Unfortunately, Avery and Rendall do not report medians or other quantiles.[7] However, given their method for forecasting bequests, the relation between the means and medians of bequests should be very similar to the relation between the means and medians of net worth. Kennickell and Shack-Marquez (1992) report that median net worth in the 1989 Survey of Consumer Finances was $47,200, compared with mean net worth of $183,700. The ratio of median-to-mean net worth is therefore 0.257. If we assume that the same relationship between means and medians holds for bequests, then the Avery-Rendall figures imply a median bequest of only $23,170.

In addition, the Avery-Rendall figures must be interpreted in light of their assumptions, which tend to overstate the magnitude of bequests. In particular,

- Avery and Rendall make no allowance for the likelihood of significant end-of-life expenses, such as extended nursing home care. In practice, these expenses will probably deplete a significant fraction of the wealth held by the baby boomers' parents. In fact, many individuals may exhaust their assets intentionally so that Medicaid will cover nursing home expenses (Levin, 1993).

- Avery and Rendall use the Bureau of the Census's middle series for male and female single-year age-specific survival probabilities, forecasted for the year 2005. As I have already mentioned, these figures may understate improvements in longevity (Vaupel, 1992). In addition, Avery and Rendall do not compensate for the fact that mortality probabilities are correlated with wealth. Since wealthy people tend to live longer, the Avery-Rendall calculations tend to overstate bequests.

- Avery and Rendall forecast the evolution of bequeathable assets for the baby boomers' parents using age-wealth profiles estimated from cross-sectional data. It is well established in the literature that cross-sectional estimates tend to understate significantly the rate at which the elderly deplete their resources (Bernheim, 1987).

- Avery and Rendall assume that the baby boomers will ultimately inherit all of their parents' remaining wealth. In practice, other parties (other relatives, churches, charitable foundations, and so forth) may also receive significant bequests.

In light of these considerations, even the $23,170 figure reported above probably exaggerates the likely inheritance for the typical baby boomer by a wide margin.

Finally, it should be noted that baby boomers have, to

[7] Instead, they examine the distribution of bequests and inheritances by reporting log-means and log-variances, which are difficult to interpret.

some extent, already begun to receive their inheritances. Thus, estimates of the rate at which these individuals are accumulating assets subsumes the effects of inheritances. Yet these rates of accumulation are clearly insufficient by any reasonable standard.

The Role of Economic and Financial Literacy

Why do members of the baby boom generation—and other Americans—save so little? And why do they invest their money so conservatively? The unfortunate fact is that the average member of the baby boom generation does not have sufficient knowledge of financial issues to understand his or her vulnerabilities and to distinguish between appropriate and inappropriate financial decisions.

Study after study has demonstrated that the level of economic and financial literacy in this country is appallingly low. One common measure of economic knowledge is performance on the Test of Economic Literacy (TEL), which was developed under the sponsorship of the National Council on Economic Education (NCEE). The TEL is typically used to evaluate economic literacy among high school students. The NCEE has also developed a Survey of American Economic Literacy (SAEL), which has been administered to the general public as well as to student populations. Other sources of information on economic literacy include the Survey of Adult Literacy in America, sponsored by the National Center for Education Statistics, U.S. Department of Education, a study of high school competency tests sponsored by the Consumer Federation of America and the American Express Company (1991), and results from national high school equivalency tests. Collectively, these studies paint a rather bleak picture of economic literacy. For example, only 20 percent of adults can determine correct change using prices from a menu (Jordan, 1993), and many have trouble determining whether a mortgage at 8.6 percent is better than a mortgage at 8 3/4 percent (Crenshaw, 1993). Most individuals also severely underestimate the benefits of compound interest (Ng, 1992), a concept that is absolutely central to long-term financial planning.

If poor financial decision making reflects deficiencies in economic and financial literacy, then it may be possible to promote saving through programs that improve knowledge, encourage the dissemination of relevant information, and facilitate qualified guidance. Indeed, these programs may prove to be highly cost effective complements to traditional tax incentives.

The Japanese have had the most extensive experience with policies of this sort (Central Council for Savings Promotion, 1981). After World War II, the Japanese government launched a national campaign to promote saving. To orchestrate this campaign, it established several new agencies, including the Central Council for Savings Promotion, the Savings Promotion Department of the Bank of Japan, and the Savings Promotion Center of the Ministry of Finance. Promotional activities have included monthly seminars that extol the virtues of saving and provide workers with financial guidance, sponsorship of children's banks, and the appointment of private citizens as savings promotion leaders. These agencies have also prepared and disseminated magazines, booklets, leaflets, posters, advertisements, and films designed to build and reinforce the values of conservatism and frugality. There is reason to believe that the *combination* of informational programs and favorable tax treatment of capital income was responsible for much of the dramatic increase in Japan's rate of personal saving during the post-war period (Bernheim, 1991).

There is also some limited experience with saving promotion campaigns in the United States. The expansion of eligibility for individual retirement accounts (IRAs) to all taxpayers in 1981 was accompanied by a great deal of public fanfare. Television, newspapers, and magazines devoted an extraordinary amount of time and attention to this topic. Financial institutions soon joined the media blitz, hoping to capture a share of the rapidly expanding market. Promotional strategies were designed to help potential investors appreciate the tax benefits of IRAs through simple, concrete illustrations. There is evidence that the beneficial effects of IRAs were to some degree attributable to these promotional efforts (Bernheim, 1991).

Evidence from surveys also suggests that the promotion of financial literacy could well lead to more responsible financial behavior. Ng (1992) reports that, although most individuals do not appreciate the power of compound interest, they indicate a willingness to save more once the implications of compounding are demonstrated. Of course, a "willingness" may not translate into behavior. However, preliminary analysis of data from a recent survey sponsored by Merrill Lynch supports the view that financial knowledge significantly affects behavior. Those who described themselves as "very financially knowledgeable" saved several times as much for retirement as those who described themselves as "not very financially knowledgeable." Moreover, both financial knowledge and adult financial behavior are strongly related to identifiable developmental experiences. For example, those baby boomers who, as children, talked with their parents about financial decisions "always" or "often" saved 43 percent more for retirement as adults than those who talked with their parents "rarely" or "never." Similarly, those who received allowances as children saved 36 percent more for retirement

as adults than those who did not; those who held bank accounts saved 108 percent more; those who held securities saved 40 percent more; and those who took courses in economics or related subjects in college saved 60 percent more for retirement as adults than those who went to college but did not take these subjects.

Conclusion

This paper has reviewed the evidence on the adequacy of retirement saving by members of the baby boom generation. Several conclusions emerge from this review. First, low saving has become something of an American tradition, in that the baby boomers' parents also saved relatively little. However, the parents of the baby boomers benefitted from a variety of fortuitous developments, which left the majority of them in relatively good shape for retirement. Second, despite some suggestions to the contrary, when properly interpreted, the existing evidence uniformly supports the conclusion that retirement preparation by baby boomers falls far short of what is required to avoid a steep decline in their standard of living after retirement. Third, the available evidence does not support the conclusion that most baby boomers will achieve financial security by inheriting substantial resources from their parents. Although some baby boomers will receive substantial inheritances, the typical baby boomer will inherit very little. Finally, there is growing evidence that the majority of Americans do not appreciate their financial vulnerabilities and poorly understand the implications of financial decisions. This observation raises the possibility that programs designed to educate, inform, and advise the public may be effective tools for stimulating increased rates of saving.

References

Arthur D. Little, Inc. *America's Retirement Crisis: The Search for Solutions*. Final Report to Oppenheimer Management Corporation, June 1993.

Attanasio, Orazio P. "Personal Saving in the US." Mimeo. Stanford University, February 1993.

Auerbach, Alan J., and Laurence J. Kotlikoff. *The United States' Fiscal and Saving Crises and Their Implications for the Baby Boom Generation.* Merrill Lynch, Pierce, Fenner & Smith Inc., February, 1994.

Auerbach, Alan J., Laurence J. Kotlikoff, and David N. Weil. "The Increasing Annuitization of the Elderly: Estimates and Implications for Intergenerational Transfers, Inequality, and National Saving." Mimeo. University of Pennsylvania, 1992.

Avery, Robert B., and Michael S. Rendall. "Estimating the Size and Distribution of Baby Boomers' Prospective Inheritances." *Proceedings of the 1993 Annual Meeting of the American Statistical Association* (forthcoming).

Bernheim, B. Douglas. "Dissaving After Retirement: Testing the Pure Life Cycle Hypothesis." In Z. Bodie, J. Shoven and D. Wise, eds., *Issues in Pension Economics.* Chicago, IL: NBER-University of Chicago Press: 1987.

Bernheim, B. Douglas. *The Vanishing Nest Egg: Reflections on Saving in America.* New York: NY: Priority Press, 1991.

Bernheim, B. Douglas. *Is the Baby Boom Generation Preparing Adequately for Retirement? Summary Report.* Merrill Lynch, Pierce, Fenner & Smith Inc., January 1993.

Bosworth, Bary, Gary Burtless, and John Sabelhaus. "The Decline in Saving: Evidence from Household Surveys." *Brookings Papers on Economic Activity* (1991): 2.

Central Council for Savings Promotion. *Savings and Savings Promotion Movement in Japan.* Tokyo: Bank of Japan, 1981.

Congressional Budget Office. *Baby Boomers in Retirement: An Early Perspective.* September 1993.

Consumer Federation of America and the American Express Company. *High School Competency Test Report of Findings.* Washington DC: Consumer Federation of America and the American Express Company, 1991.

Crenshaw, Albert B. "For Too Many, Managing Money Isn't Child's Play." *Washington Post*, 3 October 1993.

Diamond, Peter A. "A Framework for Social Security Analysis." *Journal of Public Economics* (December 1977): 275–298.

Hamermesh, Daniel S. "Consumption During Retirement: The Missing Link in the Life Cycle." *Review of Economics and Statistics* (February 1984): 1–7.

Hurd, Michael D. "The Adequacy of Retirement Resources and the Role of Pensions." Mimeo. SUNY, Stony Brook, NY, 1993.

Jordan, Mary. "90 Million Lack Simple Literacy." *Washington Post*, 9 September 1993.

Kennickell, Arthur, and Janice Shack-Marquez. "Changes in Family Finances from 1983 to 1989: Evidence from the Survey of Consumer Finances." *1992 Federal Reserve Bulletin* no. 78 (1992): 1–18.

Kingson, Eric. *The Diversity of the Baby Boom Generation: Implications for Their Retirement Years.* Washington, DC: American Association of Retired Persons, 1992.

Kotlikoff, Laurence, Avia Spivak, and Lawrence Summers. "The Adequacy of Savings." *American Economic Review* (December 1982): 1056–1069.

KPMG Peat Marwick. *Retirement Benefits in the 1990s.* September 1993.

Levin, Laurence. "Demand for Health Insurance and Precautionary Motives for Savings Among the Elderly." Mimeo. Santa Clara University, 1993.

Mankiw, N. Gregory, and David N. Weil. "The Baby Boom, the Baby Bust, and the Housing Market." *Regional Science and Urban Economics* (May 1989): 235–258.

Ng, Yew Swang. "Do Individuals Optimize in Intertemporal Consumption/Savings Decisions? A Liberal Method to Encourage Savings." *Journal of Economic Behavior and Organization* (January 1992): 101–114.

Vaupel, James W. "Uncertainties and New Evidence about the Prospects for Longer Life Expectancy." Mimeo. Odense University, Denmark, 1992.

Venti, Stephen F., and David A. Wise. "Aging, Moving, and Housing Wealth." In David A. Wise, ed., *The Economics of Aging.* Chicago IL: University of Chicago Press, 1989.

Discussion After Bernheim Presentation

MS. MANCHESTER: There are several misleading statements in Dr. Bernheim's presentation. First, the statement that the microdata can't support the idea that people respond to economic circumstances is simply not right. The Attanasio paper I mentioned before illustrates individual responses in consumption.

MR. BERNHEIM: You misunderstood the point, Joyce (Manchester). I'm referring to the literatures that look for substitution on an individual level with respect to the variations that we're talking about. For example, the literature on the extent to which Social Security displaces private wealth. When you look at individual data to try and figure out whether differences in Social Security or differences in pension displace people's wealth, that's very dicey; and I think that you'll find precious few studies these days that document displacement in excess of 30 percent.

All the Attanasio study is showing you is that temporally these things were correlated, but it's not showing you anything on the individual level. That's what I'm referring to.

MS. MANCHESTER: I agree that the Social Security studies are very complicated because of the complicated benefits formula and other factors and therefore those studies have not found substantial evidence. I still maintain that the Attanasio study is relevant, as is work by Bosworth, Burtless, and Sabelhaus[8]—both of which rely on microdata and find a substantial decline in saving rates in the 1980s in response to these very lucky circumstances.

MR. BERNHEIM: Correlated, but not in response to. That's the critical difference.

MS. MANCHESTER: I'd like to say a few words about the Bernheim study. First of all, the Bernheim study relies on telephone survey data for wealth. Telephone survey data are known to understate actual wealth. People are reluctant to reveal the true value of their assets in a phone survey.

Second, the Bernheim study does not include housing wealth in household wealth. Once that is included, the ratio of savings adequacy rises to 84 percent. Now that sounds like we're almost there. Once you realize that Bernheim requires that people maintain the same consumption and expenditures after retirement as before, you realize that maybe that's a very high standard, higher than most people meet today. So 84 percent sounds pretty good.

Third, not every computer simulation model finds that the baby boomers are not saving adequately. Lewin-VHI has released a computer simulation model that shows that baby boomers on average will have household incomes in real terms 70 percent higher than their parents.

In addition, Oppenheimer released a study by Arthur D. Little and WEFA in June 1993.[9] In their base case they find that saving adequacy ratios range from 20 percent to 50 percent if households don't have a pension; from 50 percent to 90 percent if households do have a pension. Then they allowed for various scenarios so that, if households allocate more of their assets to equities, for example, their saving adequacy rises.

If households use 50 percent of their housing equity, a substantial increase in saving adequacy ratios occurs; and if households double their saving rate, which is within the realm of possibility for many baby boomers, again that adequacy ratio rises. Let me add that their measure of how much is adequate is based on 70 percent of their preretirement income.

I would also like to point out in response to Professor Bernheim's remarks on wealth-to-income ratios of baby boomers that household composition has changed dramatically for baby boomers compared with their parents, and the biggest difference is seen in the 25–34 age group. The number of single heads of households has increased dramatically. Therefore, it is very misleading to concentrate on the all-

[8] Bosworth, Burtless, and Sabelhaus, *Brookings Papers on Economic Activity*, Issue 1 (Washington, DC: The Brookings Institution, 1991).

[9] Little and WEFA, *America's Retirement Crisis: The Search for Solutions* (June 1993).

households ratio of wealth to income. Moreover, we are looking at two different cohorts. It's misleading to say that, if the ratio of wealth to income is so high for 25–34 year olds and then tails off in the 35–44 age group, this is evidence they will have low savings over time. You simply can't draw that conclusion by looking at table 3 of the CBO study.

Why is the level of saving by baby boomers so low if the baby boomers are saving enough? It is well known that the bulk of savings in the United States comes from people in their late forties, fifties, and early sixties. It is not the baby boomers yet who are responsible for the low rates of aggregate saving, and indeed as the baby boomers reach later age groups, you may very well see a rise in the national saving rate. Moreover, the national saving rate is affected not only by personal savings but also by government saving, and we have seen large government deficits for many years, through no fault of the CBO.

Finally, a comment on the bequest issue. Dr. Bernheim did some rough calculations that say median bequests per baby boomer may be about $23,000. We did some rough calculations looking at the wealth of parents of the baby boomers, and using many reasonable assumptions we conclude that the median baby boomer may receive an inheritance of about $30,000. Now the difference between 23 and 30 is not very big in my book. So I don't think that's a point of contention.

[Editor's Note: For further discussion of the Manchester and Bernheim presentations, see pages 119–122.]

CHAPTER 5: U.S. Fiscal and Savings Crises and Their Impact for Baby Boomers

Laurence Kotlikoff and Alan J. Auerbach

EXECUTIVE SUMMARY

AMERICA'S SAVING AND FISCAL CRISES

The United States faces two extremely grave and interrelated economic crises. One involves its rate of saving. The other its long-term fiscal finances. This study documents the dimensions of these crises, explains their connections to one another, and considers their implications for Americans in general and the baby boom generation in particular.

USING GENERATIONAL ACCOUNTING TO ASSESS FISCAL POLICY

The study uses a relatively new methodology, called generational accounting, to assess the sustainability of long-term U.S. fiscal policy. Generational accounting calculates how much of the government's bills existing generations will pay and how much of these bills will be imposed on future generations. Fiscal policy is unsustainable (in crisis) if it entails leaving future generations with unpaid bills that are an extremely high percentage of their potential earnings.

IS THE BABY BOOM GENERATION SAVING ENOUGH?

The study also develops new methods for assessing the nation's saving crisis. Specifically, it constructs a unique cohort data base to consider whether the baby boom generation is saving enough to preserve the same living standard in retirement as current retirees, after adjusting for growth. The concern about saving adequacy is particularly important given the future tax increases or benefit cuts that baby boomers and other Americans are likely to face.

U.S. SAVING

The United States is now saving at less than one-quarter the rate observed in the 1950s and 1960s and less than one-fifth the rate of Japan and many other developed countries. In 1992, the U.S. national saving rate was just 2.2. percent. Since 1980 the U.S. saving rate has averaged 4.2 percent, compared with 9.1 percent in the 1950s and 1960s and 8.5 percent in the 1970s. The extremely low U.S. saving rate has produced an extremely low rate of U.S. domestic investment. Low rates of domestic investment have meant slower growth in capital per worker, labor productivity, and real wages.

THE FISCAL IMPLICATIONS OF OUR SAVING CRISIS

Since reduced saving produces, over time, a smaller and poorer economy than would otherwise be the case, it also reduces the tax base. Given the level of government spending, a smaller tax base spells higher tax rates. Higher tax rates, in turn, reduce the incentive to work and save, leading to even less national saving.

THE GOVERNMENT'S FISCAL FORECASTS

The General Accounting Office (GAO), the Health Care Financing Administration (HCFA), and the Social Security Administration (SSA) make long-term forecasts of different aspects of U.S. fiscal policy. Each of these forecasts is highly alarming. GAO projects federal deficits rising to 20 percent of Gross Domestic Product (GDP) by 2020. HCFA projects that federal spending on Medicare and Medicaid will grow from 4.4 percent of GDP now to 12.4 percent by 2030. SSA projects a deficit in Social Security over the next 75 years. Under intermediate assumptions, fixing this deficit requires an immediate and permanent rise in the Old-Age, Survivors and Disability Insurance (OASDI) payroll tax by 1.46 percentage points. Under pessimistic assumptions the required increase is 4.98 percentage points. If OASDI payroll tax increases are put off until 2036, when the Social Security trust fund is scheduled to run out of funds, the requisite increases will exceed 4 percentage points under intermediate assumptions and 9 percentage points under pessimistic assumptions.

THE AGING OF AMERICA

The United States is aging. There are now 3.2 workers per older American. This ratio is falling and may fall to 1.8 by 2029. Given that older Americans receive more transfers from the government in Social Security and health care benefits, etc. than they pay in taxes, the aging of America will increasingly

squeeze our fiscal finances. For example, hypothetically replacing the current U.S. age structure of the population with the one that is projected to prevail in 2029 would require a 12 percent increase in all federal, state, and local tax rates to avoid increases in the deficits of these governments.

A Century of Rising Rates of Net Taxation

The aging of America and the government's fiscal forecasts suggest an acceleration of what is now a century-long process of making each successive generation pay a higher share of its labor earnings in net taxes (taxes paid less transfer payments received). Generations born at the turn of the century paid less than one-quarter of their lifetime labor earnings in net taxes. Ignoring likely future tax increases or benefit cuts, generations just born will face a lifetime net tax rate of almost 37 percent.

The Need for Generational Accounting

Most fiscal analysts focus on the size of the federal government's official debt. In so doing they ignore entirely the government's unofficial obligations, such as the obligation to pay current retirees' Social Security benefits through the remainder of their lives. The federal government's unofficial obligations are many times larger and considerably more problematic than its official debt. Focus on the federal debt also ignores the fiscal affairs of state and local governments. And while the federal debt tells us something about the government's fiscal policy in the past, it tells us nothing about where it is headed. Finally, if federal debt has any value as a fiscal statistic, it is in suggesting the fiscal burden to be passed to the next generation. But this fiscal burden can be calculated directly by using generational accounting.

What is Generational Accounting?

Generational accounting measures how much current generations will pay, on average, in net taxes over the remainder of their lives. These amounts are measured as present values. The aggregate present value net tax contribution of current generations can be compared with the size of the government's bills (the present value of its future purchases and the value of its outstanding official net debt (financial liabilities less financial assets). The difference between the government's bills and the aggregate net tax contribution of current generations indicates the fiscal burden being passed to future generations. The ratio of this burden on future generations to the present value of the labor income they are projected to earn indicates the lifetime net tax rate facing future generations. Demographics enter the calculation of both the numerator and denominators in this ratio.

The Scope and Data of Generational Accounting

Generational accounting is a comprehensive method of understanding U.S. fiscal policy. It considers the taxes, transfers, and purchases of all government entities: federal, state, and local. It uses the government's own fiscal forecasts, specifically those of the Office of Management and Budget, SSA, and HCFA. Indeed, generational accounting is, in large part, simply a method for combining the government's separate fiscal projections to consider their collective implications.

The Fiscal Burden Facing Future Generations

Under current policy, future generations face an 82.0 percent lifetime net tax rate! This enormous net tax rate would have been even higher (93.7 percent) had Congress not passed the Omnibus Budget Reconciliation Act of 1993 (OBRA '93). Since the gross tax rate associated with a 82.0 percent net tax rate is likely to be close to 100 percent, and since people stop working when tax rates reach these levels, U.S. fiscal policy is on an unsustainable path.

The Implications of Our Fiscal Crisis for U.S. Saving

U.S. fiscal policy effectively asks future generations to pay a bill that existing generations would otherwise have to assume. In letting existing generations off the hook, the government permits them to consume more than would otherwise be the case. Government health care spending on the elderly provides a clear example. The remarkable growth in this spending over the last few decades has led to an equally remarkable increase in the total consumption (including health care) of the elderly, measured either in absolute terms or relative to that of younger Americans. Recent research has estimated that the increased total consumption of the elderly accounts for about one-half of the decline in U.S. saving since 1960. However one feels about the growth in government health care transfers to the elderly, it's clear that the elderly, as a group, have consumed these transfers without fully paying for them.

Implications of U.S. Fiscal Policy for the Baby Boomers

Since taxing future generations at an 82.0 percent rate would effectively bankrupt them, net tax payments of existing generations will have to rise in order to lower those of future generations. For the baby boom generation this means, in all likelihood, either paying substantially higher net taxes during their remaining working years or paying even higher net taxes

in retirement. Since net taxes can rise either though an increase in taxes or a reduction in transfer payments, boomers can anticipate either increases in income taxes, payroll taxes, or other taxes or reductions in their future Social Security, health care, and other benefits.

The Role of Health Care Spending

The projected continuation of what is now almost three decades of extraordinarily high growth in government health care spending is, in large part, responsible for the 82.0 percent net tax facing future generations. Were U.S. governments able, starting in 1994, to restrain growth in their collective health care spending to be no greater than that warranted by demographic change and economywide productivity improvements, the lifetime net tax rate of future generations would equal 45.9 percent.

Health Care Reform

Unfortunately, President Clinton's health care reform proposal does nothing to limit growth in government health care spending (inclusive of the proposal's new subsidies) through the turn of the century, although it does promise to stabilize this spending after 2001. Under the proposal's own cost estimates and assuming health care costs are stabilized after 2001, the lifetime net tax rate of future generations is 66.5 percent. While 66.5 percent is lower than 82.0 percent, this rate is still astronomical. A net tax rate of this magnitude would represent nothing short of an economic catastrophe for future Americans. While the President's proposal has much to recommend it, it continues to ask the next generation, in effect, to pay for today's health care spending.

Resolving the Fiscal Crisis

There are many different ways to resolve the fiscal crisis. But, as generational accounting makes clear, the longer we delay addressing the crisis, the more painful will be its resolution. This study examines eight different policies to eliminate the imbalance in the fiscal treatment of current and future generations. One option is raising income taxes. If income taxes are raised permanently starting in 1994, they would have to increase by 32 percent. If they aren't raised until 2009, they'd have to increase by 63 percent. Another option is permanently cutting Social Security benefits. The requisite cut, even starting in 1994, is 70 percent. A third of the eight options considered is permanently cutting Social Security and government health care benefits by 12 percent coupled with a 12 percent permanent increase in income and excise taxes.

Baby Boomers in Retirement

The U.S. fiscal crisis has important implications for the baby boom generation as it approaches retirement. Take, for example, the possibility that the fiscal crisis will be resolved by cutting health care and Social Security benefits by 49 percent starting in 2009—two years before the oldest baby boomers retire. For those who are saving at low rates, this would be an economically devastating outcome. To consider how well baby boomers as a group are prepared for retirement even in the absence of any of the fiscal adjustments they are likely to face, this paper projects the average resource and consumption levels in retirement of three different groups of boomers: those born at the beginning, middle, and end of the baby boom. While the oldest boomers are projected, on a growth-adjusted basis, to be able to sustain the same non-medical consumption in retirement as current retirees, the same is not true for younger boomers. Indeed, those born at the end of the baby boom are projected to consume less, in absolute terms, than today's retirees. These findings suggest that the American dream may be ending, even ignoring the impact on the baby boomers of resolving the fiscal crisis.

The Effect on the Baby Boomers of Resolving the Fiscal Crisis

Each of this study's eight options for resolving the fiscal crisis raises the net taxation of the baby boomers and reduces their future consumption. Take the 49 percent cut in medical and Social Security benefits starting in 2009. This policy would reduce the retirement consumption of the oldest boomers by 29 percent and that of the youngest boomers by 40 percent. In contrast, an immediate increase in income taxes means a 7 percent lower level of retirement consumption for the oldest boomers and a 10 percent lower level for the youngest. The results of the other policy simulations fall in between these estimates. Depending on the type of fiscal adjustment that occurs, one-half or more of the baby boom generation could end up in retirement with a lower standard of living than typical elderly Americans now enjoy.

Conclusion

The U.S. faces saving and fiscal crises of unprecedented proportions, two crises that are exacerbating each other. These crises are not simply macroeconomic phenomena. Given current saving patterns, baby boomers are leaving themselves very poorly prepared for a retirement that is likely to be marked by sizable increases in taxes or cuts in Social Security and health care benefits.

Introduction

The United States faces two interrelated crises, one with respect to its fiscal policy, the other with respect to its rate of saving. Unfortunately, Americans are generally unaware of the full dimensions of these crises. On the fiscal side, most Americans know that the federal government is running huge deficits, in part because of runaway health care spending. But few know the dire implications of these deficits for their own future net tax payments (taxes paid net of transfers received) as well as those of their children and grandchildren.

With respect to saving, few Americans know that the United States has, for over a decade, been saving at about one-third the rate observed in the 1950s and 1960s. Nor do they know how this low rate of saving will affect the growth of their wages and those of their offspring, or what this means for their own living standards in retirement. Finally, most Americans have little understanding that these two crises are connected: that our fiscal profligacy raises our collective consumption and thereby lowers our collective saving, and that our failure to save means a lower future tax base and, consequently, higher future net tax rates.

This section describes these two crises in general terms. It also considers how the crises relate to one another and to the remarkable demographic transition on which the United States is embarked. Specifically, it considers deficit projections for the total federal budget and for two key components of the budget: Social Security and Medicare. These projections lay a foundation for the next two sections' generational accounting, which spells out what these and related fiscal forecasts are likely to mean for Americans in general and the baby boom generation in particular. Also documented are changes over time in the U.S. rate of national saving and how the decline in national saving connects to the question of the adequacy of individual saving, particularly saving by baby boomers for their retirement. This analysis will provide a background to the consideration in the last section of the degree to which future tax increases or reductions in transfer payments threaten the baby boomers' living standards during retirement.

The U.S. Fiscal Crisis

Short-Term Federal Deficit Projections

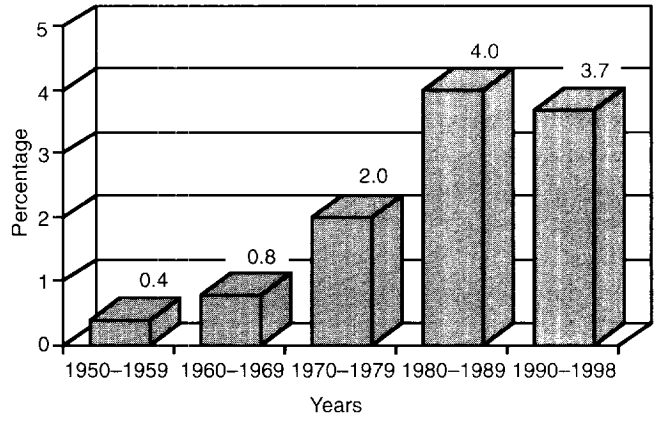
Americans typically connect our fiscal problems with the growth in federal debt—the deficit. Because the deficit equals the difference between federal government expenditures and receipts, the deficit records expenditures that are not currently paid for. Hence, the deficit tells us about the increase in our fiscal liabilities—liabilities that will have to be met in the future. Unfortunately, as described in the next section, the deficit is an imperfect measure of our accrual of fiscal liabilities. Nonetheless, the trend in the deficit provides some indication of the severe fiscal difficulties the country is facing.

Chart 5.1 reports the actual and projected federal deficit as a share of GDP for this decade and the previous four decades. The estimate of the average deficit for the period 1990–1998 incorporates Congressional Budget Office (CBO) projections that take into account the OBRA '93.

As the chart indicates, the federal deficit averaged less than 1 percent of GDP in the 1950s and 1960s. Since the growth rate of debt was well below the economy's growth rate, federal debt declined during these years from 76 percent of GDP to 29 percent (chart 5.2). In the 1970s, federal deficits exceeded 2 percent of GDP, but debt still grew less rapidly than did the economy, leaving the federal debt in 1979 equal to 26 percent of GDP. The 1980s witnessed deficits in excess of 4 percent of GDP and a rise in the debt-to-GDP ratio to 42 percent in 1989. In this decade, the CBO projects deficits to be a smaller fraction of GDP than they were in the 1980s but nonetheless large enough to raise the federal debt to 57 percent of GDP by 1998.

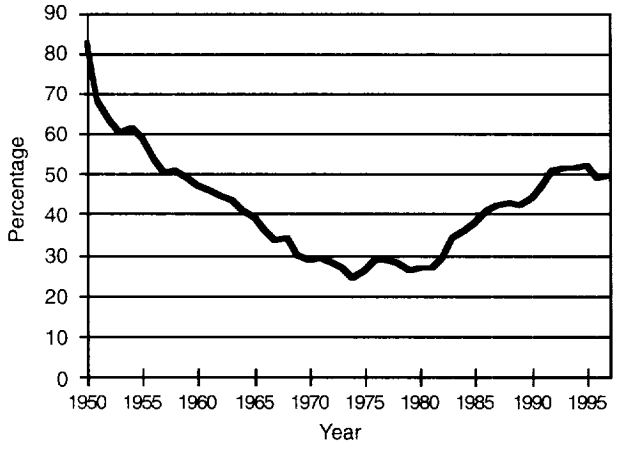
In considering the CBO's short-term deficit projections, one should bear in mind that they are only as good as their underlying assumptions. Martin Feldstein, former chairman of the President's Council of Economic Advisers, has

Chart 5.1
The Federal Deficit as a Percentage of Gross Domestic Product



Source: U.S. President, *Economic Report of the President, February 1993* (Washington, DC: U.S. Government Printing Office, 1993); Congressional Budget Office.

Chart 5.2
The Federal Debt Held by the Public as a Percentage of Gross Domestic Product, 1950–1998



Source: U.S. President, *Economic Report of the President, February 1993* (Washington, DC: U.S. Government Printing Office, 1993); Congressional Budget Office.

identified four assumptions he views as particularly unrealistic.[1] First, by 1998 the real defense expenditure is assumed to be reduced by 25 percent from its current level. Second, the federal government is assumed to save $30 billion a year through improved management. Third, the unemployment rate is assumed to fall to 5.8 percent. And fourth, rich Americans are assumed to neither significantly avoid nor evade OBRA '93's higher taxes on their incomes. Under what Feldstein views as more realistic assumptions, federal deficits through the turn of the century are almost two-thirds larger than CBO projects, and the ratio of federal debt to GDP is almost restored to its 1950 value by the year 2000.

The CBO's track record, as well as those of other government agencies, in deficit forecasting is hardly spotless. In 1990, for example, the CBO forecast a $170 billion deficit for 1993, well below the $281 billion deficit recorded last year. The CBO's 1990 forecast for the 1995 federal deficit was $29 billion. Their current forecast for this deficit is $206 billion—almost 7 times higher!

Long-Term Federal Deficit Projections

Even if CBO's projections prove correct, federal deficits will not become smaller after the turn of the century. Rather, they will get bigger and bigger. In a recent study, the GAO extended CBO's deficit forecasts through the year 2020.[2] Their analysis sees the deficit growing to a colossal 20.6 percent of GDP by 2020, raising federal debt to almost two times GDP!

It is hard to fathom deficits of this magnitude. Total federal tax receipts from personal and corporate income taxes, excise tax, estate tax, etc. are currently about 19 percent of GDP. Since the GAO's projection envisions federal taxes remaining roughly equal to this share of GDP, balancing the budget in the year 2020 would require a doubling or more of federal taxes.

Why does the GAO project such huge deficits? Part of the reason is the compounding of interest payments on previous deficits. Part is the aging of society, coupled with the fact that, as a group, the elderly receive more in transfer payments than they pay in taxes, while the opposite is true for the nonelderly. And part reflects the projected rise in real transfer payments per elderly individual, primarily in the form of health care benefits. Let us consider the aging of society and then turn to the projected expenditures and deficits of the Social Security system as well as those of Medicare and Medicaid.

The Aging of America

Chart 5.3 displays the Social Security Administration's projections of the share of the population aged 65 and over for three different sets of demographic assumptions.[3] Set I is, from the Social Security Administration's budgetary perspective, the most optimistic. It envisions the elderly dying relatively early and, therefore, not being around as long to collect Social Security benefits. Set II is Social Security's intermediate assumptions, while set III represents its pessimistic assumptions.

Consider the population share of the elderly in the year 2029, when the youngest of the baby boomers reach age 65. Under assumptions I, this share equals 17 percent. Under assumptions II and III, it equals 20 percent and 23 percent, respectively. These figures may be compared with the current 12 percent share of the elderly in the population.

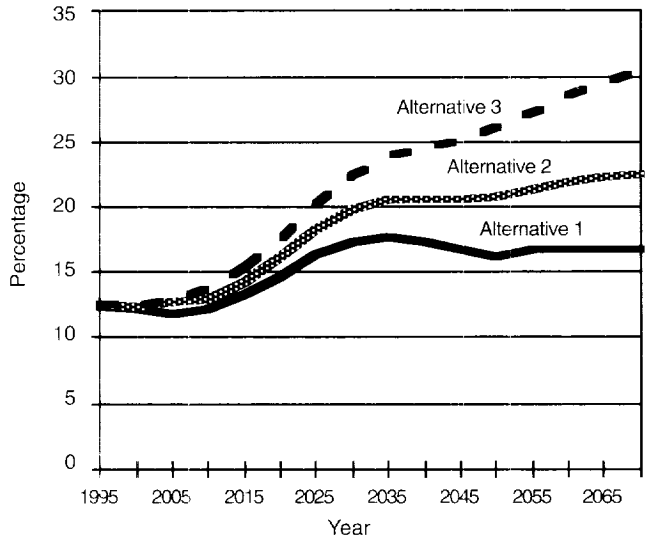
At present there are 3.2 workers per aged American. Under assumption I, this figure falls by more than one-quarter, to 2.3, by 2029. Under assumption II, it falls by one-third, to 2.1; and under assumption III, it falls by more than two-fifths, to 1.8. Because most of the transfer payments

[1] Martin S. Feldstein, "The Impact of Health Care Reform on the Budget Deficit," Address to the American Enterprise Institute, Washingon, DC, September 23, 1993.

[2] U.S. General Accounting Office, *Budget Policy: Prompt Action Necessary to Avert Long-Term Damage to the Economy* (Washington, DC: Government Printing Office, 1992).

[3] These data are reported in U.S. Department of Health and Human Services, Social Security Administration, *The 1993 Annual Report of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Fund* (Washington, DC: U.S. Government Printing Office, 1993).

Chart 5.3
Share of U.S. Population Aged 65 and Over, 1995–2070



Source: U.S. Department of Health and Human Services, Social Security Administration, *1993 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: U.S. Government Printing Office, 1993).

received by the elderly are financed on a pay-as-you-go basis from payroll taxes levied on workers, the decline in the number of workers per elderly suggests that payroll taxes in 2029 would have to be 39 percent higher under assumptions I, 52 percent higher under assumptions II, and 78 percent higher under assumptions III.

Of course, workers pay other kinds of taxes besides payroll taxes, not only to the federal government but also to state and local governments. Chart 5.4 graphs average total (federal, state, and local) tax payments in 1992 by adult Americans of different ages. It also graphs, as a negative number, the value of average total transfer payments in 1992 received by adult Americans of different ages. Finally, it graphs the difference between these two curves, namely, average net taxes in 1992 paid by adult Americans of different ages. As the chart shows, net taxes move from positive to negative between age 60 and age 65. The level of average net tax payments was lowest for 85 year olds, equaling –$12,670. It was highest for 45 year olds, equaling $11,523.

One way to assess the potential impact of America's aging on government finances is to ask how much smaller total net tax payments would have been in 1992 had the U.S. had the same total population, the same age profile of net tax payments per person but, for instance, the 2029 population age distribution associated with Social Security's intermediate demographic assumptions. The answer is $222 billion, because actual total net tax payments in 1992 were $1.129 trillion, while total 1993 net tax payments based on the 2029 age distribution equal $0.907 trillion. Meeting this hypothetical $222 billion loss in net taxes without increasing federal, state, or local government deficits would, in 1992, have required at least a 12 percent increase in all federal, state, and local tax rates.[4]

Social Security Deficit Projections

At present, the largest transfer payments being made to the elderly are in the form of Social Security's disability, retirement, and survivor benefits. Thus, the concern about the fiscal impact of America's aging should be apparent in projections of Social Security's finances. Indeed, it is. The latest Social Security trustees' report indicates that, under intermediate as well as pessimistic assumptions, the present value of Social Security benefit payments over the next 75 years exceeds the present value of Social Security payroll tax receipts plus the assets of the Social Security OASDI trust fund. Under intermediate assumptions, the present value tax shortfall equals 1.46 percent of the present value of tax receipts. Under the pessimistic assumptions, it equals 4.98 percent.

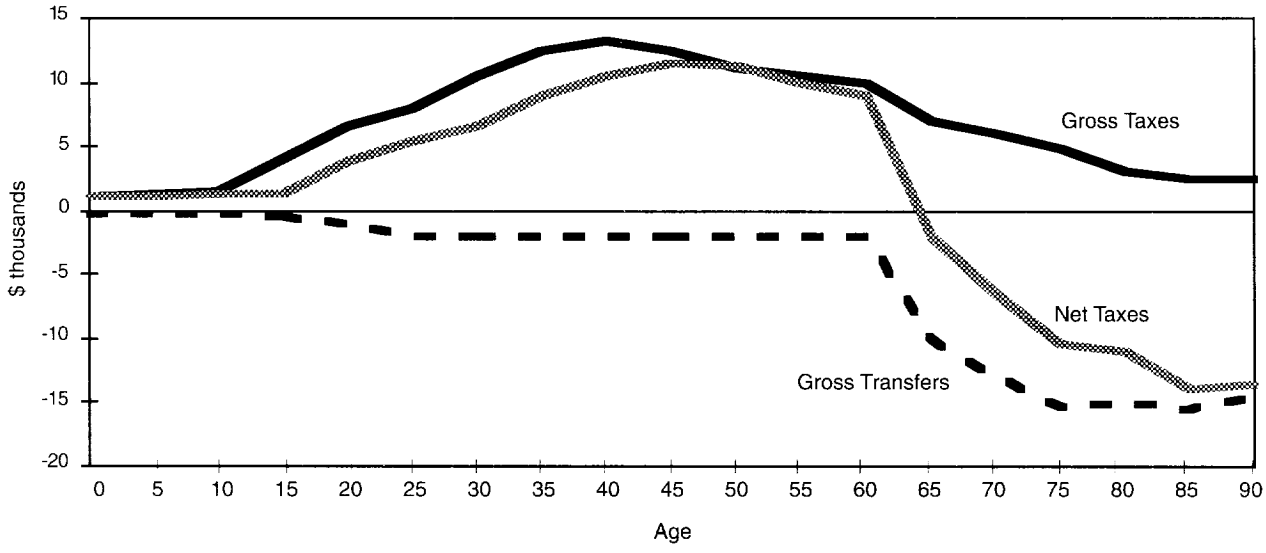
In other words, if we take the intermediate assumptions as realistic and want to ensure that Social Security breaks even over the next 75 years, we need to raise the combined employer-employee Social Security (OASDI) payroll tax rate by 1.46 percentage points, from its current 12.40 percent value to 13.86 percent. If we take the pessimistic assumptions as realistic, the Social Security tax rate needs to rise by 4.98 percentage points, from 12.40 to 17.38.

It is critically important to understand that, for each set of assumptions, the requisite tax increase is sufficient to finance Social Security's transfer payments over the next 75 years *if and only if* the tax increase is instituted immediately. If, instead of raising the OASDI tax rate now, the tax rate is not increased until, for instance, 2029, achieving balance over the 75-year period would require a much greater tax rate increase—an increase apparently in excess of 4 percent under the intermediate assumptions and in excess of 9 percent under the pessimistic assumptions.[5]

[4] This figure assumes no reduction in tax receipts, due to tax evasion or avoidance, arising from the rise in tax rates.

[5] We say apparently because the Social Security trustees do not report the tax rate increase needed for 75-year balance conditional on the tax rate not being raised until specified future years.

Chart 5.4
1992 Average Taxes, Transfers, and Net Taxes, by Age



Source: Authors' calculations.

The Social Security Trust Fund

Unfortunately, the chances of immediately enacting a fiscally prudent Social Security tax increase or benefit cut are small because of Social Security's short-term cash-flow position. As is well known, at present the Social Security system is running surpluses. The system's excess of tax receipts over benefit payments reflects the large contributions currently being made by the baby boom generation, which is in its prime earning years. Those contributions that are not being used to meet current benefit payments are being accumulated in the Social Security trust fund. Under the intermediate assumptions, and given current tax rates, the Social Security trust fund will not run out of funds until the year 2036. Under the pessimistic assumptions, it will not run out until 2017. Absent an imminent cash-flow crisis, politicians are likely to delay addressing Social Security's long-term finances until well into the next century, at which time the requisite tax adjustment, as indicated above, will be far more painful.

However, a cash-flow crisis may arise even before 2017, at least if the history of the trust fund projections is any guide. When the plan to accumulate a substantial trust fund to help finance the baby boomers' Social Security benefits was formulated in 1983, the Social Security trustees estimated, based on what they believed then to be intermediate assumptions, that the fund would last through 2063 (chart 5.5). By this time even the youngest boomers would, with a few rare exceptions, need Social Security benefits no longer. But in almost every year since 1983, estimates of the trust fund's accumulation have been scaled back. As mentioned, the current estimate, based on intermediate assumptions, sees the trust fund running out of funds in 2036, more than a quarter century earlier than originally envisioned.

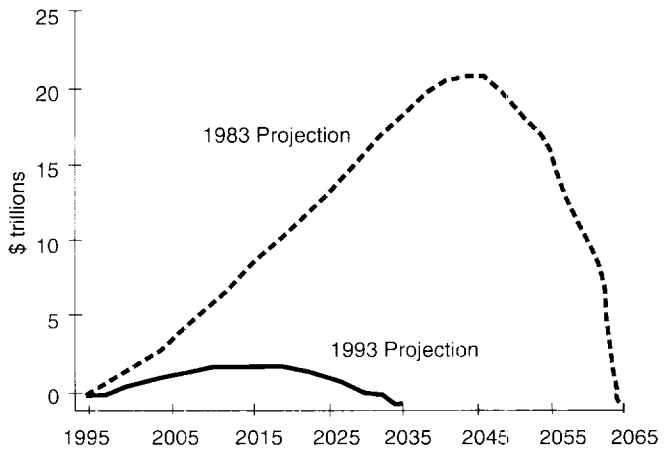
The sooner the trust fund runs out the better, in terms of getting the politicians to take remedial action. But if the trust fund runs out sooner than projected, it will do so because the system's finances are even weaker than projected and require even stronger measures in the form of tax increases or benefit reductions.

Even were the U.S. Social Security system projected to be in actuarial balance over the next 75 years, one might still question whether its taxes were high enough and its benefits low enough. The reason is that Social Security is part of a larger fiscal system whose imbalances could require adjustments of Social Security taxes and benefits. Stated differently, we may well decide that we need Social Security to do better than just break even over the next 75 years to offset problems with the rest of the government's finances.

Is the Social Security Trust Fund a Shell Game, Since It Holds Federal Debt?

Another concern that has been raised about the Social Security trust fund, other than whether it is large enough to

Chart 5.5
Projected Old-Age, Survivors and Disability Insurance Trust Fund Accumulations, in Current Dollars, 1983 and 1993



Source: Old-Age, Survivors and Disability Insurance Trust Fund Annual Reports.

meet its actuarial liabilities, is associated with its holding of federal debt. Some Americans view the accumulation by the trust fund of government bonds (federal debt) as evidence that the trust fund is a sham. According to their view, the baby boomers' benefits represent a claim on the trust fund, but the trust fund represents a claim on the federal government (through its holdings of government debt), so the boomers' benefits simply represent a claim on the federal government, which is exactly what would occur under a pure pay-as-you-go system with no trust fund.

Is this view correct? Is the trust fund a sham? The answer is maybe, maybe not. The allegation that the trust fund is a sham really comes down to claiming that the federal government simply borrowed the money that has been invested in the trust fund. While this may be true, the fact that the trust fund's assets are held in the form of government bonds does not, in itself, establish the case. After all, if tomorrow the trust fund were to sell its government securities and purchase, say, corporate bonds, the trust fund would have the same value but no longer be holding a claim on the federal government. Yet, the total claims on the federal government arising from its bonds would be the same, because the bonds formerly held by the trust fund would simply be held by the general public.

To understand whether the government simply borrowed the money needed to build up the trust fund, one needs to consider the total amount of government bonds outstanding, rather than the trust fund's portfolio composition. Even if one looks at the right data, namely the total outstanding value of government bonds, it is difficult to know whether the creation of the Social Security trust fund raised, lowered, or kept constant the government's total outstanding debt. The reason is that no one knows precisely what the government's total outstanding debt would have been had the trust fund never been created.

As described in the next section, the trust fund, as well as the government's outstanding official debt, are simply two elements of a multifaceted intergenerational policy. These two elements can change greatly over time without any necessary implications for the overall stance of generational policy, either because they offset each other or because other elements of the policy offset changes in these elements. Even if we could determine precisely how much the trust fund's creation altered the total outstanding amount of government debt, this knowledge would not tell us whether other policies had been used to maintain the stance of generational policy. The real question is not how one or two of the elements of the government's generational policy have changed over time. The real question is how the *overall* state of generational policy has changed. This is the question that generational accounting alone can answer.

Medicare Deficit Projections

Currently, federal transfer payments to the elderly total almost 7 percent of GDP. By 2020, this figure is projected to rise to 12 percent. While the aging of the population explains some of this growth, most of it reflects the projected continued explosive growth in health care costs in the Medicare and Medicaid programs.

Medicare has two components: Hospital Insurance (HI), which pays for inpatient hospital care, skilled nursing facilities, hospice, and home health care, and Supplementary Medical Insurance (SMI), which pays for outpatient services, such as physician visits, lab tests, and durable medical equipment. The HI portion of Medicare, which is financed by the HI payroll tax, is currently running deficits, and these deficits are projected to soar over time. Under the intermediate assumptions, the Medicare tax rate needs to rise by 5.07 percentage points to achieve actuarial balance over the next 75 years.[6] Under the pessimistic assumptions, it needs to rise by 10.58 percentage points. Again, these are the minimum tax rate increases needed, provided they occur *immediately*. Any delay in raising these tax rates implies much higher tax

[6] These estimates predate the passage of the Omnibus Budget Reconciliation Act of 1993's increase in the Hospital Insurance (HI) taxes on upper income Americans. However, this tax increase appears to be too small either to affect materially HI's long-term financial problem or the calculated across-the-board tax increases that may have to be used to fix this problem.

rate increases (or very severe benefit cuts) in the future. For example, if we wait until 2029 to raise the HI tax rate, and if HI costs rise as projected, the requisite tax increases will, apparently, exceed 8 percentage points under intermediate assumptions and 15 percentage points under pessimistic assumptions!

If we combine these calculations of requisite HI tax increases with those for OASDI, we find that achieving 75-year actuarial balance necessitates an *immediate* combined Old-Age, Survivors and Disability and Hospital Insurance (OASDHI) payroll tax increase of 6.53 percentage points under the intermediate assumptions and 15.56 percent under the pessimistic assumptions. Since the current OASDHI payroll tax rate is 15.53 percent, this means immediately increasing payroll taxes by more than 40 percent, if we take the intermediate assumptions as our guide, and immediately increasing payroll taxes by more than 100 percent, if we take the pessimistic assumptions as our guide. A delay in raising the OASDHI tax rate until, for instance, 2029, entails, apparently, increasing this tax rate at that time by over 12 percentage points, according to the intermediate assumptions, and by over 24 percentage points, according to the pessimistic assumptions. In this case, the OASDHI tax rate would end up exceeding 27 percent if the intermediate assumptions prove correct and a whopping 39 percent if the pessimistic assumptions prove correct!

Projections of the SMI component of Medicare make this bad news even worse.[7] Unlike HI, SMI is about one-quarter financed through insurance premiums collected from the elderly, with essentially all the rest financed through general revenue contributions. Hence, increases in SMI expenditures spell increases in general tax rates. Currently, SMI expenditures total 0.87 percent of GDP, up from 0.15 percent in 1967, SMI's first year of operation. Under intermediate assumptions, SMI's expenditures are projected to reach 4 percent of GDP by 2029. SMI does not make long-term projections based on the pessimistic assumptions. But the intermediate projections are bad enough. Because labor earnings constitute about 65 percent of GDP, paying for this growth in SMI would require a 3 percent to 4 percent additional tax on labor income.

In addition to Medicare, the government provides health care to the elderly through Medicaid, primarily in the form of nursing home care. The cost of this assistance is also projected to continue to rise, from about 0.3 percent of GDP to over 0.5 percent of GDP by 2029. Because Medicaid is also general revenue financed, if these additional costs are financed by higher taxes on labor income, they will mean, roughly speaking, an additional 0.3 percentage point tax on labor income by 2029.

Health Care Spending and Health Care Reform

Unfortunately, President Clinton's health care reform proposal will, it appears, do little, if anything, to curb federal health care spending. Indeed, the proposal openly admits this, at least with respect to health care spending through the end of this decade. It calls for essentially the same total spending on health care through 2000 as is projected under current policy.[8] While the proposal suggests that there will be health care spending restraint after the turn of the century, it provides no projections of federal health care spending after the turn of the century.

In reality, if it is adopted, the new policy may entail federal health care spending far beyond the extraordinarily high levels now projected. The reason is that the proposal calls for new and expensive subsidies to low-income Americans, early retirees, and small businesses as well as new and expensive health care programs for the elderly, including increased payments for prescription drugs and home health care. If past experience with newly adopted federal subsidies and direct health care payment programs is any guide, the ultimate cost of the President's health plan will far exceed the amount now being projected.

Worse yet, much of this new spending is to be "financed" by reductions in federal spending on Medicare and Medicaid. But beyond some vague claims about controlling costs in these programs through spending caps, the proposal offers no effective mechanisms to ensure that spending on these programs will actually be controlled.

The U.S. Fiscal Crisis—A Summary

The aging of America will place tremendous stress on our fiscal finances—stress that will be greatly compounded by the projected growth in real federal health care spending per old person. The federal government's projections of its overall deficit, as well as those of Social Security and Medicare, represent early warnings signals of this stress.

Our ultimate concern with these projections is what

[7] See Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund, *1993 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund* (Washington, DC: U.S. Government Printing Office, 1993).

[8] We define health care spending under the President's reform proposal to include his proposed new subsidies to early retirees, low-income Americans, and small business to assist in their purchase of health insurance.

they portend for our own future net tax rates as well as those of our children and grandchildren. Unfortunately, as the next section makes clear, the answer is very unpleasant. Once one properly takes into account all government (federal, state, and local) liabilities, not just those showing up as official federal debt, and once one properly factors in our nation's changing demographics, the fiscal imbalance we face is truly startling.

The projected future path of government spending, and the ultimate taxes that will have to finance it, represent a continuation of a century-long practice of placing increasingly larger net tax burdens on each successive generation of Americans. As chart 5.6 details, current taxes are already so high that today's children will, on average, pay a larger share of their lifetime labor earnings to the federal, state, and local government in net taxes than any previous generation of Americans. This average lifetime net tax rate, equal to 36.3 percent, is over 50 percent larger than the 23.6 percent rate faced by Americans born at the turn of the century. But, as suggested above, and as examined in detail in the next two sections, even this very high rate of taxation on today's and tomorrow's children will be far too little to meet the government's bills if government spending continues to grow at the rate now being forecast.

There is certainly a limit to the level of taxes that can be imposed on any American generation, either present or future. A generation's net tax rate obviously cannot exceed 100 percent, but before a generation's net tax rate reaches 100 percent, its gross tax rate will reach 100 percent, assuming positive transfers. Of course, with a gross tax rate equal to or near 100 percent, the generation will stop working. In this case, the government will be unable to collect the tax revenue it needs to finance its spending, and it will be forced to reduce its spending. Since much of government spending is in the form of transfer payments, this means potentially reneging on transfer payment commitments.

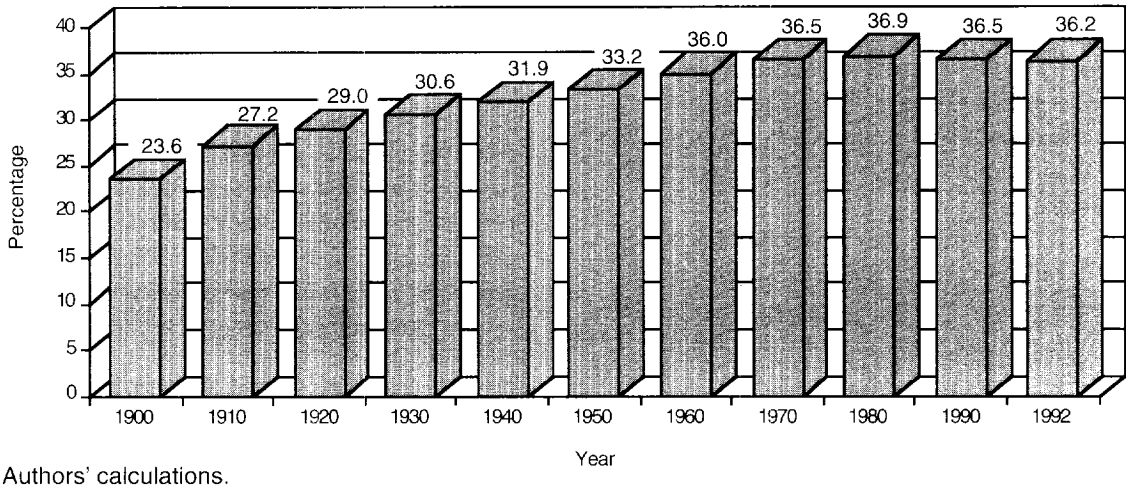
While the major impact of U.S. fiscal policy on U.S. labor supply is likely to occur in the future as tax rates are increased, U.S. fiscal policy already appears to be playing a major role in reducing the supply of U.S. capital by lowering U.S. saving. Let us review recent data on U.S. saving and investment and then consider the likely effect that U.S. fiscal policy, in particular U.S. generational policy, has been having, and will have, on U.S. saving.

The U.S. Saving Crisis

Chart 5.7 plots the U.S. net national saving and domestic investment rates for the years 1950–1992.[9] As shown, 1992's saving rate (the latest rate available) was just 2.2 percent—among the lowest rates observed in the postwar period. Last year was no outlier. The United States has been saving at a very low rate for over a decade. Since 1980, the U.S. saving rate has averaged 4.2 percent, compared with 9.1 percent in

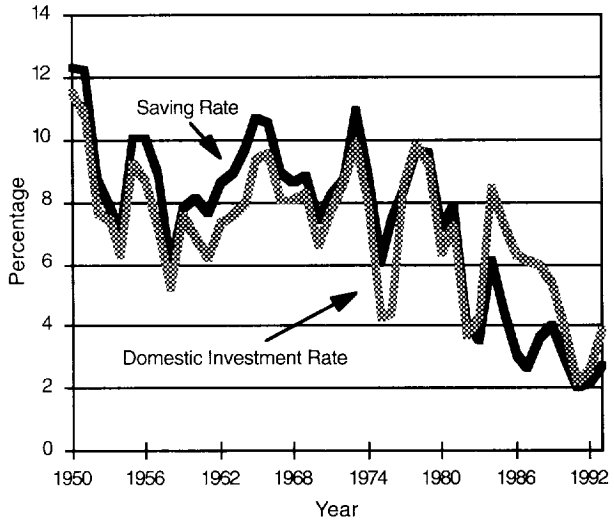
[9] The denominator of this saving rate is net national product (Gross National Product minus depreciation). The numerator is net product minus the sum of household consumption expenditures and government purchases. The net investment rate is defined as net investment divided by net national product.

Chart 5.6
Lifetime Net Tax Rates of Generations Born Between 1900 and 1992



Source: Authors' calculations.

Chart 5.7
U.S. Saving and Domestic Investment Rates, 1950–1992



Source: Survey of Current Business.

the 1950s and 1960s, and 8.5 percent in the 1970s.

The drop in U.S. saving is taking its toll on U.S. domestic investment. The 2.6 percent rate of domestic investment in 1992 represents another dismal performance. Since 1980, our domestic investment rate has averaged 5.4 percent per year, compared with 8.2, 7.9, and 7.9 percent in the 1950s, 1960s, and 1970s, respectively.

Thanks to the inflow of foreign capital, U.S. domestic investment did not decline during most of the 1980s as sharply as did U.S. saving. Net foreign investment as a fraction of net national product (NNP) can be measured in chart 5.7 as the vertical distance between the national saving and domestic investment rates. The rate of net foreign investment reached a postwar high of 3 percent in 1987. In that year as well as in 1986, foreign saving financed more investment in the United States than did American saving. However, foreign investment in the United States has waned. Since 1988, the rate of net foreign investment in the United States has declined, leaving most of U.S. domestic investment to be financed by the meager amount of U.S. saving.

Nations that fail to invest experience slower growth in capital per worker, which means slower growth in labor productivity. Since 1970, U.S. labor productivity has been growing at only about two-fifths the rate observed in the 1950s and 1960s. Since businesses pay workers based on their productivity, slower growth in labor productivity has meant slower growth in wages. Since 1975, total compensation (wages plus fringes) per U.S. worker have increased, in real terms, by only about 3 percent. This is a very poor record compared with the 35 percent increase in total compensation per worker observed between 1960 and 1975.

U.S. Generational Policy and the Decline in U.S. Saving

Postwar U.S. generational policy appears, in large part, responsible for our failure to save and invest. For over four decades, government, at the federal, state, and local levels, has been shifting fiscal burdens from current to future generations. Much of this intergenerational redistribution has been effected through the expansion of Social Security and Medicare, but some has come in more subtle forms, such as a shift in the tax structure away from sales and excise taxes toward labor income taxes.[10] In repeatedly shifting fiscal burdens from current to future generations, the government has permitted current generations to consume more, with the consequence that the nation as a whole has saved less. As indicated in chart 6, this process of "pass the generational buck" has left today's young and middle-aged Americans paying such a high fraction of their labor earnings in net taxes that many have little wherewithal from which to save for their old age.

The process by which "pass the generational buck" reduces national saving, domestic investment, and growth is very gradual, making it difficult to document statistically. But in the past decade economists have developed detailed computer simulation models to study the consequences of such generational policy. These models predict precisely the kind of decline in national saving, domestic investment, labor productivity growth, and real wage growth that our nation has been experiencing.[11]

How Will the U.S. Fiscal and Saving Crises Affect the Baby Boom Generation?

Are baby boomers saving enough for their retirement? This question is beginning to receive considerable attention by academics, the government, the general public, and the media. The question is prompted by a number of factors, including the very low rate of total U.S. saving just described, the future tax increases and benefit cuts baby boomers are likely to experience, uncertainty concerning the level of employer-provided private pensions that boomers will ultimately

[10] See Laurence J. Kotlikoff, *Generational Accounting—Knowing Who Pays, and When, for What We Spend* (New York, NY: The Free Press, 1992).

[11] See, for example, Alan J. Auerbach and Laurence J. Kotlikoff, *Dynamic Fiscal Policy* (New York, NY: Cambridge Unversity Press, 1987).

receive, the fact that boomers are likely to retire earlier and live longer than their parents, and the limited number of children that boomers will able to count on to support them in old age.

A recent CBO study, *Baby Boomers in Retirement: An Early Perspective*, is quite sanguine about the boomers' retirement finances.[12] It arrives at its optimistic assessment by arguing that, when the boomers become old, they will have incomes at least as high as their elderly parents now have. The criterion for saving adequacy chosen by the CBO—that boomers be able to sustain the same living standard in retirement as their parents—is quite peculiar. After all, one would naturally expect each generation to enjoy a higher living standard at each age as the consequence of productivity growth. While U.S. productivity growth has slowed, it has not stopped, so setting a target for the baby boom generation of simply matching the retirement living standard of their parents is, to some extent, preordaining a favorable finding.

The real question of interest is not whether boomers will do as well as their parents but whether boomers will be able to maintain their current living standards through retirement, especially in light of the U.S. fiscal crisis and the tax and transfer adjustments it will necessitate. The U.S. fiscal crisis and its potential resolution appear, by the way, to have been completely ignored in the CBO study.

A recent study asking a more appropriate question was prepared by Douglas Bernheim.[13] The study, *Is the Baby Boom Generation Preparing Adequately for Retirement?*, uses household survey data on the median income, wealth, and demographic characteristics of subgroups of the baby boomers and compares actual median saving in each subgroup with the amount of saving suggested by rational, life-cycle economic planning. Across all subgroups Bernheim finds that actual median saving averages only 34 percent of rational life-cycle saving. While Bernheim's conclusion is dramatic, it may even understate the degree to which boomers are undersaving. The reason is that Bernheim assumes that boomers will face no tax increases or cuts in their transfer payments when they reach retirement.

In the section titled Baby Boomers in Retirement we also examine the adequacy of the baby boomers' saving. But in so doing we apply the results described in the section titled Resolving the Fiscal Crisis, which calculates the sizes of various fiscal adjustments that might be used to address the long-term U.S. fiscal crisis. Rather than consider the saving behavior of particular households or types of households, we consider the average saving behavior of three different cohorts of baby boomers: the oldest boomers—those who were born in 1946—middle boomers—those who were born in 1955 in the middle of the baby boom—and the youngest boomers—those who were born in 1964. The nature of our data leads us to look at mean, rather than median, resources and saving. In considering means rather than medians we are biasing our results toward a finding of saving adequacy. Nonetheless, we find that all three cohorts of baby boomers are saving too little in light of the potential tax increases and benefit cuts they may experience in old age. Even ignoring these fiscal adjustments, we find that the three boomer cohorts will be barely able to maintain their living standards in retirement. We also find that younger boomers will enjoy a lower living standard at each age, including old age, than older boomers. Thus, we reach a conclusion opposite to that of the CBO study. Rather than finding that the American dream is intact—that each generation is doing better than the previous generation—our evidence indicates that the American dream is becoming just that—a dream.

Using Generational Accounting to Assess the U.S. Fiscal Crisis

The previous section provided a general sense of the fiscal crisis facing the United States but no precise analysis of what the entire panoply of federal, state, and local government policies, coupled with our demographic transition, may mean for particular generations of Americans. This section uses a relatively new methodology, called generational accounting, to provide this analysis.[14] Generational accounting estimates, under different assumptions about future fiscal policy, how much each current and future generation will contribute in net taxes toward paying the government's bills. The government's bills are the sum of two components: the present and likely future purchases of goods and services by federal, state, and local governments and the outstanding official debt of federal, state, and local governments.

Why Was Generational Accounting Developed?

The recent growth of federal debt has generated enormous public concern, apparently because the public believes federal debt measures the fiscal burden we are placing on our chil-

[12] U.S. Congress, Congressional Budget Office, *Baby Boomers in Retirement: An Early Perspective* (Washington, DC: U.S. Government Printing Office, 1993).
[13] B. Douglas Bernheim, *Is the Baby Boom Generation Preparing Adequately for Retirement?*, prepared for Merrill Lynch & Co., August 1992.
[14] The first paper on generational accounting is Auerbach, Gokhale, and Kotlikoff (1989). A full listing of subsequent publications on generational accounting is given in the references.

dren and grandchildren. Unfortunately, this is not the case. The federal debt directly measures neither the net tax treatment of current generations nor the net taxes that are likely to be imposed on future generations. While the federal debt does record our nation's accumulation of official liabilities, it ignores a host of unofficial or implicit liabilities that swamp the official ones as a source of concern. Indeed, if the federal debt was all there was to worry about, our nation's current fiscal position would look better than it did in 1950. As described in the previous section, federal debt today is a smaller share of GDP than it was in 1950.

What liabilities or obligations does the federal debt leave out? Take the largely unfunded obligation to pay Social Security benefits to current retirees as well as younger adult Americans who have accrued benefits under the system. According to the Social Security Administration, this unfunded "closed group" liability is more than twice as large as the size of federal debt. Also in the trillions is the "closed group" Medicare liability. While these liabilities are not immutable (Social Security and Medicare benefits may be changed), neither is federal debt. The real value of federal debt can, and has in the past, been reduced as well as increased by unexpected changes in the rate of inflation.

In addition to paying current and near-term Social Security and Medicare beneficiaries, our government has implicit long-term obligations to pay benefits to welfare recipients and unemployment insurance to the unemployed, provide education to our children, maintain the nation's defenses, etc. The enumeration of the very long list of our government debts might lead one to conclude that, as there is no natural stopping point in producing "the" correct measure of government debt, it is best to just stop with the official debt.

The problem with this response is that those obligations that the government classifies as official are not intrinsically different, in economic terms, from those not so classified. Indeed, one can say that the classification of government obligations as "official" and "unofficial" is a linguistic, rather than an economic, choice.[15] To see this, consider the alternative choice of words that would be required to put the closed group unfunded Social Security liability on the books (make it official). The government would simply need to recharacterize its Social Security contributions as "borrowing" rather than as "taxes," and its Social Security benefits as "return of principal plus interest" rather than as "transfer payments."[16] Such a change of language is not simply a hypothetical possibility. Chile's privatization of its Social Security system in 1981 in large part entailed reclassifying a large portion of its implicit unfunded Social Security liability as explicit government debt.

Rather than contribute to a sterile debate over what words to use to describe the government's fiscal liabilities, generational accounting focuses on the fundamental question underlying concern about the government's obligations, be they official or unofficial, namely, how large are they? And who will pay them?

The Simple Arithmetic of Generational Accounting

Generational accounting is based on what economists call the government's intertemporal budget constraint. This constraint says simply that either current or future generations will have to pay the government's bills. Because much of the government's bills, and much of the net taxes paid to meet these bills, will occur in the future, the intertemporal budget constraint considers the value today (what economists call "the present value") of these future bills as well as net tax payments.

We can express the government's intertemporal budget constraint by a simple equation:

The present value of remaining net tax payments of existing generations	The present value + of net tax payments of future generations	The present value = of government purchases	Official + government net debt

In this equation, the two terms on the right-hand side are the government's bills. The equation indicates the zero-sum nature of generational policy. Given the size of the government's bills, the less current generations pay, the more future generations will have to pay. The equation also puts the government's official and unofficial liabilities on an equal footing in assessing the size of the net tax bill to be passed to future generations.

To see this, note that a higher value of official net debt, with no corresponding reduction in the present value of either government purchases or increase in the present value of net tax payments of existing generations, means a larger net tax payment required of future generations. But such an outcome also arises if the present value of the obligation to make transfer payments to current generations is higher,

[15] For a formal analysis of this point, see Laurence J. Kotlikoff, "From Deficit Delusion to the Fiscal Balance Rule: Searching for a Meaningful Way to Describe Fiscal Policy," *Journal of Economics* (Supplement 7, 1993): 17–41.

[16] Because Social Security benefits do not necessarily precisely equal the amount that would constitute return of principal plus interest on past Social Security contributions, the difference between actual benefits paid and this amount could be classified as an "old age tax" or an "old age transfer," depending on whether the difference was negative or positive.

because it means a smaller value of the first term on the left-hand side, requiring a larger value of the second term on the left-hand side, given the value of the right-hand side.

Generational accounting involves estimating the values of the government's bills as well as the present value of net tax payments of existing generations. Given these values, we apply the equation and calculate the burden on future generations as a residual. Determining the collective present value net tax payments of current generations requires separately calculating the present value of net tax payments of each generation and then adding the values together.

The calculation of any particular existing generation's present value of remaining net tax payments (its generational account) is an actuarial one. It takes into account projections of the number of members of a generation who will survive to future years and, therefore, be alive to pay net taxes in those years. Assessing the burden on future generations in per capita terms also involves actuarial analysis for the following reason: once we know the total burden to be paid by future generations, figuring out how much any one person born in the future will pay requires knowing how many people will be around in the future to help make the payments. In incorporating actuarial projections, generational accounting automatically takes demographic change into account.

Allocating the Burden To Be Borne by Future Generations

In estimating how much particular individuals born in the future will pay, we assume that the average lifetime net tax payment of successive generations rises at the economy's rate of productivity growth.[17] Leaving out this growth adjustment, the lifetime net tax payments of future generations are directly comparable to the generational accounts of current newborns, since the generational accounts of both newborns and future generations take into account net tax payments over these generations' entire lifetimes.

Note that our assumption that the generational accounts of all future generations are equal, except for a growth adjustment, is just one of many assumptions one could make about the distribution across future generations of their collective net payment to the government. We could, for example, assume a phase-in of the additional fiscal burden to be imposed on new young generations. Such a phase-in would, however, mean that generations born after the phase-in period has elapsed would face larger lifetime net tax burdens than those estimated here.

Our purpose in assuming (1) growth-adjusted equal treatment of future generations and (2) that the generational accounts of current generations are those one would project under current policy, is to illustrate the intergenerational imbalance of present fiscal policy and highlight the need to change that policy. It is not to claim that policy will necessarily deal with the intergenerational imbalance by treating all future generations equally or, indeed, by putting all the burden on future generations.

Constructing Generational Accounts[18]

To form generational accounts for current and future generations for our base year, 1992, we need (1) projections of the population by age and sex, (2) projections of average net taxes for each generation in each year in which at least some members of the generation will be alive, (3) a discount rate at which to convert flows of net taxes into present values and a productivity growth rate, (4) an estimate of the initial stock of government net wealth, and (5) projections of future government consumption.

Population Projections

We use the Social Security trustees' 1992 intermediate projections of population by age and sex through 2066 and extend these projections beyond 2066 using the fertility, mortality, and immigration probabilities projected to prevail in 2066.

Projection of Taxes and Transfers

Our age- and sex-specific projections of average future taxes and transfers incorporate projections of National Income and Product Accounts (NIPA) totals of federal, state, and local taxes and transfers. These projections incorporate the Social Security trustees' long-term forecasts of Social Security total contributions and benefit payments, the Health Care Financing Administration's long-term forecasts of spending on Medicare and Medicaid, and the Office of Management and Budget's (OMB) long-term forecasts of federal taxes and transfer payments other than those of Social Security, Medicare, and Medicaid. The projections represent the latest available as of December 1993. Since the OMB projections postdate the passage of OBRA '93, they incorporate its federal tax increases and spending cuts as summarized in OMB's 1993 mid-session review.

Beyond the period in which these government long-

[17] Generation here refers to gender-specific birth cohorts.

[18] For a detailed description of the methodology and data sources used in calculating generational accounts, see Auerbach, et al. (1991) and Executive Office of the President (1994).

term forecasts are available, we assume that particular tax and transfer aggregates grow to keep pace with demographics and productivity growth. The current and projected future NIPA tax and transfer totals are distributed to generations, as defined by age and gender, based on corresponding distributions in cross-section survey data.[19]

Discount and Productivity Growth Rates

The calculations assume a 6 percent annual real discount rate, which is roughly half way between the real historical returns on government bonds and private-sector capital. They also assume a productivity growth rate of 0.75 percent per year.

Government Purchases

Federal purchases of goods and services through 2004 are projected on a NIPA basis using OMB's 1993 mid-session review estimates. State and local purchases through 2004 are kept at the same ratio to GDP as in 1992. Federal, state, and local purchases after 2004 were divided between (1) those made on behalf of specific age groups—the young, middle aged, and elderly—such as educational expenditures; and (2) those that are more nearly pure public goods, such as defense and public safety. Purchases per person in each of the three age groups, and purchases of public goods per capita, increase at the assumed rate of productivity growth.[20]

Official Government Net Debt

Our measure of official government net debt for 1992 is formed by adding together annual NIPA deficits (federal, state, and local) from 1900 through 1992.

Baseline 1992 Generational Accounts

Tables 5.1 and 5.2 present 1992 generational accounts for every fifth generation of males and females alive in that year. The calculations assume that no policy changes will affect the burdens of generations currently alive. The first column of each table, labelled "net payment," is the difference between the present value of taxes that a member of each generation will pay, on average, over his or her remaining life and the present value of the transfers he or she will receive. The other columns show the average present values of the different government taxes and transfers.

Take 40-year-old males. As table 5.1 indicates, these males are projected to pay, on average, $170,900 to the government over the course of their remaining lives. This figure (adjusted for rounding) is the difference between their $252,800 present value tax payment and their $82,000 present value transfer receipt. The largest source of payments (in present value) is payroll taxes, followed by income taxes, excise taxes (which include state sales taxes) and capital income taxes, respectively. Health-related transfers, through Medicare and Medicaid, are the single largest transfer category, followed by OASDI and welfare (such as Aid to Families with Dependent Children).

The present value of the future taxes to be paid by the young and middle-aged generations exceeds the present value of the future transfers they will receive. The present value of net payments peaks at age 25 for both males and females. These amounts are large because these generations are close to their peak taxpaying years. For newborn males and females, on the other hand, the present value of their net payment is much smaller, because they will not pay much in taxes for a number of years.

The male and female generational accounts differ because of differences in labor force participation, family structure, and mortality. For example, older women are projected to receive a greater present value of health transfers because they will live longer, on average.

Older generations have negative net taxes; they are projected to receive more Social Security, Medicare, and other future benefits than they will pay in future taxes. However, one must remember that the figures in these tables show the *remaining* lifetime net payments of particular generations and do not include the taxes a generation paid or the transfers it received in the past. Males who are now aged 65, for example, paid considerable taxes when they were younger, and these past taxes are not included in the remaining lifetime net payments shown in their generational accounts. Therefore, the remaining lifetime net payment by one existing generation cannot be directly compared with that of another. While the generational accounts simply consider remaining lifetime net tax payments, we have also constructed entire lifetime net tax payments for each generation born in this century. These figures, which may be compared with one another, are used in forming the lifetime net tax rates that appear in chart 5.6.

[19] These surveys include the Survey of Income and Program Participation, the Survey of Consumer Expenditures, and the Current Population Survey.

[20] We have not attempted to measure the value of existing government capital, such as highways, and subtract that value from official government debt. Nor have we added the imputed rent on this capital to our measure of government purchases. However, the omission of such adjustments has little impact on our assessment of the imbalance in the net taxation of current and future generations. If we value the capital at the present value of its imputed rent, these two adjustments to the right hand side of the above equation would cancel. For example, our exclusion of Yellowstone National Park in calculating government net debt is offset by our exclusion of the park's implicit rent from future government purchases.

Table 5.1
The Composition of Male Generational Accounts[a] (r=.06, g=.0075)
Baseline: with Omnibus Budget Reconciliation Act of 1993, without Health Reform
Present Values of Receipts and Payments

Generation's Age in 1992	Net Payment	Tax Payments				Transfer Receipts		
		Labor income taxes	Capital income taxes	Payroll taxes	Excise taxes	OASDI[b]	Health	Welfare
		($ thousands)						
0	$ 78.4	$32.2	$ 7.9	$34.7	$30.2	$ 6.8	$16.2	$3.6
5	99.3	41.3	10.1	44.6	35.6	8.6	19.1	4.6
10	124.8	52.6	12.9	56.9	41.3	10.3	22.7	5.9
15	157.2	67.1	16.6	72.8	47.4	11.9	27.3	7.6
20	187.7	80.8	21.0	88.2	51.4	13.3	31.0	9.2
25	203.0	88.2	25.2	96.7	52.2	16.4	33.0	9.9
30	201.6	87.8	38.2	96.5	51.4	28.1	34.7	9.4
35	192.4	84.5	36.1	93.2	50.4	25.2	37.9	8.7
40	170.9	77.2	49.8	85.4	49.4	31.7	42.3	8.0
45	132.5	64.9	43.5	72.0	46.7	39.8	47.5	7.2
50	81.0	49.6	44.0	55.2	42.8	50.4	53.6	6.5
55	19.5	32.7	42.2	36.6	37.8	63.7	60.2	5.8
60	-43.9	17.5	38.9	19.6	32.2	80.4	66.7	5.1
65	-94.1	6.2	34.3	6.9	26.9	90.6	73.4	4.4
70	-98.6	2.5	27.1	2.9	21.5	82.7	66.1	3.8
75	-92.9	1.2	18.2	1.3	16.4	69.0	57.8	3.2
80	-79.4	0.6	9.2	0.7	11.5	52.0	47.2	2.2
85	-69.4	0.3	0.0	0.3	7.9	39.4	37.5	1.0
90	-11.6	0.0	0.0	0.0	1.7	6.9	6.4	0.0
Future Generations	177.1							
Percentage Difference	126.8							

Source: Authors' calculations.
[a]Assumes a discount rate of 6 percent and a productivity rate of 0.75.
[b]Old-Age, Survivors and Disability Insurance.

The Burden on Future Generations

The bottom rows of tables 5.1 and 5.2, labelled "Future Generations," indicate the present value amounts that males and females born in 1993 will, on average, have to pay to balance the government's budget constraint, assuming that subsequent generations pay this same amount except for an adjustment for growth. This amount, $177,100 for men and $99,600 for women, represents an increase of 126.0 percent over the burden faced by current newborns, who have been assumed to face current tax and transfer rules!

Measuring the Generational Imbalance in Terms of Lifetime Net Tax Rates

Perhaps the easiest way to comprehend the size of the fiscal burden facing future generations is to express it as a share of their projected lifetime labor income. Table 5.3 and chart 5.8 do this. For comparison purposes, they also show the lifetime net tax rates of generations born in this century, the values of which also appear in chart 5.6. To focus on differences across rather than within generations, table 5.3 considers the combined male-female lifetime net tax rate.

The table indicates that future generations will face a huge lifetime net tax rate—82.0 percent—unless the course of U.S. fiscal policy is altered and existing generations are made to pay higher taxes or are given smaller transfers! The 82.0 percent net tax rate is more than twice as large as the already extraordinarily high net tax rate facing today's young children, assuming they pay no more than current policy suggests.

Of course, the assumption that today's young children as well as other existing generations pay the amounts stipulated by current policy is made simply to illustrate the need to adjust current policy. Certainly, there is no reason to expect a large discontinuity in the net tax treatment of children who were born, for instance, in 1990, and those who will be born in 1995. What table 5.3 is really telling us then is that our own living children as well as our as yet unborn children will face sky-high net taxes unless adult Americans are made to pay more.

Table 5.2

The Composition of Female Generational Accounts[a] (r=.06, g=.0075)
Baseline: with Omnibus Budget Reconciliation Act of 1993, without Health Reform
Present Values of Receipts and Payments

Generation's Age in 1992	Net Payment	Tax Payments				Transfer Receipts		
		Labor income taxes	Capital income taxes	Payroll taxes	Excise taxes	OASDI[b]	Health	Welfare
		($ thousands)						
0	$ 44.1	$16.6	$ 8.4	$18.8	$29.2	$ 6.4	$13.1	$ 8.6
5	54.8	21.3	10.8	23.0	34.2	8.1	15.5	11.0
10	67.3	27.1	13.8	29.4	39.3	9.7	18.6	14.0
15	82.5	34.4	17.7	37.5	44.5	11.1	22.6	17.9
20	96.9	48.7	22.3	44.6	48.0	12.4	25.8	20.5
25	101.5	42.1	27.3	46.2	49.1	15.4	29.4	18.5
30	96.9	39.5	32.2	43.5	49.0	18.9	33.4	15.0
35	87.8	36.3	37.3	40.8	48.9	23.7	39.1	11.9
40	69.1	31.5	40.5	34.9	47.8	29.9	46.6	9.1
45	39.7	25.1	41.4	27.8	45.4	37.9	55.3	6.8
50	2.4	18.1	48.2	20.2	41.5	48.4	64.1	5.2
55	–40.2	11.6	38.1	13.8	37.0	62.0	73.9	4.1
60	–86.3	6.0	34.9	6.8	31.8	79.2	83.2	3.5
65	–122.5	2.2	29.5	2.4	26.6	88.4	91.6	3.1
70	–124.6	0.9	20.7	1.0	21.7	81.4	84.6	2.8
75	–117.9	0.4	11.4	0.5	16.5	69.1	75.2	2.4
80	–100.5	0.2	4.3	0.2	12.1	54.1	61.2	2.0
85	–79.3	0.1	0.0	0.1	9.2	39.9	47.1	1.6
90	–11.3	0.0	0.0	0.0	1.6	5.9	6.7	0.3
Future Generations	99.6							

Source: Authors' calculations.
[a]Assumes a discount rate of 6 percent and a productivity rate of 0.75.
[b]Old-Age, Surviviors and Disability Insurance.

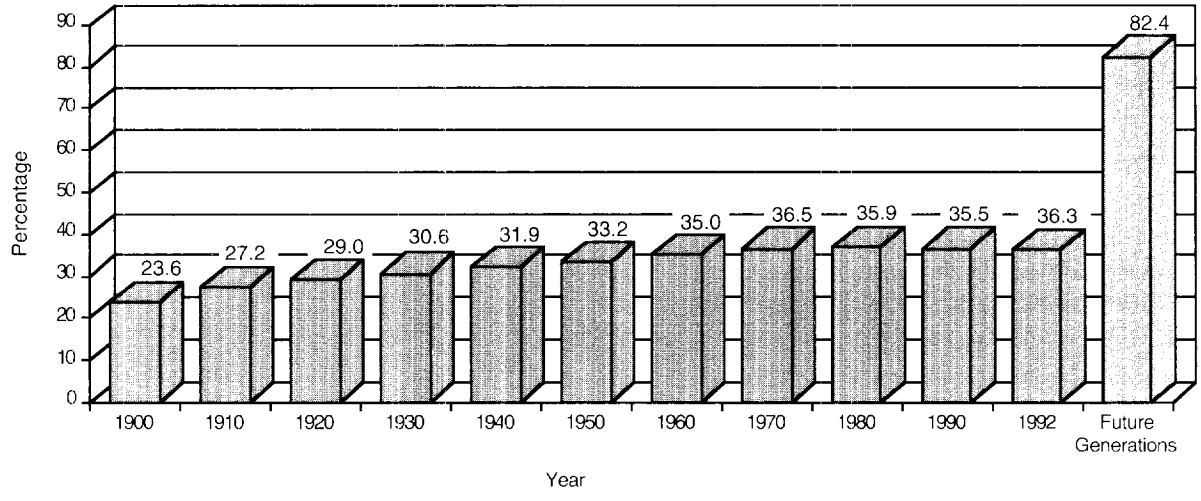
Table 5.3

Lifetime Net Tax Rates for Generations Born Since 1900
Post- and Pre-Omnibus Budget Reconciliation Act of 1993 (OBRA '93)

Year Generation Was Born	Post-OBRA '93 (Baseline)			Pre-OBRA '93		
	Net tax rate	Gross tax rate	Gross transfer rate	Net tax rate	Gross tax rate	Gross transfer rate
1900	23.6	27.3	3.7	23.6	27.3	3.7
1910	27.2	33.0	5.8	27.2	33.0	5.8
1920	29.0	35.9	6.9	29.0	35.9	6.9
1930	30.6	38.8	8.1	30.5	38.7	8.2
1940	31.9	41.0	9.1	31.6	40.9	9.2
1950	33.2	44.0	10.8	32.8	43.7	10.9
1960	35.0	47.2	12.2	34.4	46.7	12.3
1970	36.5	50.6	14.1	35.7	49.8	14.1
1980	36.9	51.9	15.0	36.0	51.5	15.0
1990	36.5	52.4	15.9	35.5	51.5	16.0
1992	36.3	52.4	16.1	35.4	51.5	16.2
Future Generations	82.0			93.7		

Source: Authors' calculations.

Chart 5.8
Lifetime Net Tax Rates of Current and Future Generations



Source Authors' calculations.

The Gross Rate of Taxation and the Impact on Labor Supply

Table 5.3 also shows the gross tax and transfer rates, the difference between which is the net tax rate. Consider the 52.4 percent gross tax rate facing 1992 newborns under current law. This figure indicates that 1992 newborns will, over their lifetimes, hand over to federal, state, and local government the equivalent of more than one-half of all the income they earn over their working lives. Since this is an average, not a marginal tax rate, and since our tax and transfer schedules are progressive, the marginal tax rates facing most tax-paying 1992 newborns will be even higher than 52.4 percent. As mentioned in the first section, such high marginal tax rates can be expected to have a very deleterious impact on U.S. labor supply. Unfortunately, as just suggested, 1992 newborns could well be forced to pay even higher net tax rates than current law suggests, which is, of course, likely to mean even higher gross tax rates.

Is the Estimated Imbalance in U.S. Generational Policy Sensitive to Discount Rate and Growth Rate Assumptions?

Given the central role played by discounting and growth accumulation in the calculations, it is natural to ask whether the conclusions are sensitive to the assumed levels of the interest and growth rates. Table 5.4 shows lifetime net tax rates for 1992 newborn and future generations under different assumed values of growth and interest rates. As the table indicates, the picture is worse, the larger is the interest rate and the lower is the growth rate.[21] However, even under the most favorable assumptions—a growth rate of 1.25 percent and an interest rate of just 3.0 percent—the lifetime net tax rate facing future generations is still 74 percent higher than that on current newborns (44.3 percent versus 25.5 percent). And, with no change in the interest rate, growth alone has relatively little impact on the outcome. One reason for this result is that government purchases are assumed to grow as fast as the economy does. Were faster economic growth to occur without a concomitant rise in the rate of growth of government spending, the results would look much more favorable. However, history suggests that this would not be a realistic assumption.

[21] One would expect lifetime net tax rates to be higher, the higher is the interest rate and the lower the growth rate. While a higher interest rate reduces both the numerator (the present value of net tax payments) and the denominator (the present value of labor earnings) of the lifetime net tax rate, it reduces the denominator by a larger percentage than the numerator, and thus raises the tax rate. The reason is that the present value of net tax payments equals the present value of taxes minus the present value of transfer payments. Since transfer payments occur relatively late in life compared with tax payments, higher interest rates mean that the future transfer payments are discounted relatively more heavily than are the future tax payments. This makes the numerator fall by a smaller proportion than the denominator.

Table 5.4
Lifetime Net Tax Rates for 1992 Newborns and Future Generations Under Different Interest Rate and Growth Rate Assumptions

Interest Rate	Growth Rate	Lifetime Net Tax Rates	
		1992 newborns	Future generations
3.0	0.75	26.9	54.2
6.0	0.75	36.3	82.0
9.0	0.75	42.1	134.9
3.0	0.25	28.3	67.3
6.0	0.25	39.1	101.5
9.0	0.25	45.8	166.5
3.0	1.25	25.5	44.3
6.0	1.25	33.8	66.6
9.0	1.25	38.8	109.3

Source: Authors' calculations.

Didn't OBRA '93 Fix Our Fiscal Woes?

Notwithstanding the considerable fanfare associated with the passage of OBRA '93, it went only a small part of the way to alleviating the U.S. fiscal crisis. As table 5.3 indicates, in the absence of OBRA '93, future generations would face an 93.7 percent lifetime net tax rate. OBRA '93's passage reduced this rate to 82.0 percent. This improvement came at the cost of raising the net tax rates of existing generations, in some cases by a considerable amount. The youngest baby boomers, for example, saw their lifetime net tax rates rise by almost a full percentage point. All in all, though, OBRA '93 represented only about one-fourth of what really needed to be done to ensure that the next generation's economic birthright does not end up being almost entirely taxed away.

The Role of Health Care Costs in the U.S. Fiscal Crisis

The fiscal crisis documented in table 5.1, table 5.2, and table 5.3 reflects a number of factors, including the demographic transition, the size of the official debt, and the scale of pay-as-you-go Social Security. Eliminate any of these factors and the generational imbalance in fiscal policy would largely disappear. Of course, we cannot change the demographic transition or the size of official government debt. And Social Security is viewed by politicians as "the third rail."

However, one policy that we could change, which would make an enormous difference to our fiscal problems: eliminating excessive growth in government health care spending. As the second column in table 5.5 shows, stabilizing growth in health care spending starting in 1994 at the growth rate warranted by demographic change and productivity growth eliminates most of the gap in the treatment of 1992 newborns and future generations. The lifetime net tax rate of future generations falls from 82.0 percent to 45.9 percent, while that of newborns rises from 36.3 percent to 40.1 percent. Other existing generations also lose from stabilizing health care. For example, young boomers experience a two percentage point increase in their lifetime net tax rate.

Table 5.5
Lifetime Net Tax Rates for Generations Born Since 1900: Health Care Spending and Health Reform Scenarios

Year Generation Was Born	Baseline	Stabilizing Health Care Spending in 1994	Clinton Health Reform Post-2000 Spending Scenarios	
			Optimistic	Pessimistic
1900	23.6	23.6	23.6	23.6
1910	27.2	27.3	27.2	27.2
1920	29.0	29.3	29.1	29.1
1930	30.6	31.5	30.9	30.9
1940	31.9	33.2	32.4	32.2
1950	33.2	34.8	34.0	33.5
1960	35.0	37.0	35.9	35.2
1970	36.5	39.1	37.6	36.6
1980	36.9	40.1	38.2	36.7
1990	36.5	40.1	38.3	36.2
1992	36.3	40.1	38.3	36.0
Future Generations	82.0	45.9	66.5	75.2

Source: Authors' calculations.

While the Clinton health care reform proposal has many attributes to recommend it, cost containment, at least through the end of this century, is not one of them. Based on the proposal's own cost estimates, which many view as highly questionable, total government health care spending (including the proposed subsidies to early retirees, small businesses, and low-income households) through the turn of the century will be essentially the same as that projected under current policy. For the Clinton health reform plan to improve the country's fiscal situation, it must restrain health care spending after the turn of the century.

The last two columns of table 5.5 consider both optimistic and pessimistic scenarios concerning health care spending after the turn of the century, assuming the Clinton health care plan is enacted. Under the optimistic scenario, health care spending growth after 2000 equals the amount warranted by demographics and productivity. Under the pessimistic scenario, health care spending grows between 2000 and 2020 at a 2 percentage point rate over and above the rate produced by demographic change and productivity growth. Even under the optimistic assumptions, the Clinton plan produces a huge 66.5 percent lifetime net tax rate for future generations—leaving a gap of over 28 percentage points between the lifetime net tax rates of today's newborns and those of future generations. This illustrates the cost of waiting even a few years to achieve cost containment. And, under the pessimistic scenario, the Clinton plan achieves only a moderate reduction in the net tax rate facing future generations, which remains at 75.2 percent.

Resolving the Fiscal Crisis

As the preceding section showed, the United States faces a serious fiscal crisis. If existing generations bear the fiscal burdens that current policy projects for them, future generations will have to face a considerably higher burden in order to satisfy the government's burgeoning debt. However, as the magnitude of this crisis becomes more evident, the pressure to address this problem will increase. It is impossible to know when changes will be made, or how gradual they will be, but most, if not all, current generations are likely to be affected by the changes that occur. There are many possible ways out of the fiscal crisis which, even if they have relatively similar impacts on the pattern of future budget deficits, may have quite different effects on the well-being of the elderly, the young, and the baby boom generation. We can use generational accounting to measure these different effects. This section considers the changes in the baseline generational accounts that would result from several alternative policies that might be used to deal with the U.S. fiscal crisis. The following section examines the implications of these changes for the well-being of baby boomers, now and in their retirement.

Alternative Policy Scenarios

We consider a variety of tax increases, spending cuts, and combinations of tax and spending policies aimed at eliminating the fiscal imbalance between current and future generations. The policies include increases in income taxes, increases in indirect taxes such as sales and excise taxes, and reductions in entitlement benefits, including Social Security, Medicare, and Medicaid.

The policies considered increase the fiscal burdens of current generations through tax increases, benefits cuts, or some combination of the two. In each case, the policy is scaled to a level sufficient to eliminate the imbalance between the fiscal burdens of current newborns and those of future generations. For example, consider raising income taxes to achieve generational balance. This will increase the generational accounts of those generations currently alive because of the higher income tax payments they will make during their lives. At the same time, by raising the net payments made by existing generations, this policy will reduce the burden that must be borne by future generations in order to meet the government's liabilities. At some point, as income taxes are increased, the rising fiscal burdens of newborns and the falling burdens of future generations will become equal to one another.

In some cases, the policies are assumed to be enacted immediately (i.e., in 1994). In other cases, the policies are assumed to take effect only with a delay of 15 years, in 2009. It is useful to keep in mind that in 2009 the oldest baby boomers will be nearing retirement; those born in 1946 will turn 65 in the year 2011. Thus, baby boomers will view the effects of a delayed policy much the way the older population would view a similar policy enacted immediately. Simulating delayed policies reflects our recognition that it may take a considerable period before serious fiscal reform occurs. The results of such simulations indicate quite clearly the costs of delay, in terms of the increased severity of budget cuts or tax increases that will be needed in the future to restore fiscal balance between present and future generations.

Simulation Results

Table 5.6 describes the following nine simulations. The first is simply the baseline simulation, repeated from the previous section. The second, labelled INC94, increases income taxes permanently in 1994. The third, INC09, raises income taxes permanently after a delay of 15 years, in 2009. The fourth

Table 5.6
Alternative Policy Simulations

Baseline: Baseline 1993 Generational Accounts	
INC94:	Increase all income taxes permanently by 32 percent in 1994
INC09:	Increase all income taxes permanently by 63 percent in 2009
SS94:	Reduce all OASDI[a] benefits permanently by 70 percent in 1994
IND94:	Increase all indirect taxes permanently by 61 percent in 1994
IND09:	Increase all indirect taxes permanently by 132 percent in 2009
BE94:	Cut health and OASDI[a] benefits permanently by 29 percent in 1994
BE09:	Cut health and OASDI[a] benefits permanently by 49 percent in 2009
TXBE94:	Cut health and OASDI[a] benefits, raise income and excise taxes permanently by 12 percent 1994

Source: Authors' calculations.
[a]Old-Age, Survivors and Disability Insurance.

simulation, SS94, reduces Social Security's OASDI benefits permanently in 1994, while the fifth and sixth, IND94 and IND09, increase indirect taxes permanently in 1994 and 2009. The final three simulations combine different policies. The seventh and eighth simulations, BE94 and BE09, reduce OASDI *and* government health care benefits (Medicaid and Medicare) permanently in 1994 and 2009, respectively. The last simulation, TXBE94, combines smaller versions of the 1994 permanent benefit cuts with permanent increases in both income and indirect taxes.

As indicated above, each policy (except the baseline) is scaled to produce generational balance, as measured by the generational accounts of current newborns and future generations. Table 5.6 indicates, for each simulation, the percentage increase in taxes or decrease in benefits needed to accomplish this objective. In the seventh and eighth simulations, OASDI and health benefits are assumed to be reduced by the same percentage. In the final simulation, taxes are assumed to increase by the same percentage that benefits fall.

Generational Accounts under Alternative Policies

Table 5.7 presents the generational accounts for males of different generations under each of these policies. The effects of a particular policy can be ascertained by comparing the relevant column to the first, which presents results for the baseline. Table 5.8 presents comparable results for females.

Let us begin with an examination of the effects of these policies on male generational accounts, beginning with the policies that raise income taxes. In order to achieve generational balance with an immediate increase in all income taxes (federal, state and local, individual and corporate), these taxes must rise permanently by 32 percent, or about 4.5 percent of net national product.[22] The impact on newborn generations is to raise lifetime net tax payments by $12,900 in present value, from $78,400 to $91,300. The greatest burden is felt by those between the ages of 20 and 45, who are already earning income and will be doing so for many years to come. For this group, the increase is in the neighborhood of $30,000 per person. For retirees, the increase is progressively smaller as age increases, because such individuals have lower taxable income and fewer years over which their income will be taxed. Future generations, of course, will benefit considerably from such a policy. Their lifetime fiscal burdens, on a growth-adjusted basis, will decline by nearly $86,000.

It is politically unrealistic to assume that such a large tax increase would be introduced immediately. It may take time before the severity of the nation's fiscal problems spurs action. However, if action is delayed, the requisite tax increase is even larger. If income taxes do not increase until 2009, at that time they must rise by 63 percent, or roughly 9 percent of NNP. In this case, the increase in net taxes on generations aged 25 and over will be reduced, but those on generations under age 25 will be increased. The reason is simple. Those not yet working gain the least from a delay in the tax increase and suffer the most from the added burden of higher taxes, once they are raised. The extra burden placed on newborns is essentially double that of the immediate income tax increase, for virtually all of their income will be earned after taxes have risen.

Cutting Social Security Benefits

As the policies of 1993 indicate, another potential tool for

[22] This estimate is about 50 percent higher than earlier, preliminary calculations we performed based on less recent data. The primary reason for the change is the revision in Office of Management and Budget projections, which leads to a larger estimated fiscal imbalance.

Table 5.7
Male Generational Accounts

Age in 1991	Policy								
	Baseline	INC94	INC09	SS94	IND94	IND09	BE94	BE09	TXBE94
0	81.0	88.9	96.4	83.7	84.7	89.9	94.6	84.3	87.4
5	102.4	112.6	121.1	105.8	107.1	112.8	116.5	106.5	110.3
10	128.3	141.3	148.9	132.3	134.2	140.1	142.1	133.2	137.9
15	161.4	177.9	182.9	165.7	168.8	174.4	174.8	167.0	173.0
20	191.9	211.2	212.7	197.2	200.8	205.1	204.4	198.4	205.0
25	209.3	230.1	228.2	215.8	220.0	221.9	220.8	216.7	223.2
30	211.2	232.3	227.2	219.1	224.1	223.1	221.3	219.6	225.5
35	204.9	225.8	217.6	214.8	220.8	216.3	213.6	214.8	219.6
40	186.5	206.2	195.8	198.9	206.2	197.3	193.7	198.4	201.3
45	151.6	169.0	157.7	167.3	175.2	161.6	157.3	166.1	166.3
50	103.8	117.8	107.6	123.5	124.8	112.5	107.9	121.1	118.0
55	45.6	56.1	47.9	70.3	61.9	52.9	48.3	66.4	59.4
60	–16.3	–9.3	–14.9	13.9	–6.1	–10.3	–14.6	8.2	–2.8
65	–68.1	–63.4	–67.3	–39.7	–62.5	–63.4	–67.3	–44.7	–56.2
70	–75.9	–72.7	–75.6	–51.9	–73.6	–72.6	–75.5	–56.0	–66.3
75	–72.0	–69.9	–72.0	–54.7	–72.0	–69.7	–72.0	–57.0	–64.9
80	–58.7	–57.2	–58.7	–46.8	–58.7	–57.3	–58.7	–48.1	–53.7
85	–45.9	–44.9	–45.9	–38.4	–45.9	–44.8	–45.9	–39.0	–42.6
90	–3.5	–3.5	–3.5	–3.5	–3.5	–3.5	–3.5	–3.5	–3.5
Future Generations	136.8	88.9	96.4	83.7	84.7	89.9	94.6	84.6	87.4

Source: Authors' calculations.

Table 5.8
Female Generational Accounts

Age in 1992	Policy								
	Baseline	INC94	INC09	SS94	IND94	IND09	BE94	BE09	TXBE94
0	44.1	52.1	59.8	48.6	59.4	66.7	49.7	52.0	52.6
5	54.8	65.1	73.6	60.3	72.4	78.5	61.6	64.1	65.1
10	67.3	80.4	87.6	73.8	87.0	90.8	75.4	78.4	79.7
15	82.5	99.3	103.7	89.8	104.2	105.8	92.1	96.0	97.3
20	96.9	116.5	117.7	105.6	119.3	119.3	108.0	112.9	113.5
25	101.5	122.2	120.5	112.3	123.3	122.5	114.5	120.5	119.2
30	96.9	117.8	113.2	110.1	117.9	115.6	112.1	119.2	115.5
35	87.8	108.5	101.4	104.3	108.2	104.1	106.1	114.3	107.4
40	69.1	88.4	80.0	89.9	88.7	82.9	91.4	101.3	89.7
45	39.7	56.8	47.6	66.1	57.7	50.9	66.7	78.7	61.1
50	2.4	16.9	7.5	36.1	18.4	11.1	35.1	42.8	24.8
55	–40.2	–28.4	–37.5	2.9	–26.5	–33.8	–0.7	–4.6	–16.5
60	–86.3	–77.5	–85.2	–31.9	–74.9	–82.0	–39.3	–57.9	–61.0
65	–122.5	–116.6	–122.5	–68.4	–113.3	–119.7	–74.9	–102.7	–98.6
70	–124.6	–121.2	–124.6	–77.0	–117.5	–122.9	–82.1	–113.4	–104.2
75	–117.9	–116.5	–117.9	–79.8	–112.8	–117.9	–82.9	–117.9	–101.7
80	–100.5	–100.5	–100.5	–72.2	–96.8	–100.5	–74.0	–100.5	–88.7
85	–79.3	–79.3	–79.3	–60.5	–76.4	–79.3	–61.3	–79.3	–71.2
90	–11.3	–11.3	–11.3	–11.3	–11.3	–11.3	–11.3	–11.3	–11.3
Future Generations	99.6	52.1	59.8	48.6	59.4	66.7	49.7	52.0	52.6

Source: Authors' calculations.

addressing the nation's fiscal imbalance is a reduction in Social Security benefits. Whether it occurs through a direct reduction in benefits or, as was done in 1993, the exposure of a greater share of benefits to income taxation, the impact is still a reduction in after-tax Social Security benefits. Social Security benefits would have to be cut considerably to solve the nation's fiscal crisis. Even were they cut immediately and permanently, they would have to fall by 70 percent. Were the cut delayed until 2009, even the complete elimination of Social Security benefits would not suffice! Clearly, these policies would hit hardest those who are already retired or nearing retirement at the time the cuts occur.

Under the immediate reduction, those most affected would be 60 and 65 year olds, who are just passing into their primary age of benefit receipt. However, the young would vastly prefer this policy to an income tax increase and so, perhaps surprisingly, should baby boomers. Those in the 30–45 age group would experience a smaller increase in net lifetime tax payments if Social Security benefits were cut immediately, even by 70 percent, than they would from the immediate increase in taxes depicted in the second column.

Raising Indirect Taxes

Because indirect tax collections are not as large in the aggregate as income tax collections, it would require a larger percentage increase in indirect taxes to achieve generational balance. These taxes would have to rise by 61 percent if the increase occurred immediately, or by 132 percent if it were delayed 15 years. However, the generational impact of the two types of tax policies would be similar. Income taxes would be slightly preferred by the old and the young, whose consumption exceeds their income. Indirect taxes would be preferred by those in the baby boom generation, who currently are in their peak saving years and consuming less than their income.

Combining Different Policies

One clear lesson of all the foregoing simulations is how large a change in any one tax or benefit program would be necessary to provide generational balance. It may be that such individual changes simply are not politically feasible. On the other hand, combining different policies might strengthen the supporting coalition by broadening the distribution of the program's effects and lessening the impact on each particular tax or benefit component.

For example, one way of reducing the magnitude of Social Security cuts is by adding health care benefits to the reduction package. Health care reform is already under discussion, but, as mentioned above, it is unclear what, if any, savings will result from the current effort. In any case, if we were able to reduce the level of health care and Social Security benefits by 29 percent immediately, this would suffice to achieve generational balance. The seventh column of table 5.7 shows the results of this policy simulation. Because Medicare is received by the same group that receives Social Security benefits, the generational effect of this policy is similar to that for the policy of cutting just Social Security benefits. The elderly should prefer this policy over the alternative, and other generations prefer the Social Security cuts alone, because health care spending also includes Medicaid, a benefit received not only by the elderly but by individuals of other ages as well. However, as the next simulation shows, the baby boomers would suffer considerably more if a cut in health and Social Security benefits were delayed until 2009. After such a delay, a benefit reduction of 49 percent would be needed to close the generational gap. Only those generations who are now retired or are close to retiring would benefit from such a delay.

Expanding the fiscal package to include not only these benefit cuts but also the tax increases already considered permits a much smaller change in each policy. Cutting benefits and raising taxes immediately by 12 percent would suffice to balance the fiscal burdens of newborns and future generations. As would be expected, the generational impacts of this combination policy lies between those of the tax increases and benefit cuts alone. These policies would be preferred by the elderly to benefit cuts but not to tax increases. They would be preferred by the young to tax increases but not to benefit cuts. For the middle-aged baby boomers, the differences among the policies would be smaller. For example, the 45-year-old male would have the same generational account under the combination policy and the policy of combined immediate benefit cuts alone and only slightly different accounts under the two tax policies, compared with under the combined tax-benefit policy.

Male-Female Differences

The impact of these different policies on the generational accounts of females is shown in table 5.8. Recall from the previous section that the baseline generational accounts for females are smaller than those for males because of the lower female labor force participation rate and longer life expectancy, which lead to lower income and payroll taxes and higher Social Security and Medicare benefits. Our generational accounts for future males and females are determined in such a way that the accounts of future generations of each gender bear the same ratio to the accounts of newborns of the same gender. We maintain this ratio as policies change, so that the

alternative policies just considered that equalize the generational accounts for newborn and future males also do so, simultaneously, for females. This equality is apparent in each of the columns of table 5.8 other than that representing the initial baseline simulation.

The differences between males and females lead not only to the differences in baseline generational accounts just discussed but also to differences in the relative effects of different policy changes. In general, current generations of females are more adversely affected by benefit reductions than are males and less adversely affected by income tax increases. For example, while a 45-year-old male is indifferent between the benefits-only combination package in the seventh column and the benefit-and-tax package in the last column of table 5.7 and table 5.8, females of the same age will bear a $5,600 higher lifetime fiscal burden under the more limited policy. Yet, while males of this same age will experience a lifetime increase of $28,600 in their net tax burdens if the income tax rises immediately, the burden on 45-year-old females rises by only $17,100. A final noteworthy difference between the sexes is the relative impact of indirect taxes and income taxes. Because consumption is more evenly distributed across men and women than is income, males are relatively less adversely affected by indirect taxes, which fall mainly on consumption. For example, the 45-year-old male is $10,200 worse off under the immediate income tax increase than under the immediate rise in indirect taxes. However, for females, the income tax increase imposes a lifetime burden that is $900 *lower* than that under the indirect tax increase.

Of course, these comparisons may overstate the differences between men and women to the extent that married couples share in the additional burdens that any policy change impose on their family. However, not every household contains a married couple. Particularly among the elderly, women may have no partner with whom to share the burdens of tax increases or benefit reductions.

Remaining Lifetime Tax Rates

One way of assessing the potential changes in generational accounts is to express them in terms of the remaining resources that individuals will have at their disposal over the remainder of their lifetimes. By dividing an individual's generational account by the present value of that individual's remaining lifetime income, we arrive at a "remaining lifetime tax rate," the share of that individual's remaining resources that must be paid to the government, on net.

Table 5.9 shows these remaining lifetime tax rates for male cohorts aged 0–50, corresponding to the generational accounts in table 5.7. Table 5.10 presents the remaining lifetime tax rates for females that correspond to the generational accounts given in table 5.8.[23]

Under the baseline simulation, remaining lifetime tax rates decline gradually with current age among males. Among females, the decline with age is sharper, because of the lower lifetime incomes and larger transfer benefits females expect to receive in old age as the result of greater longevity. While these overall patterns for males and females remain under all the alternative policy scenarios, the relative effects on indi-

[23] We do not present remaining lifetime tax rates for generations aged 55 and over because, as the generational accounts become negative in older age, and remaining lifetime income falls, the remaining lifetime tax rates become quite negative and convey little intuition.

Table 5.9
Remaining Lifetime Net Tax Rates, Males

	Policy								
Age in 1992	Baseline	INC94	INC09	SS94	IND94	IND09	BE94	BE09	TXBE94
0	35.5	41.1	46.6	37.4	42.4	46.2	38.3	39.5	40.2
5	34.8	40.6	45.5	36.9	41.3	43.8	37.6	38.7	39.5
10	34.3	40.1	43.6	36.2	40.1	41.2	36.9	37.7	38.8
15	33.6	39.4	41.2	35.3	38.6	38.9	36.0	36.7	37.8
20	32.9	38.5	39.0	34.5	37.1	36.9	35.1	35.7	36.8
25	32.2	37.7	37.2	34.1	35.9	35.6	34.5	35.1	36.0
30	31.9	37.4	36.2	34.1	35.4	34.9	34.4	35.2	35.8
35	31.4	37.1	35.0	34.3	34.9	34.1	34.4	35.3	35.5
40	30.3	36.1	33.1	34.2	33.9	32.7	34.1	35.4	34.8
45	27.7	33.7	29.9	33.5	31.6	30.0	33.0	34.8	33.0
50	21.9	28.3	23.7	31.4	26.4	24.2	30.0	31.1	28.6

Source: Authors' calculations.

Table 5.10
Remaining Lifetime Net Tax Rates, Females

Age in 1991	Policy								
	Baseline	INC94	INC09	SS94	IND94	IND09	BE94	BE09	TXBE94
0	38.4	45.4	52.0	42.3	51.7	58.1	43.3	45.2	45.8
5	37.2	44.2	50.0	41.0	49.2	53.3	41.9	43.6	44.2
10	35.8	42.8	46.6	39.3	46.3	48.3	40.2	41.7	42.4
15	34.2	41.2	43.0	37.3	43.3	43.9	38.2	39.9	40.4
20	33.5	40.2	40.6	36.5	41.2	41.2	37.3	39.0	39.2
25	33.6	40.4	39.8	37.1	40.8	40.5	37.9	39.8	39.4
30	33.9	41.3	39.6	38.6	41.3	40.5	39.3	41.7	40.4
35	33.3	41.2	38.4	39.6	41.0	39.5	40.2	43.3	40.7
40	29.9	38.3	34.6	38.9	38.4	35.9	39.6	43.8	38.8
45	21.4	30.7	25.7	35.6	31.1	27.5	36.0	42.5	33.0
50	1.8	12.5	5.6	26.7	13.6	8.2	26.0	31.7	18.3

Source: Authors' calculations.

viduals of different ages vary considerably across the simulations. We can see this by considering what happens to remaining lifetime tax rates among the old, young, and baby boom cohorts.

The policies that hit the young hardest are the delayed tax increases. For males, the highest increase occurs if income taxes are raised: a newborn male experiences an increase of over 11 percent in his remaining lifetime tax rate under the delayed tax increase. For newborn females, the highest increase in fiscal burden, almost 20 percent of remaining lifetime income, comes about if indirect taxes are raised. For current 50-year olds, especially among females, benefit reductions hit the hardest. The combined, immediate Social Security health benefit reduction, for example, would raise the 50-year-old woman's remaining lifetime tax rate by over 24 percentage points!

Given that the baby boom generation effectively spans those from age 28 (born in 1964) to those age 46 (born in 1946) in 1992, it is difficult to draw firm conclusions about which policy would be most preferred by this group. Younger baby boomers, particularly males—for instance, 30-year olds in table 5.9—like the young, fare best under policies that reduce benefits, and do so immediately. On the other hand, 45-year olds generally do better under policies that raise taxes, if these tax increases are delayed. The 45-year-old male's smallest increase in remaining lifetime tax rate, 2.2 percentage points, occurs under the policy of a delayed increase in income taxes. For 45-year-old females, the smallest increase is 4.3 percentage points, under the same policy. For 45-year-old males, the increase in remaining lifetime tax rates could be as high as 7.1 percentage points if a delayed cut in benefits is used to restore fiscal balance. For females of the same age, the increase would be 21.1 percentage points of lifetime income.

In short, the choice among policies to solve the nation's fiscal crisis is an important one to all individuals, but the preferred alternatives will differ strongly by age. Even among the baby boom cohort, the interest of those at the young end differ from those already in their mid-40s. These findings illustrate not only why this is an important policy decision but also why it is likely to remain a contentious one.

The Baby Boomers in Retirement

The current U.S. fiscal problem has important implications for the baby boom generation as it approaches retirement. Even without any change in fiscal policy, there is serious concern about whether baby boomers have been saving adequately for their own retirement. Moreover, each of the alternative policy scenarios considered in the previous section would increase the future fiscal burdens faced by baby boomers, making it even more difficult for them to maintain their current living standards without saving adequately.

This section considers the baby boomers in retirement. To begin, it asks how the future looks for them under the current baseline projections. Because such projections assume no increase in baby boomers' fiscal burdens, they represent an optimistic extreme. They tell us how well the baby boomers will do if they shoulder none of the cost of meeting the nation's current fiscal crisis. This initial analysis provides estimates of the resources baby boomers will have as they approach retirement and the retirement consumption this will permit. By comparing these measures with the consumption of baby boomers and retirees today, we can assess whether baby boomers will succeed in maintaining their own living standard and how their living standard in

retirement will compare with that of their parents' generation. Then, for each of the alternative policy scenarios previously discussed, we consider the change in resources the baby boomers will experience and how this will affect their standard of living.

Methodology, Data, and Baseline Projections

The easiest way to illustrate our methodology is by describing the four panels in table 5.11. The top panel reports actual average flows of labor income, capital income, pension income, net transfers (transfers minus taxes), and consumption in 1992, for individuals of four ages in that year: 28, 37, 46, and 65.[24] The first three ages represent individuals born in 1964, 1955, and 1946, respectively—the endpoint, midpoint and beginning of the baby boom. The previous section illustrated the importance of looking separately at individuals of different ages within the baby boom generation. We include those aged 65 for the sake of comparison with the baby boomers' future experience.[25]

The values of the net transfer flows are obtained from our generational accounting data base. The values of the various income flows and consumption flows were derived by distributing the 1992 aggregate values of each of these flows to individuals at different ages in 1992, using cross-section age-income and age-consumption profiles.[26] These profiles were obtained from the latest Current Population Survey and Consumer Expenditure Survey.

The final two columns of table 5.11 give two measures of consumption: consumption less Medicare and Medicaid

[24] Because our measures of labor and capital income correspond to those reported in the national income accounts, they are already net of indirect taxes. Hence, to avoid double counting, only direct taxes are included in forming net transfers.

[25] For each of these age cohorts, the information reported corresponds to the average individual of that age, combining the experience of males and females. We combine males and females in order to provide an overall picture of the well-being of individuals in the future. In addition, this obviates the need to make arbitrary assumptions about how males and females will share the burden of increased taxes and reduced transfer benefits under different policy changes.

[26] Aggregate labor income is estimated as 81 percent of 1992 National Income and Product Accounts (NIPA) national income. Aggregate capital income is assumed to equal 6 percent of 1992 aggregate U.S. household net worth as estimated by the Federal Reserve Flow of Funds. Aggregate consumption equals NIPA's 1992 value of household consumption. Aggregate private pension benefits for 1992 were assumed to have grown from their 1988 level at the same rate as they did from 1984 to 1988.

Table 5.11
Baseline 1994

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	−5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	−7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	−8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	−8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	36,733.79	9,700.87	8,841.90	15,654.56	2,536.47	21,682.10	29,699.07
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	−7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	29,727.39	−11,600.19	33,380.24	7,861.01	86.32	24,096.07	24,096.07
2020	37,105.58	10,981.88	9,456.95	13,953.84	2,712.91	20,966.88	30,293.18
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	−5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	23,500.90	−10,039.38	30,812.47	2,671.04	56.76	21357.46	21357.46
2010	27,812.95	−12,690.44	35,702.20	4,708.85	92.33	22,544.28	22,544.28
2029	35,009.20	11,640.57	10,114.78	10,352.23	2,901.63	18,760.18	28,922.50

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

transfers received and total consumption. In each case, the consumption is family consumption, including the consumption of dependent children. There are two reasons for considering the narrower measure of consumption that excludes the government's medical transfers. First, as transfers in kind, these transfers do not provide individuals with the same command over resources that cash or otherwise fungible transfers would. That is, an increase in medical transfers, which must be used to purchase additional health care, is not likely to allow individuals to increase other forms of consumption. Moreover, given the sharp increases in the share of medical spending over the next couple of decades, it is inappropriate to equate the large associated increases in medical transfers received, particularly by the elderly, with other increases in consumption. While the increased medical costs and transfers may represent an increase in the quality and quantity of medical care being received, they may not.

The top panel of table 5.11 shows how the income and consumption patterns of individuals differ at present. Labor income is highest among 46 year olds, while capital income (which includes not only income received but also the imputed rent on owner-occupied housing) and pension income are highest among 65-year olds. The latter age cohort also receives transfers, primarily in the form of Social Security and Medicare benefits, that exceed the taxes that they pay. Finally, the age profile of consumption (measured either way) peaks among this group at age 46. Those aged 65 consume less than 37-year olds and 46-year olds, but more than 28-year olds. The drop in consumption between ages 46 and 65 reflects not only the reduction in consumption needs (i.e., the departure of dependent children) but also the general growth of incomes over time. The elderly worked and saved in an earlier era, when incomes were generally lower. Hence their ability to provide for their own retirement consumption is more limited. However, the reduction in consumption in old age is smaller if we consider total consumption, because of the significant health care transfers the elderly already receive.

The remaining three panels in table 5.11 provide information about the income and consumption of baby boomers at different key dates in the future. For each of the three baby boom cohorts (those born in 1946, 1955, and 1964) we compare income and consumption in 1992 and other key years: for those aged 46 in 1992, when they reach age 65, in 2011; for those aged 37 in 1992, when *they* reach age 46 and age 65, in 2001 and 2020, respectively; and for those aged 28 in 1992, when *they* reach age 37, age 46, and age 65, in 2001, 2010, and 2029. These different "snapshots" permit us to consider different groups at similar ages and to follow each group over time.

Projecting the Boomers' Future Levels of Income and Consumption

The future projections of labor income, pension income, taxes, and transfers are the same as those used above in estimating generational accounts, based on the same projections of economic growth and fiscal policy. To predict future consumption, we assume that individuals in the future will save the same share of their disposable income as individuals of the corresponding age save today. That is, we assume that a 55-year old in 2002 will save the same share of disposable income in that year as a 55-year old did in 1992. Thus, we are imposing the same pattern of saving on future baby boomers as we observe for older generations today. Hence, if baby boomers save a lower fraction of their disposable income than their parents did at comparable ages, we will be overstating the amount of saving that they do. The one exception to this behavioral assumption is our treatment of medical care transfer payments. Consistent with the discussion above, we assume that all medical transfers are consumed, i.e., that increases in disposable income in the form of Medicare and Medicaid do not give rise to additional saving.

We derive our estimate of assets at each age from this assumed consumption behavior. Starting with the actual level of assets in 1992 of our three baby boom cohorts, we estimate the change in assets in each successive year as the saving that a particular age group does in that year.[27] For example, to follow those who are aged 46 in 1992, we measure their 1992 saving (equal to total income less consumption in the top panel of the table) and add this to their 1992 assets to derive their 1993 assets. We multiply this measure of 1993 assets by our assumed before-tax rate of return of 6 percent to calculate the household's capital income in 1993. Adding this to the other income components already projected, we obtain a measure of total income in 1993. Multiplying this income measure by the saving-income ratio for 47-year olds observed in 1992 gives us a projection of the saving by 47-year olds in 1993, which, added to their 1993 assets, provides us with a measure of their assets in 1994. We are then in a position to estimate consumption and saving in 1994 for the same age cohort, who are then 48-years old, based on the saving-income ratio (and associated consumption-income ratio) of 48-year olds in 1992. The process continues, following them as 49-year olds in 1995, and so forth, until they reach age 65 in 2011.

27 Each baby boomer cohort's average 1992 level of assets is determined by distributing the Federal Reserve Flow of Funds' estimate of aggregate 1992 household net wealth to individuals of different ages in 1992, based on a cross-section age-wealth profile. This profile was obtained from the 1983 Federal Reserve Survey of Consumer Finances.

Hence, our measure of boomers' future consumption is an estimate of where historical saving behavior and projections of fiscal policy will leave the baby boomers. If, for example, baby boomers face higher taxes as a share of before-tax income than their parents did, this will translate into lower asset accumulation and consumption when they retire. With this methodology, we can ask not only where the baby boomers are headed under the baseline scenario but the impact that changes in taxes and transfers will have on their living standard.

Baby Boomers in Retirement

Having discussed the underlying methodology, let us consider the prospects for baby boomers in the next century under the baseline fiscal projections. This information is provided in the lower three panels of table 5.11, which show future income and consumption measured, as before, in real terms, i.e., in 1992 dollars. Considering first the oldest baby boomers, who reach age 65 in 2011, we observe that consumption, overall, will be higher than this cohort's consumption in 1992 and higher than the consumption of those aged 65 in 1992. However, a considerable share of this increase is attributable to the sharp rise in medical transfers. Excluding medical transfers, this group will experience a drop in its consumption as it ages. It still will enjoy a higher standard of living than 65-year olds in 1992. The difference, $21,700 versus $18,900, represents a growth of 15 percent, which is roughly what would be predicted by the growth in productivity of 0.75 percent per year assumed over this 19-year period. Thus, the prospects for the oldest baby boomers *under the baseline assumptions* are for a maintenance of the status quo.

For younger baby boomers, the prospects are dimmer. Chart 5.9 tells the story, tracing out each baby booms cohorts' consumption as it ages. Leaving out the huge medical transfers projected by the baseline, each generation will be successively worse off at each age than the previous one. Consumption drops by nearly $1,500 at age 46 as we move from those born in 1946 to those born in 1955, and by nearly this much again as we move to those born in 1964. The gap continues to widen as the cohorts age, with the youngest baby boomers projected to consume nearly $3,000 less at age 65 than the oldest. This compares with the roughly $3,000 *increase* in consumption that productivity growth alone would have predicted for this younger cohort relative to the oldest baby boomers. The reason for this drop is the lower capital income that the younger cohort will have at age 65. While the oldest baby boomers are projected to have more capital income when they retire than today's retirees, each successive baby boom cohort will be able to accumulate less. Indeed, the youngest cohort is projected to have accumulated less capital when it reaches age 65, in 2029, than did 65-year olds in 1992, 37 years earlier! Facing higher taxes than earlier generations (as indicated in the previous section, by the increase in lifetime net tax rates over time), younger generations will find it more difficult than older baby boomers to accumulate assets.

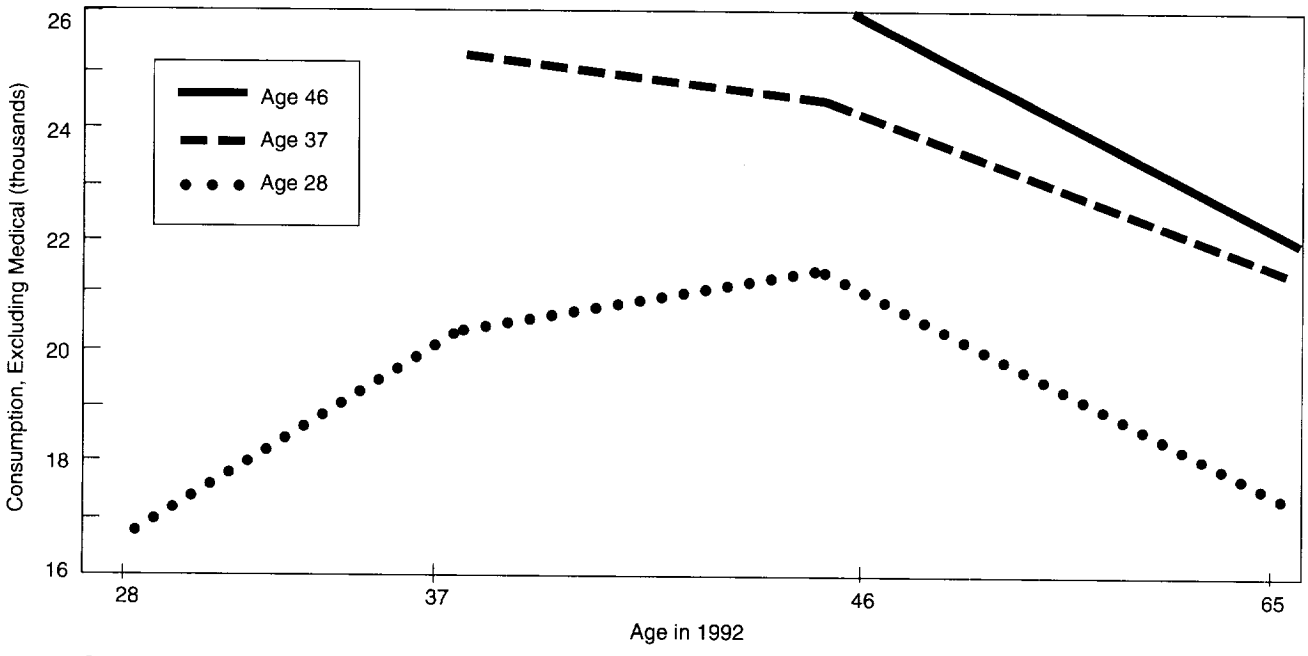
In summary, even under overly optimistic assumptions, the future does not look promising for the baby boom generation. Even if they save as much of their income as past generations saved at comparable ages, and are forced to bear none of the fiscal burden needed to address the current fiscal imbalance, only the oldest baby boomers will make it to retirement with enough resources to permit them a standard of living that exceeds that of previous retirees to the extent indicated by economic growth. Younger baby boomers will fare progressively worse, with the youngest not even being able to consume as much at age 65 (aside from medical expenditures) as 65-year olds in 1992—a cohort that is 37 years older—consumed.

Future Consumption Under Alternative Policy Scenarios

The discussion of the impact of different policy changes that would eliminate the fiscal imbalance between current and future generations demonstrated that baby boomers could well experience significant increases in their remaining lifetime net tax rates when the fiscal imbalance is addressed. How much will these potential increases in net taxes affect boomers' retirement living standards? Table 5.12 through table 5.19 provide the answers. Each table has the same format as table 5.11, with the top panel repeating from table 5.11 the actual income and consumption of different age cohorts from 1992 and the lower panels presenting projections of income and consumption for the three representative baby boom cohorts. Each table presents projections corresponding to one of the policy scenarios previously discussed, with the tables organized in the same order as those experiments. Table 5.12 corresponds to the second columns of table 5.7 through table 5.10, the immediate income tax increase in 1994; table 5.13 corresponds to the third column in these previous tables, and so forth. By comparing the lower panels of table 5.12 through table 5.19 with those of table 5.11, we can evaluate the impact of a particular policy on the future consumption and income of baby boomers. Comparing the second column of each table indicates the change in the flow of tax payments at each particular age associated with the policy in question.[28]

28 Special treatment is necessary for indirect taxes, as the initial level of such taxes does not appear explicitly in the baseline simulation. In cases in which indirect taxes are changed (table 5.15, table 5.16, and table 5.19), the *change* in these taxes is incorporated in the column reporting net transfers received.

Chart 5.9
Consumption by Age, Baseline



Source: Authors' calculations.

Since each alternative policy raises the net taxes baby boomers face, each policy also reduces their future consumption. It is useful to focus on what happens to each group as it reaches age 65. In each case, we will consider consumption net of medical transfers. At this age, the oldest baby boomers face, under the scenario of a delayed reduction in health and Social Security benefits, a reduction in their consumption as high as $6,200, or 29 percent, and the youngest baby boomers face a reduction of $7,600, or 40 percent. In contrast, an immediate increase in income taxes means a 7 percent lower age 65 consumption level for the oldest boomers and a 10 percent lower level for the youngest. (Chart 5.10 shows what happens to consumption of the oldest and youngest baby boomers, under this second, relatively optimistic scenario.) The results of the other policy simulations fall in between the estimates for these two simulations. The extent of this range indicates how uncertain the future is for baby boomers. It also indicates the general tendency of policies to fall more heavily on the consumption of the younger baby boom cohorts. The reason is simple. Even if older cohorts face the same net tax increases each year that younger cohorts do, they have more assets already accumulated to help finance their future consumption. Younger generations must depend relatively more on their future disposable income to finance future consumption. Hence, equal proportional drops in future disposable income will lead to larger percentage drops in the consumption of the younger baby boom cohorts.

Combined with the relatively poorer prospects that younger baby boomers face even under the baseline scenario, the outlook for this group is particularly grim. Even under the baseline scenario, their consumption at age 65 will be only slightly higher than it is today, despite their spending 37 years working and saving in an economy whose productivity is growing each year. Their age 65 consumption under the baseline will also be *lower* in real terms than that of 65-year olds in 1992, a result that is quite the opposite of that embodied in the American dream.

What Fraction of Baby Boomers Will Consume Less at Age 65 Than Today's Typical 65 Year Old?

One way of expressing the disappointing future facing baby boomers, even under the optimistic baseline case, is in terms of the fraction of them who will have a lower standard of living than today's typical 65-year old. That is, we can calculate the share of each baby boom cohort whose consumption at age 65 will be less, in absolute terms, than the median 65-year old's consumption in 1992.

In making these calculations, we assume that the relative distribution of age-65 consumption across members of a cohort remains the same as that currently observed. For example, if 70 percent of current 65-year olds are consuming

Table 5.12
Raise Income Taxes in 1994

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	34,834.30	8,199.31	8,841.90	15,256.61	2,536.47	20,247.92	28,264.90
Series for Males and Females age 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	27,395.94	–13,797.93	33,380.24	7,727.30	86.32	22,206.26	22,206.26
2020	34,830.40	9,372.71	9,456.95	13,287.84	2,712.91	19,279.05	28,575.35
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	21,657.09	–11,841.16	30,812.47	2,629.01	56.76	19,681.81	19,681.81
2010	25,173.20	–15,108.91	35,702.20	4,487.58	92.33	20,404.59	20,404.59
2029	32,476.76	9,918.78	10,114.78	9,541.57	2,901.63	16,848.10	27,010.42

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.13
Raise Income Taxes in 2009

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	33,743.35	6,769.12	8,841.90	15,595.85	2,536.47	19,424.22	27,441.19
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	29,727.39	–11,600.19	33,380.24	7,861.01	86.32	24,096.07	24,096.07
2020	33,489.34	7,840.00	9,456.95	13,479.48	2,712.91	18,266.50	27,562.80
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	23,500.90	–10,039.38	30,812.47	2,671.04	56.76	21,357.46	21,357.46
2010	23,038.73	–17,412.44	35,702.20	4,656.64	92.33	18,674.45	18,674.45
2029	30,532.43	8,278.82	10,114.78	9,237.21	2,901.63	15,380.08	25,542.40

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.14
Lower Social Security Benefits in 1994

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	1,8210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	2,4322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	2,5483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	1,8937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	31,150.82	4,287.84	8,841.90	15,484.61	2,536.47	17,466.78	25,483.75
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	29,537.88	–11,779.72	33,380.24	7,851.03	86.32	23,942.45	23,942.45
2020	31,184.08	5,259.40	9,456.95	13,754.82	2,712.91	16,525.95	28,522.26
Series for Males and Females Aged 28 in 1992							
1992	20381.41	–5039.54	23546.99	1848.82	25.14	18210.80	18708.59
2001	23390.20	–10147.87	30812.47	2668.82	56.76	21256.85	21256.85
2010	27604.94	–12883.46	35702.20	4693.87	92.33	22375.67	22375.67
2029	28902.67	5746.53	10114.78	10139.73	2901.63	14149.55	24311.87

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.15
Raise Indirect Taxes in 1994

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	34,969.64	8,264.15	8,841.90	15,327.12	2,536.47	20,350.11	28,367.08
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	27,695.01	–13,506.32	33,380.24	7,734.76	86.32	22,448.68	22,448.68
2020	35,009.89	9,444.38	9,456.95	13,395.65	2,712.91	19,414.56	28,710.87
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	21,627.14	–11,865.39	30,812.47	2,623.29	56.76	19,654.60	19,654.60
2010	25,572.74	–14,719.90	35,702.20	4,498.11	92.33	20,728.44	20,728.44
2029	32,674.58	9,995.94	10,114.78	9,662.24	2,901.63	16,997.46	27,159.78

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.16
Raise Indirect Taxes in 2009

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	33,542.94	6,568.05	8,841.90	15,596.52	2,536.47	19,272.90	27,289.88
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	29,727.39	–11,600.19	33,380.24	7,861.01	86.32	24,096.07	24,096.07
2020	33,330.10	7,629.30	9,456.95	13,530.95	2,712.91	18,146.27	27,442.58
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	23,500.90	–10,039.38	30,812.47	2,671.04	56.76	21,357.46	21,357.46
2010	23,338.14	–17,115.75	35,702.20	4,659.36	92.33	18,917.14	18,917.14
2029	30,423.46	8,054.38	10,114.78	9,352.67	2,901.63	15,297.79	25,460.11

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.17
Lower Health and Social Security Benefits in 1994

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
0	250.54	250.54	.00	.00	.00	–244.53	.00
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	31,640.31	4,742.73	8,841.90	15,519.20	25,36.47	17,836.35	25,853.33
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	29,311.79	–11,996.88	33,380.24	7,842.11	86.32	23,759.19	23,759.19
2020	31,399.01	5,462.86	9,456.95	13,766.29	2,712.91	16,688.23	25,984.54
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	23,218.58	–10,314.90	30,812.47	2,664.25	56.76	21,100.89	21,199.89
2010	27,319.44	–13,150.27	35,702.20	4,675.19	92.33	22,144.26	22,144.26
2029	28,858.78	5,714.36	10,114.78	10,128.01	2,901.63	14,116.41	24,278.73

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.18
Lower Health and Social Security Benefits in 2009

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	2,5176.18
2011	28,489.89	1,519.47	8,841.90	15,591.32	2,536.47	15,457.15	2,3474.12
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	29,727.39	–11,600.19	33,380.24	7,861.01	86.32	24,096.07	24,096.07
2020	27,809.76	1,874.98	9,456.95	13,764.92	2,712.91	13,978.24	23,274.54
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	23,500.90	–10,039.38	30,812.47	2,671.04	56.76	21,357.46	21,357.46
2010	27,045.90	–13,449.21	35,702.20	4,700.58	92.33	21,922.54	21,922.54
2029	24,918.65	1,861.76	10,114.78	10,040.49	2,901.63	11,141.49	21,303.81

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

Table 5.19
Raise Taxes, Lower Benefits in 1994

Age	Total Income	Net Transfers[a]	Labor Income	Capital Income	Pension Income	Medical Transfers[b]	Total Consumption
Profile Males and Females in 1992							
28	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
37	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
46	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	26,176.18
65	28,758.89	5,417.68	7,671.66	13,468.78	2,200.77	18,937.28	22,614.72
Series for Males and Females Aged 46 in 1992							
1992	32,131.68	–8,542.39	31,209.30	9,384.06	80.71	25,483.18	25,176.18
2011	33,530.81	6,772.16	8,841.90	15,380.28	2,536.47	19,263.74	27,280.72
Series for Males and Females Aged 37 in 1992							
1992	27,260.51	–7,249.45	28,808.53	5,648.36	53.07	24,322.85	24,819.46
2001	28,254.67	–12,988.54	33,380.24	7,776.64	86.32	22,902.32	22,902.32
2020	33,436.92	7,758.07	9,456.95	13,508.99	2,712.91	18,226.92	27,523.22
Series for Males and Females Aged 28 in 1992							
1992	20,381.41	–5,039.54	23,546.99	1,848.82	25.14	18,210.80	18,708.59
2001	22,301.67	–11,210.11	30,812.47	2,642.53	56.76	20,267.60	20,267.60
2010	26,148.24	–14,214.17	35,702.20	4,567.88	92.33	21,194.92	21,194.92
2029	31,009.23	8,182.51	10,114.78	9,810.32	2,901.63	15,740.07	25,902.39

Source: Authors' calculations.
[a]Transfers minus taxes.
[b]Consumption minus Medicare and Medicaid transfers.

less than the average level of consumption of 65-year olds, the same will be true in future years as well. To determine the absolute distribution of age 65 consumption in future years, we simply blow up the current distribution by the ratio of mean age 65 consumption projected in that future year to mean age 65 consumption today. The source for our current consumption age distribution is the 1987–1990 waves of the Bureau of Labor Statistics' Survey of Consumer Expenditures.

Ignoring potential fiscal adjustments, our distributional analysis shows the following: roughly 40 percent of the oldest baby boomers (those born in 1946) are projected to consume less at age 65 than today's (actually 1992's) median 65-year old's level. For those born in 1955, this fraction rises to 42 percent. For those born in 1964, the fraction rises to 50 percent.

However, the assumption of no fiscal adjustment seems highly unrealistic. If we assume instead the enactment of the combination of immediate tax increases and benefit cuts considered in table 5.19, we project the following: a total of 49 percent of the oldest boomers, 52 percent of the middle boomers, and 60 percent of the youngest boomers will consume less at age 65 than today's typical 65-year old. Thus, under this fairly optimistic fiscal adjustment scenario, it appears that over one-half of all baby boomers will consume less at age 65 than today's typical 65-year old.

Next, consider the fraction of boomers projected to consume less than today's typical 65-year old under the pessimistic fiscal adjustment scenario assumption of table 5.18 in which health care and Social Security benefits are cut starting in 2009. In this case, 61 percent of the oldest boomers, 67 percent of the middle boomers, and 78 percent of the youngest boomers consume less at age 65 than today's typical 65-year old. Thus, this scenario entails over 60 percent of all boomers, when they reach age 65, consuming less than the typical 65-year old consumes today.

These distribution analyses take as the reference point the actual median consumption of today's 65-year olds. An alternative reference point is the median consumption of today's 65-year olds adjusted for growth. This alternative reference point seems more appropriate if we are trying to assess the continuation of the American dream. Under the baseline assumption of no fiscal adjustment, 50 percent of the oldest baby boomers, 56 percent of the middle baby boomers, and 66 percent of the youngest baby boomers are projected to consume at age 65 less than current age-65 median consumption, adjusted for growth. Under the assumption of immediate tax increases and benefit cuts, 57 percent of the oldest baby boomers, 63 percent of the middle baby boomers, and 74 percent of the youngest baby boomers are projected to consume at age 65 less than current age-65 median consumption, adjusted for growth. Finally, under the assumption of health care and Social Security benefit cuts starting in 2009, 69 percent of the oldest baby boomers, 77 percent of the middle baby boomers, and 88 percent of the youngest baby boomers are projected to consume at age 65 less than current age-65 median consumption, adjusted for growth.

Conclusion

The United States faces a fiscal crisis of enormous magnitude. This report has used the modern technique of generational accounting to quantify the problem, to measure the size of fiscal responses needed to address it, and to evaluate the prospects for baby boomers under a variety of possible visions for the future.

Even if no changes in fiscal policy affect the economic decisions of baby boomers, their current behavior and the fiscal policy they now face lead to the conclusion that their living standards in retirement will not keep pace with those of past generations, after accounting for growth. Under the types of fiscal policies that might be adopted to address the current fiscal imbalance, the baby boomers' future looks far bleaker.

References

Auerbach, Alan J., Jagadeesh Gokhale, and Laurence J. Kotlikoff. "Generational Accounts: A Meaningful Alternative to Deficit Accounting." In D. Bradford, ed., *Tax Policy and the Economy.* Vol. 5. Cambridge, MA: MIT Press, 1991.

_____. "Generational Accounting: A Meaningful Way to Evaluate Fiscal Policy." *Journal of Economic Perspectives* (Winter 1994): 73–94.

_____. "Generational Accounting: A New Approach to Understanding the Effects of Fiscal Policy on Saving." *Scandinavian Journal of Economics* (June 1992): 303–318.

_____. "Social Security and Medicaid Policy from the Perspective of Generational Accounting." In J. Poterba, ed., *Tax Policy and the Economy.* Vol. 6. Cambridge, MA: MIT Press, 1992.

Auerbach, Alan J., and Laurence J. Kotlikoff. *Dynamic Fiscal Policy.* New York, NY: Cambridge University Press, 1987.

Bernheim, Douglas B. *Is the Baby Boom Generation Preparing Adequately for Retirement?* Prepared for Merrill Lynch & Co. August 1992.

Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund. *1993 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund.* Washington, DC: U.S. Government Printing Office, 1993.

Executive Office of the President. Office of Management and Budget. *Budget of the United States Government: Fiscal Year 1995.* Washington DC: U.S. Government Printing Office, 1994.

_____. "Generational Accounting Appendix." In *Budget Baselines, Historical Data, and Alternatives for the Future.* Washington, DC: U.S. Government Printing Office, 1993.

Feldstein, Martin S. "The Impact of Health Care Reform on the Budget Deficit." Address to the American Enterprise Insitute. Washington, DC, September 23, 1993.

Kotlikoff, Laurence J. "Deficit Delusion." *The Public Interest* (Summer 1986): 53–65.

_____. "From Deficit Delusion to the Fiscal Balance Rule—Looking for an Economically Meaningful Way to Assess Fiscal Policy." *Journal of Economics* (Supplement 7, 1993): 17–41.

_____. *Generational Accounting—Knowing Who Pays, and When, for What We Spend.* New York, NY: Free Press, 1992.

U.S. Congress. Congressional Budget Office. *Baby Boomers in Retirement: An Early Perspective.* Washington, DC: U.S. Government Printing Office, 1993.

U.S. Department of Health and Human Services. Social Security Administration. *The 1993 Annual Report of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Fund.* Washington, DC: U.S. Government Printing Office, 1993.

U.S. General Accounting Office. *Budget Policy: Prompt Action Necessary to Avert Long-term Damage to the Economy.* Washington, DC: U.S. Government Printing Office, 1992.

Discussion After Kotlikoff Presentation

MS. MANCHESTER: I think the Auerbach-Kotlikoff paper is a very important extension to the work on the well-being of baby boomers in retirement. I would like to make two points.

The first is that they've used reasonable assumptions to arrive at their conclusions. A different set of reasonable assumptions would arrive at a different set of conclusions. It's possible to get a substantially lower tax rate on the unborn than the 82 percent rate in the Auerbach-Kotlikoff study if you use a slightly different set of assumptions.

MR. KOTLIKOFF: I'm not sure, Joyce [Manchester], exactly what fiscal scenario you had in mind.

MS. MANCHESTER: I was talking about using different parameter values.

MR. KOTLIKOFF: What parameter values do you have in mind here? There is no reasonable set of growth rates that do not generate a huge imbalance in the treatment of retired persons in future generations. Reasonable growth assumptions lead to the need for a huge fiscal adjustment.

MS. MANCHESTER: The second point is that I'm surprised that the saving profile in 1992 is assumed to continue forever. We think that today's older working people shifted down their saving rates in response to fortunate circumstances. It is reasonable to assume that people in their forties and fifties who are faced with a different set of circumstances will save at a higher rate. That could make a difference for the results.

MR. BERNHEIM: First, let me return to the issue of the adequacy of the trajectory of saving, which is what we ought to be focused on.

Table 3 in the CBO report allows us to infer savings trajectories from a cross-section at a point in time—a very common procedure. The comparison shows baby boomers saving at a much lower rate than their parents. This use of the CBO data avoids many possible analytic pitfalls since the numbers are expressed as ratios to income rather than as absolute numbers.

Can I infer anything from this comparison given compositional changes in the population? Compositional changes are much more important between generations than within generations. If you are looking at the baby boomers, for example, the compositional differences between the 25–34 year olds and the older segment are less significant than between baby boomers and their parents.

The second issue that I'd like to revisit is bequests. I think that there's probably no real important dispute here on the factual issues, as there isn't much dispute on many of the factual issues. I think that people will actually end up with a lot less than $30,000. First, their parents are going to live longer than they expect them to live. Second, there are substantial end-of-life expenses that are going to dissipate the bequest. But even if it's $30,000, if you compared $30,000 with retirement needs, the difference between 30 and 23 is not that big. It just isn't going to make a big difference. So for the typical baby boomer, inheritance is not the solution. We don't have disagreement on that.

Joyce Manchester raised an issue about the quality of data. We all wish that we had better quality data to work with. If one wants to use current data as opposed to data that are somewhat older, one has little choice but to try and get the best telephone survey data that are available. That's what you do if you want to use data that are available within the last year or two.

Of course, data quality problems plague the CBO

study as well. The Federal Reserve appears to be renouncing its benchmarking of the 1962 data. That calls into question all of the comparisons in the CBO's report. We don't know whether we're comparing apples to oranges here or not.

With respect to housing, it is true that my study found that saving would be roughly 84 percent adequate if baby boomers used 100 percent of their housing equity to finance retirement. Now that 84 percent is, of course, an optimistic number, because it assumes, for example, no reduction in Social Security benefits. It assumes that baby boomers aren't going to live any longer than current generations. I would say that the targets that I use for assessing adequacy in my survey are very low for these reasons.

Also, if you use up all of that housing wealth to finance retirement, where do you live? If baby boomers downsize their houses to get at half of their equity, they will still be far, far short of the mark of adequacy.

There is also a basic issue of whether we should conclude that the baby boomers are okay because they're heavily invested in housing. It was great for their parents to be heavily invested in housing, because over the course of their parents' lifetime the real prices of houses were rising rapidly. But the forecasts for the baby boomers are the opposite. Is it a wise investment? It was wise for their parents, but not for the boomers.

Finally, let me revisit one item about my study, because there is an element of confusion about what my study did. My study calculated what income is necessary to have the same consumption immediately after retirement as immediately before retirement. Consumption varies before retirement according to household composition. I have allowed households to consume significantly more, for example, when they have children in the household. The study also allows consumption to fall off fairly rapidly during older ages. The standard is not to be able to maintain a fixed level of consumption forever. I project falling consumption. My standard is therefore very conservative.

MR. KOTLIKOFF: Regarding the issue of saving, it does not make a lot of sense to look at saving rates out of current income because the definition is really up for grabs.

Saving out of the present value of lifetime resources is a more appropriate way to measure saving. I'm doing a study right now with John Sabelhaus that shows that there's been a remarkable increase in the propensity of older people to consume. A large part of this has to do with their health care consumption. Their propensity to consume has basically tripled in the last 20 years. The consumption of old people relative to young people has risen dramatically over the last 20 years. A typical 70-year old's consumption relative to that of a typical 30-year old's has gone up by a factor of two. Leaving out health care, it's gone up by about a factor of 1.5.

So what we really have going on, in my view, is that the government is taking income from the boomers and younger people—working people—handing it to old people in the form of health care benefits and other benefits which they're consuming to a very large extent. Even if the boomers' saving rates were very high, they would not be left with that much from which they can actually save because so much is being handed over to older people to consume.

That's the real story underlying our national saving rate decline. This intergenerational redistribution doesn't show up in the deficit in general. This pay-as-you-go financing is leading to this debacle with respect to national saving.

MR. COLEMAN: Instead of comparing 1950 to 1990, we compared 1990 to 2030, because in 2030 surviving boomers will be aged 66–84, when most of these surviving boomers will be retired.[29] Our results are fairly similar to those in the CBO study and we used fairly similar assumptions. These assumptions ultimately drive our results in the future. In our study, we considered a middle-of-the-road scenario that is basically consistent with the Social Security Administration's 1991 alternative II assumptions. We also looked at what we consider to be a very pessimistic scenario and a very optimistic scenario. The differing assumptions in each scenario obviously have a profound effect on boomer retirement income in 2030.

Second, we're hearing a lot of the same facts with a very different spin put on them. All the analyses project that the income of boomers in retirement will be higher than the incomes of the current elderly. The issue is whether or not they're (boomers) going to consider that income to be adequate. I think that's something all of us have to decide for ourselves. I think the idea that boomers are going to wind up with less in absolute terms than now is not shown by the studies being debated here.

Third, our study concluded that there is probably going to be a large class of boomers who are going to do very poorly, such as people who now have low incomes, poor educations, and who have not yet become married and have the advantage of being part of a two-income family. I think that we need to talk about both how big the pie is and who gets the slices. Some of those slices are going to be pretty small.

[29]Lewin-VHI, Inc., *Aging Baby Boomers: How Secure Is Their Economic Future?* (Washington, DC: American Association of Retired Persons, 1994).

MODERATOR SALISBURY: Did this study use the original model?

MR. COLEMAN: Yes, it did.

MODERATOR SALISBURY: Have you adjusted that model since the work was done for the Social Security Advisory Council in 1990 or does it still assume near total annuitization of both defined benefit and defined contribution values at the point of retirement?

MR. COLEMAN: It is the same model, but the model does allow boomers to consume lump sum-distributions from pension plans prior to retirement.

MODERATOR SALISBURY: I have looked at those assumptions, and it assumes very high annuity rates. The 1987 to 1990 IRS data on lump-sum dollar values suggest that there is a lot of money that the model assumes stays in as retirement income that does not. Yet, available data would not allow any model to be deemed accurate. I am hopeful that the Health and Retirement Survey will improve this situation for the future.

MR. WASSERMAN: Part of my confusion in trying to determine what is adequate income is that we've been talking in relative terms. CBO compares the baby boomers relative to their parents. Dr. Bernheim talks about relative to their preretirement income. The gentleman from Xerox, similarly, uses 70 percent of preretirement income fully adjusted for inflation, but no one has talked about income in dollar terms.

I would find it very useful if these researchers defined what they mean in terms of the dollar income of elderly households. For example, using the CBO census numbers, the baby boom generation—defined as households from 35 to 44 years of age—has income of $40,000. Using the CBO table that defines elderly retirees as households headed by someone aged 65–74, their income equals $20,000. So it strikes me that in terms of dollars, CBO is saying the baby boomers will have adequacy income, that is, they will do better than the $20,000 of their parents.

I wonder what numbers Dr. Bernheim is using to project incomes for baby boomers when they're about to retire and take 70 percent of that?

MR. BERNHEIM: I use low real wage growth forecasts based on recent experience. There is also a cross-sectional pattern of rising wages and then falling wages right before retirement that comes from seniority and life cycle patterns.

The average baby boomer is projected in my model to be earning an amount right before retirement that is roughly comparable to what they would be earning at age 40, in real terms. I'm preserving consumption expenditures corrected for household composition.

So if the household immediately before retirement is saving 25 percent, this calculation gives them enough to replace that 75 percent of income that's being consumed.

MR. WASSERMAN: Could you give us the value of their consumption in today's dollars, so we're not talking in relative terms?

MR. BERNHEIM: The numbers are calculated separately for different classes of households. It is probably roughly the case that a household with a $40,000 income would be given spending in real terms of around $30,000 after retirement.

MR. KOTLIKOFF: I think that comparing income for middle-aged people and old people is a little bit tricky because older people are retired. Consumption of the retired should, in a life cycle model, exceed their income in retirement. There should be dissaving. The actual consumption of old people today versus middle-aged people is lower. On average, a 46-year old is consuming $25,400. A 65-year old is consuming $18,900. So, it's 25 to 19. Then think about the fiscal adjustments again. The 46-year old earning $25,000 today will be down to about $21,000 when he or she hits age 65. That $21,000 could end up down at $15,000 if reforms are delayed until 2009, and it comes in the form of Social Security benefit cuts at that point.

MS. MACUNOVICH: I really appreciate the generational accounting. I think it really clarifies the issue for a lot of us and allows us to get a better handle on what's going on.

One major problem that I have is this emphasis on the American dream. If you talk about the American dream, you're talking about a long-term, secular trend.

For example, if you think of population growth over the last 100 years, you've got a nice, long-term, secular, upward trend, but if you look at the pattern of population growth over that period, you've got two major blips. You've got one blip that is the parents of the baby boomers who are a very small cohort, and then you've got the baby boomers themselves, who are a very large cohort.

Instead of having a constant trend, you've got a blip in it. We are at this point because we're not sufficiently differentiating between the long-term trend and the baby boomers. We're making the mistake of comparing the baby boomers with their parents, instead of looking at the overall secular trend.

I think it's very possible that the overall secular trend

in the American dream can be upward, but if you compare the large cohort of the baby boomers you're going to see them not do as well as their parents because of this tremendous difference in average cohort size.

In generational accounting, you are comparing all of the revenue that's coming from the different generations with revenue coming from future generations and then balancing that against government expenditures and the current government debt. You just balance them out.

In calculating the official government net debt, I would have assumed you would have taken the current debt that we recognize as the debt that's published in various places, but you say that your measure of official government net debt for 1992 is formed by adding together annual deficits from 1900 through 1992. How different is the debt figure that you're using in your calculation from the debt figure that we've seen published by the government?

MR. KOTLIKOFF: Our net debt number might be about $1 trillion less than the $4 trillion number that's published by the government.

CBO has five different definitions of the deficit in their statement. Sometimes they differ from 2 percent–7 percent of Gross Domestic Product (GDP) in the same report. We're trying to do analysis that is consistent with the national income accounts. We think that's the best source for government statistics. OMB and the other agencies have given us forecasts that are consistent but are done on a different basis.

What we have is a fiscal policy that for four decades has been transferring from a successive set of young people to older generations through pay-as-you-go programs. This is leading us to consume like crazy and save very little. We're going to end up in a steady state with very low levels of per capita wealth and income. I'm not saying absolutely lower than the 14th century, or absolutely lower than today, but we're really stealing the economic inheritance of future generations by engaging in this fiscal policy. Because we're doing it through a pay-as-you-go, under-the-cover deficit, it's really a form of deficit finance, but it's not described that way because of our bookkeeping. We are expropriating from the next generation. We're sleeping very well at night because we don't see it on the flash board in Times Square.

MS. MACUNOVICH: Yes. One of the main reasons I really like this study is because you're showing us how we have gone off track. Because we were dealing with the small cohort as they retired, we tended to increase their levels of Social Security, medical care, and have assumed then that we can do the same thing with the large cohort in the future.

So this is very valuable in showing that we're going off track. I think the quote that 50 percent of the current population feel that the older generation is not getting their fair share of government benefits is particularly significant. I think this tells us how far off track we are in terms of the way we shifted those benefits.

A technical question gets to the discount rate and the productivity rates that you assumed. You assume a 0.75 productivity rate, because you say that, in general, productivity has declined and so you're not assuming an optimistic increase. At the same time, for your discount rate, which is assumed to be the rate of return that you get on investments, which somehow should be related to the productivity rate, you're taking a long-term rate that was established when productivity rates were high. So you have a discount rate of 6 percent but a productivity rate of only 0.75. Don't you think that those two are very inconsistent?

MR. KOTLIKOFF: Not at all. The discount rate is connected to what economists call the marginal product of capital. In the United States the marginal product of capital has been around 10 percent. The economy can go down the tubes and the marginal product of capital can stay high. The more we dissave, or the less we save, the less capital we accumulate and the higher the marginal product of capital will be, due to a capital shortage. Capital relative to labor will fall. I think we're actually using too low a discount rate at 6 percent. If we discounted at a higher rate, things would look even worse. They look bad enough, as it is.

MR. AMBACHTSHEER: We're talking about savings and whether the savings rate is 2 percent or 4 percent or 6 percent, but there is also the whole issue of what happens once the savings become capital formation.

The financial markets are telling an interesting story. The long-term markets have public debt selling at rates that are historically high in terms of real rates of return required to get sold. You have equity capital selling at historically high rates in terms of the value of how dividends are being capitalized. Both suggest that you have some interesting things going on in the financial markets. This may reflect what we're talking about here today. The U.S. Treasury is having a lot more difficulty selling their bonds, while issuers of corporate equity capital are having a very easy time selling stocks.

It's probably another conference, but there's a whole issue about capital formation in the kind of world that we live in. Certainly, investors seem to be favoring productive corporate investments over government bonds, based on current pricing relationships relative to historical ones.

MR. RUSSELL: This is a question for Larry Kotlikoff and Doug Bernheim. When you look at consumption profiles by different age groups, is there a breakdown of family balance sheets to look at? For example, a percentage of consumption dedicated to housing? There has been a dramatic shift in that number from the information that we've been looking at.

While there are a number of key drivers to what causes people to save, the leftover amount at the end of each month that a family can even consider saving can be dramatically impacted by the housing expense figure alone. Do you get into that level of detail?

MR. KOTLIKOFF: Yes. The consumer expenditure surveys have been connected with the national income account aggregate data. The aggregate data have an imputation of rent on housing. We had to go to the microdata and figure out how to attribute the housing rent to households. Housing seems to be a larger share of total consumption now, and it's certainly part of the reason for the increase in consumption of the elderly relative to younger people.

MR. RUSSELL: And the ability to save. Isn't it two or three times what it was in the generation that was doing family formation in the 1950s?

MR. KOTLIKOFF: Let me say it in these terms. If you have a government policy that takes from young people and gives to old people, it lowers the consumption of young people and raises the consumption of old people. If you have a change in the value of housing, the value of assets that old people own goes up, which young people are trying to buy from them. That means that young people are left with less money left over to save from. So their consumption ends up going down, and the older folks' consumption goes up due to big capital gains.

MR. BERNHEIM: There were a number of comments about the appropriate standard of adequacy during retirement. I think the uncertainty about the appropriate standard arises because there are a couple of different contexts in which one can think about that question. We tend to blur them. One context is from the point of view of individual decision making or individual planning, that is, making my own decisions for my retirement. If a retirement planner comes in and lays out a plan for me that will just keep me out of poverty during retirement, I'm not going to be very happy with that. If he lays out a plan for me that will let me achieve the income standard of my parents, who earned a lot less than I did, I won't be happy with that either.

So from the perspective of individual planning and saving, I think the right standard is to compare postretirement prospects with the standard of living that they achieve for themselves before retirement.

There is also the separate issue of the right standard for making public policy. Maybe for public policy we don't care greatly if the baby boomers in retirement are going to be able to drive around in BMWs. It may not be a public policy objective to maintain baby boomers at a very high level of consumption. But most baby boomers aren't that well off to begin with. It isn't a matter of maintaining them at an extremely high level of consumption; we're talking about whether they will be able to maintain a living standard that very few of them currently find luxurious.

Moreover, policy is really a matter of politics. By the time the baby boomers retire they're going to be a huge political force; and they're going to be a political force that's going to be affecting decisions about Social Security and other retirement policies.

If 40 years from now we're telling the baby boomers to be quiet because they are making as much as their parents made back in 1990, I don't think that's going to have much influence on them at that time.

What they're going to look at is how well off are they relative to nonretirees. Are they a relatively deprived group? That's going to affect their thinking. They may also look at retirees in other countries. People of baby boom age now in Germany, Japan, Italy, and a lot of other countries are saving a lot more than the baby boomers of this country. They're going to be doing a lot better.

I think that the comparisons that will affect political decisions and political pressures in the future are not comparisons with what retirees are getting today. Even for policy, it's therefore worth thinking seriously about the issue of maintaining lifestyles.

MS. MANCHESTER: I would like to make two points. First, the share of total income of households aged 65 or older in 1990 coming from asset income was 25 percent. Now that's an average, and there's certainly a lot of diversity according to income level and so forth, but it relates to an earlier point about the income gap.

Second, some picture of housing assets for baby boomers relative to the parents' housing assets comes from table C-3 of the CBO study. That table shows median nonhousing wealth by educational attainment. It shows that those with no high school degree are falling behind and have less nonhousing wealth than their parents at a similar age in the 35–44 age group. Those with four years of college, how-

ever, have about the same median nonhousing wealth. That's just one snapshot of how housing and nonhousing assets stack up.

MR. KINGSON: Two comments that move away from econometrics. One, I think there are important issues of unrealized expectations that will drive the policy discussion. The baby boom cohort's work experience is, on average, comparable to or better than their parents' circumstances. But that isn't the comparison that many boomers use in assessing their well-being. Many feel worse off because they expected to achieve equal and then higher standards of living within a few years of starting to work.

Second, I have a concern about generational accounting related to how it affects the policy discussion. It moves us away from thinking about diversity within cohorts and asks us to focus only on one set of policy issues affecting baby boomers. For example, whether they, as a whole, will achieve the American dream of an excellent standard of living now and in retirement and whether, as a whole, they are getting fair returns on their government "investments."

But there is another way to think about the American dream and about what's fair. One could say the American dream has never existed for a substantial portion of all cohorts. I think that's part of the difference in the discussion. Generational accounting lumps everyone together, overlooking intragenerational inequities. I am concerned that exclusive focus on generational accounting moves us away from very important questions about race and gender and educational status and income position today and the implications of these differences throughout the lives of baby boomers and other cohorts.

MR. KOTLIKOFF: We need to do intragenerational accounting. Our distributional analysis with respect to how we're treating different groups within a generation is almost as bad as our cross-generational analysis.

MR. RIVERA: Is the income problem specific to the baby boomer? Does it go beyond that or does it go away? That "birth dearth" that's sitting at the tail end of the melon moving through that python is small relative to the baby boomer, but in absolute terms it is very, very significant. Some have referred to the birth dearth as the lost generation. You're looking at situations where the mindset goes beyond instant gratification to despair. Is there any consensus that a problem is going to be here for a long time or is it specific to the baby boom generation?

MS. MACUNOVICH: Employees that we're thinking about planning for are still a relatively small proportion of the total baby boomers. When you think about all those other baby boomers who aren't planned for in this way and add that to the fiscal crisis that Larry Kotlikoff is talking about, I think you've got a major problem.

I really agree with the point that Larry made that one of the major types of education that we have to do right now is with current retirees and our expectations about what the system can provide for retirees.

I'm always horrified when I hear interviews with older people who think that they are only getting back from the system what they've put into it. There's so much education that needs to be done out there about what kinds of transfers are actually occurring right now and the fact that those can't continue in the future.

MR. MADDEN: There will be 62 million retirees in 2030 and 60 million in 2080. We see the melon getting smaller, then pass through, and the continuation of a system that has more demands on it than we can accommodate with today's structure. We're trying to get rid of the blips a little bit and look at more than the 500-year kind of average.

MS. MITCHELL: I'm worried about that group because it's my kids. I'm also worried about things that happen sooner for the people who are now aged 51 through 61. They're not boomers. They're the people who are making retirement decisions right now, and it is important to look at where they stand. Based on the Health and Retirement Survey, it appears like people aged 51–61 have a bit less than $50,000 in home equity. They also have about $25,000 in financial and other assets. That's not a lot for the next 25 or 30 years.

Median pension wealth is around $38,000–$40,000. Then you must ask, how do we value Social Security wealth and Medicare wealth? Using current law, the median present value is about $130,000 for Social Security. The Medicare valuation may be worth another $150,000–$250,000. So we're talking about, on the outside, $400,000 to $500,000 worth of present value that is mostly government/taxpayer supplied. In other words, the personal, private leg of the three-legged stool is quite short.

MODERATOR SALISBURY: EBRI has been engaged with the Public Agenda Foundation on a retirement prospects project. A second project with the National Academy of Social Insurance looks at confidence in Social Security.

Part Two

Attitudes Toward Retirement Planning, Saving, and Preparedness

CHAPTER 6: Public Attitudes on Retirement: Can't Stop Now to Plan for the Future

Steve Farkas and Jean Johnson

INTRODUCTION

In the fall of 1993, Fidelity Investments asked Public Agenda and the Employee Benefit Research Institute (EBRI) to conduct a multiphase study of Americans' attitudes toward planning and saving for retirement. Public Agenda's work in other major policy areas such as education and health care has often shown that experts and leaders are on a different wavelength from the public, with different agendas, levels of concern, and perceptions. We therefore adopted a two-pronged approach to studying this important public policy issue, assessing both the public's and the experts' perceptions.

We began our assessment of the public's thinking on this issue through a review of existing survey data. Expert perceptions of the issue were assessed through one-on-one interviews with leaders from government, corporations, the media, independent research organizations, and academia and reported in the January 1994 report, *"Are Americans Ready for Retirement: An Expert Forecast."* In the next phase of research, detailed in the March 1994 report, *Hidden Anxieties: Public Views on Retirement and Retirement Planning,* we conducted 16 focus groups in 8 cities across the nation. Participants were divided by age (under and over age 45) and income (under and over $35,000 per year annual income). Four types of groups resulted: older, lower income; older, higher income; younger, lower income; and younger, higher income. Individuals with less than $20,000 annual income or under 22 years of age were excluded from the focus groups. Retired persons were likewise excluded.

This report summarizes and integrates research conducted as of early spring 1994. It served as a foundation for designing a questionnaire that was used in a national telephone survey of the public conducted and analyzed during the spring and summer of 1994. Additionally, Public Agenda surveyed a sample of America's leadership to test hypotheses drawn from the foregoing research. A full report of all research undertaken in this project was released in early autumn 1994.

THE RETIREMENT ISSUE IN CONTEXT

Retirement and planning for retirement are unusual policy issues. When we talk to Americans about most public policy issues, they will engage, consider the options, and enter a dialogue among themselves. When we talk to Americans about their retirement, they initially react with ambivalence and then go on to display a mixture of bewilderment, underlying fears, acceptance of personal responsibility and admission of irresponsibility, and skepticism and anger at government all in the same breath. We also confront deeply embedded resistance to saving and preparing for retirement. This resistance is driven by psychological factors and cultural values, mirrored and reinforced by social and economic trends as well as government policy.

PEOPLE ACKNOWLEDGE PERSONAL RESPONSIBILITY FOR RETIREMENT

Some issues—such as health care or education—are perceived by Americans to involve a "right" whose fulfillment is the appropriate responsibility of the government, not individuals. The public expects programs ensuring such "rights" to be publicly financed or at least mandated and resists individual-level responsibility. Retirement planning is a different kind of issue. In our focus groups, people directly acknowledged a significant amount of personal responsibility for their retirement planning and saving. They said they are not relying on business or the government to prepare their retirement for them.

> "The buck stops here. If I don't do it, it's not going to get done."
>
> —Older Denver man, lower income

> "You can't lay blame on anybody other than yourself. It's your risk, it's your goal, it's your life. Nobody else is going to take care of your life for you."
>
> —Younger Atlanta man, higher income

Recent survey data support the notion that the public has limited expectations of business and government. For example, when asked "What do you expect to be/is your main source of income in your retirement?," 31 percent say savings/investments, and an additional 8 percent say earnings. By

contrast, only 21 percent expect Social Security and another 20 percent expect employer-sponsored pensions to be their main source of retirement income (Employee Benefit Research Institute/The Gallup Organization, Inc., 1990).[1] These data may even underestimate the public's acknowledgement of individual responsibility. People in our focus groups repeatedly and incorrectly lumped defined contribution plans with traditional pensions.

Some survey data show public support for requiring employers to provide retirement benefits to workers. For example, 72 percent say "companies should be legally required to provide retirement benefits, in addition to Social Security, as part of every full-time employee's compensation," while 28 percent said they should not (Employee Benefit Research Institute/The Gallup Organization, Inc., 1992).[2] Our initial research suggests that this survey question may actually be capturing people's wishful thinking that employers *would* provide retirement benefits. Our focus group research strongly suggests that support for requiring employers to provide retirement benefits is soft and weakens on reflection. Many more people spoke against the idea than spoke for it, and arguments that it would overly burden small businesses or cut into employee wages seemed to resonate with others in the focus group who were undecided.

The Public Expects Very Little from Government or Social Security

The great majority of people we interviewed expect very little from Social Security, and many do not even think it will be around to pay them a benefit when they retire. Low expectations of Social Security seemed to drive home a sense of personal responsibility for some focus group participants.

> "Social Security won't be there. That's why I think it's important to save now for (retirement)."
>
> —Younger Atlanta woman, higher income

The doubts we found in the focus groups are borne out by survey data: 49 percent think the Social Security program will be able to pay them a benefit when they retire, but another 49 percent think it will not (Employee Benefit Research Institute/The Gallup Organization, Inc., 1992).[3] In contrast, most of the experts we interviewed thought the public—or at least sizable segments of it—was not preparing adequately for retirement, because people are unrealistically counting on Social Security and employers to do the preparation for them. But the research consistently shows the public acknowledges that it is more responsible for its retirement planning than either government or business.

There Is Widespread Ignorance About How Social Security Works

Most people we spoke with have little understanding of Social Security. They did not know where the government puts the Social Security tax it takes out of their paychecks, how it determines people's retirement benefits, and who is eligible for the program. This lack of knowledge is consistent across age and income levels. Some admit their ignorance freely, simply saying "I don't know," and leaving it at that. But others venture some wild—and cynical—guesses. Many believed much of the money is lost through government fraud, waste, and mismanagement; others thought much of the money is used to finance the deficit, welfare programs, foreign aid, and nonsensical research.

> "They give it to foreign countries."
>
> —Older San Antonio woman, lower income

> "Some of it is probably going out to California for the earthquake."
>
> —Older Atlanta woman, higher income

Survey research bears out this finding. In 1992, Gallup asked respondents whether or not they knew where their F.I.C.A. taxes go. More than one-third (39 percent) incorrectly stated that F.I.C.A. taxes are put into an account to pay for one's own Social Security benefits on retirement (Employee Benefit Research Institute/The Gallup Organization, 1993).[4]

People Resist Changes to Social Security

Paradoxically, despite low expectations and cynicism about

[1] Employee Benefit Research Institute/The Gallup Organization, Inc., *Public Attitudes on Retirement Age and Planning, 1990,* EBRI Report no. G-14 (Washington, DC: Employee Benefit Research Institute, 1990).

[2] Employee Benefit Research Institute/The Gallup Organization, Inc. *Public Attitudes on Retirement Income and Savings, 1992* EBRI Report no. G-34 (Washington, DC: Employee Benefit Research Institute, 1992).

[3] Ibid.

[4] Employee Benefit Research Institute/The Gallup Organization, Inc. *Public Attitudes on Taxation of Employee Benefits, 1992,* EBRI Report no. G-42 (Washington, DC: Employee Benefit Research Institute, 1993).

Social Security, respondents recoiled from proposals that would fundamentally change the program. Participants rejected three reform ideas we presented to them: scrapping the system altogether and keeping the taxes as salary, making Social Security a voluntary system, and privatizing Social Security by contracting a private firm to administer the program's funds. Frustration with the program does not automatically translate to support for fundamental reform of the program.

Most reacted negatively to a proposal to eliminate Social Security and to put money in the hands of workers. They do not trust others or themselves to use the extra money to prepare for retirement. They wanted a safety net to be there for the hard-of-luck and a way to compel the irresponsible to contribute.

> "There are so many irresponsible people who aren't going to save for their future. Who's going to take care of them when all of their money's run out because they had a good time and spent it?"
>
> —Younger Atlanta woman, higher income

> "We have to subsidize the country, we can't just think about ourselves. The system was put in not as a retirement plan. It was put in so that everybody would have something to lean on."
>
> —Older Chicago man, higher income

Some participants, especially in the younger groups, were attracted by the notion of making Social Security a voluntary program. But in every group several people foresaw trouble with this scheme. They worry that some people would act irresponsibly, opt out of the program, but then neglect to prepare and save for retirement. When their time came to retire, they would rely on someone else, probably taxpayers, to foot their bill. Forcing everyone to participate would avoid this problem. When other participants heard this argument, their doubts about the proposal were reinforced.

> "The people that choose not to volunteer for that, the first time that they get down on their luck and need something, they're going to run to the government and say 'Gimme! Gimme! Gimme!' anyway. So those of us who have been volunteering are going to have to pay for them anyway, in welfare or some other form."
>
> —Younger Atlanta man, higher income

Finally, people balk at running the Social Security program privately. They feel the government would not go into bankruptcy as a business might. As it is, the program is susceptible to pressure from its citizenry, while a business might be immune. With the government they have an "address" to go to in times of trouble.

> "Who's ever saving it for you in the institution, what if they do something with it, or run off with it, or whatever. At least Social Security . . . it's been there all of my life."
>
> —Older Cincinnati woman, lower income

In explaining their opposition to changes in Social Security, people revealed some of their more profound beliefs, which shape their approach to retirement preparation. They desire a safety net, a mechanism that forces saving, and a secure place for their money. Social Security seems to appeal to these interests. They do not want to fundamentally alter the system. They just want it run better.

> "Social Security, the way it was originally defined, is an excellent plan. I think the way the government has access to the money is the problem. I think Social Security needs to be there. I want it to be there. I just want the government to stay the hell out of it."
>
> —Younger Atlanta man, higher income

Retirement Is a Remote Consideration for Most

Although retirement is an issue for which most accepted personal responsibility, it is also very remote in people's minds. Most said they had not thought seriously about the issue.

> "I've not thought about retiring. I'm not concerned about it. I'm not interested in it."
>
> — Older San Diego man, higher income

> "I really didn't know about planning for retirement. You hear about it but I guess I had other things on my mind and I couldn't afford it. Therefore, I just didn't pay that much attention."
>
> — Older Boston woman, lower income

For many respondents, particularly younger ones, retirement seems far off while more pressing financial concerns—jobs, education, health, bills, children—demand

immediate attention. Day-to-day obligations push retirement saving off people's agendas.

> "Between the day care and the mortgage and the car payments, we're trying but really we're just taking care of today."
> —Younger Chicago man, higher income

> "As soon as you start saving a little bit it seems like something comes up—whether the car goes in the shop, it could be anything. And all of the sudden it's gone."
> —Younger New Jersey man, higher income

Most People Say They Should Be Doing More

Although many people reported having some retirement savings, an individual retirement account (IRA), or a 401(k) plan, only a small minority dedicate substantial energy to learning and planning for their retirement. Most people we spoke with did not hesitate to say they were not doing enough planning and saving for their retirement. Survey data confirm this finding. In a 1992 survey, 78 percent said the statement,"I need to start saving more for retirement," describes them.[5] The person who spends significant time thinking, planning, and carrying out a retirement plan is simply atypical.

Fears Lie Just Beneath the Surface

The surface inattentiveness many display toward retirement belies a reservoir of concern and anxiety. When we asked people to tell us what comes to their minds when they think about retirement, they talked about financial worries much more than about vacationing and enjoying their leisure time. This was especially true for lower income participants. We also heard recurring concerns about the costs of health care during retirement.

> "It's kind of a scary thing to me 'cause I don't know what I'm gonna' do. I don't have a plan, and I don't want to go to work, and I don't want to retire."
> —Older Denver woman, lower income

Given immediate financial pressures, negative associations with retirement, and the perception they are not doing enough saving for their retirement, it is no wonder many of the people we interviewed did not spend much time thinking about retirement. They seem to have a great deal of incentive to avoid the issue.

> "If you thought about it, you wouldn't want to retire. You would never want that time to come because you'd know you can't make it. You don't want to face it, you don't want to look at it."
> —Older San Antonio woman, lower income

> "I hope that I will be well off enough to enjoy it and just relax and do nothing — play golf and travel in a Winnebago. But it frightens me to think seriously of the financial aspect. I mean I have *got* to fantasize about it."
> — Younger Boston woman, lower income

A 1993 survey item highlights this lack of confidence. A question asked, "How confident are you that you and your spouse are doing a good job of preparing financially for retirement?" While only 23 percent responded "very confident," fully three-quarters (75 percent) said either "somewhat confident, not too confident, or not at all confident" (Mathew Greenwald & Associates).[6]

Many Leave Retirement Planning to Fate

With so much underlying anxiety about financing retirement and so little concrete action by many, it was perhaps not surprising to find people resorting to fantasy or fate—hitting the lottery or dying—to resolve this burdensome issue, at least in their minds.

> "I just hope and pray that I'll die before I'll get real old and then I won't have anything to worry about."
> —Older Cincinnati woman, lower income

> "I'm on retirement plan C. Plan A is that you've made enough money in your life to put it away for a good retirement. You can forget that. Plan B is that you win the lotto. Plan C is that I'm gonna' drop dead behind the barber chair."
> —Older Denver man (a barber), lower income

[5] Time/CNN national telephone survey conducted August 19, 20, 1992 by Yankelovich, Clancy, and Shulman.
[6] Mathew Greenwald & Associates.

The Role of Knowledge and Information

People Do Not Know Where to Begin

People approach retirement planning with uncertainty. Most readily admitted they do not know how to plan for their retirement and what they should be doing. The problem is even more basic—many would not know where or to whom to go if they wanted to start planning for their retirement.

> "I wouldn't even know where to begin."
> —Younger San Diego woman, higher income

> "I'm probably the worst example around because I've spent most of my life just working and not looking up and seeing what's around in the financial world. I didn't do much as far as educating myself with respect to investing and financial planning."
> —Older Chicago man, higher income

Many feel there is little help available to them in the hunt for information. They would have wanted someone to take them by the hand and explain to them the options and alternatives.

> "There was no conversation, no push from the media, there was really no thought out plans. If you wanted information, you got a pamphlet from the Social Security office."
> —Older Boston man, lower income

> "No one has ever talked to me about retirement or explained to me what it is that I need to do. Now, I'm in my late forties and still to this day, I really don't know. I think if someone had reached me 20 years ago and explained what to do, I'd be better off, but that never happened."
> — Older Boston woman, lower income

Even when people make the effort and seek out information, what they receive sometimes overwhelms them. There is too much of it and it is often presented in terms they do not understand. The end result is often frustration.

> "One bank sent me an envelope that was this thick, with fliers of everything from sending your money to Russia to putting it in a thing that only gets 4 percent interest. I can't even pronounce half of these things. So basically right now, I wouldn't know where to go to get a good straight answer, someone telling me the truth and the facts."
> — Younger San Antonio man, lower income

Experts noted repeatedly that even workers who are eligible for employer-sponsored plans don't receive enough information. As a result, many do not participate in these plans or choose inappropriate investment strategies for their retirement funds. The experts said employers may be reluctant to provide information or advice because of government regulations, because they fear litigation, or because they do not have the expertise and knowledge to do so.

People Avoid Salesmen and Seek Out Personal Contacts for Advice

The people who try to fill the public's information gap are often the wrong kind of people as far as the public is concerned. Many do not trust financial advisors or representatives of companies in the financial services industry. It seems to be a problem of perception—they heard stories about bilking, and they are wary of advisors who act like salesmen. Many of those who had actual experiences with such advisors and representatives had good experiences to report, but others were frustrated by "hard sell" tactics.

> "If you call these guys, they're so hard sell they turn you off. You don't want to invest, you want to go down and punch them in the nose."
> — Younger New Jersey man, higher income

People are quite positive about getting advice from personal friends, family, and neighbors—sources they trust and with whom they are familiar. Many focus group participants also related positive experiences with company-managed or sponsored-retirement plans due to their trust in these information sources. Advice was given to them by someone whom they respected, knew on a personal basis, and who did not have a profit agenda. Some said they would research the issue on their own, going to the library and reading up on options.

> "I would go to friends, family, co-workers—people who have been in similar situations."
> —Younger Cincinnati woman, lower income

"The first thing I would do is get out all of my information about the 401(k) plan and read it thoroughly. I really trust the corporation that I work for to give me a good steer."

—Younger Chicago man, higher income

Discussion of information sources sometimes led participants to talk about the need for education about retirement planning. Some even suggested the public schools should take the lead in this regard.

Bearing out people's skepticism of financial advisors, a 1993 survey asked, "When making investment decisions, from where do you get the most information?" The most popular response (mentioned by 29 percent of respondents) was financial newspapers or magazines. Eighteen percent mentioned friends or relatives, and only 10 percent mentioned financial advisors or experts (Employee Benefit Research Institute/The Gallup Organization Inc., 1993).[7]

Experts agree there is a need for a neutral source that can disseminate balanced educational information to the public without a hidden financial motive. There is no one currently filling this need: the government is not playing that role, financial service companies do not play that role, and even the media are too busy providing short-term financial news.

But it became clear that the problem of inadequate retirement planning is driven by much more than a simple lack of information and attentiveness on the part of the public. There are sources of resistance to planning and preparing for one's retirement that cannot be overcome merely by exposure to additional information about how to plan for retirement.

Barriers to Retirement Planning

Respondents' explanations of why they are not doing more to prepare for their retirement reveal a complex tangle of social, cultural, and psychological factors that are difficult to unravel. External barriers to deferring gratification seem to converge with internalized values that make saving and planning for retirement a difficult struggle. Americans face economic uncertainty, a consumers' economy, and government tax policy armed only with a "live for today" sensibility, a preoccupation with immediate gratification, and the widespread absence of an internalized savings ethic. Prospects for long-term planning and saving under such circumstances are bleak.

A recurring theme in our conversations with experts was that America's savings gap stems at least in part from a history and culture that encourage consumption and credit and discourage savings. Presently, they said, easy access to credit and government policies that penalize savings by taxing interest from savings reinforce cultural tendencies to spend now instead of save for the future. Some experts called for a consumption tax to discourage spending and ending the taxation of interest income.

'Taxes Take Away Our Incentive to Save'

Few participants had positive things to say about whether the government was helping them save, and many said government was making it harder on them. They complained that taxes leave them with less money to save; that the government punishes them for saving when it taxes their salaries once and then taxes them again on the interest income from their savings, and that the government rewards them for consumption with tax breaks.

"How can they be encouraging us when they take so much in taxes for everything?"

— Older San Diego woman, higher income

"They're gonna' tax me twice. You've earned $400 of interest over the year, you've gotta' bring that to your accountant. I earned money off the money I already made, and now you're gonna' tax me again? What's the use? I might as well keep it underneath my bed or in a jar."

—Younger New Jersey man, higher income

Some acknowledged the government is trying to do something to help and cited IRAs and other tax-deferred plans as evidence. About one-half of the people who had IRAs told us this was money they would not have saved if not for the program.

Finally, some think the government has a credibility problem: it cannot balance its budget or save money, how could it ask this of its citizens?

"[The government is] like a parent telling us saving would be good, saving's gonna' help you. But they can't save anything. They owe billions, trillions of dollars. If they think it's so important to save, let's see them do it. Don't tell me to do something that you can't manage to do."

—Younger Atlanta woman, higher income

[7] Employee Benefit Research Institute/The Gallup Organization, Inc., *Public Attitudes on Investment Preferences*, EBRI Report no. G-44 (Washington, DC: Employee Benefit Research Institute, 1993).

Survey data support the finding that taxes present an obstacle to savings. A 1994 poll asked: "There are many different reasons people give for having difficulty saving as much money as they'd like. Please tell me how each one (of these) affects your own ability to save." Among those who had not saved, 46 percent cited too many taxes as their obstacle to saving. Even among those who had saved, fully one-third (34 percent) also cited taxes as something limiting their savings (Princeton Survey Research Associates).

Experts were highly critical of government's approach to encouraging the public to save. Most said that, in effect, there is no coordinated strategy or sustained attention paid to the issue. They cited IRAs as an example of government *nonplanning*, saying that tinkering with tax-free ceiling levels and other regulatory changes were driven by tax revenue considerations, not by thought of what individuals needed to save for their retirement.

Deferring Gratification Faces Many Challenges

Many of the people we spoke with objected to the notion of disciplined savings. Two related but differently motivated variations emerged on this theme. Some people argue that unforeseen events could destroy one's best laid plans, making years of discipline meaningless. For them, the possibility of a stock market crash makes diligent saving seem unappealing. Taking another tack, others believe TVs, VCRs, and vacations are not frivolous luxuries but rather deserved necessities. After all, they point out, what is the point of working if one cannot enjoy it?

"What's the Point of Saving for Tomorrow?"

People sometimes spoke with a fatalistic air about the limited benefits of planning. According to this line of reasoning, they could do everything right, but many factors beyond their control could spoil their plans. They invoked a philosophy of life that tells them foregoing today's pleasures is foolish because there may be no tomorrow—your life or your health may end unpredictably. Many perceive America's economic future in bleak terms, where negative trends—budget deficits, decreased job security, or increasing health care costs—could ruin their efforts. Almost no one spoke of future economic conditions optimistically. It was interesting to hear high levels of anxiety about inflation even though the nation has seen relatively low inflation rates in recent years.

> "Inflation is terrible. I'm very pessimistic about the future. I'm concerned about medical insurance. I can see I will have to struggle because I think inflation will keep us down."
>
> — Older Boston man, lower income

> "Just live life as it is, enjoy it as you're going along. I don't want to work myself to death now, and not enjoy it in the future. I may not be healthy enough to enjoy retirement."
>
> — Older Cincinnati man, lower income

A 1994 survey asked "please tell me how each one (of these) affects your own ability to save." Among those who had not saved, 38 percent pointed to the "unpredictability of life" as their primary reason for not saving. Among those who had saved, only 14 percent cited unpredictability as a reason (Princeton Survey Research Associates).

Some Take a "Live For Today" Attitude

A sizable group of participants refuses to do more even though they readily admit they could be doing more. They reject, often vehemently, suggestions that they sacrifice or postpone a measure of life's pleasures. They do not want to give up the comforts, the small (or large) pleasures that bring them joy. Asking these people to forego immediate rewards is like asking them to adopt a drab existence—they envision a life dominated by work, self-denial, and responsibility and very little fun and relaxation.

> "I'm not a test rat living in a cage. What's the purpose in life if you can't enjoy it a little bit?"
>
> — Younger Cincinnati man, lower income

> "It seems like all you do is work, work, work, work. If I was to start taking away some of those things that I get some enjoyment from, you wonder, 'what's it all for?'"
>
> —Younger San Diego woman, higher income

Discipline Isn't Enough When Resources Are Scarce

Some people told us it was not a lack of discipline that kept them from saving, but rather a lack of resources. They said, often adamantly, they were doing all they could given their financial and family situations. You can give them all the information and advice you want—they simply don't have the extra money to prepare for their retirement.

"I'd like to see where the hell he's (a well-intentioned advisor) going to get more blood out of the turnip. I'm sacrificing as much as I want to maintain the life style that I'm accustomed to, and it's no great life style."
—Older Chicago man, higher income

Some Say They Only Need More Information

Others acknowledged they could do more but said they did not know enough about how to do so—give them a plan, a mechanism, and they would consider signing up. These individuals seem most likely to be responsive to information or advice, especially if it were easy to understand and simple to carry out.

"Show me how. Put it in black and white. I'll listen."
—Older San Antonio woman, lower income

"If they could show me a reasonable sacrifice and what we would gain with it and actually show us a program that we could work with, I'd consider it."
—Younger Cincinnati man, lower income

People Do Not Think About Saving Until Middle-Age

Most, though not all, of the experts we interviewed cited the life-cycle effect as a prevalent phenomenon. They pointed to the mid- to late-30s as the age when most people begin to save. Until then, they suggested, many young people feel invincible or cannot see far enough down the road to understand the value of saving. Participants spontaneously discussed the effects of life stages as well, saying that awareness and planning for retirement increase as one moves from youth to middle age.

"The younger you are, the less you worry about it. You got mom and dad, you're going out on the weekends, you got a girlfriend, you got a fast car, and that's all that matters."
—Younger New Jersey man, higher income

"My daughter is out of the nest in one or two years. I gotta' get serious, and fast."
—Younger Denver woman, lower income

Only a Few Have a Planning-Oriented Personality

Across the age and income groups we interviewed, we ran across individuals who took naturally to plotting the strategy and details of their retirement, who investigated and researched the options, leaving as few questions unanswered as possible. It seems clear this is a function of their personality. They set specific objectives for their retirement, planned their approach, and carried it out much as they did for other aspects of their lives. This personality type was a distinct minority in our focus groups.

"It's a real fun thing for us to imagine our retirement—we don't sit and bite our nails. We know exactly what we're gonna' do, how much we're gonna' have, what a typical day's going to be."
—Younger Atlanta woman, higher income

Baby Boomers Versus Older Generations

Experts and the public alike distinguish between the life styles and savings habits of the baby boomers and older generations. Both younger and older participants in our focus groups think there are differences between individuals who experienced the Depression and World War II and those born later, especially in terms of an ethic of savings and financial responsibility.

Baby Boomers Are in Trouble

There is a consensus among participants that the younger generations, the baby boomers, will do worse in retirement than older generations. People talked about adverse economic trends affecting younger cohorts: corporations are quicker to lay off workers than in earlier times, the federal budget deficit will burden taxpayers for many years, and the very size of the baby boom generation will put more pressure on Social Security than ever.

"The whole working environment has changed. People don't stay in one company or one job for a length of time like they used to. Even if they work for companies that offer benefits, they may not stay there long enough to get retirement benefits."
—Younger San Diego woman, higher income

At the same time, they said that baby boomers grew up in affluent times, during an era when it was easier than ever to obtain credit and there were many more consumer goods to buy.

> "Our generation has made it so easy to shop and buy, you don't even have to go out of your house anymore."
> —Younger San Diego woman, higher income

> "When my parents were first married, there wasn't the new cars, there wasn't cellular phones, VCRs, microwaves — there just wasn't as many things to spend your money on. So it seems like they were able to save more than we do now."
> —Younger Chicago man, higher income

Many of the experts we interviewed suggested baby boomers were caught in an era of transition. Responsibility for retirement planning has been shifting from employers to individuals, they said, and baby boomers have not adjusted their behavior accordingly. A few experts disagreed and think baby boomers are not in trouble because their incomes and savings matched, if not exceeded, those of earlier generations.

Older Americans Criticized the Instant Gratification Generation

The barriers to saving among baby boomers seem to go beyond economic trends. Older participants predicted younger people will have a more difficult retirement not only because of negative economic trends but also because they could not postpone gratification and lacked a savings ethic. They criticized younger people for borrowing too much, for spending too much, and for not thinking enough about the future.

> "They want instant gratification. If they had to spend five minutes in the drive-thru, then that's too long. They're not going to have any money put away for their retirement, they probably haven't even thought about it."
> —Older San Antonio woman, lower income

> "I think the reason our kids are like that is because we gave them all that stuff instead of making them earn it. I'm afraid I raised some lazy kids."
> —Older Denver man, lower income

Baby Boomers Admit They Have a Problem

It is perhaps not surprising to hear older people criticize "young people today" on any given moral or behavior issue and especially regarding money matters. It was surprising, however, to hear the younger generations readily confess and criticize their own shortcomings when it comes to saving. They also think their problem is a lack of discipline about spending and saving—they simply don't have good financial habits.

> "I never really learned how to save. I don't know if it would make any difference but I do know that it was never taught to me and when I was gonna' get a car, I didn't have to save for the car. My dad went out and co-signed the loan."
> —Younger Atlanta woman, higher income

> "I know I should (prepare for retirement), but I'm not because I'm not thinking about it. I've never been one to look long term, I look for next week. I can't think in years."
> —Younger New Jersey man, higher income

What they want most is a way out of their dilemma, a solution to a problem they readily acknowledged.

> "I don't need somebody to show me how to do more. I need somebody to show my wife and me how to stop spending money."
> —Younger Chicago man, higher income

Conclusion

Much of the current expert discussion about retirement focuses on making technical changes to regulations covering programs such as IRAs and 401(k) plans. Our research with the public to date indicates that, while some of this kind of reform may be necessary, it will probably not be sufficient. The barriers we encountered are unlikely to be scaled by regulatory tinkering. The psychological and cultural obstacles to increased preparation for retirement will require fundamental shifts in attitudes that are deeply ingrained. A broad-based, long-term effort may be more to the point if we are to challenge the cultural norms that prevail.

Discussion after Farkas/Johnson Presentation

MR. RIVERA: I want to quickly describe two situations, and then I'd like to ask a few questions from the employer's perspective.

We have an administrative assistant in the department. She's 26 years old. We were able to sit down with her and in one New York minute show her that there's going to be a future problem. As a result, she's saving at 8 percent in a 401(k). She's doing a very good job.

We had somebody else that went through the same exercise. In this case and because of her particular situation, when this employee saw the future requirements, heart failure almost set in. (So we quickly recalibrated the Consumer Price Index assumption and saved her $600,000 in the process.)

Xerox is looking at a number of traditional and nontraditional ways of trying to get this message across to employees. Financial planning seminars are well and good, but at the end of the seminar people may not take appropriate action. From a policy perspective and from an educational/communication perspective, what would seem to be key for an employer, i.e., what should be an underlying consideration as an employer develops an educational or communications program?

MR. FARKAS: A life-endangering condition or a birthday may represent moments in life where people reexamine fundamental issues. These are the times when you can catch them.

MR. RIVERA: We couldn't do one-on-one sessions with 55,000 employees, and therefore the company is exploring alternative measures of providing on-going education and encouragement.

MS. JOHNSON: One of the things that really struck me is how much people's ability to deal with this problem depends on a very basic personality type. There are the planners and savers. There were people who would save, if you could just convince them they could do it and give them the crutch they need of taking the money out of their paycheck before they got it in their hand.

There are other people either so pessimistic about the future, or so happy-go-lucky about the future, that they can't even think about it. I think these are the tough ones because it is not related to education, age, or any of the usual demographics. It's just a personality feature.

MR. FARKAS: People really like the automatic deduction from their salary—put it away because I don't want to be able to touch it. I don't want to see it. I'll adjust my life accordingly. I know I'll spend it if I get it.

The easier you make it for people who don't have an internalized saving ethic, the better.

MR. GREENWALD: I have advice on getting people to save more. Employers have two key advantages in encouraging saving. First, they often have high credibility with employees on issues concerning how much is needed for retirement saving and investment strategies. Employers are seen as being interested in employees, as opposed to some financial advisors who are often perceived to be mainly interested in the commission. Second, employers know when pay increases are given. The time of a pay raise is the best time to encourage an increase in saving. Because people are living on the "pre-raise" income, they are especially amenable to saving at least a part of their increase in take-home pay.

On a different point, my organization has done a number of surveys on retirement issues and has found a somewhat different flavor than the focus group results reported by The Public Agenda Foundation.

Almost all Americans do not expect to be solely responsible for their retirement income. Despite considerable concern about the future of Social Security, most Americans expect to obtain a considerable amount of retirement income from Social Security and from a pension plan.

Also, few people are inattentive to financial preparation for retirement. It is on their "radar screen." Saving for retirement often begins when people are in their 20s. There is an awareness of the need for saving for retirement and for most people it is the main reason for saving. The movement toward 401(k)s will only accelerate public awareness and interest in retirement savings.

Our polling has strongly indicated that almost all Americans do not expect to be poverty stricken during retirement. Indeed, people's confidence in their financial security in retirement might be an impediment to higher saving for retirement saving. The things that worry people about their financial situation in retirement is not the amount of money they will have accumulated, but things beyond their control, especially inflation and their physical well-being.

We also found differences from The Public Agenda Foundation findings on public support for the Social Security system. Our surveys have consistently shown that the public is very supportive of Social Security. This is, in a way, an amazing finding because there is low confidence in the long-term financial future of Social Security. One of the factors that I believe explains high support for Social Security among

workers who are contributing a good deal of money to the system in FICA taxes is that Social Security is currently supporting their parents; that to them is, of course, a good thing.

Finally, The Public Agenda Foundation found distrust in financial advisors. Our surveys find that distrust, too, about financial advisors in general. But, many people have insurance agents, stock brokers, bankers, and other financial advisors that they rely on. So, many people do put trust in financial advisors, even though they are distrusted as a group.

MR. FARKAS: Regarding the first point on the income people are counting on in retirement, I don't think we should look at what the public expects from Social Security the same way we look at what they expect from pensions: they are two different issues. People in the focus groups had low expectations of what they would get from Social Security, and there's plenty of survey data that show this is generally the case. As we indicated in the presentation, the focus group participants strongly supported the existence of the program and people thought the principles that underlie the program were very important. They were dissatisfied because they don't think it's working the way it should be. And Social Security may be a victim of the public's skepticism toward government in general.

From talking with people it seemed that retirement is not something on most people's day-to-day agenda; it's something far off. But it's also a source of concern and even anxiety to people—there seems to be fear and avoidance bound up with retirement that consistently emerged in our discussions. Most people in the focus groups were not confident or comfortable with what they were doing. Perhaps focus groups are more likely to pick these kinds of attitudes because people have time to talk freely about the issue in their own words in that kind of setting. We can nail down how pervasive a lot of this is in the upcoming survey.

MR. BERNHEIM: I was particularly interested in the conclusions about the sources of information and advice that people relied upon: that parents and relatives and friends were ranked highly. I can offer some corroborating evidence on that. I was recently involved in designing and implementing a survey sponsored by Merrill-Lynch. It looked at sources of information and advice. We found that parents and relatives are the number one source of information and advice on financial matters. We also found that those who rely on their parents tend to save less. I think the correlations between what you rely on and what you do are interesting.

Financial professionals ranked about fourth or fifth on the list of what people rely on. Only 11 percent or 12 percent have a financial professional who is their primary source of information and advice.

The really interesting thing is that people trust their employers. That is really important. The fact that has to be coupled with that is that right now practically none rely on their employers.

We found that the number of people who rely on prayer as their primary source of information and advice was greater than those who relied on employers. By the way, we didn't offer prayer as an alternative.

There is a real gap between who they want to rely on and who they do rely on. What's the barrier?

There are now some companies taking steps to provide their employees with information, but they are relatively few and far between. I think a lot of the reason for that is a fear of liability under ERISA that might arise from providing this elaborate planning.

An important public policy target is to break the liability fear down so that employers can be a more important source of information and advice.

I also found your comments on IRAs and 401(k)s perceptive. The tax advantages are perhaps secondary to these other cognitive forces. Something like IRAs and 401(k)s can really be a focal point. A raise in salary can be a focal point. I think it worked that way in 1982 when we expanded the IRA system and provided a channel by which, you know, the country could focus on this issue. There was a lot of discussion of it. These things go hand in hand.

The last thing I wanted to comment on was the issue of "baby boomers in denial," of them not really focusing on the retirement savings issue. We can sit around as professionals and talk about the relative merits of different studies on the adequacy of saving and at the end of the day realize that there are good points and bad points to different studies; but the average person out there goes through processes of cognitive dissonance and selective perception.

When the press reports a number of studies, even in nonbiased fashion, my guess would be that the inclination of the average person in a state of denial is to focus on the information that says, "Don't worry, you're doing just fine." That's one of the things that's been really concerning me about the way the press has covered the information we talked about earlier.

MS. JOHNSON: It provides a wonderful excuse to stay in denial.

MR. BERNHEIM: Yes, exactly.

MS. RAPPAPORT: One of the first issues at employee meetings is if they don't have a 401(k) plan, they want one.

MODERATOR SALISBURY: You still run into the issue that Paul Rivera was mentioning of 401(k) participation running at 50 percent. The point is that if employers put in 401(k) plans, they're going to get some level of participation.

MR. BIRNBAUM: The Participant Reference Model, developed by J.P. Morgan Investment Management finds differences in attitudes based on whether or not participants in defined contribution plans are also covered by traditional pension plans. People who only have defined contribution plans place a much higher value on education than people who are covered by both. It may be that the awareness that you're covered by a defined benefit plan makes the decisions you're facing on the defined contribution side seem of less importance.

There are many issues that the model addresses, demographics, plan design, fund features, and so on.

Part Three

Action, Inaction and Plan Design: Can We Find a Predictive Model?

CHAPTER 7: Understanding Participant Behavior: A Research-Based Approach

Robert Birnbaum

INTRODUCTION

The voluntary nature of 401(k) plans requires plan sponsors to take participant preferences and behavior into account if they hope to design effective plans. Generally, sponsors seek to implement a combination of design features that—given a plan's unique circumstances—delivers the highest level of participant satisfaction and most desirable investment behavior at the lowest possible cost. Cost information is readily obtainable, and design ideas abound. But how can the impact on participants be predicted before costly and hard-to-reverse schemes are tried?

What if plan administrators could construct a menu of alternative plan designs and then determine in advance of implementation how plan participants would react to each design in terms of both satisfaction and investment allocation? With such knowledge, a plan administrator could evaluate both the costs and the benefits of potential plan designs, much as an analyst might use a spreadsheet to evaluate financing alternatives.

The Participant Preference Model (sm) was developed to help plan sponsors obtain such knowledge and does so by answering two key questions:

- Which plan features are most valued by employees and therefore have the greatest impact on satisfaction and participation?
- How will changes in funds or the addition of new funds affect participant asset allocation?

TRADEOFF ANALYSIS

The model makes predictions based on interviews with a national sample of 401(k) plan participants and a group of employees of the four large companies that, together with J.P. Morgan Investment Management, developed the model. All interviews were conducted by computer, using a methodology known as tradeoff, or conjoint, analysis. Tradeoff analysis asks participants to rank features of a plan according to their importance and then choose among plans built from features with high rankings. Out of this comes a realistic decision model that can be used to predict future behavior. One of the great strengths of the model is that it can accurately predict the behavior of participants in an existing plan even though these particular individuals are not included in its underlying base of interviews.

Table 7.1 and chart 7.1 provide an example of a typical tradeoff sequence. Table 7.1 shows, for example, "a balanced fund with U.S. stocks and bonds" as one individual's first choice in a plan. Suppose that, in response to another question, this same individual attached great value to the ability to take loans from the plan with no transaction fee. The computer then constructs a tradeoff question, as shown in chart 1. The idea is to force the individual to make a tradeoff between features he or she likes—in this case, between a plan with *no* balanced fund and *with* free loans versus a plan *with* a balanced fund and a $50 *transaction fee* for loans.

Repeating this procedure enough times with an individual will produce a good model of how that person makes decisions. Expand it across a population, and the result is a predictive model. The question is, of course, how accurate is the prediction? Table 7.2 contains a "back-test" that compares the actual allocation of contributions in J.P. Morgan's own profit-sharing plan with the model's predictions. The results illustrate the strengths and limitations of the model. There are several points to notice:

- The model's predictions are generally accurate—and sometimes startlingly so, as evidenced by the predicted versus the actual results for the capital preservation, the diversified, international equity, and JPM stock investment options.
- The two largest discrepancies between predicted and actual results are for the money market fund and the small capitalization fund. Both discrepancies can be explained by externalities. For example, the money market fund is the "default option" in the Morgan plan; when no decision is made, the money is invested in this fund. Default options are clearly outside the scope of the model. However, one can surmise that some portion of the allocation to the money market fund would have gone to the fixed income fund—whose allocation was below the predicted level—had all participants made active decisions.

Table 7.1

Sample Question:

In an investment fund for a defined contribution plan, which of the following would be your first choice?

- Money Market Fund
- Income Fund (GIC)
- Intermediate-Term Bond Fund
- Long-Term Bond Fund
- Large U.S. Companies Stock Fund
- Small U.S. Companies Stock Fund
- International Stock Fund
- Company Stock
- Balanced Fund with U.S. Stocks and Bonds
- Balanced Fund with U.S. and International Stocks and Bonds

Source: J.P. Morgan Investment Management Participant Preference Model.

- In the case of the small capitalization fund, the external factor was the extremely positive media attention that small capitalization stocks received during the fourth quarter of 1992. This attention obviously influenced allocations made in January 1993. But, if the allocations for the plan's two U.S. equity options (equity and small capitalization) are combined, the result is a predicted allocation of 23 percent (19 percent plus 4 percent) versus an actual allocation of 25 percent (12 percent plus 13 percent). Therefore, the model was quite accurate in predicting the *overall* equity allocation, even if it missed the allocation between large and small capitalization stocks.

It is important to understand that the model predicts allocations at the margin. Usually, this means the allocation of current contributions, when participants are asked to make decisions. The implication is that, if there is no communication or information concerning choices, or no request for a decision, no decisions will be made. Over time, the allocation of existing balances ("old money") will come into line with that of current allocations, but there are long lags. These lags are largely due to inertia. Under normal circumstances, participants are not "forced" to make decisions about "old money" and so simply do not. In those relatively rare cases in which decisions are forced—for example, an option is closed or all existing options are replaced by new ones, requiring redistribution of existing balances—"new money" and "old money" allocations are very similar.

Scenario Testing

The model is used by plan sponsors to test the effectiveness of alternative plan designs and answer questions such as: Which funds should we add? Which managers? How important is the availability of daily transactions? Are there certain features we must have in the plan? Which could we safely eliminate to lower costs?

Table 7.3 shows an example of scenario testing drawn

Chart 7.1

Sample Conjoint Question

Which one of the following defined contribution plans do you prefer?

No BALANCED fund offered AND Able to take LOANS against balance for NO FEE	**OR**	BALANCED fund offered AND Able to take LOANS against balance for $50 FEE

1	2	3	4	5	6	7	8	9
STRONGLY PREFER LEFT				**NO PREFERENCE**				**STRONGLY PREFER RIGHT**

Source: J.P. Morgan Investment Management Participant Preference Model.

Table 7.2
Back Test on J.P. Morgan Profit Sharing Plan[1]

Investment Options	Model's Predicted Allocation	Actual Allocation (January 1993)
Money Market	1%	9%
Capital Preservation	17	19
Fixed Income	11	5
Diversified	18	15
Equity	19	12
Small Capitalization Equity	4	13
International Equity	7	6
JPM Stock	22	21

Source: J.P. Morgan Investment Management Participant Preference Model.
[1] This back test was performed in July 1993. The two investment options enclosed in boxes were added to the plan that year.

from a "real life" application of the model. This particular plan sponsor was growing uncomfortable with the size of the plan's guaranteed investment contract (GIC) exposure but was concerned about participant reaction to any changes. The plan's initial design—the "base case"—included four investment funds. The analysis begins by entering into the model over 30 characteristics of the base case design. The model then calculates a "preference index"—in this case, 53. The purpose of this index is to provide a basis for comparing the impact of design alternatives.

In scenario 1, the GIC fund is closed to new contributions. The Preference Index drops a statistically significant 9 percent, from 53 to 48. In scenario 2, the GIC fund is back in the plan, but company stock is eliminated. The drop in the Index is much greater: 21 percent. The model reveals that, because this particular stock had done well, employees valued it quite highly. Thus, removing access to it would be a very unpopular design change. Removing access to GICs would be somewhat more acceptable.

In scenario 3, company stock is back, but a money market fund and a balanced fund are substituted for the GIC. The preference index rises to 58—above the base case level. Total satisfaction with the plan goes up due to the provision of appropriate GIC alternatives. While this does not mean the GIC fund should necessarily be closed to new contributions, it does indicate that the plan sponsor has more freedom to modify the GIC fund than had initially been thought.

In fact, one of the strongest revelations of the model is that participants have a high degree of trust in their employers, particularly in the selection of investment options. Outside the plan environment, the brand image and reputation of investment funds is of great impact. But inside the plan environment, the imprimatur of the employer is the critical factor. In other words, employees are more influenced by the fact that the employer selected a fund for inclusion in the plan than they are by the reputation of the investment organization associated with the fund.

Let us examine how employees will allocate their contributions under the same plan design scenarios. The characteristics of the specific choices currently available in the plan are modelled—asset class, performance, manager, style, and fees. (The current bond and equity options are, frankly, not particularly attractive. Company stock, because of its very good performance, is quite popular.) Table 7.4 compares the actual current allocation with the model's predictions. Once

Table 7.3
Case Study: Modifying or Closing a Guaranteed Investment Contract (GIC) Fund

Investment Option	Base Case	Scenario #1	Scenario #2	Scenario #3
Money Market Fund	No	—	—	Yes
Income Fund (GIC)	Yes	No	Yes	No
Bond Fund	Yes	—	—	—
Stock Fund	Yes	—	—	—
Company Stock	Yes	—	No	Yes
Balanced Fund	No	—	—	Yes
Preference Index	53	48	42	58

Source: J.P. Morgan Investment Management Participant Preference Model.

Table 7.4
Case Study: Closing a Guaranteed Investment Contract (GIC) Fund

Investment Option	Actual Allocation	Model Allocation	Add Balanced and Money Market	Eliminate GIC
Company Stock	43%	46%	40%	50%
Large Cap Equity	18	20	15	21
Bond Fund	6	5	4	7
Income Fund (GIC)	33	29	23	0
Balanced Fund	–	–	15	19
Money Market Fund	–	–	3	4
Total	100	100	100	100

Source: J.P. Morgan Investment Management Participant Preference Model.

again, the model is an accurate predictor. When a balanced fund and a money market fund (the specific funds modelled were of average attractiveness) are added, participants are predicted to allocate 15 percent and 3 percent to them, respectively. Allocations to company stock and GICs drop, which is probably a desirable outcome.

If the GIC fund is then eliminated, the bulk of the new allocation goes to company stock. This is quite counterintuitive; rather than choosing the next least risky alternative, participants flee to a more speculative investment. However, in the minds of many participants (particularly less sophisticated ones in the GIC option), the next least risky alternative is company stock. It is associated with the employer, whom they trust, and it carries a familiar name. Eliminating the GIC fund is therefore predicted to have a perverse effect.

On the basis of the model's analysis, this company decided to keep its GIC fund open but modify it with market-value investments and over a five-year period migrate it to a short-term bond fund.

The model, therefore, is able to help sponsors evaluate the plan design that is specific to their company and analyze plan design scenarios of interest without the need for extensive research among company employees.

Continuing Research

The Participant Preference Model (sm) was developed in the first half of 1993, using data from salaried employees of large companies. The data base has recently been expanded to include hourly employees, both union and nonunion, so that a more complete population can be modeled for companies with hourly staffs. Thus far, preference differences between salaried and hourly employees appear to be largely unremarkable and mainly correlated with income levels. (There are significant differences in preference associated with income.) Additional demographic analysis—to uncover preference differences between men and women, for example, and between age groups—is continuing.

Although the model has proven to be highly accurate in predicting allocations, its underlying foundation of data clearly has a limited life. Interviews must be conducted every two to three years, at a minimum, to maintain accuracy. A significant market event would, in all likelihood, necessitate a shortening of the interview cycle.

Discussion After Birnbaum Presentation

MODERATOR SALISBURY: Are you doing any followup data collection and analysis?

MR. BIRNBAUM: Yes, this model was run with large companies. It was all salaried and had no hourly or union workers. Now unionized and hourly have been added to the model. We're not sure yet whether there will be differences in terms of investment preferences. Chances are not; but a big question is whether union and hourly workers regard their employers with the same degree of trust as salaried workers seem to.

The other is the difference between large companies and small companies. In a small company there could be many more points of influence, and you may have more direct access to people making plan design decisions. The other big difference is the role of company stock, which in a large, publicly traded company is a huge factor in a plan, and in small

companies we're not sure yet what kind of a factor it is. So those are some of the current data collection exercises going on now.

MR. AMBACHTSHEER: It seems to me, people respond based on the level of knowledge. Are these "standing start" type respondees?

MR. BIRNBAUM: These are.

MR. AMBACHTSHEER: There is no education or information provided?

MR. BIRNBAUM: There is some information provided, but the process tried to assure no education beyond what people already knew. The only thing we had to be sure of was that terminology was understood. So if we said "bond fund," people would know what we meant. There was about a five minute exercise before the questionnaire. This was videotaped and printed for consistency. The purpose was to make sure people had the terminology right.

One of the things we did find from running the model and using it in plans is a sense of what people have to know about a fund in order to make a rational decision about it. It's not all that complicated. People want to know something about the asset class. They want to know something about who's running the fund. They want to know how it's being run. That doesn't mean a detailed description of process, but is it active, is it indexed, and what is the fund trying to do. They want a performance history for evidence that the fund has achieved something in the past. Last, if they are paying the fees, people want to know those fees in context. If you can put fees and performance in context, you will get results very similar to what the model projected. You don't have to go that far beyond it in order to get those results, but people really need to have those five pieces of information. Then you do get more rational decisions.

MR. RUSSELL: I think one of the explanations for why, when GICs are pulled out, people run for what may not necessarily be the safest option has to do with what we define as comfort zone. There is a certain level of comfort when your career is with an organization that spends a lot of its internal communications focusing on your own company—what it does; how it does what it does; and how it communicates things to its employees to try and motivate them to push the stock price up by getting them to work more productively. There is a certain level of comfort about an employing organizations' stock that doesn't exist for some outside organization, some outside fund, something that's less familiar, therefore less comfortable. That phenomenon is absolutely consistent, regardless of where you look, with an unsophisticated investor audience.

MR. JACKSON: Here is a quotation from Bernard Baruch, advising individuals on investments in common stocks. He said, "If you are ready to give up everything else to study the whole history and background of the market and all the principal companies whose stocks are on the board as carefully as a medical student studies anatomy, if you can do all that and, in addition, you have the cool nerves of a great gambler, the sixth sense of a clairvoyant and the courage of a lion, you have a ghost of a chance."

MODERATOR SALISBURY: Larry Thompson, last week Mr. Rostenkowski [Rep. Dan Rostenkowski, D-IL] and various others made proposals for adjustments in the Social Security program that would have the effect over time of bringing down the present value of benefits. Second, the Social Security Administration (SSA) will soon begin sending annual statements to all Americans telling them what they are going to receive from Social Security. Is this a good idea or a bad idea? Is it something that will enlighten or potentially mislead? Should it, in fact, be repealed, would be a question, as well. If there is a prospect that Social Security will prospectively be adjusted downward, how will SSA communicate that in the statement process?

MR. THOMPSON: The PEBES [Personal Earnings Benefit Estimate Statement] statements are being issued by an Act of Congress, or, more to the point, by an Act of Pat Moynihan [Sen. Daniel P. Moynihan, D-NY]. He makes no secret about why he thinks Social Security should issue these statements. He believes they will increase confidence among the American people that, in fact, benefits will be there for them when they reach retirement. I agree with him.

A large percentage of Americans say they have no confidence that Social Security will be there when they retire. (At the same time, only a tiny minority seem to have made any alternative retirement plans, but that's another topic.) Sen. Moynihan fears that the lack of confidence can become a self-fulfilling prophecy. If the American people don't think Social Security will be there, they will not urge their elected representatives to fight to make sure it is there. He happens to believe—as do I—that it should be there. He believes that the dynamic resulting from issuing the PEBES can increase confidence in the system and therefore increase political support for the system. This, in turn, will increase the chances that the benefits will be there at a level that's not too dissimilar from what they are today.

Will this affect the relative probabilities that the

long-range deficit will be addressed through revenue increases as opposed to benefit reductions? Probably. It may not change the political dynamic totally, but it may move the percentages of the population favoring one approach over another up or down by a few percentage points.

Public preferences on this issue are not all that clear right now. Social planners are convinced that the public rejects payroll tax increases so that long-range balance must be restored through benefit reductions. On the other hand, when pollsters ask the public: "Would you pay more in payroll taxes to protect your Social Security program?," they usually find a majority who say, "yes." So who's right—the social planners or the pollsters?

As an economist, my view is that the most important factor deciding how we will actually adjust to the coming demographic changes will be the underlying state of the economy. History suggests that leisure is a normal good. That means, simply, that as people get richer they want to consume—to enjoy—more leisure. Early in this century, as real wages rose, the work week shrank. People consumed more leisure by working fewer hours each day and fewer days each week. The work week stopped shrinking about the time it reached 40 hours. Thereafter, increases in real wages led to increases in annual vacations and in increasingly generous retirement benefits.

For all intents and purposes, real wages stopped rising some 20 years ago, and the demand for increased leisure slackened at that time. In the more recent economic environment, people are less interested in getting more leisure than they are in preserving their standard of living from the effects of higher taxes. If real wages are rising, people can accept modest tax increases. If your real wage is rising from one year to the next, you can afford a modest tax increase and still have a higher real income. But if real wages are stagnant, tax increases cause reductions in after-tax income. Tax resistance rises when economic growth slows. Hence, in recent years tax increases have become quite unpopular, and the idea of increasing the retirement age as a way of avoiding further Social Security tax increases has gained wider acceptance.

I suspect that the actual adjustments that will be made in Social Security over the next several decades will be influenced greatly by the future course of the economy. If real wage increases resume, I suspect the probability of restoring balance by increasing revenues will also rise. If real wages remain stagnant, I suspect that benefit reductions will play a significant role in restoring balance. Put differently, a growing economy will lead to an increased desire for leisure time and will lessen resistance to the tax increases needed to finance currently scheduled benefits; a stagnant economy will cause people to prefer maintenance of their living standards to preservation of the retirement age.

Social Security makes 75-year projections of currently scheduled taxes and benefits. It's the right thing to do, but there's some baggage that comes with it.

The first piece of baggage is that the projections provide the information needed to calculate the rate of return that benefits appear to afford payroll tax payments. Economists love to make these calculations and to propose alternatives to Social Security based on the results. Note, however, that they only make them for Social Security because Social Security is the only program that provides them with the wherewithal to do so. Nobody is projecting the income tax for 75 years into the future. So nobody calculates the rate of return on an alternative to Social Security that is financed by general funds or subsidized through tax expenditures. Thus, we don't know how the rate of returns of alternative instruments compare.

The second piece of baggage is that analysts have become obsessed with the idea that no one's benefits are secure unless these projections always show a balance between revenues and expenses. Not only that, but they implicitly assume that whatever decisions are made today about the best way to balance revenues and expenses over the next 75 years will, in fact, never be revisited—that the 75-year projection will turn out to be an accurate portrayal of precisely what will happen over the next 75 years.

The deficit now projected needs to be dealt with. It doesn't have to be dealt with this year, but legislation closing the deficit should be enacted sometime in the next few years. And, we need to begin now a debate over what kinds of ways we might want to change the program to adjust. People planning for retirement need to know what our current plan for financing Social Security is.

History suggests, however, that we should expect that the program will never develop precisely in the manner projected. Every couple of years the Congress is going to adjust Social Security, sometimes in minor ways and sometimes in not so minor ways. And, ultimately, the changes will reflect the actual development of the economy. If you tell me what's going to happen to real wages in the 2010–2030 period, I'll make a prediction about whether the retirement age is increased between now and then.

The Concord Coalition got center stage late last year when the major feature of the proposal that they made to balance the budget deficit was to cut back on Social Security through means-testing of benefits. The means-testing was introduced far in advance of any need to adjust Social Security and seemed to have more to do with the deficit in the rest of the budget than with the longer range Social Security financing problem. Chairman Rostenkowski subsequently presented

his own plan, which was designed to show that there was no need to means-test Social Security. Whatever anybody said, the 75-year deficit could be handled relatively easily through some modest changes. He did this to illustrate that the problem was manageable.

Although I personally favor now enacting changes that will close the projected long-range deficit, I'm not sure that such changes will by themselves increase public confidence in Social Security. I suspect that the thing people focus on most is not the projections that Social Security will run out of money in 2027 or 2029. Such future dates are remote abstractions. I sense that people have a gut feeling that Social Security costs are going to rise and create financing problems. Their more pressing fear, however, is that the government is taking the money paid in for Social Security and using it for something else. This is the concern that is reflected in talk about government bonds being "worthless IOUs." Thus, the fear of cuts in Social Security comes not from a fear of a decline in public support for Social Security. Rather, the fear is that Social Security benefits will have to be cut because the rest of the government will be unable to get its fiscal house in order and eventually will be unable to pay Social Security the money that is owed it. Put differently, the fear is that Social Security benefits may get cut not because of a lack of public support for Social Security but because the general fund of the Treasury can't pay off the loans it has taken from the Social Security account.

MR. KOTLIKOFF: Is there any sense of some kind of fiscal disaster occurring? I know you're just talking narrowly about Social Security and leaving out health insurance. Is waiting to "balance the books" going to be a prescription for a disaster, as opposed to doing something right now to get things in order?

MR. THOMPSON: You mentioned health. Everyone realizes health is what's driving the government's fiscal problem. Right?

MR. KOTLIKOFF: Well, health is in large part driving it. It's certainly connected with health and demographics. Everything is interacting. Are the trustees in the state of near panic that they should be? Are they sufficiently exercised? I get this sense listening to you that there's a feeling of, "We'll just go along, we'll see how things turn out, and maybe if real wage growth turns around, everything will be okay." I think we need to understand that the reason our real wage growth is so low has to do with our capital accumulation, which has to do with our investment rate, which has to do with our saving rate, which has to do with our fiscal policy.

MR. THOMPSON: Right.

MR. KOTLIKOFF: These things are not independent.

MR. THOMPSON: That's right.

MR. KOTLIKOFF: Are they worried enough?

MR. THOMPSON: They're worried, first of all, about health. They worry most about health. They urge immediate action to deal with health financing.

The trustees have also urged the Congress to begin working on a way to restore balance to the cash benefit trust funds. Personally, I think that the right thing to do is to give the American people the projections and to develop and enact a plan of action for closing the financing gap. But the plan we enact today doesn't necessarily need to include changes that take effect in the next few years. The plan should put Americans on notice about the changes that may come, but we should also recognize that this financing plan will be modified as time goes on.

The long-range financing problem in Social Security is serious, but it is not the end of the world. The gap that we have to close between scheduled benefits and scheduled payroll taxes out in about 2040 is a gap that's about the size of what we've done with the overall budget deficit over the last two or three years.

The pension problem can be solved; the world is not going to end. The world might end if health care cost increases are not brought under control soon. For if they are not brought under control, they will grind on year after year, forcing health spending as a percentage of GDP ever higher. In contrast, the Social Security financing gap next century is in the neighborhood of 1.5 percent of GDP. Governments can adjust to those kinds of gaps.

Introducing new changes such as those advocated by the Concord Coalition may not have the macroeconomic effect posited by their advocates, anyway. I submit the following question: If we weren't running a $60 billion surplus in Social Security right now, would aggregate savings be lower? In other words, after ricocheting through all the political adjustments, is the current Social Security surplus having any effect on the aggregate savings rate? Are we really saving more, or are we just playing a game here with the American people?

MR. KOTLIKOFF: I think we're playing a game.

MR. THOMPSON: That implies that trying to solve it today isn't really going to achieve anything, is it?

MR. KOTLIKOFF: On the contrary! It's absolutely critical because we need today's elderly to help us solve this problem with reductions in their benefits, certainly in the growth of their health care benefits.

MR. THOMPSON: You keep slipping into health. That's a different issue.

MR. KOTLIKOFF: You can't make these fine distinctions between one program and another.

MR. THOMPSON: Yes, you can, because pensions are totally controllable. You set a schedule, and you pay out cash. You can adjust the schedule for future years. With health, you have to make major modifications in the entire health care delivery system. That's much more difficult.

MR. KOTLIKOFF: We need to tell the elderly that, like everybody else, you're going to have to be under managed care; and we need to do that immediately. If we wait for even 10 years, this whole elderly population and the near elderly, are going to retire with much higher levels of benefits, which are going to be a huge burden on the next generation to pay for.

Furthermore, the baby boomers will come up and retire at these higher benefit levels than currently exist and at a higher health care benefit level. It's absolutely imperative that we get the older generation today to help contribute to resolving this problem. If we wait for 20 years, they will be dead, and we will be left with much bigger bills. So that's my concern. And the issue is urgent. Moynihan and other people say let's just wait and see what happens with real wage growth and other factors. If we wait, we're going to have an unmitigated disaster.

MR. HUNT: We seem to be on the verge of a change in terms of the retirement income needs and wants of people. I understand from the medical people that we're within a few years of being able to predict fairly reliably from DNA how long we're going to live.

Some families live a long time and some don't. For the person told that life will end in their sixties, a 70-year-old retirement age is not going to be an exciting idea. Why pay for Medicare, Social Security, or whatever? Compare this with a person told they will live into their nineties.

I'm wondering whether our generation is about 20 years ahead of our parents in terms of burn-out or accomplishment in life. It used to be that you were 55 or 60 before you could make vice president or president of the company. Now people are making it at 30 or 35. I'm amazed at the number of my friends who are suddenly saying at 46 that they want to transition into retirement. They're not going to be happy if you suddenly say they can't have Social Security until they're 70. Could this be one of the driving factors for SEPs and 401(k)s and approaches where people have more control?

MR. RUSSELL: We've talked about the fundamental issue of individual investors and savings plans and if individuals will have enough to retire. We've talked about the fact that our major challenge now is whether I am going to outlive the resources that I have put aside.

I've heard various people quoted as saying that the life expectancy according to the medical profession keeps hiking up, but the life expectancy assumptions inside of Social Security have not. What is the life expectancy assumption in the Social Security Administration projections?

MR. THOMPSON: I don't have the numbers with me, but the assumption is that mortality rates will decline quite substantially. A substantial increase in life expectancy is assumed, and I think the age 65 life expectancy goes up three years or so.

MR. SCHIEBER: Baby boomers are expected to live about a year and a half longer than people who are retiring now.

CHAPTER 8: Determining the Retirement Income Gap and Employers' Changing Role

Paul A. Rivera

INTRODUCTION

The proposition that the traditional "three-legged stool" will no longer provide adequate resources for retirement in the 21st century is very disconcerting. Unresolved, the problem may pose potentially significant issues both to the individual and to the global economy.

Compared with the health care dilemma, the issue can become a greater threat to the overall financial well-being of retirees in the future. For those looking to retire in the medium term, some studies would put the average personal savings of the 75 million or so baby boomers at about $15,000. When combined with about another $30,000 in accrued retirement entitlements, on average, this segment of the population appears to lack appropriate resources to supplement their retirement. Younger segments of the population, being further away from retirement, and more readily influenced by an "instant gratification" life style, are apt to be even less prepared on retirement.

Although it may undergo extensive debate and deliberation, the health care dilemma may be resolved (determining the most appropriate solution is the major challenge.)

However, for the 30-year-old person earning $30,000 today, who will need a retirement income fund of approximately $2 million at age 65, there may be no viable solution in the absence of appropriate and timely retirement planning.[1] A $2 million retirement income fund would be needed at age 65 to provide an annuity of final pay, indexed for inflation and for life expectancy.

The purpose of this article, therefore, is to suggest a role for the employer in helping employees become more alert and aware of this potential future significant issue. Additionally, the discussion introduces and describes one of a number of measures developed and used by Xerox Corporation to help employees determine their retirement income needs and any corresponding shortfall (the retirement income "gap"). The example below is based on the individualized modeling technique that we provided to Xerox employees with their annual benefit statements in April 1994.

The discussion does not attempt to treat any related public policy issues or corresponding proposal, which would clearly go beyond the scope of this article.

WHITTLING OF THE THREE-LEGGED STOOL

A number of factors will shift a greater portion of the burden of retirement planning to personal savings. The first factor is the much needed overhaul of the Social Security system and the corresponding uncertainty of its reform. Second is the growing trend among private pension plan sponsors to move away from traditional paternalistic and entitlement-based arrangements toward greater choice, flexibility, and participant engagement in retirement programs. The latter is reflected in plan sponsors' growing interest in and preference for defined contribution and participatory programs over the more traditional defined benefit plans. This trend shifts the risk to plan participants.

However, because of the long-term nature of retirement planning and its future impact, and without the assistance of a personal financial planner, employees may not fully understand the value of effective and early retirement planning. Even less apparent may be the risks associated with inadequate or no planning at all.

Even if the 30 year old in the above example were to become aware of his or her $2 million requirement at retirement, it is not likely that he or she would take appropriate and immediate action. A requirement concerning an event 35 years down the road remains "35 years down the road." For others, the magnitude of the future requirement could be intimidating if perceived in current dollar terms. The intimidation could lead to denial.

Most behaviorialists would suggest that when something does not seem achievable, the mind manages to circumvent the dissonance or intimidation by "rationalization," excuses, or falsely believing that the goal or requirement is truly not of value or not required, or it seeks to find fault or shortcomings to resolve or minimize the issue. This is an aspect of the typical "sour grapes" psychological phenomenon of rationalization to reduce psychological dissonance. It

[1] Based in a probable set of long-term assumptions of annual CPI=3 percent, annual salary progression=5 percent (with promotions), long-term investment growth of 7 percent, and life expectancy to age 85.

becomes a major obstacle in planning for the future, and the mind is steered into an incomplete notion of "reality" to justify not taking action.

A research project conducted by The Public Agenda Foundation produced the following findings and observations concerning attitudes toward retirement planning:

- Denial, fate, and fantasy were characteristic, coupled with reliance on future miraculous fortune ("hitting the lottery").
- Barriers to retirement planning were nominal to deep seated.
- Youth ignore the long-term and see retirement planning as a task for later life.
- A prevalent fatalistic outlook was observed, i.e., a "live for today" mind set with no feel for an unpredictable future.

All of these tendencies are reinforced by a culture that encourages spending and not saving.

The individualized modeling technique described below, by intent, does not focus on long-term objectives in absolute dollar terms. Therefore, the long-term objective is instead reflected in terms of percentages.

The whittling of the three-legged stool may seem to be an unfair statement that suggests the total erosion of traditional resources for retirement income. However, whether there is reform in Social Security, through "means testing" or an assessment of generational accounting, or curtailment by private plan sponsors, the "three-legged stool" is changing dramatically. It is becoming unbalanced and at best may end up significantly "shorter" for future retirees.

The role of the employer in this context could be to educate and provide tools to encourage and facilitate a greater engagement by participants in the retirement planning process.

The New Role of Employers

The key role that employers can play is that of a collaborator with employees in their retirement income planning. In basic terms, collaboration is a process of introducing a problem or making employees aware of a problem and then engaging employees and facilitating the problem-solving process. Effective collaboration includes providing tools for employees to identify and determine an appropriate set of solutions and the corresponding implementation procedures.

For obvious reasons, employers should avoid rendering financial/investment, legal, or personal tax advice. At Xerox, the policy is one of strictly helping employees obtain educational and generic information.

Recognizing that total personal financial planning goes beyond retirement income planning and encompasses personal tax planning, estate planning, insurance planning, and investment planning, Xerox continues to introduce alternative solutions on an affordable and understandable employee-paid basis.

In related areas, Xerox has expanded the number of investment funds (to six) available to its 401(k) savings plan participants. Extensive use of technology and voice processing is available.

In 1990, Xerox amended its combined money purchase and defined benefit offset formula arrangement with a minimum cash balance pension plan—a "win win" arrangement that favors both participants and Xerox.

The advantage to participants is portability and more favorable accrual at younger ages (than traditional defined benefit plans). The plan sponsor benefits from the potential funding efficiency inherent in defined benefit plans. It should be noted that the cash balance pension plan concept may also facilitate the needed portability in economic regions such as the European Union, where defined benefit plans are traditional.

Xerox, in 1992, developed and implemented a unique cash-value life insurance program with extensive choice, flexibility, and capital accumulation opportunities. The redesign of the Xerox retirement and capital accumulation programs were completed on a cost-neutral basis and in some cases with significant cost savings. The resultant array of programs remains highly competitive and offers extensive flexibility and choice to participants. Chart 8.1 illustrates the future value of benefits for a typical Xerox employee currently aged 43, with retirement age of 61, 15 years of service, salary of $35,000, and other reasonable inflation and investment growth assumptions.

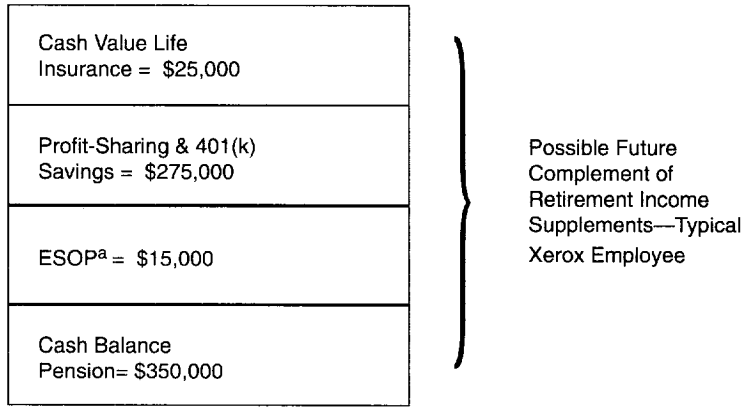
Employee Benefit Statement

To better help employees understand the potential future impact of company programs and to assist employees in their retirement income planning, in 1994 Xerox introduced an added feature to the annual employee benefit statement. Each employee received an individualized projection to show the combined effect of company programs (both contributory and noncontributory), Social Security, and any shortfall (or opportunity) corresponding to other additional resources.

The statement used reasonable and probable economic assumptions that were not less conservative than those used in the current pension plan valuation. It used the long-term Consumer Price Index (CPI) as projected by the Social Security Administration (SSA).

Chart 8.1
Full Complement of Xerox Retirement/Capital Accumulation Programs

Typical Case
Current Age 43, Retiring at Age 61



Source: Xerox Corporation.
[a]Employee stock ownership plan.

Although the final output was expressed as a percentage of final pay, the algorithm may be expanded in subsequent years to solve for the additional percentage of pay needed to be saved annually to achieve the 75 percent final pay objective.

The purpose was to determine what percentage of an employee's final pay—indexed for inflation—could be funded by the pension plan, employee stock ownership plan (ESOP), and 401(k)/savings, and what balance would have to come from personal savings, to meet a 75 percent replacement income ratio objective. The output represents percentages of the lump sum (Retirement Income Fund) that are needed to fund an indexed annuity.

The following assumptions were used:

- The current pension valuation long-term interest rate as the assumed long-term investment rate, for savings investment growth.
- The SSA long-term CPI assumption.
- Age 65 as the assumed retirement age to determine the number of years to retirement.
- The mortality assumption used in the pension valuation, for consistency, to determine the length/term of the retirement income stream.
- Assume the objective is a retirement income replacement ratio of 75 percent of final pay and that current pay will increase at CPI up to age of retirement.
- So that the retirement income objective will be solved for in "today's dollars," i.e., adjusted for inflation to preserve current purchasing power, an inflation adjusted (or *effective*) interest rate, was used.

Determining the Retirement Income Gap

Chart 8.2 is an example of the individual analysis provided to Xerox employees. The Retirement Income Fund is defined as the amount needed in a lump sum at retirement age sufficient to provide an indexed annual retirement income of 75 percent of an employee's last year's pay. The 75 percent replacement ratio is commonly recommended by financial planners as an appropriate retirement income objective.

The analysis illustrates on an *estimated* basis the percentage of a lump sum needed to fund an indexed annuity of the estimated final pay that could be provided by each of the various capital accumulation and retirement programs, including how much would need to come from other personal savings. In other words, the illustration is based on the lump sum amount needed at age 65 to fund an *indexed* annuity of 75 percent of an employee's estimated final pay.

As indicated, the personalized projection included a sensitivity analysis to show the impact on any potential gap that increased participation in the 401(k) plan could have.

How Employees Compared

A further analysis by salary levels as indicated in table 8.1 and table 8.2 summarizes the corresponding component contributions to the 75 percent of final pay objective.

Chart 8.2

Example of Employee Illustration: An Excerpt of the Personalized Projection Provided to Each Xerox Employee

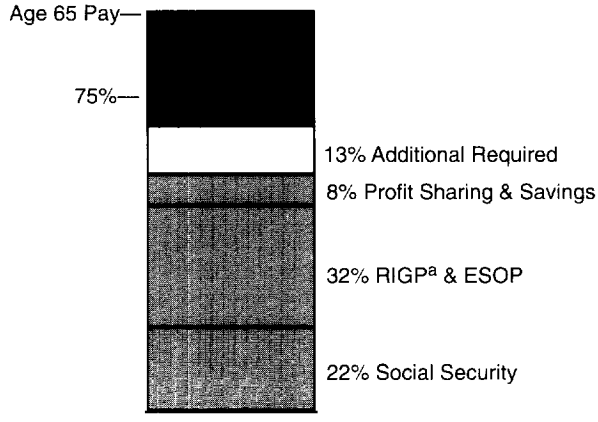
Saving for Retirement

While individual situations will vary significantly, experts say that, on average, a retiree will need approximately 75 percent of his or her preretirement gross income in order to maintain a similar standard during retirement. The chart below is designed to give you a general idea of the role your current Xerox retirement programs may play in meeting this goal. The assumptions are listed below.

For the chart, we first estimated your pay at age 65 (by assuming that your pay increases at the long-term rate of inflation). We then calculated the lump sum you would need at age 65 to provide ongoing income equal to 75 percent of that amount (including increases for inflation to preserve the same purchasing power). Finally, we calculated how much of that lump sum would be provided by each of the sources listed.

Your chart estimates that the Xerox plans, plus Social Security, would fund 62 percent of your age 65 pay (indexed for inflation). You would need to have an additional 13 percent of this amount funded from other sources to achieve the 75 percent target.

This calculation is based on the following assumptions. It is an estimate only, designed to help with your planning, and does not guarantee the projected result:

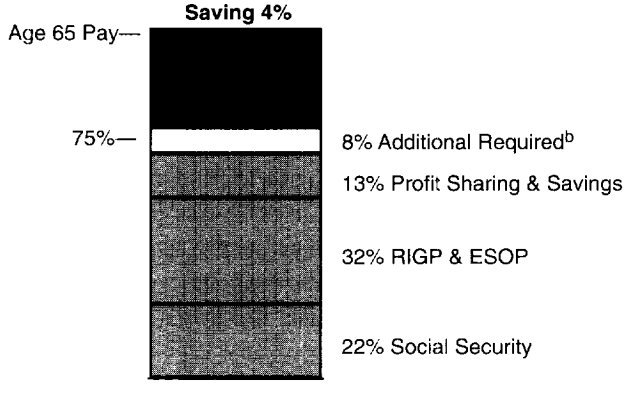


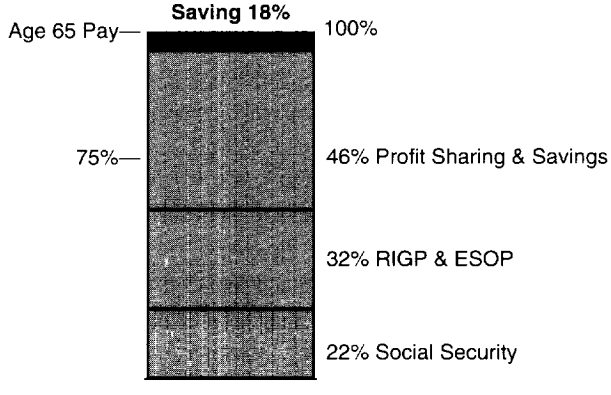
- You continue to work at Xerox until age 65.
- Your pay increases at the long-term inflation rate (3 percent) assumed by the Social Security Administration.
- You continue your current rate of saving in the Profit-sharing and Savings Plan.
- The annual earnings on your profit-sharing savings accounts are 7.5 percent.
- Your current profit-sharing and savings and employee stock ownership plan (ESOP) balances remain in these plans.
- Deferred optional profit-sharing is not included.
- Your pension estimate.

This projection of your future benefits is based on the assumptions above and current records. These estimates are for illustrative purposes only. They are not a guarantee of pay, earnings, or continued employment and do not suggest a mandatory retirement at any given age.

Increasing Your Savings

One strategy for providing additional retirement income would be to increase your savings in the profit-sharing and savings plan. You are currently saving 2 percent of your pay. The charts below show the effect of increasing your savings to 4 percent and 18 percent, and the corresponding increase in funding that would come from your profit-sharing and savings plan.





As indicated above the individualized projection included a sensitivity analysis to show the impact on any potential gap that increased participation in the 401(k) plan could have.

Source: Xerox Corporation.
[a]Retirement Income Guarantee Plan (Xerox's defined benefit plan).
[b]Note that the amount required from other sources is reduced because of the increased savings in the profit-sharing and savings plan.

For those not currently participating in Xerox's 401(k) savings plan, the gap or shortfall is prevalent and significant at all salary levels above $20,000.

Conclusion

Xerox continues to explore on-going educational programs and services. A very affordable ($39.95) multimedia (audio, video, work books) program offered to employees on a voluntary and direct credit card purchase basis, was also introduced in 1994. Other measures that will be examined include financial planning/retirement counseling seminars, individual computer interactive software, and voice processing.

The underlying principles with these future efforts will continue to be:

- educational
- generic
- affordable
- accessible
- provocative

In addition, there will be continuous reminders of the need for and value of timely and effective retirement income planning.

The belief is that employers can play a very important role in the retirement planning of their employees, particularly as the trend away from entitlement continues. Providing market information, education, access, and tools may help mitigate the potential problem for future retirees.

Table 8.1
Retirement Income Gap Analysis, Salaried Participants [in 401(k)]

Group	Salary Range	Pension/ESOP	Profit Sharing	Social Security	Sum	"Gap" Add'l Required
Salaried	All	32%	40%	29%	101%	(26%)
Salaried	$0–$20,000	30%	33%	42%	105%	(30%)
	$20,001–$30,000	31	39	38	108	(33)
	$ 30,001–$40,000	32	40	35	107	(32)
	$40,001–$50,000	32	43	30	105	(30)
	$50,001–$60,000	32	44	27	103	(28)
	$60,001–$70,000	32	40	24	95	(21)
	$70,001–$80,000	32	38	21	91	(16)
	$80,001–$90,000	32	35	18	85	(10)
	$ 90,001–$100,000	32	34	16	82	(7)
	$100,001 and Over	30	30	13	73	(2)

Source: Xerox Corporation.

Table 8.2
Retirement Income Gap Analysis, Salaried Nonparticipants [in 401(k)]

Group	Salary Range	Pension/ESOP	Profit Sharing	Social Security	Sum	"Gap" Add'l Required
Salaried	All	31%	2%	33%	66%	9%
Salaried	$0–$20,000	31%	1%	43%	75%	0%
	$20,001–$30,000	31	1	39	71	4
	$30,001–$40,000	32	2	35	69	6
	$40,001–$50,000	32	3	30	65	10
	$50,001–$60,000	32	3	27	62	13
	$ 60,001–$70,000	32	4	24	60	15
	$70,001–$80,000	31	4	21	56	19
	$80,001–$90,000	31	4	18	53	22
	$90,001–$100,000	31	5	16	52	23
	$100,001 and Over	29	5	13	47	28

Source: Xerox Corporation.

Discussion After Rivera Presentation

MR. SCHIEBER: In your aggregation of benefits, are you including their full Social Security benefit?

MR. RIVERA: Yes. Everything is taken to age 65 and is inflation adjusted. We purposefully projected inflation-adjusted income. The assumption was that 70 percent would be an adequate replacement ratio. The underlying inflation rate used was the long-term Social Security Administration projection. A 30-year old earning $30,000 today, at age 65 in today's dollars would earn $118,000 per year. The gap illustrates how much needs to be saved to continue that annuity from age 65 to life expectancy on an inflation adjusted or a fully indexed basis.

This measure is one of many things that Xerox will do. Next year we'll probably get inside the gap and try and provide the employees tools to better understand how to mitigate the problem.

CHAPTER 9: TRANSFORMING OVERLY CONSERVATIVE "SAVERS" INTO EQUITY ORIENTED INVESTORS

Curtis Mikkelsen

INTRODUCTION

J.P. Morgan is a global financial intermediary that has built its business over a period of 150 years. We have offices in 20 countries around the world. Our total employment approximates 15,000, of which about 10,000 are U.S. employees. The average total compensation and benefits expense per employee is in excess of $100,000.

Recently, the concept of a career at J.P. Morgan has been changing. While for many employees Morgan is still a career employer, the concept of a full career is fast changing. Employees, as a very practical matter, can no longer aspire to a 35- to 40-year career with retirement at age 60 to 65. Instead, employees who continue to meet our rigorous performance standards will probably aspire to careers of 20 years to 30 years, with retirement in their early to mid-50s. Accordingly, sufficient capital accumulation is a mutually shared objective within this short time frame.

Perhaps not surprisingly, we have long sponsored highly competitive defined benefit and defined contribution plans. However, in recent years our benefits development philosophy has evolved from one that views the company as a sole generous provider to one that emphasizes our role as a contributor and facilitator.

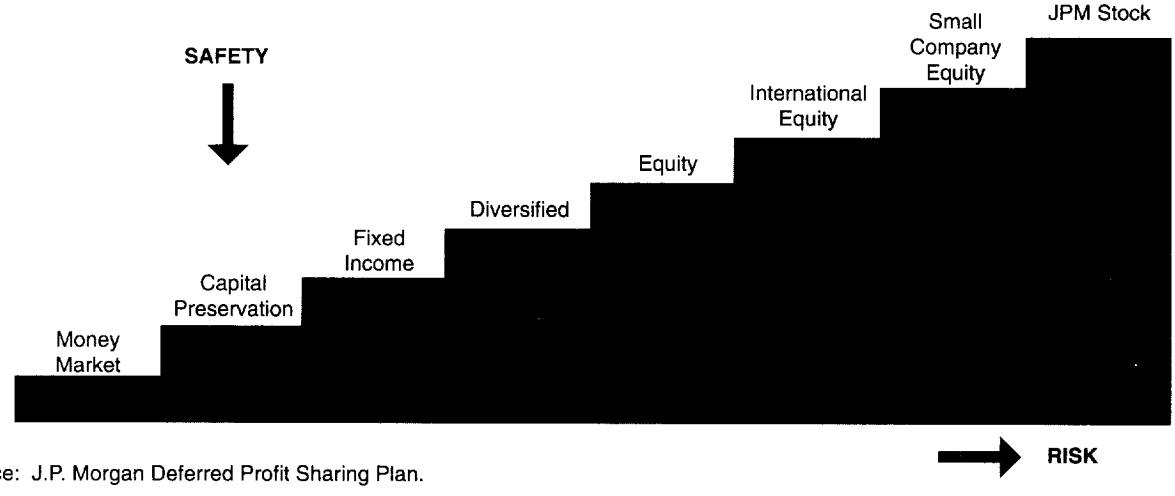
PROFIT-SHARING PLAN

J.P. Morgan's deferred profit-sharing plan was established in 1959. It currently has 9,800 participants. Over the past seven years, our annual profit-sharing award has ranged from 13 percent to 20 percent of base salary. This is split fifty/fifty—one-half cash and one-half mandatorily deferred. The plan contains an unmatched 401(k) feature. Morgan assumes all plan administrative expenses as well as investment fees. Chart 9.1 shows that we now offer eight investment funds, which range from money market to company stock.

Effective January 1995, we will be adding a ninth investment fund—an emerging markets equity fund. In 1993, the rate of return for that fund was a stunning 92 percent. So far in 1994, it has given back 8 percent. These are performance numbers that underscore the volatility of the fund and the need for us as plan sponsor to very carefully communicate its objectives and risk/reward characteristics.

The essence of our achievements over the last three years with regard to investment education is perhaps best summarized in table 9.1, which shows investment fund holdings from September 1990–January 1994. There has been a steady increase in percentage of total holdings invested in equities. This increase is further amplified in light of addi-

Chart 9.1
Investment Fund Option—Investor Steps



Source: J.P. Morgan Deferred Profit Sharing Plan.

tional fund offerings starting in 1993.

The column marked "capital preservation" represents our guaranteed investment contract (GIC) fund. It has been in place in our profit-sharing plan since 1979, and, as of September 1990, it held 60 percent of total plan assets. Since that time, it has been shrinking quite swiftly down to about 36 percent. Most of this asset shift has been to the equity funds—both large and small capitalization U.S. equity, international equity, and company stock. In addition, in this past year, less than 20 percent of our annual profit-sharing award was invested in the GIC fund, down from 57 percent in 1988.

Investment Education

We honestly believe that it has been possible to provide plan participants the information that they need to make appropriate investment decisions without stepping across the line and offering investment advice. What then is the scope of our educational effort?

We have adopted a multimedia approach, consisting of, first, group financial counseling seminars for employees at all levels in the organization. We utilize both internal and external resources.

Second, we leverage the technology in that we have an interactive voice response system that permits both account inquiries and most plan transactions, notably investment fund transfers and loan applications. This voice system currently receives about 2,000 calls a month.

Third, we use print as creatively as possible: First, a guide to investing booklet; second, a monthly financial planning newsletter. Third, an ever-evolving personal annual compensation and benefits statement, which now includes hypothetical, real rate-of-return projections over various time frames for a range of deferral percentages and asset allocation strategies.

Fourth, we utilize video, having created in the last two years both a profit-sharing/401(k) video and a broad-based benefits video for new employees. Finally, we offer individual plan participant counseling by plan administrators.

Challenges

A major challenge for plan sponsors in general is to educate participants about risk. Of critical importance is to educate our employees not to view risk as a risk of losing principal in the short-term, but rather the real risk, in our view, is that they will not being able to meet their longer-term financial goals. Participants should be asking, how much will I need, and how do I develop my investment plan to meet that need. At Morgan we are addressing these challenges. As the data illustrate, we are, in fact, transforming excessively conservative savers into equity-oriented investors.

Table 9.1
Education Results:
Investment Fund Holdings

Date	JPM	Small Company	International Equity	Equity	Diversified	Fixed Income	Capital Preservation (GIC)	Money Market	Total
					($ millions)				
9/90	$43.1 13%	N/A	N/A	$28.4 9%	$35.1 11%	$14.7 4%	$195.2 60%	$6.6 3%	$325.1
9/91	$73.8 18%	N/A	N/A	$43.8 11%	$48.2 12%	$19.3 5%	$208.9 51%	$11.7 3%	$405.7
9/92	$92.9 20%	N/A	N/A	$58.1 13%	$63.4 14%	$23.1 5%	$211.9 45%	$12.3 3%	$461.7
9/93	$124.5 22%	$14.9 3%	$15.4 3%	$73.2 13%	$78.0 14%	$24.2 4%	$219.9 39%	$13.0 2%	$563.1
1/94	$125.0 21%	$24.9 4%	$27.8 4%	$82.9 14%	$90.2 15%	$25.6 4%	$222.5 36%	$14.3 2%	$613.2

Source: J.P. Morgan Deferred Profit-Sharing Plan.

CHAPTER 10: An Employer Perspective on Action, Inaction, and Plan Design

Donald H. Sauvigne

INTRODUCTION

A sluggish economy, corporate transformations, changes in employment relationships, and federal regulations have all contributed to recent changes in pension plan designs and what employers are coming to expect from their employees. While the number of defined benefit plans has been on a steady decline since 1986, it is estimated that through 1993 the American work force will have contributed more than $1 trillion in defined contribution plans.[1] On the other hand, it appears that savings in America have been on a steady pattern of decline over the last 20 years. This decline in savings combined with a somewhat stagnant economy, flat to declining real wages, the escalation in health care costs, an increase in life expectancy, and the "bubble of baby boomers" nearing retirement will contribute to a potential social and economic crisis in the United States. If personal savings do not generate additional income for retirement years, i.e., if American workers do not respond to their responsibility to understand basic investment principles, maximize investment returns, and assume a proactive role in financial planning, the results could be staggering. We will experience a reversal in the retirement patterns as they exist today, and we will not enjoy the comfort of retirement's promise. In an effort to anticipate the impact on future retirees in this country, we need to step back and review the demographic shifts that have taken place over the last few decades.

Three separate demographic phenomena are converging on us that could potentially handicap the lifestyles of retirees in the next century. They are the senior boom, the aging of the baby boom generation, and the decline in the birth rate.[2] An increase in life expectancy, combined with better health among the older population, has resulted in a dramatic increase in the senior citizen population. This upward swing of retirees will further explode with the arrival of the baby boomers (the 76 million Americans born between 1946 and 1964 who comprise one-third of the nation's population) beginning in the second decade of the 21st century. Analysts now project the operating surpluses of Social Security will peak at approximately $5 trillion in the year 2025.[3] And then they expect a dramatic change. The decline in the national birth rate and the aging of the baby boom generation will result in a gradual decrease in the work force. This will have a significant impact on the financial well-being of seniors who are primarily dependent on social programs for their retirement income and a corresponding impact on the work patterns of the current younger working population. A greater burden will be placed on the working generation through increased taxes to correct the shortfall. But what of their own financial future? It is estimated that fewer than one-half of American households are saving for retirement.[4] And for those who are, it is not likely to be nearly enough to generate a sufficient and stable future income flow. The continual process of change, a business focus on simplicity, quality, leaner organizations, and a response to global competitive pressures have led to reduced job prospects, reduced wage growth, and trimmed benefits, including pension plans and health coverage.[5] Many labor analysts believe the increase in competition set off by the population boom in the mid-20th century has kept baby boomer salaries 10 percent to 15 percent lower than the expectation of an average generation. In addition, individuals are under increasing financial pressure to meet health care, housing, education, and taxes—all further challenging the savings dilemma.

EMPLOYER-SPONSORED RETIREMENT PLANS

As American workers seek out alternatives to respond to these financial challenges, they need to measure more precisely how much their employer-sponsored retirement plans will provide and what resources they need to fill the gap. And in doing this, employees must recognize the importance of the long-term

[1] Rose Darby, "Trends in 401(k): A Return to Reality in the 90's," *Fortune*, May 31, 1993.

[2] Ken Dychtwald and Joe Flower, *Age Wave - The Challenges and Opportunities of an Aging America* (New York, NY: St. Martin's Press, 1989).

[3] "Will the Baby Boomers Bust Private Pensions?," *Wyatt Insider* (Washington DC: The Wyatt Company, 1994).

[4] Merrill Lynch, *How Employers Influence Retirement Savings in America, the Fifth Annual Merrill Lynch Retirement Planning Survey, Including Industry Benchmarks* (New York, NY: Merrill Lynch, Pierce, Fenner & Smith, Inc., 1993).

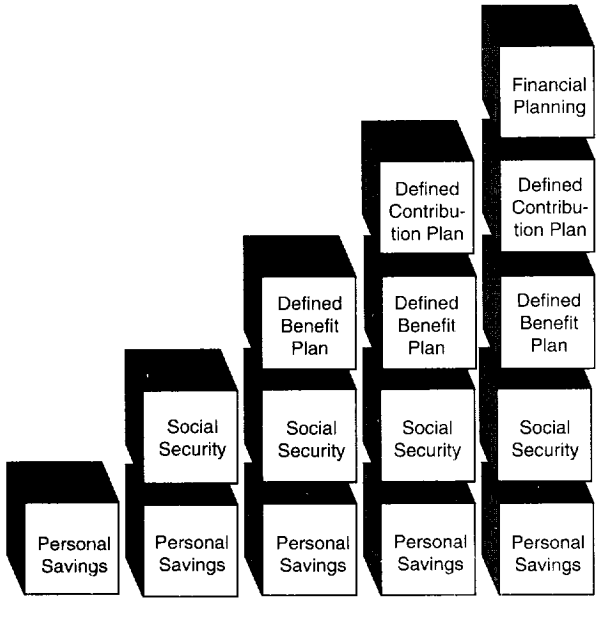
[5] Congressional Budget Office, *Baby Boomers in Retirement: An Early Perspective* (Washington, DC: Congressional Budget Office, 1993).

view of financial planning. Employers must respond to these needs by encouraging workers to save for retirement and provide an environment of continuous education to assist them in achieving their objectives—both through employer-sponsored programs and on their own. It does not come easily or without commitment and yes, cost. Because few individuals seem truly prepared to take on the responsibility for their own financial future (remaining dependent on the government and their employers), employers need to transform a complex and frightening task into an informative, enticing, and most importantly, successful adventure for their work force. Employers can provide both the opportunity and motivation for individuals to save for their retirement. Many already do this by providing a broad package of benefits and programs that serve as a foundation for personal planning. This foundation enables employees to design a personal blueprint or roadmap to follow to realize retirement financial security.

The IBM Reponse

IBM has responded to this challenge by encouraging greater self-reliance among employees in achieving their goals (chart 10.1). Policy analysts recognize the importance for employers to assist employees to save and to be more self-reliant and less dependent on government social programs. IBM has embraced this concept; one wonders if Congress lost sight of it. If present patterns continue, more of the U.S. work force will become dependent on defined contribution plans and accrue less from traditional defined benefit pension plans as the main source of their retirement funds. "Among the explanations for the growth in defined contribution plans is the shift in employment from large unionized firms in manufacturing, which traditionally have provided defined benefit plans, to smaller nonunion firms in the service sector, where defined contribution plans are more common. In addition, the federal legislation has added to both the cost and complexity of defined benefit plans."[6] This being the case, good plan design, excellent communications, and continuing education are the primary items of focus for retirement security. "Better informed workers, if they are provided with the right information and given the right tools, will come to understand the long-term issues and will make good decisions as investors."[7] This writer suggests caution and questions the long-term impact to a country overly dependent upon defined contribution plans.

Chart 10.1
Building Blocks of Financial Security



Source: Author.

As a member of the benefits planning team in IBM's corporate headquarters human resources function, this writer has had direct experience in addressing the issue of future retirement security. IBM is clearly a company in transformation—dramatically responding to revisions in our employment relationship and shifting from a culture of entitlement to one of partnership and "responsibility sharing." A paternalistic approach, which served us well in the past, would doom us and our employees in the future. It just does not fit any more. So, as an employer, we needed to and will continue to change mind sets about retirement security to create career duration savings patterns, in effect inducing material changes in life-cycle behavior.

The IBM transformation is a topic in itself. The points that follow focus on actions taken by IBM in plan design and on our education process to change savings and investment behavior. We are not done—perhaps we should never expect to be. In 1991, we set in motion a "retirement and capital accumulation strategy" and a redesigned approach to employee education that is, in fact, going through significant review and redesign studies at this time. Most significantly, we realigned the plans and education tools to more personalize company benefits and underscore the importance

[6] Employee Benefit Research Institute, *Pensions in a Changing Economy* (Washington, DC: Employee Benefit Research Institute, 1993).
[7] "Retirement Planning: The Big Shift in Accountability," *Financial World* (December 7, 1993): 77–86.

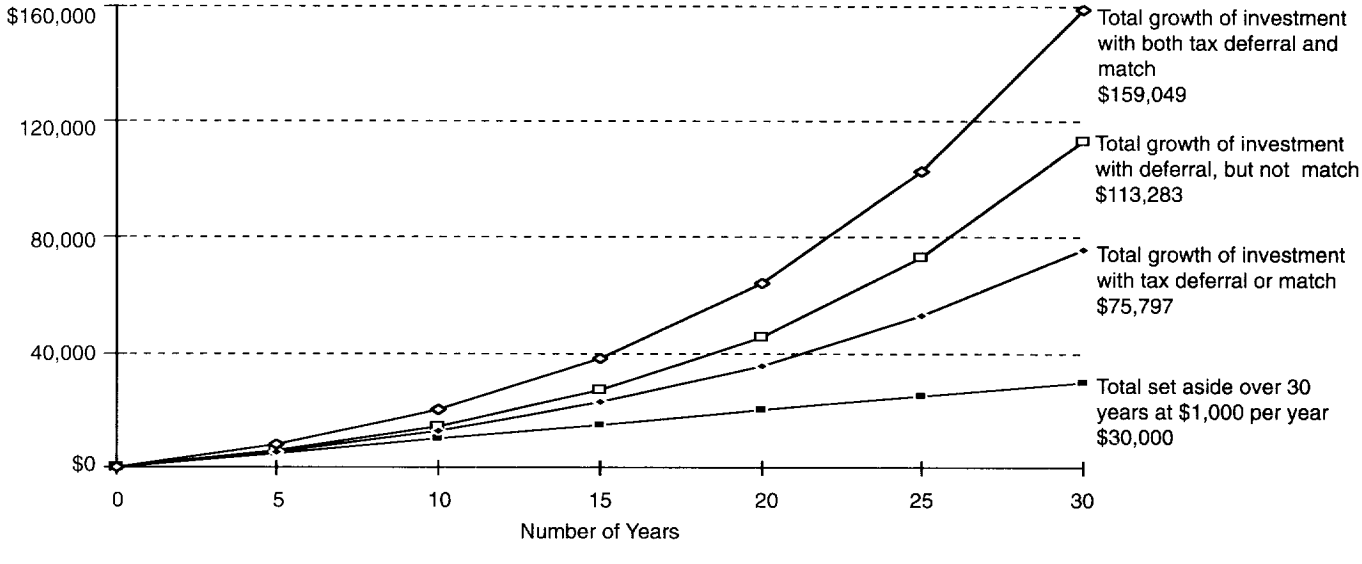
of employee participation. The focus was on 401(k) participation, personal modeling, and understanding investment techniques. Communications could not consist only of periodic statements, an updated prospectus, or an occasional SPD. Employees needed access to information to encourage and educate them and to reinforce the primary objective of achieving financial security.

We established a quarterly newsletter specifically addressing IBM's plan while providing rather specific and sophisticated investment information. The newsletter discussed the benefits of compounding, saving on a tax-deferred basis, determining risk and return threshold, and the importance of diversification and incorporating a life-cycle investment approach (chart 10.2 and chart 10.3). Communicating through traditional announcements is no longer an effective method for educating and informing, nor is it satisfactory in stimulating personal interest and motivating employees to action. We found that announcing plan modifications and making periodic changes throughout the year would have greater impact. It was a subtle message to participants to review their present savings strategies. Many employees develop a laissez-faire attitude and assume their affairs are in order, dedicating little time to an evaluation of their plans. Reminding them that former financial actions may no longer be appropriate, or that past choices could potentially erode asset value, should be a part of a seamless communications process. Both "single sheet" and elaborate software forecasting tools respond to continual "what if" personal modeling needs.

Investment education, in conjunction with frequent communications, needs to dominate the main stream of retirement planning. Many 401(k) participants are simply not getting the most from their investments, nor are they selecting investments that map to their time horizons or risk/reward tolerances. We all know that too many participants seek safety for their retirement contributions and earnings by largely overweighing them (at times, exclusively) in low-yield money market funds, guaranteed investment contracts (GICs), or bond funds. GIC investments, remaining most popular among plan participants, will not alone achieve the asset accumulation necessary to finance a successful retirement. Chart 10.3 and chart 10.4 illustrate two themes we communicate through our education campaigns.

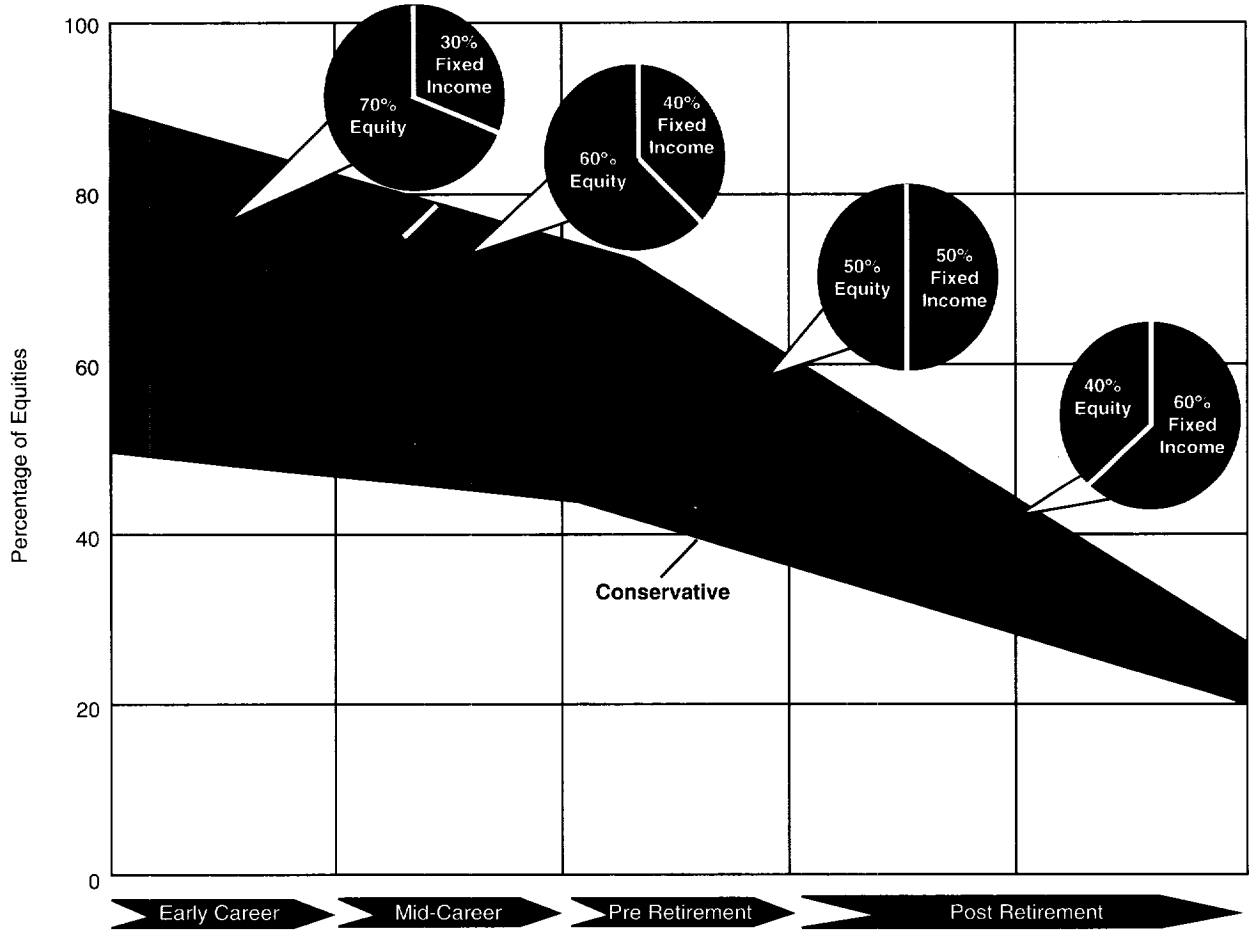
In addition, plan design needs to strike a balance between company objectives and a recognition that, for many of today's workers, a career will include multiple employers. Therefore, the need for portability, or "value accumulation," incorporating tax-advantaged rollover provisions is becoming increasingly important, and retirement programs should be flexible enough to accommodate differences among employee groups and individuals as well as changing needs at different points in time. Lapses in "value accumulation" or capital preservation would clearly be detrimental to a mobile worker's retirement security. Also, the creation of diversified portfolio investment options that provides automatically rebalanced

Chart 10.2
The Power of Compound Growth and Tax Deferral and the Company Match



Source: Sample of Investment Education Tool, WFS Workforce Solutions, IBM.

Chart 10.3
Retirement Savings Asset Allocation



Source: Sample of Investment Education Tool, WFS Workforce Solutions, IBM

allocations, offers a degree of assistance to participants who choose not to take an active approach in fund management (chart 10.4). Such an approach provides limited investment experienced participants with more investment power. The most common and basic plan provisions play a vital role in any participant's ability to maximize returns. The frequency of valuation cycles, the types of investment options offered, or the number of fund transfers permitted provide the opportunity to improve asset performance while "quietly" influencing education and behavior. Plans that limit participant-directed activity are counterproductive to the plan's basic intent. Also, overly generous latitude in initiating 401(k) loans without some built-in restrictions (i.e., a maximum number of loans a participant can initiate from the plan), can lead plan participants into viewing and using their 401(k) accounts as a savings account rather than a long-term retirement savings tools. In the implementation of plan design changes, an employer must account for the impact on participants' perceptions and what result in investment behavior is expected. If you don't know, keep working on the design!

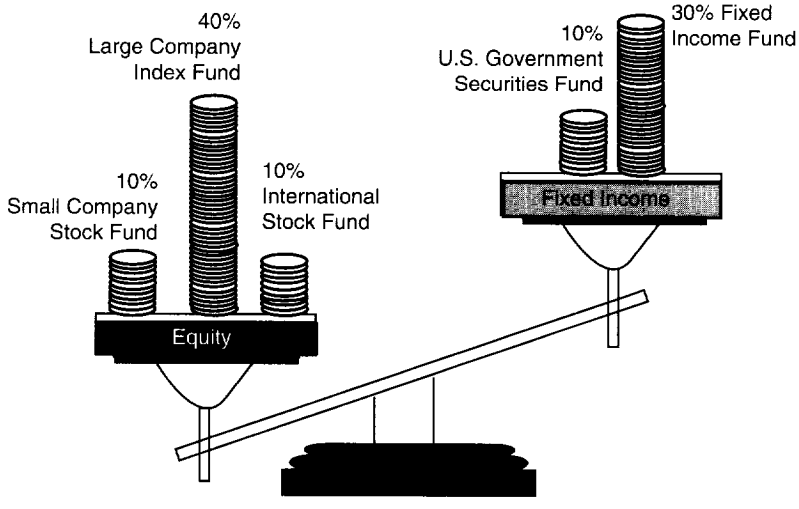
In a related discipline, employers are moving to new grounds to provide their employees with retirement planning services. These services were formerly offered only to executive-level employees, to assist them in defining financial strategies that would result in a substantial retirement nest egg. Many employees have now expressed a desire and a need for this assistance. It has been demonstrated repeatedly that those who receive retirement planning services are better prepared for retirement than those who do not. In response, IBM recently introduced its newest capital accumulation program, Personal Financial Planning (PFP). PFP further establishes the financial planning partnership between IBM

and its employees. The program offers professional financial planning guidance to employees through two nationally recognized firms. Educational seminars, individual consultations, and related services are all available to assist IBM employees in defining a financial strategy. To attract employee participation in the program, IBM offers employees up to a $250 annual reimbursement of PFP expenditures from their company-provided Life Planning Account. PFP thus far has been well received, employee reactions are positive, and hundreds of employees are using the program.

Is there any one ingredient that would guarantee increased plan participation, an increase in employee awareness and understanding, or a change in savings behavior? Probably not. However, past experience at IBM has proven that a link between strategic communications, effective education, and plan design can collectively influence employees' financial preparedness. Although IBM has undergone a decline in its work force over the last few years, it continues to experience a rise in employee participation in its 401(k) plan. In addition, investment education tools have proved successful in altering investment behavior as IBM employees shift from GICs to portfolio holdings more heavily invested in equities (chart 10.5).

Perhaps the jury is still out on how influential employers and plan sponsors can be on employee investment behavior. However, it is obvious that employers who are proactive in assisting employees to plan for the future are the ones heading in the right direction. Today, more than ever, employees must become active partners with their employers in establishing comprehensive financial strategies. The federal sector must also take notice and assume a level of commitment to this endeavor, expanding its role in supporting income creation by simplifying rules applicable to employer-sponsored plans, stopping the erosion of the tax preferences that support necessary long-term savings. Without a change in public policy and individual behavior, Americans will *lower* their retirement standards of living. By taking advantage of opportunities for long-range planning, individuals will respond to the things that are worth pursuing. When we get to tomorrow, *good enough will not be good enough.*

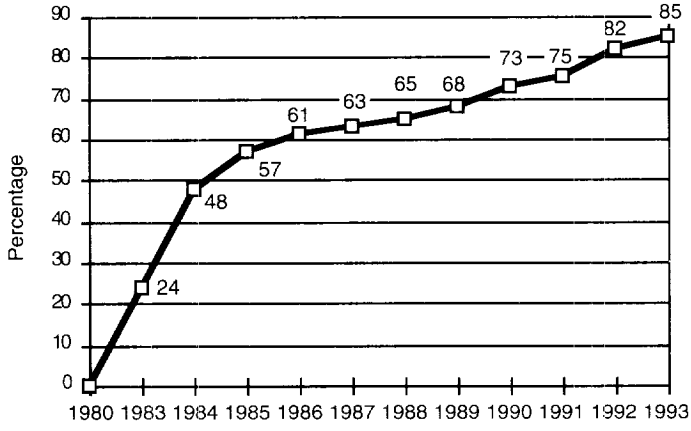
Chart 10.4
Balanced Asset Fund[a]



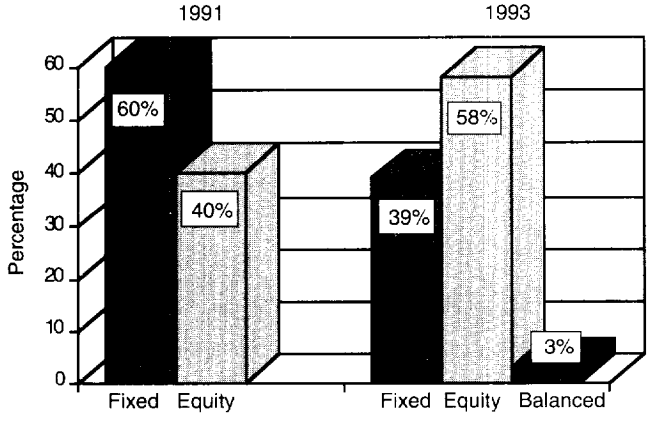
Source: Author.
[a]The Balanced Asset Fund combines five funds into one and is weighted 60 percent equity and 40 percent fixed income.

Chart 10.5

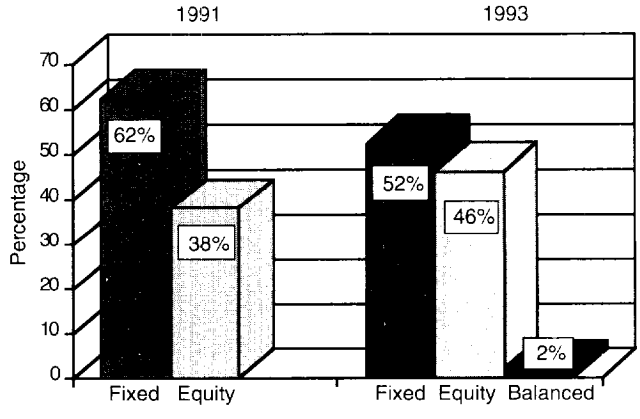
IBM Tax Deferred Savings Plan Participation, 1980–1993



Active Contributions, 1991 and 1993



Asset Allocation, 1991 and 1993



Source: Author.

CHAPTER 11: *Affecting Individual Behavior When Diversity Abounds*

Allan C. Martin

THE PROBLEM

As the press frequently reminds us, circumstances today necessitate that employees effectively plan for their retirement income security or face a lower standard of living in retirement. The September 1993 Congressional Budget Office study of baby boomers indicates that many employees are not saving at all or at rates sufficient to assure an adequate retirement income level. This is confirmed in analyses of participants in many plans. There is some encouraging news in a public opinion survey sponsored by the Employee Benefit Research Institute and The Gallup Organization, Inc. in January 1994,[1] which found that younger people are beginning to save for retirement at an earlier age. However, they do not understand the magnitude of the dollar savings they will need. "While $150,000 in savings may sound like a lot of money, it may not give people as much purchasing power in the future as they think when inflation is factored into the picture. Today, $150,000 in savings can purchase a monthly annuity for life of $1,060 at age 62."[2]

What are the significant drivers of this need to save effectively for retirement?

- *Reduced company/government support.* Social Security and pensions will represent a much lower percentage of postretirement income than they did for prior generations. Changes to Social Security are inevitable given current demographic trends and their impact on future Social Security spending. Pensions are impacted by significant changes to defined benefit plan design combined with changing patterns of employment.
- *Reduced savings/higher expenses.* Real salary growth, company benefits, and job security are all down, while major expenses—health care, insurance, housing, tuition, taxes, credit card interest—are up in relation to prior generations. This leads to a declining savings rate in the aggregate. Our personal savings rate now stands at approximately 3.5 percent of Gross Domestic Product (GDP), less than one-half the average annual savings rate from 1950 to 1980, and among the lowest in the industrialized world.[3]
- *Retire earlier/live longer.* People want or are forced into retiring earlier, yet they tend to live longer (23 years on average) in retirement. An adequate retirement plan must assume a longer than average life expectancy.
- *Bank products deemphasized/investment products promoted.* Low returns on FDIC-insured products have fostered significant mutual fund and cash management account inroads into traditional bank deposits. Less sophisticated investors or time-poor employees (those employees who do not have sufficient time available for activities such as retirement planning) may make poor decisions in their efforts to drive return and/or follow last year's hottest trend.

A recent Bankers Trust asset consulting study determined that, for virtually all periods of 7 years or longer, during the past 40 years (the period for which some form of savings plan existed), the average defined benefit plan asset mix outperformed the average defined contribution mix by 200 basis points per annum—a result due primarily to the latter's lower allocation in equities and the use of guaranteed investment contracts (GICs) as the fixed income proxy. That difference compounded over a 40-year working life for an employee earning $30,000 per year and contributing an unmatched 6 percent a year to a savings plan would result in an incremental retirement accumulation of $188,000 ($466,000 versus $278,000).

THE CURRENT SITUATION FOR DEFINED CONTRIBUTION PLANS

Given the increasing importance of defined contribution plans, especially 401(k) plans, as the primary retirement savings vehicle for many employees (especially among service industries, smaller companies, and growing technology companies),

[1] Employee Benefit Research Institute. The Gallup Organization, Inc., *Public Attitudes on Retirement Income, 1994*, EBRI Report no. G-55 (Washington, DC: Employee Benefit Research Institute, 1994).
[2] Carolyn Piucci Pemberton, "Americans Are Saving for Retirement at Early Age," *EBRI Notes* (April 1994): 12.
[3] Organization for Economic Cooperation and Development.

it is especially important for sponsors of these plans to encourage eligible nonparticipants to participate and for participants to contribute at higher levels and to broaden their investment diversification. Defined contribution plan assets ($1,063 billion) constitute 42.4 percent of all private trusteed pension assets, versus defined benefit plans of $1,134 billion, or 45 percent,[4] and are compounding at a significantly higher growth rate.

The aggregate results reflected in the update of *Bankers Trust 1991 Study of Defined Contribution Plans* indicate considerable progress, at least for the larger plans represented by the survey (the survey covers 201 defined contribution plans with total assets of $135 billion and 3.5 million participants).

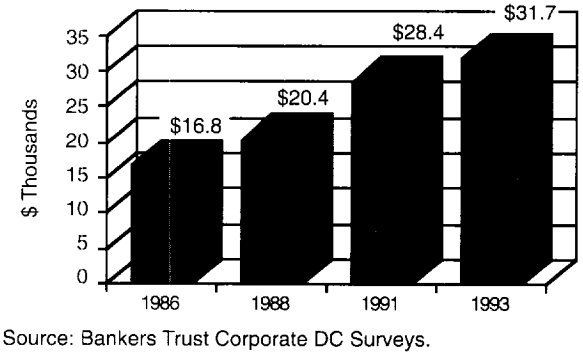
Average Balance Per Participant

While slowing slightly in the recent period, the average balance per participant in the Bankers Trust universe has increased significantly faster than inflation (chart 11.1). There is considerable individual plan evidence to indicate that improved communication has significantly affected growth.

One aggregate measure that we look at gets at the overall efficiency of the plan assets in terms of expected return and associated risk. Chart 11.2 and chart 11.3 illustrate the efficient frontier for the funds in a sample plan, with the expected return for aggregate plan assets indicated below the efficient frontier line. In chart 11.2, the plan is assuming more risk than necessary for the expected return. In chart 11.3, the plan is so low on the risk curve that it is missing out on the long-term opportunity of investing retirement money for growth.

[4] Employee Benefit Research Institute, *Quarterly Pension Investment Report*, Fourth Quarter 1993 (Washington, DC: Employee Benefit Research Institute, 1994).

Chart 11.1
Average Balance per Participant



Source: Bankers Trust Corporate DC Surveys.

Number of Funds Offered

For the large plans represented in the study, one of the most dramatic results is the increase in the number of funds offered. Since 1986, the percentage of plans offering four or more funds has risen from 41 percent to 63 percent (chart 11.4). For the most part, there has been significant participation in the new funds being offered, although we observed diminishing allocations (e.g., less than 5 percent participation in additional options) in many cases where more than six or seven options were offered.

Obviously, the increased number of options directly increases the diversity of the array of fund options *offered* to the participant. Sponsors have gone beyond the traditional array of assured income fund options (GIC and money market funds, which are offered in over 90 percent of the survey's plans), company stock, and a single active equity option to include a variety of passive equity options, international equity, and balanced funds. With this increasing array, participants have indeed diversified their choices.

Investments Selected

The percentage of employee money (excludes employer restrictions on investment) directed to specific options, where that option is included in the plan, reflects a broadening movement away from GICs and fixed income options to balanced fund and active equity vehicles (chart 11.5).

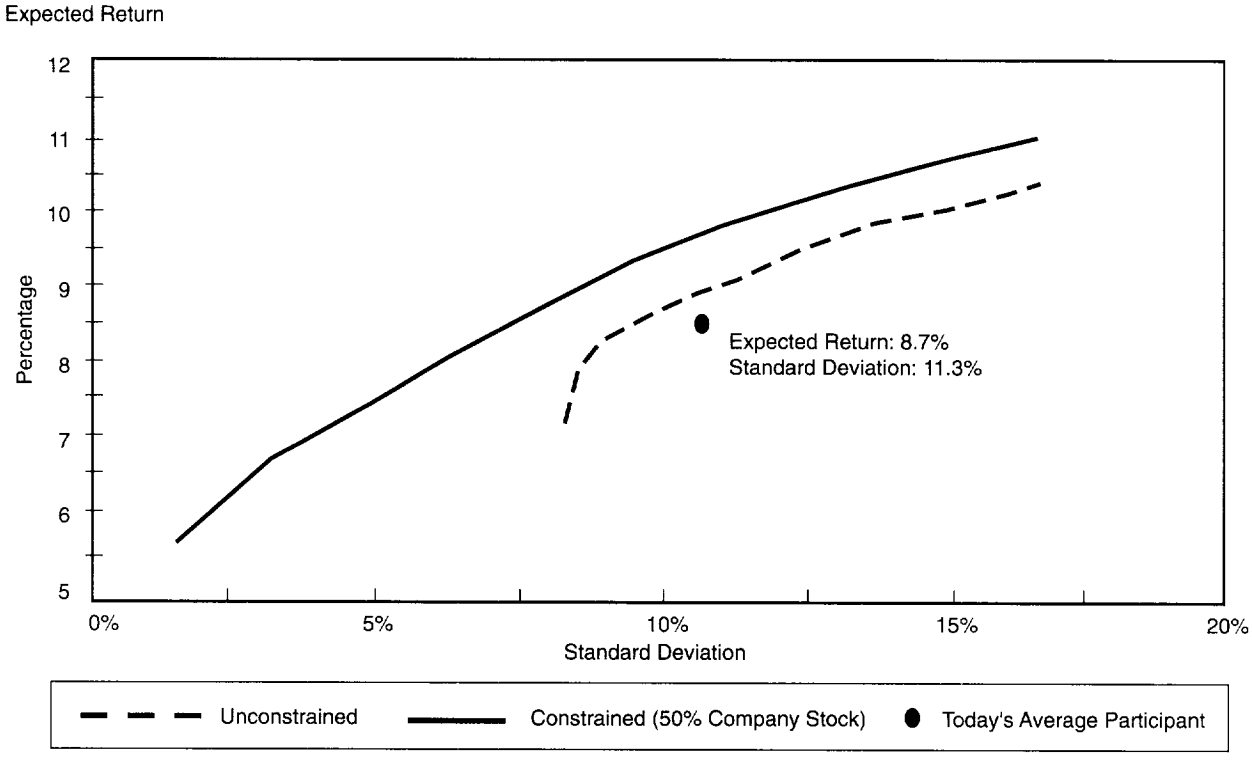
While it can be misleading to examine aggregate statistics across plans, or even within a particular plan across employee classes (age, salary, length of employment, etc.), the foregoing results suggest a positive impact of the extensive plan redesign, educational efforts, and expanded participant access initiatives being implemented by a broad range of large defined contribution plan sponsors.

The Solution: Better Plan Design, Broader Participant Awareness, and Easier Access to Retirement Vehicles

While all elements of a successful defined contribution plan must be examined together and in the context of the specific employer environment, effective communication/education seems to be one of the most cost-effective means of accomplishing employer objectives.

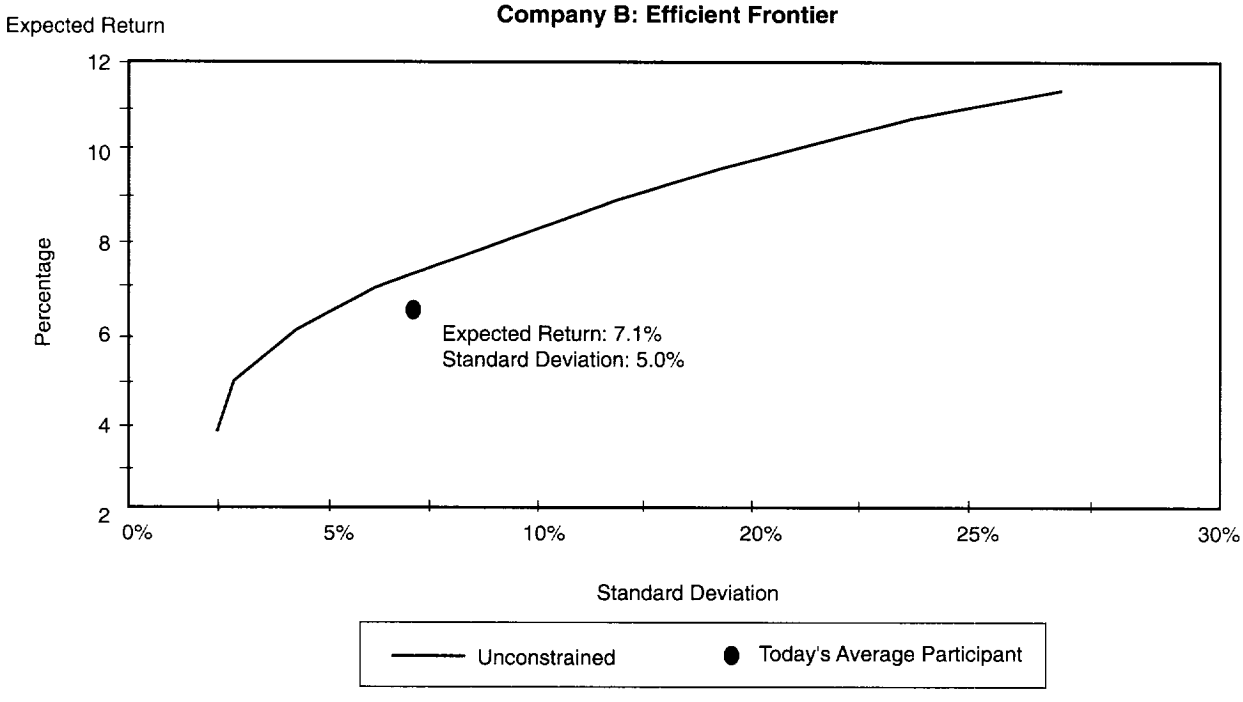
Retirement planning, specifically in company-sponsored savings plans, must be marketed effectively to the participant base (current and *prospective*) to create close to universal awareness and to change on-going behavior. The

Chart 11.2
Company A: Efficient Frontier



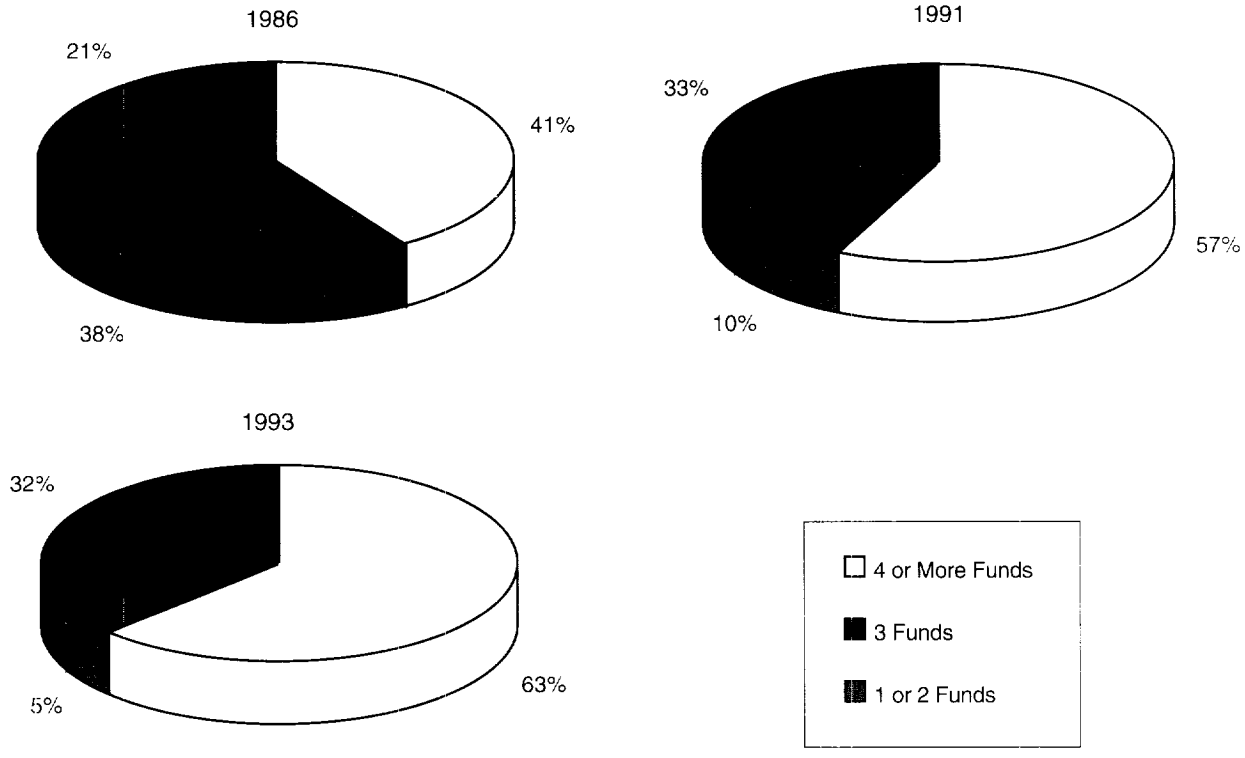
Source: Bankers Trust.

Chart 11.3
Company B: Efficient Frontier



Source: Bankers Trust.

Chart 11.4
Number of Funds Offered



Source: Bankers Trust Corporate DC Surveys.

challenge is presented by the demographic and psychographic diversity of the employee base along with the complexity of the product in terms of investment risks, constantly changing patterns of investment returns, and new product proliferation.

A useful psychographic approach views awareness of retirement income risk in four stages:

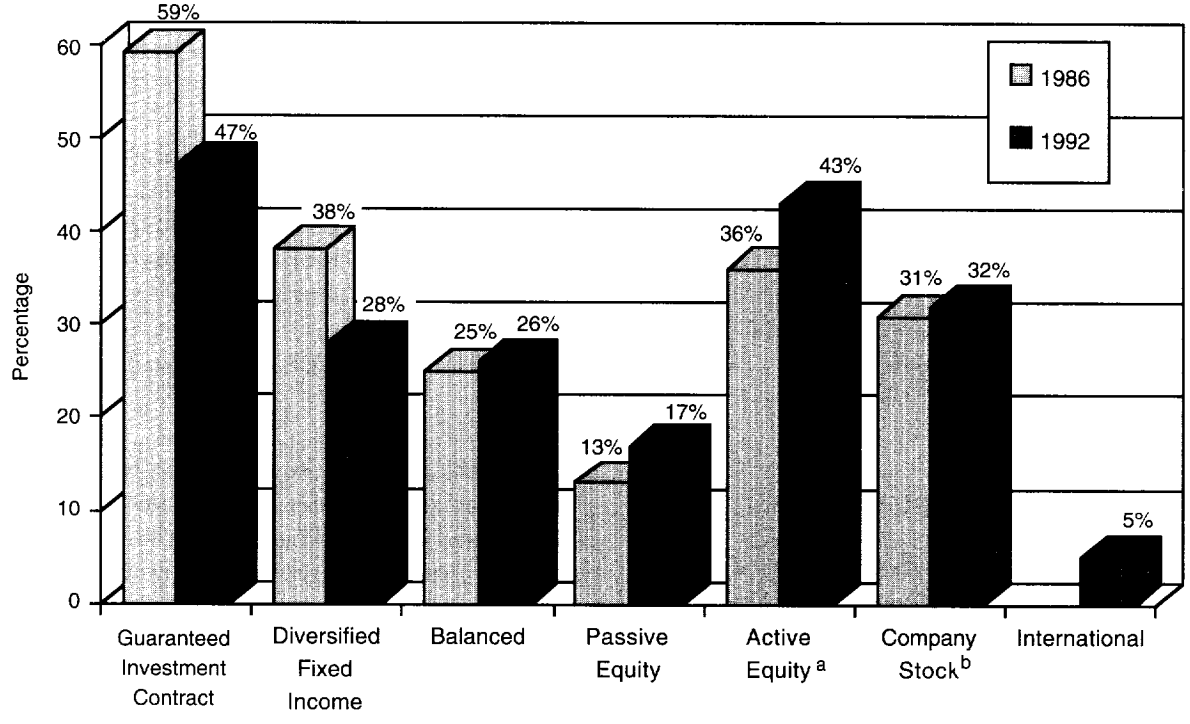
- Unaware—think company and Social Security will provide for them;
- Aware but can't fight feeling of futility;
- Aware but can't overcome inertia;
- Aware and acted, often with professional advice.

In many cases, employees do not have the know-how or tools to estimate what their retirement income needs will be or how much personal savings is necessary to supplement their pension and Social Security. Providing this personal information, accompanied by manageable solutions, can overcome the first three stages.

Further complicating the situation, many employees do not have any interest or competency in financial planning. In a recent survey Bankers Trust fielded with Market Facts, 43 percent of employees stated that they were unwilling to spend any time learning how to better manage their savings and investments. Yet an overwhelming number could not even differentiate among savings and investment vehicles. This suggests that information must be presented artfully and with intrigue in multiple media to break through lack of interest. Repetition is essential to catch each individual at a receptive moment.

Diversity in the employee base encompasses traditional demographic data such as age, income, marital status, and literacy level. It also reflects attitudes about risk, money, control, status, and the employer. Add varying skill sets and interests and it is clear that marketing retirement planning is more complex than marketing a traditional consumer product. Yet many of the same marketing principles apply to understanding the targeted segment and creating a plan to generate awareness of the need and drive intent to make a change. They must, however, be applied effectively and with continuous pressure. Ironically, most communications and education efforts look like legal documents, onerous reports, or

Chart 11.5
Investments Selected



Source: Bankers Trust Corporate DC Surveys.
[a]Includes diversified, growth, and income equity options.
[b]Excludes plans in which company stock is a required investment.

worksheets or software that are difficult to follow. They often require collecting and inputting a lot of data as well as making assumptions with no relevant knowledge base. Certainly, the proposal requiring prospectuses for 401(k) plan options will further confuse the situation.

At the point of making a change, our research indicates that many employees seek confirmation of their proposed actions either from a perceived expert, a family member, or a trusted friend or coworker. This should be no surprise. After all, most senior executives take advantage of company supplied financial and estate planning. Our research indicates one-on-one counseling in person with an objective third party is preferred. However, in general, the employees do not want to pay for the service. Objective interactive workshops and one-on-one counseling over the phone are well received alternatives.

Across our customer base, we have observed six common characteristics of successful retirement planning/education efforts.

- Attain sponsor and investment manager support and agree to parameters (particularly around company stock and advice) and goals. Although the incremental direct and indirect expense can seem high at first, it is small compared with the opportunity cost of individuals continuing with inefficient portfolios and not fully leveraging the savings plan benefits.
- Know the savings plan customer. Field a survey to understand needs and behaviors. Analyze plan demographics and compare them with similar plans. Based on these analyses, identify plan design issues and necessary plan enhancements. Communicate survey results and implications back to employees.
- Target employees with less investment savvy and those who are time poor, because they are the majority. The more sophisticated employees are probably proactively managing or seeking advice.
- Lay out a staged, multimedia program that recognizes that employees vary in where they are on the retirement planning learning curve. Borrow from the experts in consumer marketing, financial planning, mass media, adult education, benefits, and asset consulting. Break through the information overload we all face at home and at work by utilizing eye-catching design and powerful

copy. Keep it simple, concise, and involving by providing sample scenarios to which employees can relate. Facilitate the decision to make changes by providing all the information/forms/ voice response system instructions in one package. Wherever possible, be plan specific and even personalize to the individual.

- Evaluate results monthly and fine-tune programs accordingly. Communicate results to employees. Word-of-mouth is a powerful tool.
- Repeat what is working and identify innovative approaches to keep the pressure on. Many employees need constant reinforcement. For example, a voice response system message reminding investors that if they are investing for the long term, they do not need to react to each market gyration.

Successful Company Programs

Across the Bankers Trust client base, there are many individual examples of the successful application of the foregoing approach, although for many the results are just beginning to become apparent. Perhaps the most significant example is the IBM plan.

Focusing primarily on plan design, effective communication, and broader use of a dedicated 1-800-number participant access platform, IBM has increased its participation rate from approximately 70 percent to over 85 percent, while experiencing a pronounced shift in asset allocation from approximately 60 percent fixed income, 40 percent equity to almost 50 percent equity, 48 percent fixed income, and an emerging commitment to a balanced fund option. Of particular interest is that IBM achieved this result despite maintaining a low match. Based on Bankers Trust's studies, the extent of the company matching contribution is perhaps the most powerful variable (and one of the most expensive to change!) in influencing employee participation. Based on a match of 30 percent one would expect IBM to have a participation rate of 70 percent, versus the 85 percent actually realized.

The results would indicate that employer-sponsored defined contribution programs that emphasize sound design, effective communication, and broader employee access, can cost effectively foster a greater degree of effective participant utilization of these plans. Combined with sound legislation to continue incentives for employer-sponsored plans, greater recognition of the impact of defined benefit plans and retiree health care on retirement security, and continued innovation from retirement services vendors, it is possible to significantly increase the assets individuals accumulate for their own retirement!

Discussion After Mikkelsen, Sauvigne, and Martin Presentations

MODERATOR SALISBURY: Have you done an analysis of the "need" that these programs might fill?

MR. SAUVIGNE: Yes. We have been providing that information for a few years on our annual benefit statement. We take an individual's current account and their current savings rate and project. We then show what happens if they move that up 1 percent, 2 percent, 3 percent, etc.

MODERATOR SALISBURY: Have you done cumulative analysis?

MR. MIKKELSEN: Yes, we have. We've long been advocates of income replacement ratio analysis work. We have not as yet communicated it, as Mr. Rivera has, to our employees, although I suspect that's probably the next step.

MR. FLUHR: I have a question for both Curt Mikkelsen and Don Sauvigne having to do with the level of participation in the 401(k). I saw that for Morgan it was 66 percent, and overall it was 59 percent. Has the education improved that?

MR. MIKKELSEN: Yes, it has.

MR. FLUHR: Second, are all these people who are not participating those who would inherit a lot of money and don't have to worry?

MR. MIKKELSEN: First, in terms of 401(k) monthly deferral statistics for the nonmatched plan, among the highly compensated group, 71 percent are participating; among nonhighly compensated, 61 percent participate, for an overall 63 percent rate. I think what many people are doing is simply cycling their cash profit sharing into the 401(k).

MR. SAUVIGNE: At 88 percent, the differentiation between highly and nonhighly compensated is minor. There's a higher correlation to age and service. We eliminated the one-year wait; you can join the plan on day one, to get people started right away.

The education process has a very heavy influence. We emphasize that you don't have to be making $50,000 to participate. You can find a way to contribute at $20,000. At 3 percent or 5 percent you can do it. It has worked.

MS. MACUNOVICH: I have a question about these software programs. You say they allow individuals to play around with things like expected inflation rates and expected returns. Do the programs establish bounds so that they can't just conveniently assume 1 percent inflation and a 10 percent return on equity?

MR. SAUVIGNE: Our software does have limits in it. It also has frames of reference to use. For our 401(k) plan, we have built in for the eight funds, a 10-year history (as available) with the actual performance so that you can do scenarios. If that fund would continue to perform the same way in 5 years, what would it do in 10 years, and you can do a lot of other variations. You can put in spousal income. You can put in after-employment income. You can do a lot of "what ifs."

We've also recently introduced a personal financial program to further influence employee behavior about savings patterns for retirement. We'll pay up to $250 per year for a personal plan, so an employee can focus on the importance of personal financial planning.

MR. AMBACHTSHEER: The Achilles heel in these projection models are the return assumptions. You really triggered it by saying we give them the last 10 years. That's a very bad forecast for the future.

MR. SAUVIGNE: They can pull up 1 year, 5 years, or 10 years, as available. It's a method to assist in analysis. We just don't have 30-year histories on these funds.

MR. AMBACHTSHEER: But it suggests there's a shopping around that you're promoting. I think there's a real issue about what's realistic today, looking ahead 10–20 years. Where does that input come from?

MR. SAUVIGNE: I understand the shopping around concern, but in the frame of why it's there, it's working wonderfully.

MR. FROMME: I'm from AT&T. I'd like to answer Howard Fluhr's question and give you some background. We have two 401(k) plans, with 100,000 participants in each one. We presently have about 87 percent participation in the management 401(k) plan. When you cut the data by age, you find that you start to ascend up at about age 35–40. From 40 on we have at least a 90–95 percent participation rate until they retire.

We see the same thing in our union plan, even with wages that are lower on average. Again, it's the same ascent going from about age 20 to about 35, where we have about 40–50 percent participation. Once you get to age 35 or 40, you start seeing a much higher participation rate.

MR. RUSSELL: There's another point that's relevant here. A lot of these models are absolutely fantastic in terms of what they allow you to do, but there's a fairly steep curve in terms of utilization rates that is tied to age. You can link that back to when PCs and such things appeared in classrooms. Typically, people who are over about age 35 are not computer literate. So the models aren't used. So utilization rates are typically in the single-digit percentages. Obviously there are exceptions to the rule. They are slick tools that are absolutely fantastic. They're fun to play with, but they're not being used by a very broad segment of the population.

MR. BIRNBAUM: I wanted to second Keith Ambachtsheer's comment about the importance of expectations and expected returns. Some of the models, not specifically the ones referred to today, end up saying, for example, "you need to make 10 percent so get more aggressive." That's the end of the model. From the perspective of an investment manager, that's the beginning of the problem, not the solution. It's particularly true in the case of fixed income. Looking at the past 10 years will lead participants to very unfortunate conclusions about what to expect, and it may well be true of equity markets as well. They will expect high returns.

Employers need to wrestle with how comfortable they are in projecting results. We all know from the regulatory side, and it's absolutely explicit in mutual fund regulation, you can't project results. You can only show historical results. Yet what people need to have is a reasonable set of expectations for the future for a diversified portfolio. For employers, that's the key area: Are you willing to begin to make projections? Where are you going to get those projections? How certain or uncertain do you portray those projections to be? What liability do you incur by presenting projections?

I really agree with Keith. Performance expectation is the one piece of information that somebody getting serious about mapping out an investment strategy needs to have. It's also the piece that people are very reluctant to give them.

MR. FROMME: I think there's a connection being made by corporate America driving down DB [defined benefit] formulas from a 1.5 percent final five-year average to about a 1 percent. They are very interested in communicating that they have changed the pension commitment, so therefore, you better start saving. Together we will get you to the same place that you were before.

I think the corporations have changed their commitment on defined benefit plans and have decided they should educate their employees about this change in commitment.

That's what I think is happening out there, so you're not gaining on the gap that's needed for the future, you're simply reallocating.

They're going to cash balance defined benefit plans from traditional plans.

MR. MARTIN: We have not seen significant reductions in DB formulas, although we are starting to see more discussion about converting to cash balance plans. In some cases, companies are proposing an increase in the accrual rate when converting to a cash balance format.

MS. RAPPAPORT: I see more change in the form of an increase in the amount the employee has to pay for retiree health versus a reduction in the DB plan benefit. The DB plan's benefit is usually fixed, whereas it was more likely to increase in the past. So you encourage people to save more, and they have to pay more of their health benefits.

MR. SAUVIGNE: I hope you're right. I rather agree with George Fromme. As we look at a very competitive global economy, I'm just not so sure that companies can fund the continuance of a 1.6 or 1.5 DB plan. I'm not suggesting they're going to leave them altogether, but I think the value is going to shrink. Therefore, that scale has got to come up on the other side through education as employees do more on their own from day one of employment. I think this government has got to put the emphasis on training the work force to save.

MR. MIKKELSEN: Many plan sponsors are increasingly dealing with the defined benefit commitment they have in the retiree health care arena. We took steps several years ago to transform our commitment from defined benefit to defined dollar, and we've even eliminated retiree health care benefits for new employees who joined us after January of 1989.

MR. McCORMACK: Have any of the plan sponsors that have engaged in a high degree of education dealt with the post-retirement inflation issue? Most people set a goal. We heard 70 percent at Xerox is the goal as a replacement ratio of final salary. Obviously, if you have even a 3 percent rate of inflation, within a 10-year period after retirement that 70 percent has a whole lot less purchasing power. So not only is there a savings gap issue to deal with before retirement, there is inflation after retirement. I think any employers that point out a gap situation in their pension program are really opening themselves up to a lot of criticism from their employees.

MR. SAUVIGNE: Or on the plus side, a lot of credibility and thank you very much for pointing that out.

MR. McCORMACK: I agree, but then the opportunity is also there to deal with post-retirement inflation.

MR. SAUVIGNE: We've had ad hoc increases, if we're talking about the already retired.

MR. McCORMACK: No, I'm talking about educating individuals to the need to keep pace with inflation after retirement.

MR. SAUVIGNE: Yes. We have. We've been addressing that through script files that are in the software I talked about. We have it in our quarterly newsletter that goes out with our 401(k) plan. That talks about plan horizon—if you're 15 years away, 5 years away. It also talks about 10 years after retirement.

So the education is there. We're trying to build the awareness. We're not necessarily delivering the actual value. What we're saying is we can't. We are not Mr. Thompson's Social Security system that only has a 1.5 percent problem.

MR. SCHIEBER: My recollection of the discussion of the targets that Xerox was setting were for indexed benefits. It doesn't mean that they index the benefit, but in terms of defining the gap. If you've got the resources laid aside at retirement, hopefully, you can cover it.

MR. MIKKELSEN: I think it's great that it's being recognized. That's my only point. It needs to be recognized, and then the funding that is already insufficient becomes an even greater challenge.

MR. STEINBERG: I think that it is being recognized in some of the more sophisticated software programs. They'll reflect those pieces of their retirement income that will grow with inflation, like Social Security and the defined contribution assets. They will also show different rates of inflation for different pieces of living expenses after retirement such as separating out medical versus other living expenses.

MR. WRAY: Some of the mutual funds have very sophisticated programs. I agree they're not used enough.

MR. JACKSON: As a pensioner I haven't heard two things that I think are important. One is the three-legged stool. I get

Social Security. I get a pension. I've saved money. As far as I'm concerned, the more legs the stool has, the better. For example, maybe the company, if things get bad, will increase the pension benefits. That's something that helps the pensioner.

Second, although we're all talking about wealth here, there is a qualitative difference between a pension, an old-fashioned pension—paid monthly as long as Martha and I are alive, one or the other—and assets. Some assets are different from others, but this pension amount we can't outlive. A home provides monthly benefits in the sense of imputed monthly income. But as a homeowner I can also say there are local property taxes that keep mounting at a tremendous rate, and you have to have cash to pay them.

Regarding investment income, if you merely live on the interest and the dividends, it lasts, but the dividends can be cut. Interest rates can drop. I have a neighbor who had his retirement income assets in CDs and found his income drop to a point where he couldn't live on it. Then you start drawing down the principal.

There is a difference between a defined benefit pension plan and a defined contribution plan, and despite all the negatives, at least some defined benefit is good, I think.

Finally, I have a question. We were talking earlier about Social Security and employer-related pensions. We've got studies of individuals who are working and they have income and get pensions. It is entirely possible that, as you go out 10, 20, 30 years, there will be fewer employment opportunities for individuals who want to work. All sorts of companies are downsizing at this point. Everything we're talking about here is employment related. If we should get to a point where a larger and larger percentage of individuals in our society do not have employment income, not because they don't choose or don't want to work but because jobs are scarce, where is the safety net for them? The Social Security program is based entirely on earnings, and the employment-related benefits are as well. I think this could be a serious problem in the long run.

MR. ECK: I see some conflict here. Obviously, in the large plan market there's a lot of investment in communication/education, but we all know that's not the masses. How do we get to the folks that are outside the J.P. Morgans and the IBMs? We're putting a lot of faith into the programs, but we're certainly not getting to all of the individuals. I'd like to find out who these people are. So I wonder if we have to start taking a look at whether we really need to go out and tell folks what to do versus go out and educate them? A defined benefit program makes a lot of sense for a lot of coverage reasons, and individuals may not really want to learn how to be investors. The bottom line is that people are traditionally savers, and to change them to investors is a long-term challenge for all of us. How do you get to the smaller employer plans?

MR. MIKKELSEN: First, ours is a multi-media approach. We feel we have to continue to "shell the beach," and we think it's effective; but we dedicate an awful lot of resources to it. We're atypical in that our work force is quite well educated. We're in the financial management business, broadly speaking, and arguably our chore is an easier one than the one faced by other employers in other industries.

MR. SAUVIGNE: I think large employers have an advantage. Happily, I work with that part of the work force. We have an advantage of economies of scale and the ability to educate, the ability to provide the programs, the ability to provide feedback, etc.

I think something has to be done. I don't know what the answer is, but that group of DC [defined contribution]-only people that are going to be out there in the future may have problems. I think DB [defined benefit] plans have to remain as one of the legs of the stool for as many people as possible.

Whether we go cash balance or some other way, that's fine, as long as it's a DB and you get yourself some kind of security in the annuity. That's why I think there's so much need to focus beyond the 15 percent of the work force that works for large companies. Who's looking after the other 85 percent?

MR. VALENTINE: A hot topic many years ago was portability of pension plans. This seems to have been lost in a lot of the discussions. I think one of the things we need to do is foster vehicles that can be used outside of corporate America; things of the Keogh nature and the IRA nature that people can use and understand more readily. Maybe this could be married with something that is portable.

For me, it's been something less than that as I've moved through various companies. Are companies still looking at their retirement benefits today as being golden handcuffs versus a social obligation?

When vesting was 10 years, the retirement plan would be skewed to benefit only those people that had rewarded the company through longevity. Many companies have switched now to a defined contribution plan in order to attract the people who will be the job hoppers and to emphasize benefits presently available for people willing to change careers and change companies mid-term.

MODERATOR SALISBURY: Defined contribution plans are fully portable. About 40 percent of defined benefit plans now

provide an option for full cash portability. A fairly significant portion of the total plan universe provides for full portability. Paul Yakoboski and Celia Silverman's paper relates to this question of the difficulty of portability in the absence of preservation.

You're seeing the cash-balance approach introduce more portability, which is more readily a career-average formula than a final-pay formula. You're seeing it, as was mentioned by George Fromme and others, in a redefinition downward of the accrual rates in defined benefit plans and greater emphasis on defined contribution buildup to complement that smaller floor that's on top of the Social Security floor. You then get to the issue of communication. Enterprises absorb the front-end cost of developing the software programs that will then be available to small companies at an affordable rate.

The Lewin VHI model assumes in all of its projections nearly 100 percent portability and preservation and annuitization. To put a rough number to that, in 1990 that means it assumed carry-forward of about $50 billion that, in fact, left the system in that one year. If you take the four years of IRS data for 1987–1990, it would have assumed about $230 billion left the system. So we have both data issues and modeling assumption issues.

MS. RAPPAPORT: I will add to earlier comments on diversity and will raise the issue of women and the family allocation of retirement funds.

Many corporations are doing a great job today of improving information about investment options and motivating people to save more. At the same time, we're not doing a very good job of helping the family focus on the consequences of the death of a primary earning spouse, generally the husband, and the fairly long periods of widowhood.

I participated last year in a study group at the House Committee on Aging that looked at women in retirement and the problems for women after widowhood. We should consider this with the data in the CBO study of differences in income levels. I'd like to encourage us to think about that as a new dimension to our retirement planning.

Another comment about participation levels focuses on work forces with many single parents and others in very difficult economic straits. They don't have high incomes. There is not much chance to get some of those people to save. A single mother that's making $20,000 with two kids has too many immediate problems.

One thing that we didn't talk about much today, but mentioned, is retirement patterns and encouraging people to retire. We should be thinking more about definitions of retirement, and rethinking how people are going to live their lives.

One comment from the high tech companies raises new issues. I've heard recently from two of them who have been total DC companies and felt employees wouldn't stay very long. Now they have employees in their fifties who can't afford to retire. You say to them, "Do you have any retirees?" and they say, "Yes, but they're still at their desks, they can't afford to leave." The issues they're facing now are difficult. They have a different kind of work force/management issue.

MR. KINGSON: Anna Rappaport's comment again highlights the need to look at how change in the retirement income system affects groups differently. For example, to the extent that we initiate tax changes or benefit deliberalizations, the effects of Social Security on the low-income population should be uppermost in our minds. We need to look carefully at the consequences of changes we might make on today's older population, which is equally diverse, and on that next population of retirees as well—people in their fifties and sixties.

Similarly, in terms of planning savings, we must consider that benefit reductions for middle income populations may, on the one hand, increase incentives for retirement savings, but may have an offsetting effect by feeding into a sense of hopelessness about how to achieve retirement savings goals.

MR. MARTIN: I just wanted to add to the commentary on the small company. I hate in a public forum to say something good about mutual funds, but indeed Fidelity, Vanguard, T. Rowe Price, and Putnam do pursue plans as low as 100 participants and have very strong communication programs.

They may be pricey per average dollar, but they are effective plans, and I think competition will draw other firms into that marketplace through regional alliances. I think Frank Russell actually does some of that.

Technology is going to cheapen the cost of access in the long term. Cable television already has the capability for 500 channels, and we're getting to be able to be interactive. Five or ten years from now, people will be able to go to their television set and listen to the retirement news network. I really believe this will happen because it's a huge marketplace in that plan size below 3,000. So I think it will get better for the smaller companies.

MR. FLUHR: A couple of fears that I've had have not at all been ameliorated. I haven't really heard any answer to the issue of, if we're going to delay retirement ages, what are those people going to do for a living? I've heard we're going to train and educate them so we'll have more people with higher levels of capability, but where will the jobs be? I'm not optimis-

tic. I'm just looking at what I see going on in the world. We have many more people in the employment pool because 50 percent of women work now, versus 15 percent 25 or 30 years ago. Family income has gone up at a rate lower than individuals' because it now takes two, or one and a half people, to support a family. I don't see how we're going to support that system.

We've heard about very good experiences from Morgan and IBM. I'm not so sanguine about the ability to educate a wider range of people. Some of you may remember John Stuart Mill, not as a contemporary but as a writer; he believed that if we educate people early on and give them exposure and then teach them, that they will learn whatever they need to.

Anybody who has tried to tutor physics to somebody who just can't get it knows there are learning limits. I wonder if in the broader population we're not doing them, and ultimately everyone, a disservice by thinking that by giving them information and opportunity they can succeed in providing themselves with security. In some ways, I think we're giving them more opportunity to make more errors more frequently. The 1987 crash provides an example. Everybody left the market and went the wrong way. It is not easy to change.

I hark back to somebody else. We've all heard of B.F. Skinner trying to modify behavior without great success. All of this drives me to more concern, not less, that if we are going to rely on educating people to figure out how to save, we're going to be in for a big shock. Just when I get to retirement.

MR. STEINBERG: I think a pessimistic approach tends to foreclose a lot of good opportunities and ignore what we've seen in the past 10 or 15 years. If we assume that individuals can't take more of this responsibility, and act appropriately, there will be more reliance on Social Security and other government programs. I expect our experience with such programs will not be as good as it will be under approaches that rely on the private sector and the marketplace.

It takes time, but that doesn't mean people aren't trainable. Think about changes in how people conduct banking—the increased use of technology; how people manage their money—the growth in mutual funds. A lot of things have changed. It takes a while. Look at the growth of 401(k) plans. These things do take time, but people are indeed trainable. This isn't rocket science. It's complicated, but I think it's doable.

MR. FLUHR: I didn't mean to imply that we should give up. I'm concerned that we're a little too optimistic about being able to be really successful. I'm also concerned about the time frame, because the clock is ticking. There are a lot of people to educate and, as with PCs, there are a number of people who are chronologically challenged when it comes to learning. Long term we can be better off than we are, and certainly we want more responsibility and not less, but we shouldn't depend upon people who just can't be that responsible to be responsible.

MR. WRAY: There's a lot of pessimism around the table. I would just mention that it wasn't too long ago when 80 percent of the people in this country were involved in raising food, and now only 1 percent or 2 percent are doing that. Everyone else is employed in other areas, some of which didn't even exist in 1900.

I think that there is reason to be optimistic. There's a lot of change happening; but 401(k) plans, for all the knocking around they are taking, are still the best way for individuals to accumulate wealth in this country. Defined benefit plans are never going to be available in a lot of company environments. We need to encourage the one vehicle that really works. I'm not saying that it's the only solution, but there's a real cause for optimism here.

401(k) plans are now penetrating the market where there never were real retirement benefit plans in existence. You talk to vendors, and they are putting in hundreds of plans a year where people have never had the opportunity to have any retirement benefit. This is a very positive thing. We have a big challenge. It's an amazing thing to watch American business and all their service providers gear up to teach people to be investors. Only the elite ever understood investing in this country.

I personally am optimistic, unless we want to do what has been suggested by some, which is kibosh the employer system altogether, take our indexed defined benefit system, which is Social Security, and just crank it up. We have that option, but if we're not going to do that, there are certainly reasons for optimism.

MR. BIRNBAUM: On the question of education, one of the things that has come out in our research is what actually has import. A lot of what is done is very specific around investments, and when that didn't work, then the idea was to introduce investment concepts so people would have a framework for making decisions. The problem is that people don't care about investment concepts. Inherently there's nothing that the vast majority of adults are going to find interesting about investment concepts. If they are not interested in that, what are they interested in? The answer is, they're interested in themselves. They are interested in themselves and their families and their money and their future. That is actually where we think the most effective education takes place. The

education is not about investing, it is about your problem, and your problem is a retirement problem—the fact that your salary stops and your need for income doesn't. How are you going to fill that gap?

Education in that regard is actually motivational because when people begin then to recognize the long-term time frame over which it has to be solved and are presented a long-term investment solution, the concepts begin to make a lot of sense.

So we think the key to changing behavior is the motivational piece. The piece that talks to people as adults about the problem that they're about to experience. That works for mill workers in South Carolina as well as for bankers in New York.

MR. ECK: David Wray, I agree with your optimism that we are covering more people. But we also have to remember that in the lower end of the market these are primarily nonmatched plans. So participation levels are going to be in the 50 percent range. So we still have a gap in coverage. Although there's some good news, we still have to recognize that there's some bad news longer term.

MR. JACKSON: Just one observation. If I were an active investment professional, I would think the best thing that could happen to me would be to have millions of mill workers in South Carolina, steel workers in Pittsburgh, and so on, timing the market by shifting from guaranteed investment contracts to equities to international stocks to small cap stocks and so on.

MODERATOR SALISBURY: Our objective today was to put a series of observations on the table, a series of research pieces and facts, to begin bringing additional focus to the challenges of meeting the long-term retirement income security needs of Americans. Particularly in light of the challenges that have been pointed out to us by the government in recent weeks regarding Social Security and Medicare and trying to balance those systems.

There is not one approach. The emphasis that I take out of today is that we need to build on all of the pieces of the system. We need to expand educational efforts all the way around so that people are in a position to deal with life contingencies, both preretirement and at retirement.

Appendix: Policy Forum Participants

Moderator

Dallas Salisbury
Employee Benefit Research Institute

Authors and Speakers

B. Douglas Bernheim
Princeton University

Robert Birnbaum
J.P. Morgan Investment Management

Steve Farkas
Public Agenda

John Haley
The Wyatt Company

Jean Johnson
Public Agenda

Laurence Kotlikoff
Boston University

Joyce Manchester
Congressional Budget Office

Allan Martin
Bankers Trust Company

Curtis Mikkelsen
J.P. Morgan

Paul Rivera
Xerox Corporation

Don Sauvigne
IBM

Celia Silverman
Employee Benefit Research Institute

Paul Yakoboski
Employee Benefit Research Institute

Discussants

Eric Kingson
Boston College

Diane Macunovich
Williams College

William Madden
SEI Corporation

Olivia Mitchell
University of Pennsylvania

Eric A. Russell
Frank Russell Company

Lawrence Thompson
Social Security Administration

Participants

Keith P. Ambachtsheer
KPA Advisory Services

Emily Andrews
Mathematica Policy Research

Tom Arthur
Office of Management & Budget Labor Branch

Thomas A. Barthold
Joint Committee on Taxation

William Beeman
Committee for Economic Development

Jim Bell
Mead Corporation

Thomas E. Brooks
BellSouth Corporation

Neil A. Burger
Alexander & Alexander Consulting Group

Doug Burnette
American Society of Pension Actuaries

Joe Canary
Investment Company Institute

David Certner
American Association of Retired Persons

Meryl Chaum
John Hancock

Lorrayne Chu
Fidelity Investments

Robert Clarke
North Carolina State University

John Coder
Bureau of the Census

Al Davis
House Budget Committee

Doll de Golian
UNUM Life Insurance Company

Joseph G. Eck
State Street Bank & Trust Co.

Dan Ezrow
House Committee on Ways and Means

John N. Feldtmose
A. Foster Higgins & Co., Inc.

Steve Fernstrom
WF Corroon

Howard Fluhr
The Segal Company

Jay H. Foreman
United Food & Commercial Workers International Union

Robert Friedland
National Academy of Social Insurance

Edward H. Friend
EFI Actuaries

George A. Fromme
AT&T

Bill Gale
The Brookings Institution

Mike Gersie
The Principal Financial Group

Charles Godwin
Alex Brown & Sons

Mathew Greenwald
Mathew Greenwald & Associates

John Hambor
Department of the Treasury

Randolph Hardock
Department of the Treasury

Rhoda Harris
PaineWebber, Inc.

Richard Hinz
Pension & Welfare Benefits Administration

R. Byard Hires
Marsh & McLennan

Kathryn A. Hopkins
Fidelity Investments

James N. Houff
Bureau of Labor Statistics

Cindy Hounsell
The Pension Rights Center

Robert M. Hrapczynski
E.I. DuPont du Nemours

Constance Hubbell
Fidelity Investments

Fred Hunt
Society of Professional Benefit Administrators

Toni Hustead
Hay Group

Billy Jack
Joint Committee on Taxation

Paul Jackson
Society of Actuaries

Melissa Kahn
American Council on Life Insurance

Michael Kahn
National Education Association

Peter Kibalo
American International Group, Inc.

Shawn LaPean
Merrill Lynch Inc. & Co.

Robert F. Leonard, Jr.
NYNEX Corporation

David C. Lindeman
Pension Benefit Guaranty Corporation/
Social Security Adminstration

Fred A. Lizzi
New York Life Insurance Company

David Mabey
American Compensation Association

John J. McCormack
TIAA/CREF

Edward L. McGann
Chemical Bank

James B. McIntosh
MetLife Insurance Company

Frederic H. Morris
State Street Bank & Trust Co.

David Nearpass
Buck Consultants, Inc.

Janet Novak
Forbes Magazine

Kathryn Olson
House Committee on Ways and Means

Larry Ozanne
Congressional Budget Office

Bob Paul
Chairman, EBRI Fellows Program

Evelyn Petschek
Internal Revenue Service

Richard Prosten
AFL-CIO

Anna Rappaport
William M. Mercer, Inc

Kenneth J. Reifert
Merrill Lynch & Co., Inc.

Virginia Reno
National Association of Social Insurance

Melvyn Rodrigues
Atlantic Richfield Company

Bruce Rosenblum
Securities and Exchange Commission

Jane L. Ross
General Accounting Office

John Sabelhaus
The Urban Institute

Andrew Samwick
National Bureau of Economic Research

Steven Sandell
Department of Health & Human Services

Sylvester Schieber
The Wyatt Company

John H. Seiter
Capital Guardian Trust Company

Thomas P. Shea
New York Life Insurance Company

Edward Shugrue
IBM Corporation

David Skovron
Kwasha Lipton

Donald Snyder
General Accounting Office

Lisa Sprague
U.S. Chamber of Commerce

Allen Steinberg
Hewitt Associates

James Storey
Congressional Research Service

Darice Taverna
Citibank

Peter Taylor
Senate Budget Committee

Richard G. Tomlinson
The Upjohn Company

Mark Ugoretz
ERISA Industry Committee

John W. Valentine
Chase Manhattan Bank, N.A.

Mark Wasserman
Office of Management & Budget

Peter Wheeler
Social Security Administration

Stephen A. Woodbury
Advisory Council on Unemployment Compensation

John Woods
Social Security Administration

David Wray
Profit Sharing Council of America

Judy Xanthopoulos
Joint Committee on Taxation

Sheila Zedlewski
The Urban Institute

Employee Benefit Research Institute Staff

Malaika Barnes
Leah Blaugrund
Laura Bos
Sarah Boyce
William Custer
Patsy D'Amelio
Paul Fronstin
Deborah Holmes
Nora Super Jones
Kathy Stokes Murray
Carolyn Pemberton
Annmarie Reilly
Sarah Snider
Jack VanDerhei

INDEX

Page numbers in *italic type* refer to tables and charts.
Page numbers ending in *n* refer to notes.

NOTES

NOTES

NOTES

EBRI
Employee Benefit Research Institute
Suite 600, 2121 K Street, NW
Washington, DC 20037-1896

202-659-0670
Fax 202-775-6312

ISBN 0-86643-081-4
EAN 9 780866 430814 52995 >

ISBN 0-86643-081-4

As the baby boom generation begins to approach retirement age, concern over whether or not current workers are financially prepared for retirement has heightened. Recent studies that assess the prospects for baby boomers in retirement have come to sharply different conclusions.

Retirement in the 21st Century: Ready or Not? provides a comprehensive examination of baby boomers' prospects for retirement. By exploring the evolution of Social Security and the pension system, in conjunction with current workers' participation in pension plans and savings decision, this book presents the issues surrounding the forecast for retirement that today's workers are really facing.

This publication is organized into three parts — Baby Boomers' Retirement Income Prospects; Attitudes on Retirement Planning, Saving, and Preparedness; and Action, Inaction, and Plan Design: Can We Find a Predictive Model? Part One analyzes trends in the elderly's income sources and pension participation, saving behavior, job tenure, lump-sum distribution preservation, and changes in Social Security benefits as well as critically evaluates studies of the adequacy of baby boomers' saving. Part Two explores individual and employer attitudes toward planning, saving, and preparedness. Part Three considers whether individual savings and investment behavior can be changed or can be expected to change.

$29.95

ISBN 0-86643-081-4
An EBRI-ERF Publication

EBRI
EMPLOYEE
BENEFIT
RESEARCH
INSTITUTE