

Retirement Prospects in a Defined Contribution World

Edited by Dallas L. Salisbury



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Preface

The world continues to change at a rapid pace. Employers and unions, public and private, continue to drive the economic system toward greater productivity and competitiveness. The federal government, as an employer, has led the nation in the number of jobs eliminated; in reducing the generosity of its traditional defined benefit plans; and in introducing a generous defined contribution plan to which both the employer and employee contribute, allowing individuals to save for their own retirement.

Even the safe haven of federal employment is no longer available, and few will retire from that employer in the future with an adequate retirement income if they have not saved aggressively themselves. This reality is not entirely new, but broad-based recognition of the reality is new. That understanding is beginning to affect how employers, unions, and employees view employment and benefits. “Paternalism” is dead; self-sufficiency is alive and growing.

This collection of papers attempts to put the present realm of change into perspective. What does it mean for future directions, for retirement prospects, for the future of employee benefits, and more? Can individuals anticipate retirement in an increasingly defined contribution world? Will that world allow more people to do better than in the past, as some contend, or will it strip away security and the ability to retire comfortably, as others argue? Should the world return to annuity paying defined benefit plans as the rule, rather than an increasing exception? Some answers to such questions are set forth in this book. The implications are central to the future of retirement.

The book is based on a policy forum held by the Employee Benefit Research Institute Education and Research Fund on April 30, 1997, in Washington, DC. This was the 41st such policy forum held since they began in 1979. Pam Ostuw and Jack VanDerhei produced the forum, with the assistance of Jamie Chisley, Deborah Milne, Bill Pierron, Stephanie Robinson, Carolyn Stewart, and Paul Yakoboski. A very diverse group attended the forum (see attendee list on page 155) leading to rich discussion and information. Papers were enhanced by the authors following the session. The book was copy edited by Deborah Holmes, Lynn Miller, and Maureen Richmond, and layed out and prepared for publication and our Web site by Cindy O'Connor. The book is available online for EBRI members at www.ebri.org. The cover was designed by Design Smith, Inc. Seasoned journalist and EBRI Fellow Chris Conte wrote the executive summary for us.

I thank all who assisted in making the forum and the book possible, while taking full responsibility for any errors or omissions that may have occurred. The views expressed in this book are solely those of the authors and participants. They should not be attributed to officers, trustees, EBRI Members, its staff, or its Education and Research Fund. In publishing this book, EBRI-ERF is making no effort to influence any specific legislation.

Your comments and reactions to this work would be greatly appreciated. They would assist us in planning future research and forums aimed at assisting the nation in the continuing transition to “the new economy.”

October 1997

Dallas L. Salisbury
President and CEO
Employee Benefit Research Institute



About the Authors

Shlomo Benartzi is a faculty member at UCLA's Anderson Graduate School of Management. He received his Ph.D. from Cornell University's Johnson Graduate School of Management. His research focuses on defined contribution pension plans. In particular, Benartzi attempts to improve asset allocation decisions made by individuals and increase participation rates in pension plans. His work has been frequently discussed in top magazines, including *The Economist*, *The National Bureau of Economic Research Digest*, *Pensions & Investments*, and *The Wall Street Journal*.

David S. Blitzstein has been director of the United Food and Commercial Workers International Union (UFCW) Office of Negotiated Benefits since 1990. The office advises UFCW local unions in collective bargaining on pension and health insurance issues and is involved in strategic planning, with the goal of preparing the UFCW for the benefit issues of the 21st century. In addition, Blitzstein acts as an advisor to the Union's 150 jointly trusteed health and welfare and pension plans nationwide and is a trustee of the \$2.2 billion UFCW Industry Pension fund and the UFCW National Health and Welfare Fund (Social Security Fund). He is also involved in public policy as it relates to employee benefits, is a member of the working committee of the National Coordinating Committee for Multiemployer Plans (NCCMP) and the Employee Benefit Research Institute (EBRI), and is a director of the Pension Research Council of the Wharton School at the University of Pennsylvania. Previously, Blitzstein served as Director of Corporate Strategies for the United Mine Workers of America (UMWA). He still serves as a trustee of two UMWA funds in the construction industry. Blitzstein is a graduate of the University of Pennsylvania and holds a master of science degree in labor studies from the University of Massachusetts in Amherst.

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Congressman Earl Pomeroy, recently elected to his third term in the U.S. House of Representatives, sits on the House Budget and Agriculture Committees and is a member of the House Democratic Leadership Caucus. Pomeroy has emerged as a substantive force on issues ranging from farm policy to overhauling the nation's retirement system, and he has built a reputation as a hard-working, reform-minded lawmaker who believes in applying North Dakota values and common-sense to the problems facing our nation. He is a leading congressional expert on the topic of pension and retirement savings reform. In late 1995, he co-founded a bipartisan, bicameral Steering Committee on retirement issues, which hosted a series of policy seminars during the 104th Congress.

Pomeroy earned his Bachelor of Arts degree in political science from the University of North Dakota in 1974 and his law degree from UND in 1979. He undertook graduate research in legal history at the University of Durham in England. Upon graduation, Pomeroy returned to his hometown and practiced law for five years. He was elected to the State Legislature in 1980 and elected State Insurance Commissioner in 1984. He served as President of the National Association of Insurance Commissioners in 1990. Pomeroy is married to Laurie Kirby, and they have two adopted children, Kathryn and Scott.

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Retirement Prospects in a Defined Contribution World: A Report on EBRI's April 30, 1997, Policy Forum

by Christopher R. Conte

■ Introduction

Will Americans be able to afford retirement in the future?

With public retirement systems staggered by the aging of the work force and employers realigning their pension and employment practices in the face of global competition, that question has assumed new urgency in recent years. But the answer remains elusive. Cross-cutting forces are combining to shift more of the responsibility for saving—and more of the risk associated with investing—away from employers and onto the shoulders of individuals. Some are well positioned to meet this challenge. But for many people who were raised in the post-New Deal era of entitlements and grew accustomed to the easy prosperity of the post-World War II years, it is a brave new world.

On April 30, 1997, the Employee Benefit Research Institute (EBRI) convened a forum of retirement and benefits experts to examine retirement prospects in the new, “defined contribution” world. Not surprisingly, opinions varied substantially. Some participants took a grim view. Actuarial consultant Edward H. Friend and United Food and Commercial Workers International Union representative David Blitzstein, in particular, argued that the nation should reverse its move toward emphasizing greater individual, rather than collective, responsibility for retirement saving. There were no cockeyed optimists on the other side of the debate. Instead, the hopeful end of the spectrum was perhaps best represented by William Gale, an economist and senior fellow at the Brookings Institution. Gale described himself as “cautiously optimistic,” but added: “It’s better to emphasize the caution than the optimism.”

On one point, though, almost everyone agreed. We live in what EBRI President Dallas Salisbury described as “an environment of dramatic change and fundamental challenge.” As the forum made clear, planning for retirement in the coming century raises very difficult questions for policymakers, employers, and individuals alike.

■ Retirement Income Today

The discussion began with an assessment of how current retirees are faring and a look at some of the forces that will affect the chances that today’s workers will achieve financially secure retirement in the future.

Contrary to fairly widespread popular belief, retirement is far from golden for many of today’s elderly. According to Salisbury, the median income of retirees currently is just \$11,553. Despite Social Security, Medicare, and “fairly successful” pension programs, he said, poverty rates are higher, and income lower, for the elderly than for the working population.

Even workers who have held their jobs for 20 or 30 years—long enough to be fully vested in most traditional private pension plans—face a big challenge in making ends meet in retirement. A typical worker who earns \$35,000 a year and puts in 30 years on the same job will be able to replace only 65 percent of his income with pension and Social Security benefits, according to Salisbury. That is far short of the 80 percent benchmark recommended by many financial planners.

The likely “replacement rate” for workers who earned more or had fewer years on the job is even lower. And shorter job tenure is becoming more common: In 1996, the median job tenure for em-

employees ages 55–64 was just 12 years, down from about 16 years in 1991.

To make matters worse, rising medical costs represent what John Rother, director of legislation and public policy for the American Association of Retired Persons, called “the elephant in the room,” jeopardizing even some of the best laid of retirement plans. Currently, retirees typically collect about as much in Medicare benefits over a lifetime (\$232,000 in 1993 dollars) as they do in Social Security payments (\$237,000). But while the value of lifetime Social Security benefits is slated to rise to about \$324,000 by the year 2030 under the current benefit formula, the lifetime cost of the same medical services currently covered by Medicare will soar to \$497,000. The government almost surely will not be willing to bear that much of an increase, so retirees will need substantially more income just to maintain their current standard of living, argued Salisbury.

They may need a lot more. Advances in biomedical research—including increases in our understanding of how cells age and how nutritional supplements can improve immune systems—could lead to increases in life expectancy far beyond current projections, reported Axel A. Goetz, president of Goetz Group, Ltd. He said researchers recently have concluded that if there is a “hard limit” to human life spans, it must be above 130 years. Goetz likened current methods of projecting life expectancy to “looking in a rear-view mirror while driving forward.”

Appealing as longer lives would be, there is ample evidence that many people are not prepared for them financially, according to Mark Warshawsky, manager of pension and economic research for the higher education pension system, TIAA-CREF. Warshawsky noted that poverty rates tend to increase dramatically with age, suggesting that people are not saving enough. Part of the problem, he said, may be that annuities lose value over time because of inflation. Warshawsky proposed developing a new type of annuity that would include provisions for long-term care. He also suggested that annuity payments should be adjusted for inflation.

It is doubtful that new financial instruments alone can solve the retirement savings problem, however. Salisbury concluded that the times call for a new savings ethic. “Individuals in the past didn’t

think they needed to do a lot,” he noted. “They were getting a whole lot of messages that said, ‘It will be taken care of.’ Don’t worry.” While there are signs that people are becoming more aware of the need to save, many still mistakenly believe that employers or the government will cover their costs for long-term care or otherwise bail them out if they are hit by unexpected costs. “There is still a tremendous misunderstanding of what these programs will and will not provide,” Salisbury said.

■ The Global Rise of Defined Contribution Plans

Even as the financial demands on retirees are growing, governments and private employers around the world are hedging their long-term commitments to retirement security. Instead of promising employees a certain level of pension benefits based on age and years of service (a defined benefit system), more and more employers prefer helping employees save up front but then letting actual investment results—based often on the employee’s own investment preferences—determine the size of the retirement nest egg (defined contribution approach).

There are numerous reasons for this trend toward defined contribution plans. Scott Dingwell, a principal with Barclays Global Investors, attributed the switch partly to the mounting financial difficulties of government pay-as-you-go systems such as Social Security, whose solvency is threatened in many countries as the baby boom generation approaches retirement. David Healy, a principal with Towers Perrin in New York, added “oppressive regulation” of traditional pension systems to the list of causes. He also suggested that employee preferences have played a big role; most people, he said, are not attracted to companies based on their retirement plans, and many employers have concluded that pensions cost more than they are worth.

Curt Mikkelsen, who retired in 1996 after 25 years with J.P. Morgan, argued that the trend toward defined contribution systems arises from even broader management considerations. In today’s highly competitive global economy, where products and services typically have short shelf lives and companies must innovate constantly, employers are putting more emphasis than ever on

controlling costs and maintaining “flexibility” in managing their work forces, he said. According to Mikkelsen, defined contribution plans are seen as more effective in achieving both objectives than “longevity-based benefits and their associated employee entitlement-fostering mentality.” Moreover, Mikkelsen argued, many companies now see defined benefit plans as “dysfunctional” because they believe employees’ value to their companies declines after age 35 or 40 and 10–15 years of service. He also noted that defined contribution systems are more adaptable to corporate mergers, acquisitions, and divestitures.

The actual impact of defined contribution plans on retirement depends on many things, of course, including the level of actual contributions and how the funds are invested. In many countries, contributions are mandatory, noted Estelle James, lead economist for the Policy Research Department of the World Bank. In Chile, for instance, workers are required to put 10 percent of their wages into retirement plans; individuals can choose who will manage their funds, but the government closely regulates the pension managers. In Australia, mandatory contributions eventually will reach 15 percent, with employers and workers together putting in 12 percent and the government kicking in another 3 percent. In Britain, on the other hand, employer contributions have declined with the transition to defined contribution plans, according to Dingwell; while employers put 15.4 percent of wages aside in defined benefit plans, their contributions to defined contribution plans amount to just 8.2 percent of wages, he said.

Some countries have managed to maintain a degree of what Americans would consider paternalism even as they have moved toward defined contribution systems. In a number of countries, James noted, employers or union officials make investment decisions on behalf of employees. Partly as a result, while pension experts in the United States commonly worry that workers invest their funds too conservatively, passing up long-term gains in order to avoid short-term losses, some 76 percent of defined contribution plan assets in Britain are invested in so-called lifestyle plans, which base the equity-debt mix of assets on the investor’s age (and therefore their ability to ride out adverse swings in stock prices). Similarly, Dingwell noted, Australia has designated a range of

lifestyle funds for investors who do not manage their own retirement savings. Some foreign countries also have taken steps to make their defined benefit systems portable, ensuring greater retirement security to people who change jobs frequently.

Some innovations in the United States, on the other hand, may work against the goals of requiring workers to save and invest for the long term. “Is daily valuation (of retirement portfolios) really the right idea if we’re trying to encourage people to think long term?” Dingwell asked. “Are loans (against retirement savings) a great American practice that should be exported?”

■ American Retirement Programs in Transition

If individuals are now responsible for managing their own investment portfolios, it is hard to deny them information on the value of their savings whenever they want it. And if employees are told that, instead of working for a defined pension benefit, their retirement funds are in defined contribution accounts that belong to them, it is hard to say no when they want to use the funds for purposes other than retirement.

In fact, a number of forum participants argued, retirement savings in the United States increasingly are coming to serve broader financial purposes than just retirement. That is partly because workers’ needs have grown more varied as the work force has become more diverse, noted Jack Bruner, national practice leader for benefits consulting at Hewitt Associates. People have hierarchies of needs that vary from individual to individual. Besides retirement, for instance, some people must save to buy homes, to finance their children’s education or their own further education, or to care for aging parents. And most, if not all, of these other needs generally come earlier in people’s lives than retirement. “Is there any wonder we’ve got lump sums being diverted or used for other purposes?” Bruner asked.

Employers, meanwhile, have strong reasons to accommodate people’s wishes that their savings be available for purposes other than retirement, according to Bruner. In particular, he explained, many companies face serious attrition among younger workers. These employees, who frequently change jobs after a few years, are more likely to

stay with a company that helps them save to make a down payment on a home or to finance children's education than one that offers them a pension benefit they can collect only after 20 or 30 years.

To illustrate his point, Bruner described a company that operates a chain of stores catering to teenage girls. The company was eager to hire a sales force consisting of young women in their 20s because such clerks would be most able to establish rapport with the target clientele. Recognizing that a traditional retirement plan would have attracted middle-aged clerks instead of younger ones, the company deliberately fashioned its benefits package to stress helping employees save to "get a first apartment or make a down payment on a car," Bruner said.

Similarly, Glaxo-Wellcome recently restructured its employee savings plans to include a separate 401(k) retirement savings plan and a "life cycle account" that employees could tap for short-term objectives, Bruner noted.

The new, flexible approach to benefits may not be consistent with the broader public interest in building an adequate safety net for retirement, but employers cannot afford to worry about that, according to Bruner. "What companies do won't relate to our public policy decisions as much as to what they need to accomplish," he concluded.

Given the short-term nature of many employee financial needs, Bruner said, it is not surprising that many employees spend, rather than roll over, the lump-sum distributions of retirement savings funds they receive when they change jobs. Nevertheless, EBRI senior research associate Paul Yakoboski said people are holding on to such distributions more than they did just a few years ago. The portion of distributions that were rolled over climbed from 35 percent in 1993 to 39 percent in 1996, he said.

Moreover, larger distributions are rolled over more often than smaller ones; according to Yakoboski, only 19 percent of distributions valued at \$3,500 or lower were rolled over in 1996, compared with 85 percent of those valued between \$50,000 and \$100,000. And not surprisingly, older workers are more likely to roll over lump-sum distributions than younger ones; one-half of all people in their 50s who receive lump-sum distributions roll them over, compared with just over one-quarter of all recipients in their 20s.

"The trends are encouraging, but we should be a bit concerned about the levels," Yakoboski said.

■ Focus on the Individual

As the analysis of lump-sum distributions demonstrates, the future of retirement in a defined contribution world will be decided to a significant degree by individuals, not by large institutions. This is especially true in the United States, where individualism is particularly valued.

"The battle for financial security...in the future...more than anywhere else will be fought on the shop floors and in the retail outlets and in all those places where people live and work every day and where information is exchanged every day," said Bruner.

Numerous forum participants said this suggests the need for more—and better—education. "Even though we are certainly transferring a lot of risk onto the shoulders of participants [by] asking them to make their own asset allocation decisions and asking them to contribute more heavily to these programs, there seems to be consensus we aren't giving them as much education as we should," said Dingwell.

Indeed, Alfred R. Ferlazzo, president of Investcom, called for a whole new "defined contribution paradigm." Ferlazzo said defined contribution plans generally have been designed and marketed as if plan sponsors are the primary customers. But this approach "isn't getting the job done," he said. "We have to start thinking about plan participants as the primary customers of all the work that we're doing."

Investcom provides employee and retiree investment communications services and advises plan sponsors on their plans' administrative and investment aspects. The most successful defined contribution systems today, Ferlazzo argued, strive to address employees as individuals through interactive services such as seminars. Simply delivering "gobs and gobs" of printed material doesn't meet employees needs, Ferlazzo said. What makes a real difference is "somebody helping them work through this material." Ferlazzo also suggested that plan sponsors in the United States have placed too much emphasis on giving employees more investment options and not enough on ensuring the quality of those options and educating

plan participants about retirement issues broadly. “While it may have been a great idea to move from two or three investment options, on average, to five or six, it’s not clear to me at all that moving from five or six to seven or eight is necessarily a good idea for plan participants,” he said.

Moreover, several forum participants argued that employers retain substantial responsibilities even in a defined contribution environment. Ferlazzo, for instance, suggested that at least some employers could provide their employees with useful investment expertise. He cited the Xerox Corp., which decided in 1993 to increase the number of investment options it offered employees for their retirement savings. After probing employee views, the company decided that, rather than offer its employees lots of new mutual fund options, it would add just three new investment options, each managed by the company’s own defined benefit plan investment experts. The funds have performed well, and the only disadvantage to the company has been the time it had to spend explaining the new system, according to Ferlazzo.

Similarly, Shlomo Benartzi, a faculty member at UCLA’s Anderson Graduate School of Management, argued that quality is more important than quantity when it comes to informing plan participants about investing. Benartzi cited economic research that shows many people suffer “myopic risk aversion”—i.e., they irrationally strive to avoid losses, even short-term ones, at the cost of forgoing greater long-term gains. This psychological tendency, combined with people’s tendency to track investment performance too closely, explains why many Americans don’t invest as much as they should in equities, according to Benartzi.

In an experiment involving staff at the University of Southern California, Benartzi and University of Chicago Professor Richard Thaler demonstrated that, when employees are shown long-term investment results rather than short-term ones, they overwhelmingly choose to put their retirement money into stocks rather than bonds.

The moral, according to Benartzi, is that sometimes too much information—in this case, daily valuation of retirement portfolios—does more harm than good. “We are in an age where we have hyper information,” he said. “We have toll-free numbers, we have the Internet, we have Web pages. Individuals can get more information than

they can ever process, and they can get it every day of the week. We are not sure this is the best thing.”

But are Americans really investing too conservatively? Thomas Healey, managing director of Goldman, Sachs & Co., argued that asset allocation in individually controlled defined contribution plans actually is quite similar to that in professionally managed defined benefit plans. The real problem with defined contribution plans, Healey argued, is lack of diversification. The problem arises in plans where employees hold substantial amounts of their own companies’ stock, according to Healey. Conceding that companies with such plans have a legitimate interest in trying to build an “identity of interests” between employees and stockholders, Healey stopped short of endorsing proposals to prohibit the practice, though. Instead, he said, employees should be allowed to diversify as they approach retirement age.

Richard Hinz, chief economist for the Labor Department’s Pension and Welfare Benefits Administration, suggested that the concerns of Healey, Benartzi, and Ferlazzo may be more theoretical than real. Only a handful of all defined contribution plans—fewer than 0.5 percent—have more than 10 percent of their assets in employer securities, he said. Moreover, since a sizable portion of lump-sum distributions are not rolled over, employees actually may be quite wise to invest in ways that minimize the danger of short-term losses. “The asset allocations you observe may in fact be a very rational and logical liquidity preference on the part of individuals who see these accounts to be little more than short-term, tax-avoidance mechanisms rather than long-term savings,” Hinz said.

“Workers have a better intuitive grasp of investment and portfolio structure than we’re inclined to give them credit for,” he concluded. “The problem that we ought to be focusing on primarily is getting more people into that system and getting them saving in the system rather than worrying about their asset allocation.”

■ The Future of Retirement

What does all this mean for the future of retirement?

Joseph F. Quinn, a professor of economics at Boston College, predicted that a growing number of Americans will work well past the traditional

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retirement age. In fact, he said, this already is happening. Almost one-half of all career men and women—42 percent of men and 47 percent of women—take “bridge jobs” rather than go immediately into full-time retirement once they leave their career jobs, according to Quinn. In fact, he noted, earnings now account for 20 percent of the total income of all retirees, about the same as pension payments and asset income (the remaining 40 percent comes from Social Security).

Ironically, Quinn noted, public policy increasingly encourages people to work past the normal retirement age even as many employers discourage it. The mandatory retirement age has been eliminated, and Social Security earnings limits are “on the way out,” while many defined benefit plans penalize workers who stay on the job too long, he noted. “If we combine increasing life expectancy [and] improved health with this mixed public-sector/private-sector message, we’ll find even more people who leave their career jobs when the pension incentives dictate that they do, but then continue on in the labor market in new jobs, often in new occupations, often part time, sometimes self-employed,” he concluded.

Some people, of course, work by choice rather than necessity. But a number of forum participants viewed the prospect of longer work lives as part of a worrisome trend. “Welcome to the increasingly Darwinian world of reduced expectations,” said Curt Mikkelsen, J.P. Morgan’s retired benefits director. “I am less than optimistic that most baby boomers will retire in relative financial comfort given the substitution of relatively less generous defined contribution plans for defined benefit plans, reduced job tenure, increasing life expectancy, and high retiree medical and long-term care costs.”

The Brookings Institution’s William Gale, though, pointed out that it is virtually impossible to generalize about how future retirees will fare. About one-third of baby boomers are doing quite well, he said. Another third are doing poorly, and the rest are somewhere in between. “We’re not talking about an entire generational problem,” he concluded.

To David Blitzstein of the United Food and Commercial Workers International Union, the very disparity in circumstances raises public policy concerns. “A defined contribution retirement system will promote a society divided between

winners and losers, where retirement security will be a hostage to capital market risk, a pre-1935 landscape where old age and poverty will become synonymous again,” he argued. He cited research by the Economic Policy Institute showing that the wages for many American families have declined in real terms since the 1970s.

Blitzstein’s comments underscored a concern raised by a number of speakers: Many people have little or no retirement income—from either defined benefit or defined contribution plans—aside from Social Security. This is not a small group. According to Salisbury, the poorest 20 percent of retirees depend on Social Security for 90 percent of their income, and the next 20 percent for more than two-thirds of theirs.

Blitzstein called for a “regenerated defined benefit” pension strategy—one that would include employee contributions, possibly mandatory, and would include provisions ensuring portability. Edward Friend, the consultant, meanwhile, saw practical reasons for a return to the defined benefit approach. A defined benefit system with “enlightened management” would return about 1.5 percentage points more than a defined contribution plan with assets invested in lifestyle funds, he said. Along with about a 0.5 percentage point savings in administrative costs, that would produce enough returns to pay for indexation of benefits on retirement, according to Friend. “The nation needs to look hard, Congress needs to look hard, at changing direction,” Friend said. “Don’t accept the fact that a defined contribution system represents an inevitable fait accompli.” But Rep. Earl Pomeroy (D-ND) said a return to the defined benefit system of old is unlikely. “There has been much more risk given to the employee in the private work force,” he said. “We will not reverse that. We will not stop that trend.”

Pomeroy said Congress should encourage more educational efforts, expand opportunities for individuals to accumulate savings in tax-deferred retirement accounts, and try to “mitigate as best as possible the new levels of risk that have been shifted to employees.” He specifically recommended expanding the income limit on families that can make tax-deductible individual retirement account contributions to \$100,000 from \$50,000, and he suggested that Congress should look at ways to discourage people from taking lump-sum distribu-

tions, although he admitted that idea goes against the grain for many politicians.

But while insisting that “much more can be done” to address concerns about the adequacy of retirement income, Pomeroy made it clear that there are limits to what government will do. The new standard concerning retirement policy, Pomeroy suggested, was best summed up by

Washington Post writer E.J. Dionne in a column about Tony Blair, Britain’s Clinton-style Labor Party leader and now new prime minister. Said Dionne, “Tony Blair favors a nation in which the strong know the weak need help, and the weak know they need to stay on the move and help themselves.”

Section I

The Concept of Retirement Is in Transition: Why?

1. Retirement Income in America: Where Are We Now and Where Are We Going?
Dallas Salisbury
2. Life Expectancy and Retirement Income
Axel Goetz
3. The Role of Bridge Jobs in the Retirement Patterns of Older Americans in the 1990s
Joseph F. Quinn
4. The Darwinian World of Reduced Expectations
Curt Mikkelsen
5. Retirement Security: A Market Driven Approach
Jack Bruner

1

Retirement Income in America: Where Are We Now and Where Are We Going?

by Dallas L. Salisbury

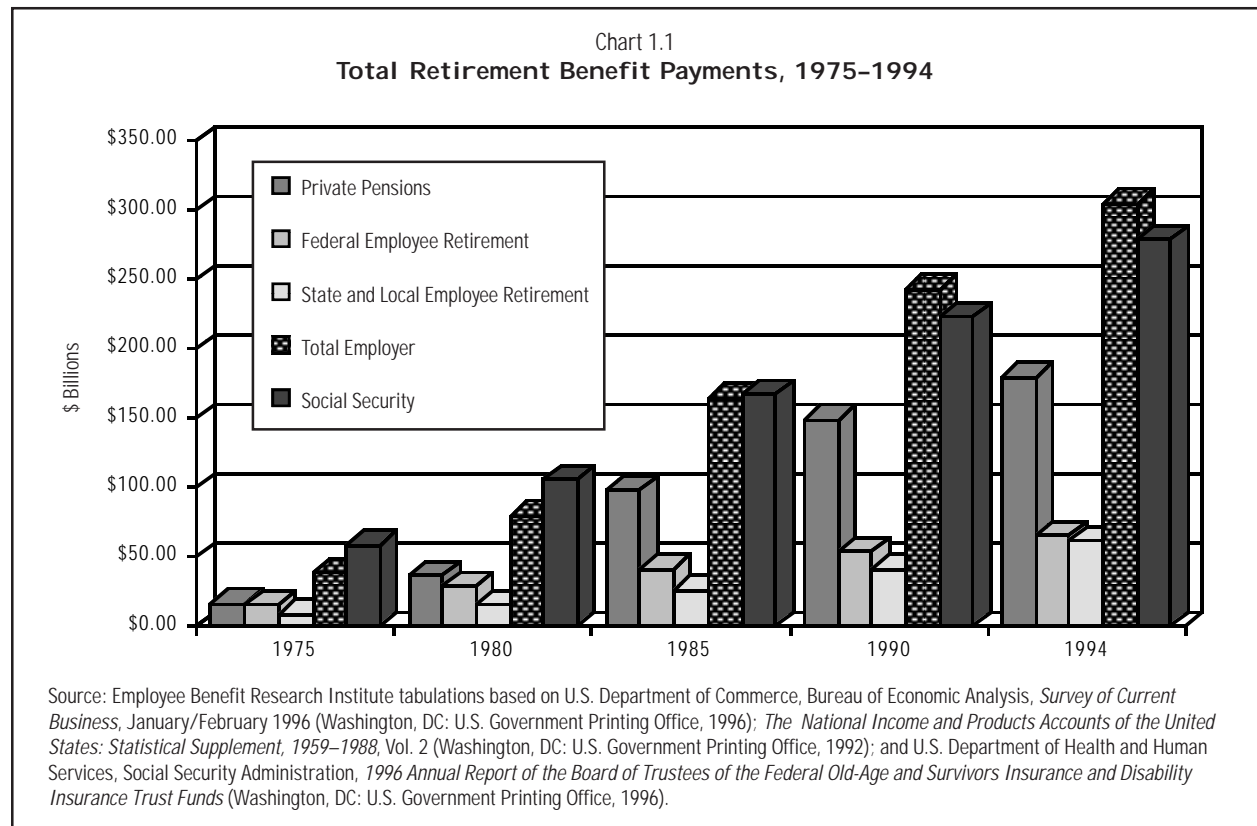
■ Introduction

This public policy forum sponsored by the Employee Benefit Research Institute (EBRI) focuses on two questions: Where are we now and where are we going in terms of retirement income in America? Chart 1.1 provides a comparison over time of the total value of retirement program benefits payable to retirees. The chart's data make two points. First, payments have grown and are growing at a rapid pace. Second, employment-based pensions provide more total income to retirees than the Social Security program.

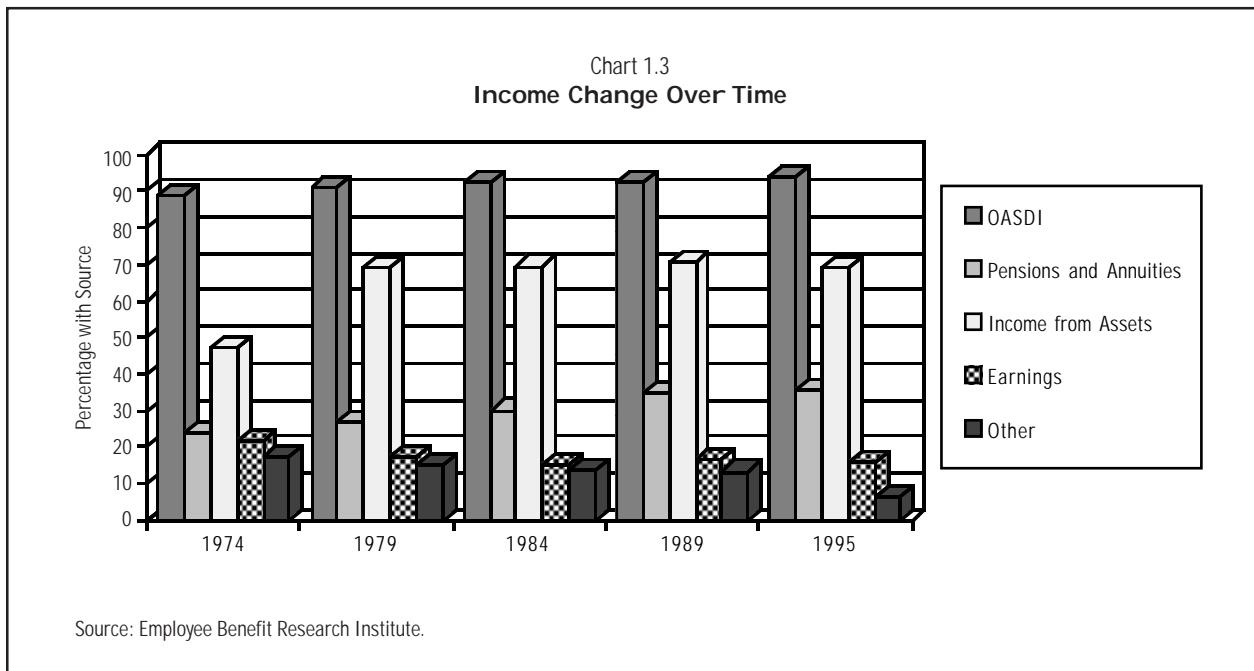
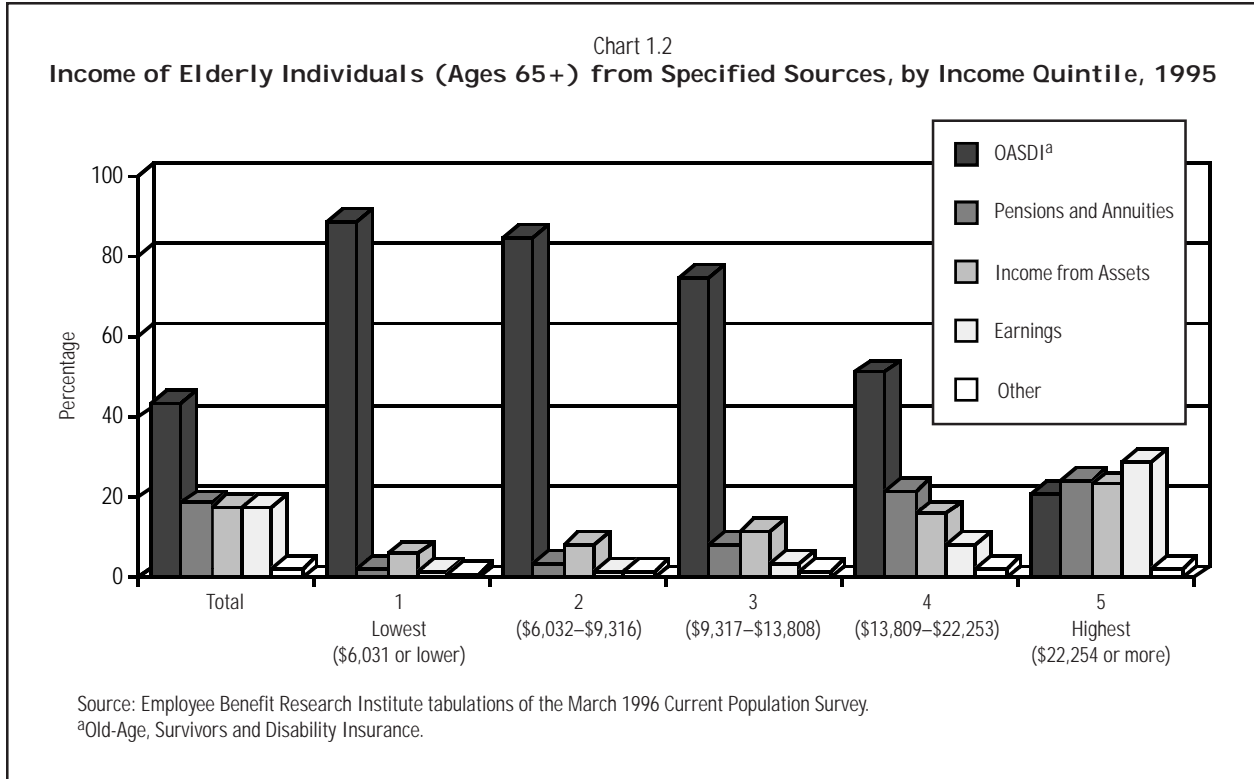
Chart 1.2 presents a picture across income quintiles of the current retiree population and their sources of income. It shows that the distribution of

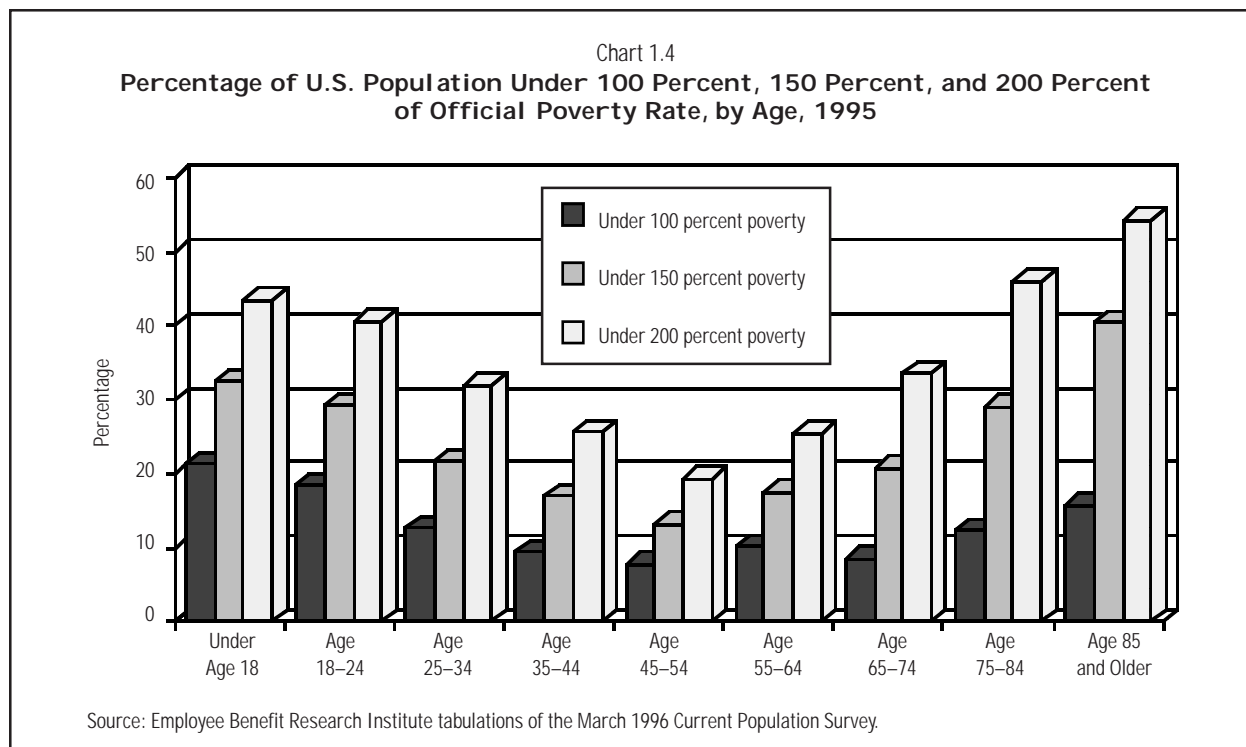
those alternative sources of payment is anything but smooth. Social Security is the most important source of income for over 80 percent of retirees. At the lowest income quintile, a maximum of \$6,000 per year, Social Security is literally the only income source, as it is for the next 20 percent. When we move to the middle 20 percent income quintile—representing about \$9,000-\$14,000—we still see nearly 70 percent of total cash income coming from Social Security.

The top quintile, individual retirees with income in excess of \$22,254 per year, shows a greater balance among income sources, with approximately 25 percent of income coming from each of four sources—Social Security, pensions, savings, and work. These numbers debunk the



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popular advertising stereotypes of today's retirees as well-off, carefree people playing golf, traveling, and spending time with their grandchildren.

Chart 1.3 shows income change over time from each major source of income by prevalence. Employment-based pensions have provided for increasing numbers of retirees over time, a trend that is likely to continue.

Even in this age of Social Security, Medicare, early success in pensions and various other means, elderly poverty rates remain significantly higher than among those in the work force, and relative income levels of the elderly remain significantly lower than income levels of those in the work force. In fact, the rates of poverty among children are somewhat lower than the rates among the retired population, as shown in chart 1.4. Chart 1.4 also clearly illustrates the fact that total income declines fairly substantially with age. Social Security grows at all ages, however, because Social Security benefits are indexed for inflation, unlike the benefits provided by other programs.

In terms of absolute dollars from income sources for the retired population, consisting of the entire population of those age 65 and older, median income—50 percent above, 50 percent below—is slightly more than \$11,500, as shown in table 1.1. The average is about \$17,000. If we look at the

relative sources, we find that money from individual retirement accounts (IRAs) and 401(k)s—relatively new phenomena that began in 1981-1982—today are producing, at the median, a reasonable amount of money for a very small percentage of retirees. The average amount produced by these sources—\$66—tends to emphasize that result.

The Social Security system, both in median and mean—and in terms of dominance—has been relatively constant. Private pensions and public pensions on average have been relatively constant in terms of what they produce across the average of the total population, although more variation exists

Table 1.1
Mean and Median Older Income

Source	Percentage Distribution	Percentage	Median	Mean
Total	1.0	1.0	\$11,553	\$17,128
IRA/Keogh	.01	.01	4,000	66
OASDI	.42	.93	7,627	7,237
Private Pension	.9	.24	4,428	1,539
Public Pension	.9	.12	10,176	1,556

Source: Employee Benefit Research Institute tabulations of the March 1996 Current Population Survey.

Table 1.2
Annual and Lifetime SSA/Medicare
1993 Dollars

	Annual Benefits		Lifetime Benefits	
	Social Security	Medicare	Social Security	Medicare
1995	\$14,600	\$9,600	\$237,000	\$232,000
2030	20,800	26,400	324,000	497,000

Source: Employee Benefit Research Institute tabulations based on study by C. Eugene Steuerle and Jon M. Bakija.

at the median. Aggregated data prevent us from determining what proportion of public pension beneficiaries lack full Social Security benefits because of their work status. Also, we are unable to differentiate between the number of public and private pension plans in the median, which would be explained at least partially by the fact that many public employees, including those who retired from the federal government prior to 1984, do not have Social Security coverage.

Thus the data would indicate that “where we are today” is shaped by relatively high income levels and positive growth over time, a total retiree income decline with age, Social Security growth due to indexation, tremendous differences by quintile, and strong total contributions to income by pensions. As we look to the future, we need to put into perspective what Social Security does and does not provide today versus what it may or may not provide in the future.

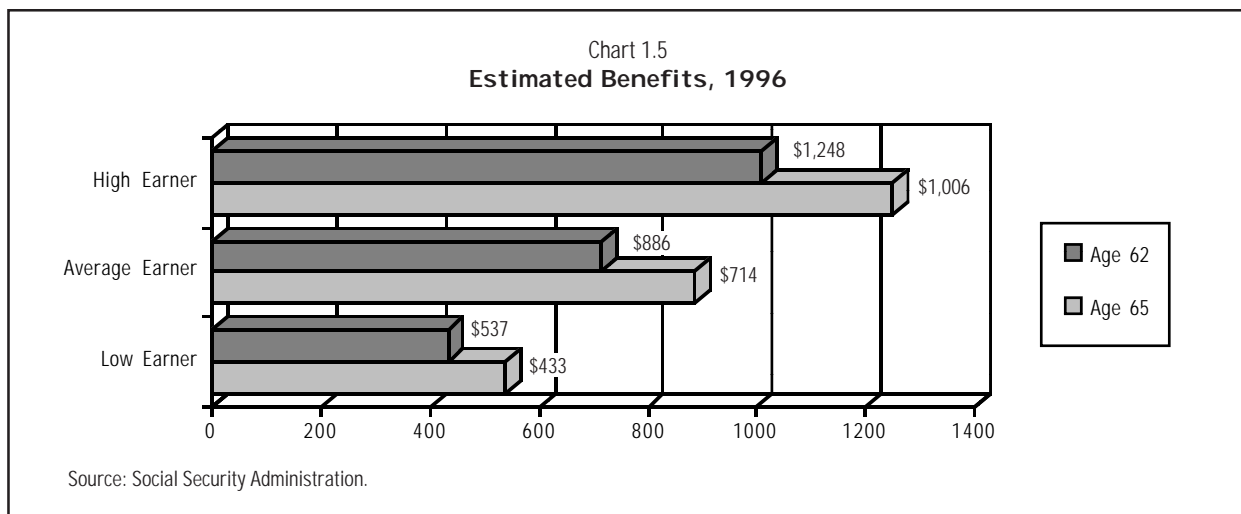
Table 1.2 is derived from a study by C. Eugene Steuerle and Jon M. Bakija,¹ in which they have attempted to assign a dollar value, both lifetime and in today’s benefits, to Social Security and Medicare. Discussions of retirement income and adequacy frequently focus on replacement rates from Social Security, rather than on absolute dollars. The replacement rates remain relatively constant over time, but as the table indicates, the actual dollar value of benefits grows. This is because the existing benefit formula passes on the

equivalent of productivity gains in the economy to future retirees. The table, in constant 1993 dollars, shows that between 1995 and 2030, the purchasing value of Social Security is scheduled to go up quite substantially in constant dollars. The aggregate lifetime value increases substantially as well. It is also important to note the projected relative change in the value of Medicare vis a vis Social Security.

Table 1.2 also shows that, if present programs are maintained, Medicare will be a larger effective source of economic value; it also indicates the financial exposure that will be produced by any significant reductions in Medicare through “reforms” such as increases in the age of eligibility. When you look at Medicare benefits, the numbers become more startling and more impressive. This may be the reason why, in current public policy debates, the issue of Medicare is seen as a more challenging long-term financing issue than Social Security. Table 1.2 shows the estimated cost in constant 1993 dollars for Medicare of purchasing the same benefit package, given life expectancy increases and an increasing average age of the retired population. A comparison of the lifetime benefit numbers shows that today Medicare is slightly less valuable than Social Security in a lifetime context, \$232,000 and \$237,000, respectively. By 2030, however, if both programs were maintained as currently designed, Medicare would be significantly more valuable to the individual as a lifetime benefit (\$497,000), compared with Social Security (\$324,000), with annual benefit numbers of \$26,400 and \$20,800, respectively.

In our Retirement Confidence Surveys, individuals often note comments such as, “I know I’ll be able to retire because I’ll get Social Security,” and “I haven’t saved because I know Social Security will allow me to retire.” Yet, when we ask in those same surveys, “Do you know how much your Social Security benefit will be?” most Americans have no idea. Chart 1.5 underscores the relatively low dollar value of Social Security benefits, even when we move to the high earner—one who is age 65 with a full benefit. The maximum benefit at \$1,248 per month is not a sum that would cause many individuals to say, “Good gosh. If I’d known that, I’d be happy with the decision I made not to save, or not to worry about rolling over that lump-sum distribution.”

¹ See C. Eugene Steuerle and Jon M. Bakija, *Retooling Social Security for the 21st Century: Right and Wrong Approaches to Reform* (Washington, DC: The Urban Institute, 1994).

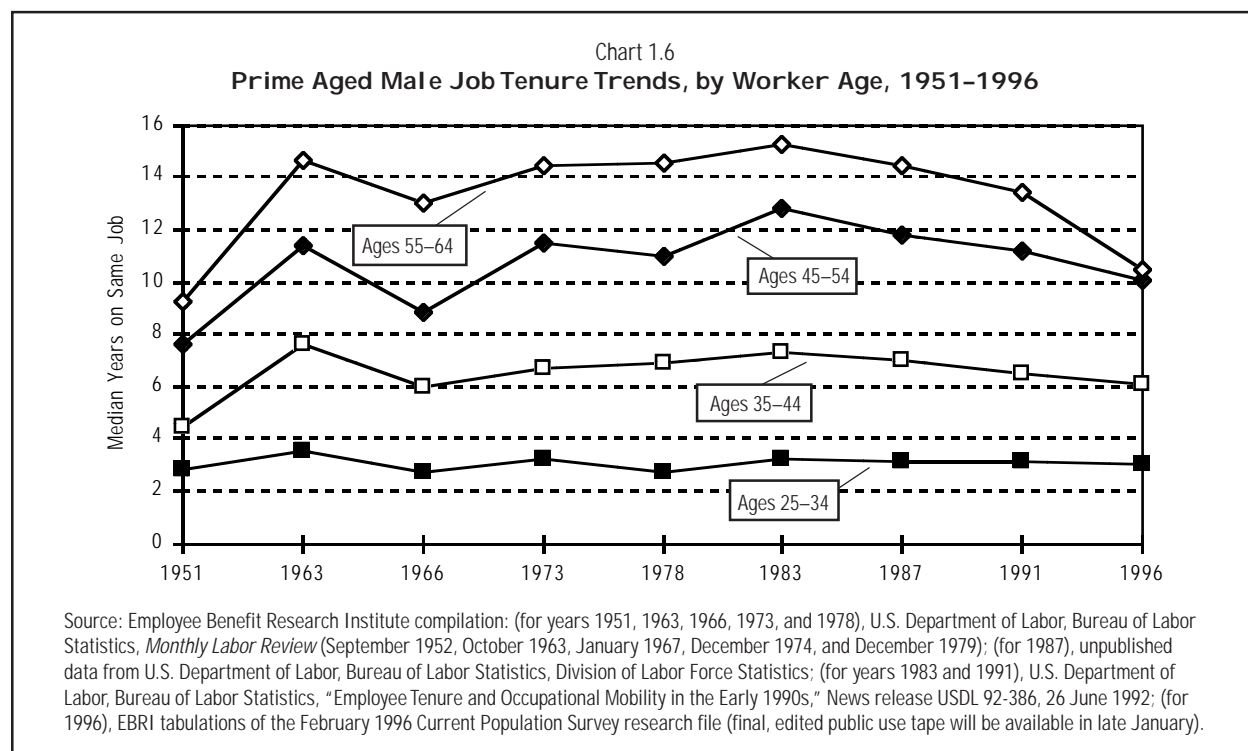


■ The Effects of Mobility in the Work Force

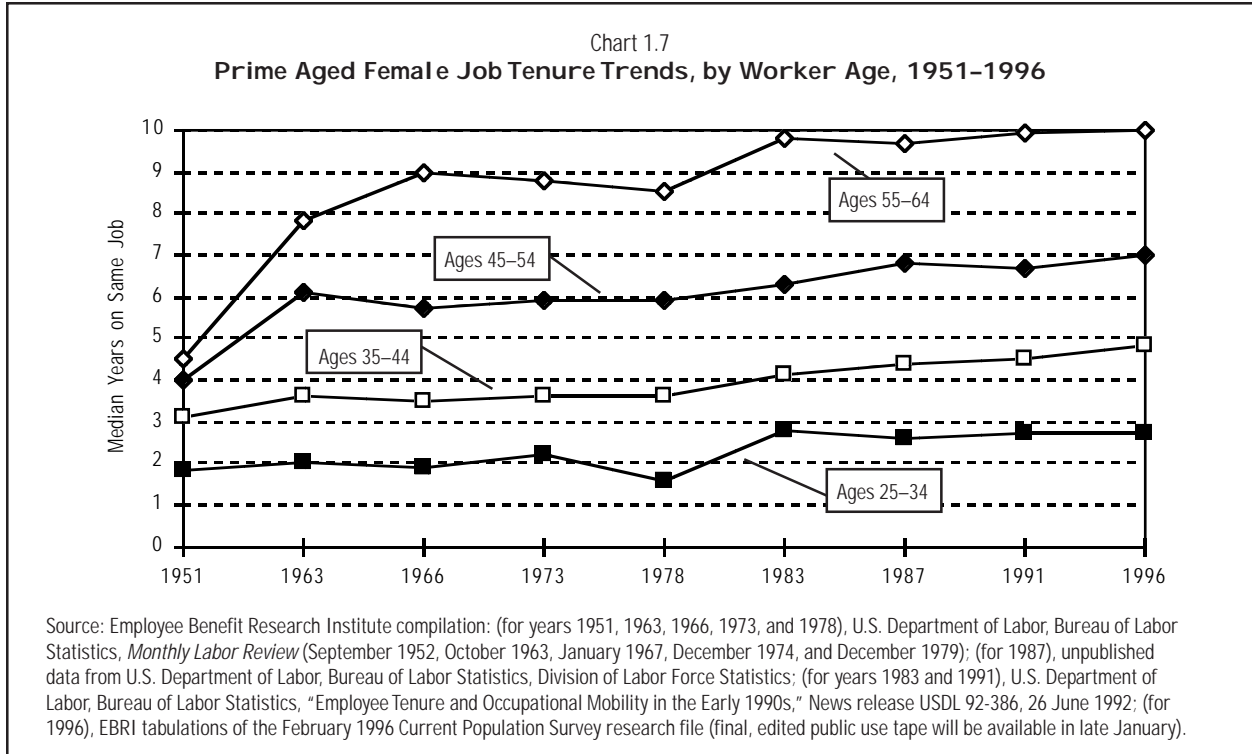
At an EBRI-ERF policy forum some years ago, we discussed the question of whether work force mobility was changing fundamentally. At that time, in 1993, we were looking forward to a prospective data-collection effort from the U.S. Bureau of Labor Statistics, which took place in 1996. Chart 1.6 shows that the United States has always been a relatively high mobility society, with a relatively

low median job tenure across the age spectrum. The number of jobs held by individuals through a career has been consistently between seven to nine jobs. But the change between 1991 and 1996, particularly for the top two lines, the age group of 55 to 64 and the age group of 45 to 54, now is moving to the point where median job tenure in the economy is 10.5 years, and 10.1 years, respectively, for those age groups.

In the past, we have had high mobility at those older ages where, in a defined benefit system



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(a system of accruals and back-loaded benefits), the late-year accumulations could be very significant. Now we see fewer and fewer individuals in those older age groups staying on the job. The experience of older females is now the same, though the path taken to get there has been different, as seen in chart 1.7. With the drop in tenure rates among older males since 1991 and an increase in tenure among older females since 1978, their median tenure figures are now almost the same—10.5 years for males and 10.0 years for females.

The significance of increased mobility in terms of the future and benefits is shown in table 1.3 from a study by Dan McGinn, an actuary in California, published by the Society of Actuaries in *Transactions*. McGinn looked at both public and private pensions with relatively generous formulas and then assumed Social Security benefits to attempt to create a picture of replacement rates at different tenures and different income levels. It is particularly significant in light of the relatively small number of total employees who stay for 30 years or even 20 years (table 1.4).

Above \$35,000 a year in income, there is a question of income adequacy in terms of a traditional financial planning standard of 70 percent to 80 percent income replacement, even at 30 years of tenure. And, as you move up the income scale, even

to the maximum Social Security wage base at \$65,000, where it might be argued that adequacy replacement might need to be only 65 percent, you still see that pensions and Social Security do not provide "adequate" replacement income. Considering the mobility patterns shown in chart 1.6 and chart 1.7, we can reach two conclusions. First, the system has not provided adequate income for the majority in the past. Second, it will not in the future without individual savings.

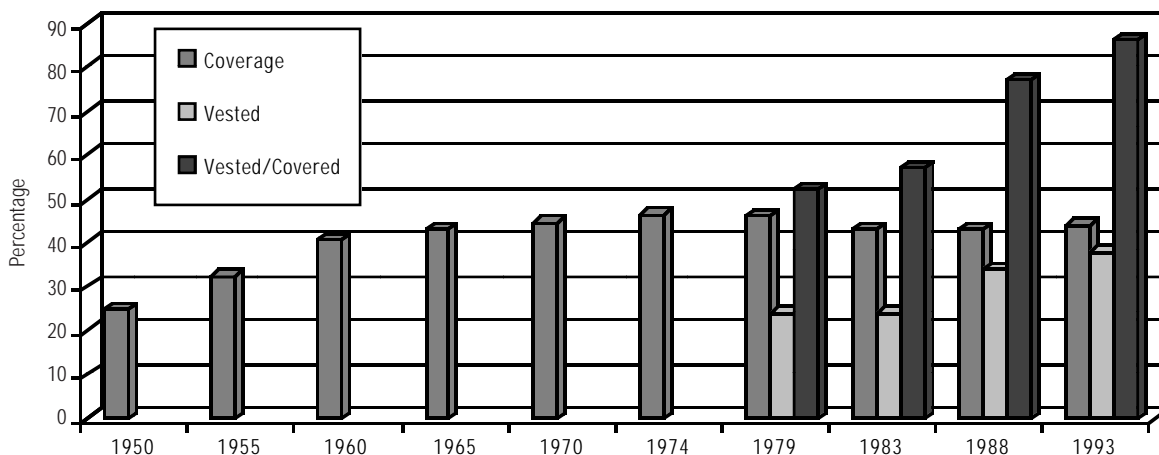
The system has been changed to accommodate these facts relating to tenure. First, this has been done through participation and vesting standards.

Table 1.3
Income Replacement Rates Are
"Inadequate" for Many Who May Have
a 30-Year Career, a Pension,
and Social Security

Final Earnings	Pension Only		Pension and Social Security	
	20 Years	30 Years	20 Years	30 Years
\$15,000	24%	37%	63%	84%
\$35,000	21	30	47	65
\$55,000	19	28	41	53
\$65,000	19	29	38	50

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Chart 1.8
Trends in Coverage and Vesting, 1950–1993



Source: U.S. Department of Labor, *Trends in Pensions, 1992* (Washington, DC: U.S. Government Printing Office, 1992); and Employee Benefit Research Institute tabulations.

Second, with the growth of defined contribution plans and the introduction of career average formulas and cash portability in more defined benefit plans. These changes have little effect on long-service workers, and may actually harm them, but as the data show, these workers are the minority. As shown in chart 1.8, the proportion of workers in any given year whose employer has a pension plan, public or private, has been relatively flat since 1960.

Looking at the vested percentage, we see that legislative changes have dramatically increased the proportion of employees who are covered by a plan,

i.e., those who report a vested right to a nonforfeitable benefit. The system is delivering to a higher proportion of the individuals who are covered during some portion of their career, than it did in the past, and that is good news.

The vested percentage of participants is now well above 80 percent. Shorter vesting periods lead to some retirement income, or at least capital accumulation, for many people. Congress has now increased the automatic amount that could be distributed in the form of a lump sum from \$3,500 to \$5,000. This will increase the number of small distributions. As later presentations show, most

Table 1.4
Current Job Tenure, 1996

	Tenure at Current Job						
	< 1 Year	1–4 Years	5–9 Years	10–14 Years	15+ Years	20+ Years	30+ Years
Age							
25–34	25.7	40.5	24.3	8.1	1.3	a	0.0
35–44	14.7	29.0	24.5	14.6	17.2	6.0	a
45–54	11.0	21.7	19.7	14.2	33.5	22.1	3.7
55–64	8.2	19.5	17.5	12.6	42.2	30.5	12.4
Age 18+	20.5	31.3	20.1	10.7	17.4	10.2	2.5
Age 25+	16.2	29.4	22.3	12.2	19.9	11.7	2.9
Age 35+	12.1	24.6	21.5	14.0	27.8	16.6	4.1
Age 45+	10.0	20.8	18.8	13.5	36.9	25.7	7.7
Age 55+	8.3	19.4	17.3	12.5	42.5	31.8	14.3

Source: Employee Benefit Research Institute tabulations of the February 1996 Current Population Survey.

Table 1.5
Pension Income with Preservation

Income Source	2018 Age 65 and Older	2030 Age 66–75	2030 Age 76–84
All Retiree Families			
Social Security	98%	99%	97%
Employment-Based Pension	77	81	84
Earnings	20	8	26
Supplemental Security Income	3	1	1

Source: Employee Benefit Research Institute, *EBRI Databook on Employee Benefits*, third ed. (Washington, DC: Employee Benefit Research Institute, 1995).

small distributions are spent rather than saved, with implications for future retirement income. Faster vesting, when combined with short tenure and lump-sum distributions, can lead to more expensive pension plans and may lead to lower pensions for long-service workers as more funds flow out of the plan to high-turnover workers. This could be bad news. How individuals handle lump-sum distributions, including very small distributions, becomes crucial in an evaluation of future retirement income delivery.

The age 55–64 line in table 1.4 presents tenure data for 1996. In this age group, 12.4 percent of employees report having been in their current employment setting for 30 or more years. An additional 30.5 percent report 20 years or more. These numbers have declined somewhat, but, interestingly, they have not declined significantly. Thirty years of service, as shown in table 1.3, does not necessarily produce an adequate income replacement—only about 12 percent are likely to have that benefit accrual. This leads to prospective issues and questions. And, it again underscores the necessity of individual savings to assure retirement income adequacy.

The American Association of Retired Persons (AARP) and the 1991 Social Security Advisory Council paid for a study by Lewin-VHI that became a proxy to answer the question: What if every dollar that went into the system stayed in the system? In short, what pension reciprocity rates would this end up producing in the future? The data in the study could not accommodate anything other than an assumption that every lump-sum

distribution essentially would be rolled over and annuitized. As shown in table 1.5, the study shows that a relatively impressive 81 percent of retirees would have pension income in retirement based on having been, at some point during their work career, at jobs in which they accrued pension value. Compare that with today's situation, in which approximately 50 percent of new retirees and 34 percent of all retirees report some pension income. Total preservation in the system would definitively change the numbers. That speaks to the issue of reciprocity, but it does not speak to the issue of adequacy.

■ The Uncertainty of Future Medicare Benefits

Another factor that makes the future very different from the period between 1964 to 1995 is the uncertainty surrounding future retiree medical benefits. This prospective issue concerns how much individuals will need to save and accumulate for the explicit purpose of maintaining retiree health benefits—funds that their most recent predecessors have not needed to accumulate. This assumes that Congress and the Medicare trustees are correct when they say that the existing Medicare program will not be maintained as we know it and that prospective retirees will get less. The essential message for the future is that we are likely to have less from Medicare and less from our employers. That will create an additional savings challenge.

A number of phenomena are driving the many changes we are experiencing. To begin, there is the aging of the population and the reality of longer lives. In addition, the reality of a new level of global competition has enterprises looking for better and more cost-effective ways to produce product and deliver services. This raises a question of whether an organization is permanent or will prove temporary. What is the confidence level that any enterprise—whether it be government or private sector, a state and local government unit, or a nonprofit organization—will be in business next decade? What confidence level would lead me to be willing to absorb the risk that, in the future, significant investment market fluctuations will occur or life expectancy will be extended 10 or 15 years? At the same time, we see employers and unions focused on the need to satisfy worker desires and the reality of

the high turnover documented above. Increasingly, workers want personal control as a means of protection against what they see as growing uncertainty about their futures.

What we have seen happening in the system in response to these “drivers” is a shift of risk from institutions to individuals, driven by the recognition of risk factors and the recognition that we never have been a full career work force. We never have been a society where the majority of people stayed in one job for 20 or 30 years. And we are accommodating that change somewhat. We have changes in defined benefit and defined contribution plans, and we are seeing more and more defined benefit plans moving into a mode of lump-sum distribution payments and a redesign to individual accounts, as opposed to annuity payments and a pooling of interest. AT&T, for example, is one of the firms to recently announce a shift in their traditional defined benefit plan philosophy in this regard.

This same movement was implemented in 1984 by the largest employer in the nation, the federal government. Congress acted in that year to significantly reduce the value of the defined benefit pension plan while introducing a generous matched defined contribution savings plan. Another example came from a recent speech by Governor John Engler of Michigan to the National Association of Business Economists. He was asked to name his single greatest achievement during his tenure as governor. His answer was “the prospective replacement of the state’s defined benefit pension system with a new defined contribution system.” That surprised more than a few of us. It was, however, a statement of the growing individual responsibility for retirement income generation and management that is now extending to segments of the economy where “paternalism”—being provided for by your employer and/or union—once reigned. Like it or not, the recognition of self-reliance as essential to achieving income above the floor of Social Security is being internalized.

■ A New Future of Individual Risk Assessment

These changes are giving rise to a new future of risk assessment and better understanding of what will not be there in terms of income provided by

someone else. An increasing proportion of the population interprets the message in the press to mean: “Social Security won’t be there at all.” Another group understands Social Security and Medicare will be there, but they will not be adequate. Opinion leaders during the 60s, 70s, and early 80s wrote and spoke about the world of big unions, big government, and big business benefits as if they had been available to all. They encouraged a public perception of broader entitlements than actually existed. On the one hand, individuals were being given easy credit for current spending, and on the other, they were told that others would take care of retirement. Social Security was described as a program that would allow individuals to retire, with little focus on benefit levels. As a result, most assumed the benefit would be adequate. Medicare was communicated and interpreted in the same way. And, in the end, people felt that, if all this failed, they would work part time.

This is all changing now. Today, opinion leaders write and speak about “crisis” and the need for individual action. The nation is no longer stable and secure. It is part of a world in a state of constant change. Given this global change, opinion leaders imply that the “retirement system” has fallen apart, even though many of the facts have changed little. For example the fact that Social Security will be inadequate—for most it always has been; the fact that Medicare will be inadequate—most have sought supplementation in the past; the fact that most retirees won’t get a defined benefit pension annuity from work—most never did; that you won’t get retiree medical from you employer—most never did; and the fact that you will need a lot of personal savings to have an adequate retirement income—which has always been the case for nearly all Americans. However, these realities are now being absorbed, and they are driving the future. Individuals are beginning to understand the realities as new realities and thinking differently about the future.

People are beginning to believe they need to save if they want an adequate retirement income. However, large numbers are still not doing it. What is getting in the way? From our Retirement Confidence Surveys, we find that about a third of individuals who want to save say they have no resources to do so. Another third do save, but they do not think they are saving anywhere near as

much as they should be. A final third do some planning as well as saving. But, there are significant barriers to saving—inadequate free income, a lack of knowledge about how small Social Security benefits are, or how much they will need for out-of-pocket health expenses. In addition, there is an absence of understanding of pension integration or the impact of inflation on assets and income and a lack of experience with investing. Moreover, most individuals underestimate their life expectancy. They frequently focus on life expectancy at birth, rather than at age 65, 75, and 85. Some individuals who have spent a lifetime living paycheck-to-paycheck are unable to convert a lump-sum account into a reasonable stream of income that will last them until death. And, they don't understand that debt is negative savings.

The barriers are evident when one reconsiders use of IRAs and the fact that less than 10 percent of those who could contribute do not. Job instability and mobility shows that individuals need an immediate cash reserve and access to funds; most don't feel that they earn enough to be able to save sufficiently. It is clear that we will need to move more individuals to a different state in the future if they are going to be able to retire at age 62 or 65. A tremendous amount of education needs to be done. Some surveys report an increased proportion of individuals who now view bankruptcy as a very real option. In essence, they are saying, "I don't need to save because I'll just keep going into debt, and if all else fails, I'll file for bankruptcy." Fundamental changes are necessary to affect such attitudes.

■ Conclusion

The new economy has moved us to an environment in which job security is minimal; safe havens are gone; middle America feels clobbered; everyone feels as though they are on their own. Finally, everyone knows someone who has been laid off. Such a state should cause people to spend less, save more, and worry more about the future. Only time will tell if it does so. A 1996 report from the New York Times included a survey of job confidence shows that nearly half of the work force in 1995 was concerned about lay-offs. Only 13 percent said they were very secure in their jobs, while another 50 percent said they were somewhat secure in their jobs. There was a lot of individual perception of risk. When one goes to the balance of this particular survey, it says that more and more individuals believe they have an increasing need to rely upon themselves for their own well-being.

The data paint a picture of an advance in retirement income relative to the pre-WWII period. There is an increased focus on education and encouragement of savings. The increased availability of defined contribution plans accommodates a mobile work force and allows the individual to save. Discussion of entitlements is beginning to take on a candid tone, and many public officials are beginning to take the lead on dramatic reforms. There is reason for optimism, but an environment of fundamental challenge clearly lies ahead.

2

Life Expectancy and Retirement Income

by Axel Goetz

■ Introduction

How big a gap will there be between what was set aside and what will be needed for retirement plans? Whether we are too optimistic, too pessimistic or somewhere in between depends critically on how life expectancy will develop in the future. A look back shows a tendency of researchers toward underestimating life expectancy and raises the question of whether pension planners are doing the same now. There are good reasons to believe that changes in age-specific rates of disability, morbidity, and mortality will continue to increase the margins of uncertainty around estimates that are relevant to benefits planning, including estimates of future life expectancy.

While not an actuary, I have had to address these issues in order to appraise health risks for individuals and groups. In this and the present context, you need two ingredients for making predictions. One is a model that adequately describes the relationships between predictor variables and the outcomes of interest; the other is a set of dependable observations on the predictor variables. Experience shows, as someone has remarked, that predictions are notoriously difficult to make, especially when they concern the future. Past efforts have missed the mark because of both inadequate models and inadequate data.

■ Little Success in Predictions of Life Expectancy

Past estimates of life expectancy used historic changes of longevity as predictors, a method akin to driving forward while looking in the rear-view mirror. The resulting extrapolations were not very good, as exemplified by a demographer's 1978 estimate that average life expectancy was limited to about 74 years. Ten years later, the men in a Japanese prefecture lived to an average of 77 years

and women to an average of 83 years. There are now population groups in the United States where life expectancy exceeds 90 years—groups mind you, not selected individuals.

Retrospective demographic research had not anticipated, for example, the large drop in cardiovascular mortality that started in the mid-1960s. More importantly, we were blind-sided by one very critical development—the failure of mortality rates to follow the exponential progression with advancing age. This exponential acceleration of mortality is central to many models for estimating future life expectancy. After about age 85, mortality rates no longer continue the exponential trend. The acceleration slows to where mortality rates level off, and as recent data show, at ages around 105 to 110 may even decline. There are corresponding data from animal populations where the exponential progression of mortality rates ceases when about 90 percent of the individuals have died.

Why is this such an important issue? It is because it concerns a critical assumption in the models used for estimating expectancy. If there is no continuation of exponential progression of mortality at higher ages, then there may not be a hard limit to life span. You are probably all familiar with the notion of “squaring the curve,” which implies a definite limit to life span. This notion suggests that, as people age, they get closer and closer to this limit, which may have some elasticity but not much. Our best efforts to improve health would then lead to more and more persons getting closer to this limit and becoming ill and dying within a relatively short time, an effect sometimes called “compression of morbidity.”

This is an interesting hypothesis, but it is poorly supported by data. Recent research suggests that there is no such limit. For example, if there was to be a hard limit to life span, one would have observed a shrinking of the variance of life spans in the population as people age. The opposite is now

being observed, i.e., the variability of life spans increases, i.e., we do not see a compression of mortality, and it does not look like we have a compression of morbidity either. One indicator of the latter would be an increase in age-specific disability rates at higher ages. No such increase is visible. Instead, age-specific rates of disability declined from 1984 through 1989, especially so among the oldest, in both community-dwelling and institutionalized elderly groups (Manton et al., 1993a). Apparently, as total life expectancy is increasing, so is quality of life, as measured by active life expectancy. The most recent study of the Center for Demographic Studies at Duke University (Manton et al., 1997) shows for the period from 1982 to 1994, a 14 percent decline in the rate of older persons who are unable to care for themselves, and that the percentage of those ages 65 and older who are disabled has dropped from 25 percent to 21 percent. According to Suzman et al. (1992), an 85-year-old man can, on average, expect that about 80 percent of his remaining life will be free of major disability, while a woman of the same age has about a two-thirds chance. For men and women, active life expectancy, i.e., the number of years expected to be lived in an active state, remains constant in the oldest old (Manton et al., 1993b). Another indicator of a hard limit to life span and the resulting compression of morbidity would be an increase in cost of care toward the end of life. It, too, has failed to appear (Lubitz et al., 1995).

A recent, thorough investigation (Manton and Stallard, 1996) addresses this issue directly, by using mortality data that were derived from death certificates. At least since the introduction of Social Security, death certificates record age at the time of death much more dependably than the traditionally used census data, even after correcting the latter for various shortcomings. Manton and Stallard found no evidence for a hard limit to life span. If there were such a limit, it would have to be higher than 130 years.

■ Reshaping Models in Light of Life Extension

We must remind ourselves that none of these estimates takes into account a substantial portion of the changes in risk factor prevalence over the

past couple of decades or so, nor do they fully account for recent disease prevention efforts. This has given rise to calls for reshaping models for estimating life expectancy. If we want to be able to better judge whether we are too optimistic or too pessimistic, it will be necessary to move away from purely data-manipulative methods that are applied to historic data sets and move toward structural models that include crucial health status variables (e.g., Lee and Skinner, 1996).

Some reasons for this need come from biomedical research. In recent years, we have seen evidence that restitution of signaling substances, such as hormones, can profoundly improve quantity and quality of life. A good example is estrogen/gestagen replacement therapy in women. It is now quite clear that mortality from all causes is drastically lowered in women who use estrogen and gestagen replacement therapy (e.g., Ettinger et al., 1996) and that the quality of life of these women is substantially improved in many ways not originally anticipated.

There is also growing evidence that replacement of other hormones that are less available with increasing age may be valuable in both women and men (e.g., Jorgensen et al., 1994; Orlander and Nader, 1996). Given a growing interest in the extension of length and quality of life, it can be safely assumed that supply will follow demand, which will have consequences for vital statistics.

As the understanding of organismic functioning at the molecular level grows, further consequences for life extension must be considered. While the merits of nutritional supplementation with antioxidant nutrients are still being debated, evidence from a variety of research disciplines points to potentially large effects. Genetically engineered over-expression of naturally occurring antioxidant enzymes in fruit flies results in slower functional aging and in an extension of average and maximum life span by about one-third (Orr and Sohal, 1994). In another example of gene manipulation, by changing just two genes in a worm species, Kenyon et al. (1993) doubled the worm's life span. These examples may be enough to give us pause when we consider our ability to foresee future changes in life expectancy.

We need not wait long to see less dramatic change. Largely unsanctioned by professional medical gatekeepers, many persons have for years

consumed nutritional supplements. Even a modest (mostly about twice RDA) multiple-nutrient supplement was able to significantly boost immune function, with a large reduction in morbidity from infectious diseases, as Chandra (1992) showed in a well-designed study. Judicious use of nutritional antioxidant supplements may have contributed to the recent decline in cardiovascular mortality and may further add to life expectancy (e.g., Enstrom et al., 1992; Losonczy et al., 1996).

■ Uncertainty on the “Down-Side”

There are no guarantees that average life expectancy will continue to grow. For example, the AIDS virus is not transmitted as readily and unavoidably as is, for example, the cold virus, which in turn, is not as deadly as is HIV. But there are virus species that are highly infectious, transmitted through the air, close to 100 percent lethal, and are able to reliably kill their victims within two months of infection (e.g., Albrecht et al., 1992). So far, they have not crossed the species barrier from monkeys to humans, but *Herpesvirus saimiri* has crossed from an Amazonian monkey, its normal and immune host species, to Old World monkeys. Another herpes virus, *H. ateles*, coexists peacefully with one monkey species but crosses to other monkey species and to rabbits, killing both with close to perfect lethality, by causing lymphatic cancer. Both viruses are uncomfortably similar to human herpes viruses and mutate extraordinarily quickly once inside cells. Given infection of an immune-compromised human, quick adaptation to human cells might occur. One hesitates to imagine the consequences, and not only those for life expectancy.

■ Conclusion

We are entering an era where the origin of diseases is increasingly understood at the molecular level, where we have the tools to adjust individual metabolisms with appropriate nutritional supplements, and with selective, individually adjusted intake of hormones and other signaling substances. No one has any idea yet how far this will extend average life span and how it will affect future estimates of life expectancy, except that the uncertainty of such estimates will increase.

Although a scenario of continued life span

extension is the most likely, the uncertainty of estimates will increase on the down-side as well. For example, should the balance between the development of new antibacterial and antiviral drugs and the emergence of new lethal strains of infectious agents tilt toward the latter, we may at least temporarily see a shortening of life expectancy. In any case, the range of uncertainty around estimates of life expectancy is, I believe, going to increase rather than lessen.

■ References

- Albrecht J.C., J. Nicholas, K.R. Cameron, C. Newman et al. “Herpesvirus Saimiri Has a Gene Specifying a Homologue of the Cellular Membrane Glycoprotein CD59.” *Virology* 190 (1992): 527–530.
- Chandra, R.K. “Effect of Vitamin and Trace-Element Supplementation on Immune Responses and Infection in Elderly Subjects.” *Lancet* 340 (1992): 1124–1127.
- Enstrom, J.E., L.E. Kanim, and M.A. Klein. “Vitamin C Intake and Mortality among a Sample of the United States Population.” *Epidemiol* 3 (1992): 194–202.
- Ettinger, B., G.D. Friedman, T. Bush, and C. P. Quesenberry, Jr. “Reduced Mortality Associated with Long-Term Postmenopausal Estrogen Therapy.” *Obstet Gynecol* 87 (1996): 6–12.
- Jorgensen J.O., L. Thuesen, J. Muller, P. Ovesen et al. “Three Years of Growth Hormone Treatment in Growth Hormone-Deficient Adults: Near Normalization of Body Composition and Physical Performance.” *European Journal of Endocrinology* 130 (1994): 224–228.
- Kenyon C., T. Cheng, E. Geusch, A. Rudner, and R. Tabtiang. “A *C Elegans* Mutant Lives Twice as Long as Wild Types.” *Nature* 336 (1993): 461–464.
- Lee R.D., and J. Skinner. “Assessing Forecasts of Mortality, Health Status, and Health Costs During Baby Boomers’ Retirement.” In E.A. Hanushek, and N.L. Maritato, eds., *Panel on Retirement Income Modeling, National Research Council: Assessing Knowledge of Retirement Behavior*. Washington, DC: National Academy Press (1996).
- Losonczy, K.G., T.B. Harris, and R.J. Havlik. “Vitamin E and Vitamin C Supplement Use

Retirement Prospects in a Defined Contribution World

- and Risk of All-Cause and Coronary Heart Disease Mortality in Older Persons: The Established Populations for Epidemiologic Studies of the Elderly." *American Journal of Clinical Nutrition* 64 (1996): 190–196.
- Lubitz, .J., J. Beebe, and C. Baker. "Longevity and Medicare Expenditures." *New England Journal of Medicine* 332 (1995): 999-1003.
- Manton K.G., L.S. Corder, and E. Stallard. "Chronic Disability Trends in Elderly United States Populations: 1982-1994." *Proceedings: National Academy of Sciences USA* 94 (1997): 2593–2598.
- Manton K.G., L.S. Corder, and E. Stallard. "Estimates of Change in Chronic Disability and Institutional Incidence and Prevalence Rates in the U.S. Elderly Population from 1982, 1984, and 1989 National Long Term Care Survey." *Journal of Gerontology* 48 (1993a): S153–S160.
- Manton K.G., E. Stallard, and K. Liu. "Forecasts of Active Life Expectancy: Policy and Fiscal Implications." *Journal of Gerontology* 48 (1993b): 11–26.
- Manton K.G., and E. Stallard. "Longevity in the United States: Age and Sex-Specific Evidence on Life Span Limits from Mortality Patterns 1960-1990." *Journal Gerontology A Biological Science Medical Science* 51 (1996): B362–B375.
- Orlander, P.R., and S. Nader. "Youthful Hormones." *Lancet* 348 (1996): s116.
- Orr, W.C., and R.S. Sohal. "Extension of Life-Span by Overexpression of Superoxide Dismutase and Catalase in *Drosophila Melanogaster*." *Science* 263 (1994): 1128–1130.
- Suzman R.M., D.P. Willis, and K.G. Manton, eds. *The Oldest Old*. New York, NY: Oxford University Press, 1992.

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The Role of Bridge Jobs in the Retirement Patterns of Older Americans in the 1990s¹

by Joseph F. Quinn

■ Introduction

The transition from work to retirement is of major interest and concern to researchers and to policymakers in the United States. The labor force participation patterns of older American men has fallen dramatically over the past four decades, although recent evidence suggests that this trend may have come to an end. Whereas one out of every two American men ages 65 or older worked in 1950, only about one in six do today. The declines are also significant in the traditional “preretirement” years—ages 55–64. For women, this early retirement trend has been largely offset by the other major post-war labor market development—the increasing labor force participation of married women—and much net smaller changes among older women are observed.

Because of earlier retirement and the aging of the American population, the ratio of workers (Social Security contributors) to retirees (Social Security beneficiaries) is also changing dramatically. The ratio has already dropped from 5:1 in 1950 to 3.3 to 3.1 today, and is projected to decline further, to only 2:1, by 2030.² Because of this and

the generous increases in the real value of public retirement benefits legislated in the early 1970s, the U.S. Social Security system is now in long-term fiscal imbalance—the future revenues that will be generated under current law are inadequate to finance the benefits already promised.³ Barring revenue increases or benefit decreases (or delays), annual Social Security expenditures will exceed revenues by 2020, and the Social Security trust funds (which currently equal about 1.5 years worth of expenditures) will be exhausted and Social Security bankrupt by 2030.

The other significant change that has accompanied these demographic trends is the composition of federal government spending. Despite popular impressions to the contrary, the size of the U.S. federal government relative to the economy as a whole has been remarkably stable over the past several decades. Since 1970, annual federal receipts have ranged between 17.8 percent and 20.2 percent of gross domestic product (GDP). Federal expenditures have also been surprisingly stable, ranging from a low of 19.2 percent of GDP in 1974 to a high of 24.4 percent in 1983, the latter during the worst recession since the 1930s, with the official unem-

¹ *This paper appears in Social Security and the Labour Market, (Philip deJong and Theodore Marmor, eds.), 1997, Vol. 2 in the Series, International Studies on Social Security (Peter Flora, Chief Ed.) (Ashgate, Aldershot, UK). The paper is reprinted with permission of the Foundation for International Studies on Social Security (FISS), Amsterdam. I would like to thank the Retirement Research Foundation, the W. E. Upjohn Institute for Employment Research, and the Employee Benefit Research Institute for research support, and Michael Kozy and Kevin Cahill for expert research assistance.*

² *To offset the coming changes in the age distribution and maintain the current (1990) ratio or retirement age to working age populations, the average retirement age in America would have to increase by nearly five years by the year 2030. See U.S. Bureau of the Census (1995).*

³ *Over the next 75 years, the traditional accounting horizon for Social Security, the unfunded Old-Age, Survivors and Disability (OASDI) program liability is estimated to be about 2.2 percent of covered payroll. In other words, an increase in the combined employer-employee payroll tax of 2.2 percentage points (from 12.2 to 14.6 percent) would eliminate today's 75-year deficit. This is somewhat misleading, however, because this deficit is an average of large surpluses in the near future, and large and increasing deficits at the end of the period. Even with a 2.2 percentage point payroll tax increase today, in other words, the system would not be in true long-term actuarial balance because the 75-year period moves forward each year, each time replacing a current surplus year with a large deficit year 75 years hence.*

Retirement Prospects in a Defined Contribution World

ployment rate near 10 percent. What has changed, and changed significantly, is the *composition* of these federal expenditures. America has reallocated its military budget, which has declined from nearly 70 percent of all federal spending in 1953 and 1954 (and over one-half until 1962) to only about 17 percent today.⁴ Where have these resources gone? Largely to entitlements. During these same four decades, the health and retirement components rose from about 10 percent of federal spending in 1950 to 30 percent in 1970, and to well over one-half—and still growing—today. Health, retirement, and disability expenditures, plus interest on the federal debt, currently consume about two-thirds of all federal spending, leaving only one-third for defense and all other expenditures (which together consumed nearly 80 percent in 1950). And this has all occurred prior to the retirement and medical claims of the baby-boom cohorts anticipated early next century.

Two important related national trends that must be addressed are Social Security's impending financial insolvency and the significant and continuing increase in federal spending on entitlements, primarily retirement and health expenditures. An important element of both issues is retirement behavior, which has moved toward earlier departure from the labor force even as life expectancies have increased.⁵

Public policy has already changed in important ways to encourage additional work in later years, and most proposals for Social Security reform include additional incentives to reverse the post-war retirement trend and to induce older Americans to work longer. Whether and how this is likely to occur requires an understanding of how and why people retire. What do we know about this?

Traditionally, the stereotypical retirement in America was a one-time transition directly from a career job to complete retirement—simultaneous departure from career employment and the labor force. Early modeling by economists reflected this;

retirement was usually viewed as a dichotomous event. Although retirement was defined in a number of different ways by various researchers (e.g., labor force status, receipt of public or private pension income, a large reduction in hours worked or earnings, or self-defined retirement status), individuals were designated as either retired or not, and the primary purpose of the research was to determine who was, who was not, and why.

However, subsequent research, mostly using data from the Retirement History Study (RHS) of the 1970s, established that this view was inaccurate for many older Americans and that the dichotomous framework was misleading. In fact, even in the 1970s, many Americans withdrew gradually from the labor force in stages, utilizing “bridge jobs” between career employment and complete retirement. Labor market withdrawal looked more like labor market entry than we had previously thought.

The importance of gradual retirement is likely to increase in the future, as the population continues to age, as life expectancies continue to increase, and as public- and private-sector retirement incentives diverge. As mentioned above, public policies in America are changing to encourage more work by older Americans. Mandatory retirement has virtually been outlawed. The amount of money that Social Security recipients can earn without reducing their Social Security benefits is being increased significantly, and there is frequent discussion of eliminating this “earnings test” altogether.⁶ The age of normal retirement under Social Security rules has already been legislated to increase from the current age 65 to age 66 by 2005, and then to age 67 by 2022, and the majority of the members of the 1995 Social Security Advisory Council recommend that the age be changed to 67 more quickly (by 2012, not 2022) and then be indexed to increase automatically with changes in longevity. Some analysts have proposed a more controversial change: that the age of *earliest* eligibility for Social Security retirement benefits be

⁴ As a proportion of GDP, military spending has declined from 15 percent in 1953 to only 3.5 percent in 1996. See Council of Economic Advisors (1997).

⁵ Between 1960 and 1990, the percentage of one's adult life spent in retirement has increased from about 4 percent to 13 percent for men, and from 14 to 21 percent for women. See U.S. Bureau of the Census (1995).

⁶ In 1996, Social Security recipients aged 62–64 can earn up to \$8,280 without losing any benefits and lose \$1 for each \$2 earned beyond that. Those ages 65–69 can earn up to \$11,520, and then forgo \$1 for each \$3 earned beyond that. There is no “earnings test” at all for recipients ages 70 and older. Congress recently passed legislation to increase allowable earnings for those ages 65–69 to \$30,000 by 2002.

increased from 62 to 65. Finally, for those who choose to delay receipt of Social Security benefits beyond the normal retirement age, the reward for doing so, the delayed retirement credit, is increasing, and by 2010, it will be close to actuarially fair for the average American worker.⁷

At the same time that Social Security work disincentives are being reduced, however, many (defined benefit) employment-based pension plans continue to penalize work beyond particular ages.⁸ This contradictory combination of public and private policies (encouraging work by older American, but *not* on their career jobs) may make gradual retirement via second careers even more prevalent than it is today, as rational workers leave their career jobs when their pension incentives dictate, but they continue working with another employer or on their own.⁹

To anticipate the retirement trends of the future, it is important to understand today's exit patterns. How common are bridge jobs in the 1990s? Who is likely to utilize them and why? How do bridge jobs compare with the career jobs that the workers left? How do these transitional routes affect the economic well-being of older Americans? Should public policy encourage or discourage these gradual retirements or remain neutral?

Much of our current knowledge about the retirement process is based on outstanding but now outdated surveys like the Retirement History Study (RHS), whose last interviews were conducted

nearly two decades ago. In this paper, we analyze the patterns of labor market and career job departure in the early 1990s, using the first two waves (1992 and 1994) of the new Health and Retirement Study (HRS). The HRS is a significant improvement on the RHS. It is current and much more sophisticated, and, unlike the RHS, it oversamples minorities and includes women as primary respondents.¹⁰

■ Brief Literature Review on Patterns of Labor Market Exit

Gustman and Steinmeier (1984), using the RHS and a subjective definition of retirement provided by the survey respondents themselves, were among the first to show that partial retirement—an intermediate step on the way out—was widespread even in the early 1970s. They estimated that about one-third of white males would become partially retired at some time during their working lives. They also showed that the estimated parameters of dichotomous retirement equations were very sensitive to whether these partly retired individuals were included in the “retired” or in the “not retired” population, and they urged researchers to take a more sophisticated view of the retirement transition.¹¹

Honig and Hanoch (1985) and Honig (1985) used the RHS and an objective definition of partial retirement based on changes in annual earnings and also found that partial retirement was impor-

⁷ Actuarially fair means that the present discounted value of expected Social Security benefits does not change if a worker delays receipt for another year. In other words, the increments in future checks from the delayed retirement credit (DRC) just offset the loss in benefits initially forgone. The DRC required for actuarial fairness (or age-neutrality) depends on the life expectancy and the interest rate facing the workers. As these differ by gender, race/ethnicity and a host of personal characteristics, a single DRC facing all workers cannot be age-neutral for each, which is why we say it will be for the “average worker.”

⁸ They do so with benefit calculation rules under which the present discounted value of expected benefits declines with additional work on the job; i.e., with future benefit increments that are insufficient to make up for the pension benefits foregone while eligible but still working.

⁹ Defined contribution pensions do not have these work disincentives. Although the importance of defined contribution pensions is on the rise in the private

sector, the majority of covered workers still have primary coverage under a defined benefit plan (Turner and Beller 1992).

¹⁰ For an excellent overview of the HRS, see Juster and Suzman (1995), and the accompanying papers in this special HRS edition of the *Journal of Human Resources*.

¹¹ In a dichotomous framework, these partly retired workers had to be assigned to one of the two states, and where they were assigned depended on the retirement definition used. For example, they were lumped with those “not retired” by researchers who emphasized labor force participation, since they were usually employed. On the other hand, they were categorized as “retired” by those who based retirement status on the receipt of Social Security or employer pension benefits, which the partly retired were often receiving, and by those who emphasized changes in earnings or hours of work, as many of the partly retired worked only part time.

tant among both men and nonmarried women in the 1970s, that it was of significant duration, and that its importance increased with age. For example, they found that 8 percent of white married men age 60 were partially retired, as were 14 percent of those age 62 and nearly one-quarter of those age 65. Quinn, Burkhauser, and Myers (1990) used all 10 years of the RHS and focused on exit routes from career jobs (defined as full-time jobs held for at least 10 years). They confirmed that many older Americans did not leave full-time status on their career jobs and the labor force at the same time. Among wage and salary workers, more than one-quarter did something else. The vast majority found new jobs, often part time, and sometimes became self-employed, while only a few (disproportionately women) were able to drop to part time while staying on their career jobs.

The self-employed appeared to follow very different retirement patterns. At any given age, the self-employed were more likely than wage and salary workers to continue working full time on their career jobs (Quinn, 1980; Fuchs, 1982). And when they did begin to retire, they were less likely to leave the labor force in one move. In the RHS, for example, only one-half of the self-employed (compared to three-quarters of the wage and salary workers) went directly from their full-time career job to complete retirement (Quinn et al., 1990). Those who did not were evenly split between part-time employment on their career jobs (an option rarely found in the wage and salary sector) and part-time or full-time work on a new job.

In the 1970s, these transitional jobs generally lasted long enough to be interesting to researchers. Of the RHS workers who switched employers late in life, nearly 60 percent were still working two years later. Most of these new jobs were in different occupations and industries, and most involved movement down the socioeconomic ladder—from skilled to unskilled or from white collar to blue collar. There was some evidence that those at the ends of the economic spectrum were the most likely to utilize nontraditional retirement routes. Those at the lower end may do so because they have to, lacking pension coverage and personal savings and often eligible for only modest Social Security benefits. Those at the upper end may do so because they want to, enjoying interesting jobs with important nonpecuniary benefits.

Ruhm (1990, 1991) used yet another defini-

tion of a career job (the longest job held) and again found considerable bridge job activity in the RHS. For example, of those who left their longest job between ages 60 and 64, 40 percent worked again; of those departing between age 65 and age 69, nearly one-quarter continued to work elsewhere.

This literature established that partial or gradual retirement, defined in a number of ways, was an important part of the retirement process in the 1970s, and that the traditional dichotomous view of retirement missed much of the action. But what has happened in the meantime? Ruhm (1995) used data from a recent (1989) Harris poll of about 3,000 older Americans to compare men ages 58–63 in 1989 with men the same age in 1969. Of course, he found much lower employment rates in 1989 than 20 years earlier; this is the well-documented early retirement phenomenon that lasted until the mid-1980s. But he continued to find substantial transitional employment, with about one-third of the men ages 58–63 who were employed in 1989 working on post-career jobs. As we will see below, these qualitative results are confirmed in the much larger and more sophisticated HRS—bridge job activity remains alive and well in America.

■ Part-Time Work and Self-Employment Patterns by Age

The United States

Two important types of bridge employment in America are part-time work and self-employment. Government statistics document that the prevalence of both rises with age.

Part-Time Employment—Although only 5 percent of (nonagricultural) employed men ages 25–54 usually work part time, 18 percent of those ages 55–64 and employed do also, along with 48 percent of those ages 65–69 and well over one-half of those few still working beyond age 70.¹² Among employed women, part-time work is more prevalent at all ages, but

¹² This section has been updated with some unpublished 1996 data from the Bureau of Labor Statistics. Beginning in 1994, the BLS has asked some new questions to help differentiate more accurately between those working part time during the reference week of the survey, and those who usually work part time. We have used the latter concept here. The proportions working part time during the survey week is higher.

the age differentials are similar. Nearly 30 percent of employed women ages 25–54 work part time in the United States, compared with one-third of those ages 55–64 and two-thirds of all working women ages 65 and older. The vast majority of those ages 55 and older who usually work part time say they are doing so voluntarily, and this proportion rises with age.

Self-Employment—Self-employment in the United States also increases with age, with the most dramatic jump at age 65. While only 8 percent of working men in the nonagricultural sector were self-employed in their primary jobs in 1996, 13 percent of those ages 55–64 were, as were 20 percent of those ages 65–69 and one-quarter of those few still working after age 70. For women, the proportion self-employed is smaller at every age, but it also jumps between ages 55–64 (9 percent) and age categories 65–69 (13 percent) and 70 and older (17 percent).

There are two reasons for these age patterns. One is that those already self-employed in their career jobs tend to retire later than wage and salary workers do. The other is that some wage and salary workers turn to self-employment late in life, often as a means of gradual retirement, since self-employment offers flexibility in work hours that is often not available on career wage and salary jobs (Quinn 1980, 1981; Fuchs 1982).

Other Organisation for Economic Co-operation and Development (OECD) Nations

Labor Force Participation—The dramatic decline in labor force participation rates among older workers observed in the United States has occurred in most other industrialized nations as well. A recent OECD publication (1995a) documents the changes in employment/population ratios between 1975 and 1991, for men and women ages 55–59, 60–64, and 65 and older, in 16 countries.¹³ Among men, declines since 1975 are seen in every country-age

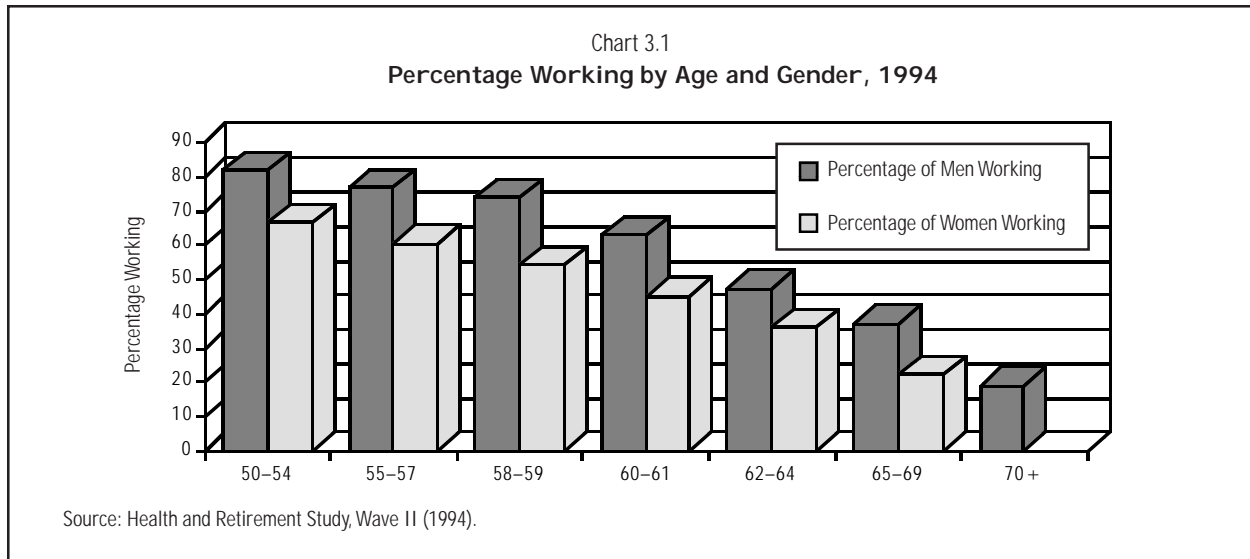
category except one, and employment is now an uncommon occurrence among men ages 65 and older in all these OECD countries except Japan, where about one-third of men ages 65 and older are still employed. Among women, as in the United States, the trends are more mixed, with more employment ratio increases than decreases among women ages 55–59, about equal instances of increases and decreases among those ages 60–64, and a predominance of employment/population declines since 1975 for women ages 65 and older (the only exceptions being Japan and the United States.)

When men and women ages 55 and older are combined, the trends toward earlier labor market withdrawal are unmistakable. It is generally true that the absolute rate of decline during the last decade (1980–1990) is more modest than during the prior decade.

Part-Time Employment—For these same 16 countries, the OECD (1995a) shows the proportion of all workers employed part time, for men and women ages 55–59, 60–64 and for all ages, around 1980 and 1990. The proportion of workers in general, and older workers in particular, who are employed part time increased (although often only slightly) during the 1980s in the majority of these nations. The incidence of part-time work tends to increase with age. Although the proportions for those ages 55–59 are often not noticeably different from those for the populations as a whole, in nearly all cases, for both men and women, the proportions are higher for those ages 60–64 than for those ages 55–59. Data for workers ages 65 and older suggest that the proportions rise again at those ages, and often dramatically (OECD 1995a). Additional data indicate that the vast majority of the older employees (ages 55 and older) who were working part time (in 1988) were doing so voluntarily, suggesting that this may be part of an intentional gradual retirement process (OECD 1995a).

Self-Employment—OECD data (1995a) show that the self-employment patterns by age observed in the United States are typical of other industrialized nations as well. In all 14 OECD countries included, for both men and women, the proportion of workers who are self-employed is higher for those ages 60–64 than for those ages 55–59, and both ratios are typically much higher than for the populations

¹³ An accompanying volume (OECD 1995b) includes detailed chapters on the labor market and older workers for 10 OECD nations (Australia, Belgium, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the United States). A thorough discussion of retirement patterns in OECD countries can also be found in the 1992 issue of the OECD's Employment Outlook.



of workers as a whole. These data do not indicate the extent to which these age patterns are due to the career self-employed working longer than career wage and salary workers, as opposed to wage and salary workers turning to self-employment late in the life cycle.

This brief look at part-time and self-employment patterns by age in other OECD countries suggests that the phenomena we will be discussing with U.S. data are worthy of analysis in other advanced industrialized nations as well.

■ Sample

The initial wave of the Health and Retirement Survey (HRS) sampled over 12,000 men and women in about 8,000 households. The age-eligible respondents were all ages 51–61 in 1992, but spouses could be older or younger. The HRS oversamples blacks and Hispanics and contains detailed information on each individual's demographic background; health and disability status; family structure; current, past, and prior employment; retirement plans (for those still working); health and life insurance coverage; housing status; income; and wealth.

As we are focusing on the retirement transition, we have excluded those with no work experience after age 49 and are left with a sample of about 8,200 individuals who were surveyed in both Wave I (1992) and Wave II (1994)—about 4,400 men and 3,800 women.

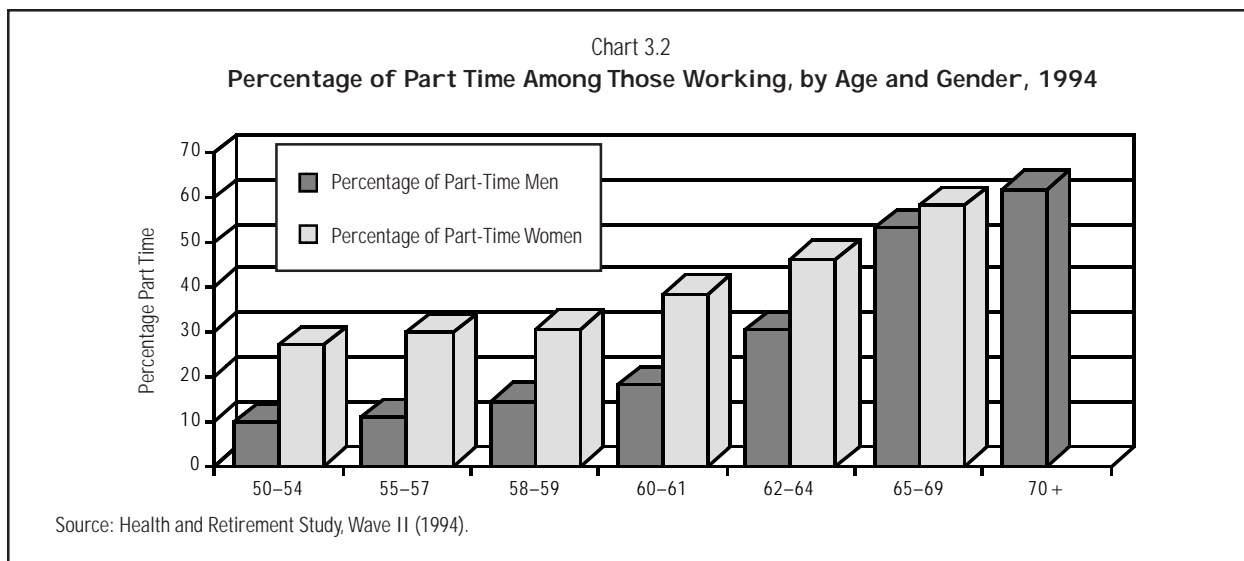
■ Current Labor Force Status

Overall, about 70 percent of the men and women in our sample were working at the time of the 1994 survey, and 30 percent were not (the numbers were 78 percent and 22 percent two years earlier, in 1992). Among those working, 25 percent of the men and 13 percent of the women were self-employed, while 17 percent of the men and 23 percent of the (younger, on average) women worked part time.¹⁴

Charts 3.1, 3.2, and 3.3 show the employment, self-employment, and part-time status by age and gender. The patterns of this HRS sample match the aggregate government labor force participation statistics. Among both men and women, the proportion employed drops monotonically with age (chart 3.1), with large declines at ages 60 (a common age for eligibility for employer pension benefits), 62, and 65 (both key ages for Social Security). The proportion of those employed who are working part time is higher for women than for men, and both rise steadily with age (chart 3.2). For the men, there are especially large jumps at ages 62 and 65, when the Social Security earnings test applies.¹⁵

¹⁴ We defined part time on an annual basis, less than 1,600 hours per year.

¹⁵ The earnings test appears to be more severe between ages 62 and 64 (when Social Security benefits are decreased \$1 for each \$2 of earnings above \$8,280) than it is between ages 65 and 69 (when Social Security benefits are decreased \$1 for each \$3 of earnings above \$11,520). In fact, the opposite is true.



For women, there are increases in the proportion of part-timers at ages 60, 62, and 65. Finally, the proportion of self-employed rises with age, although, given the smaller sample sizes, somewhat erratically (chart 3.3).

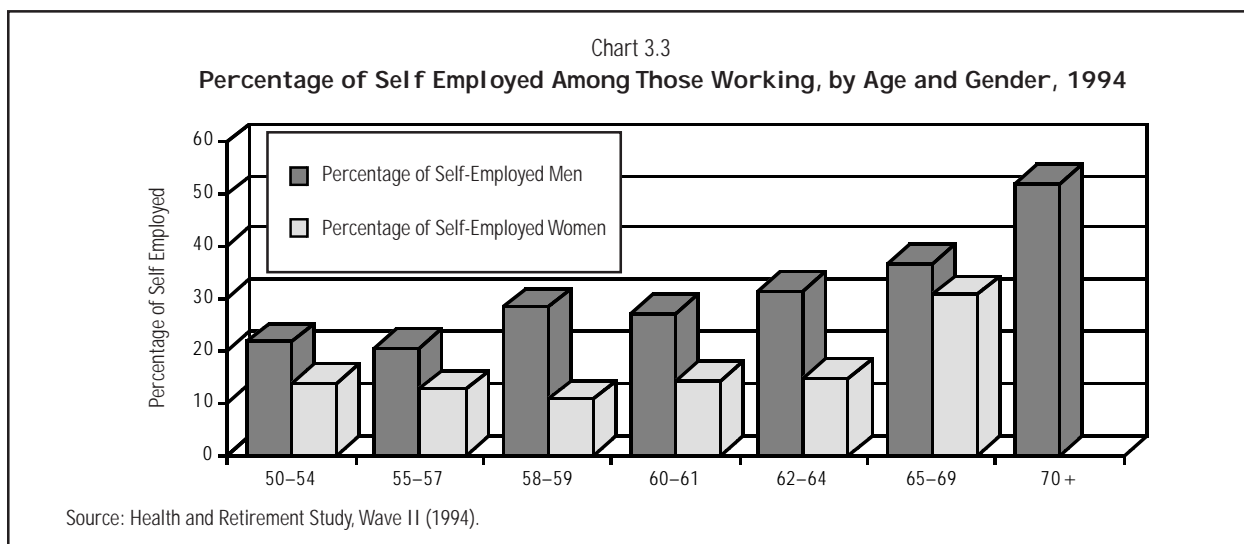
Between ages 62 and 64, the actuarial adjustment for benefits foregone is close to actuarially fair (on average), meaning that any benefits lost because of the earnings test are returned in the form of appropriately higher benefits later. At age 65, however, this adjustment drops and is currently less than actuarially fair, meaning that some of the foregone benefits are likely to be gone forever. (This is the factor, the delayed retirement credit, that is slowly being increased until it reaches approximate age-neutrality by 2010). At age 70, the earnings test disappears entirely, and Social Security benefits are unaffected by earnings.

■ The Retirement Process

Current Status of Those Who Worked After Age 49

The primary focus of this research is on how older workers leave the labor force. We have defined a “full-time career job” as one which a worker has held for at least 10 years and on which he or she is working full time (at least 1,600 hours per year). A bridge job, therefore, could be a part-time job of any duration or a full-time job of less than 10 years duration.

One problem with the definition is that some full-time workers are on jobs with less than 10 years tenure but will have more than 10 years by the time they leave them (e.g., a 51-year-old



with 9 years tenure on a full-time job; this is unlikely to turn out to be a bridge job by our definition, although it would be defined as one now). One purpose of this research is to derive some early estimates of the importance of bridge jobs in the retirement processes of the 1990s. As most of the sample has not yet retired, we have to make some assumptions about future behavior in order to derive these estimates. To use current tenure implicitly assumes that all workers are just about to leave their jobs. This is a poor oversimplification that would lead to an overestimate of short-duration bridge-job activity. A better oversimplification, and the one we adopt here, is to assume that full-time workers remain on their current jobs until they leave at age 62. We pick age 62 because it is the most important single age of retirement transition.¹⁶ We then classify the jobs as “career” or “bridge,” depending on their (assumed) eventual tenure. This may lead to an underestimate of bridge-job activity, as we miss those who in fact will leave before age 62 with less than 10 years tenure, but who would have had 10 years or more had they actually stayed until age 62. At this stage, we adopt a conservative stance, preferring to underestimate than overestimate the importance of the bridge-job phenomenon. Of course, these problems will disappear as the sample ages and retires in future waves of the HRS.

Charts 3.4a and 3.4b show the current (1994) status of our entire sample of Wave I and II respondents with some work experience after age 49.¹⁷ Of the approximately 4,400 men, nearly one-half are still working full time on career jobs (chart 3.4a); we will have to observe them over time to see how they retire. Thirty percent are not working at all, and we can observe the actual details of their departure. The remainder (20 percent) are working on what will turn out to be bridge jobs, even if the workers remain on these jobs until age 62.¹⁸ (Of these, nearly 60 percent are working part time and

the remainder are full time on what should turn out to be short-duration jobs.)

When we look at the previous employment of the men currently on a bridge job, we find that most (about 60 percent of those with good data on the previous job) were working full time before that. This is a classic career-job to bridge-job scenario.

When we look back in time at the 20 percent of the men not working in 1994, two-thirds left directly from a full-time career job (the stereotypical retirement pattern, labor force withdrawal in one move), while one-third last worked on a bridge job before leaving the labor force.

The experiences of the women in the sample are very different (chart 3.4b). Although the proportion not working is identical to that of the men (30 percent), those working are much more likely than the men to be on a job with eventual “bridge” characteristics (30 percent, compared with 20 percent). In addition, a higher proportion of the women’s bridge jobs are part-time rather than short-duration jobs (74 percent, compared with 57 percent for the men). Those not working in 1994 are much more likely to have last worked on a bridge job (two-thirds did, compared with one-third of the men), and the majority of those bridge jobs were also part time rather than short duration.

How much bridge-job activity do we observe in this 1994 snapshot? Among those who are not working, we see a great deal—about one-half of the retired sample (one-third of the men and two-thirds of the women) last worked on a bridge job. Even among those still working, there is considerable bridge-job activity. Assuming that workers younger than age 62 continue working on their current jobs until age 62, over one-third of the employed sample (29 percent of the employed men and 43 percent of the employed women) are currently working on part-time or (likely) short-duration jobs.

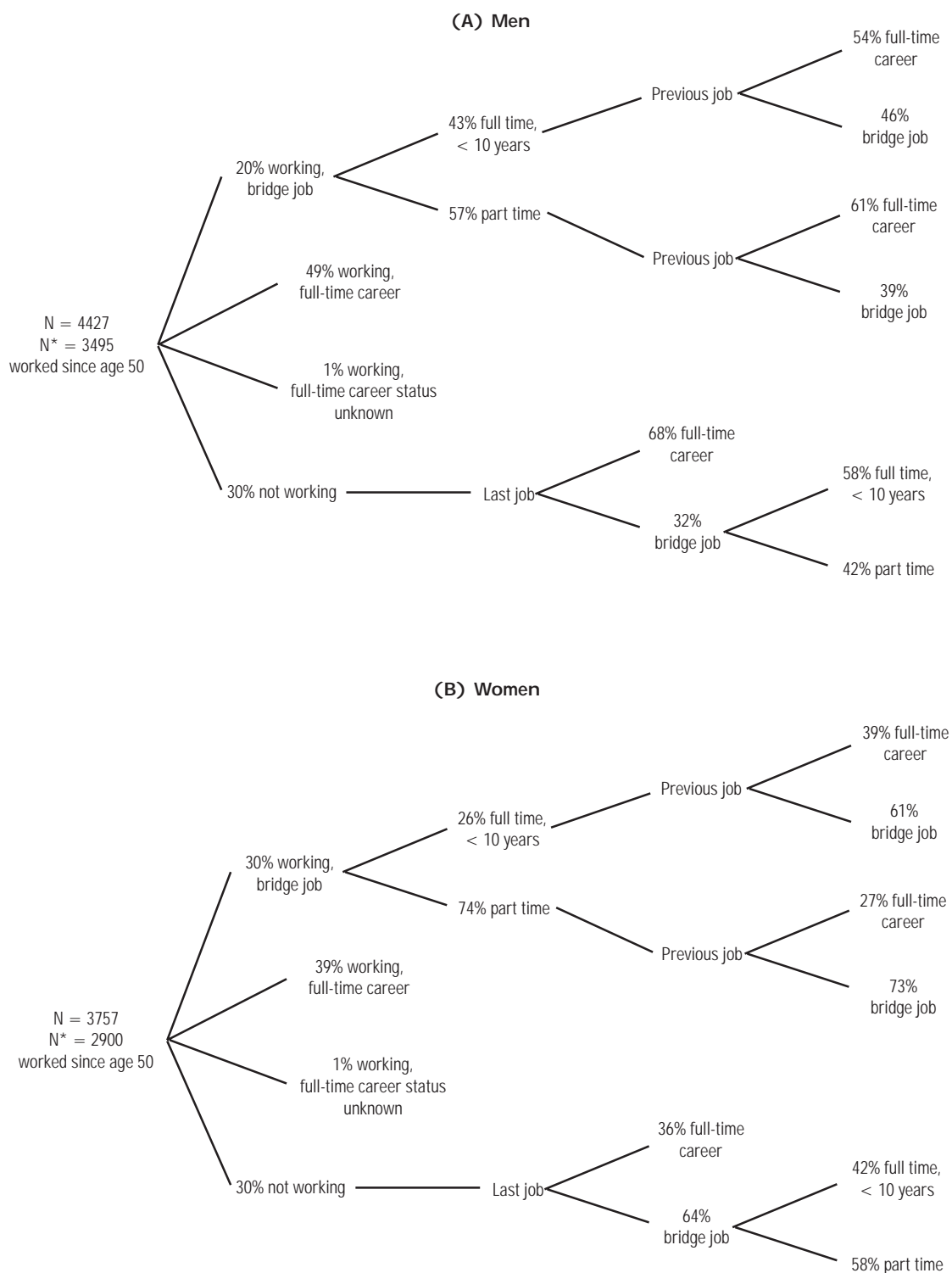
¹⁶ In 1995, about 70 percent of all new Social Security retirement recipients were ages 62–64 (Social Security Administration, 1996). Most of these were age 62, the earliest age of eligibility.

¹⁷ Of the sample of 8,026 in table 3.1, 11 respondents were dropped either because we could not discern their current work status or because we could not tell

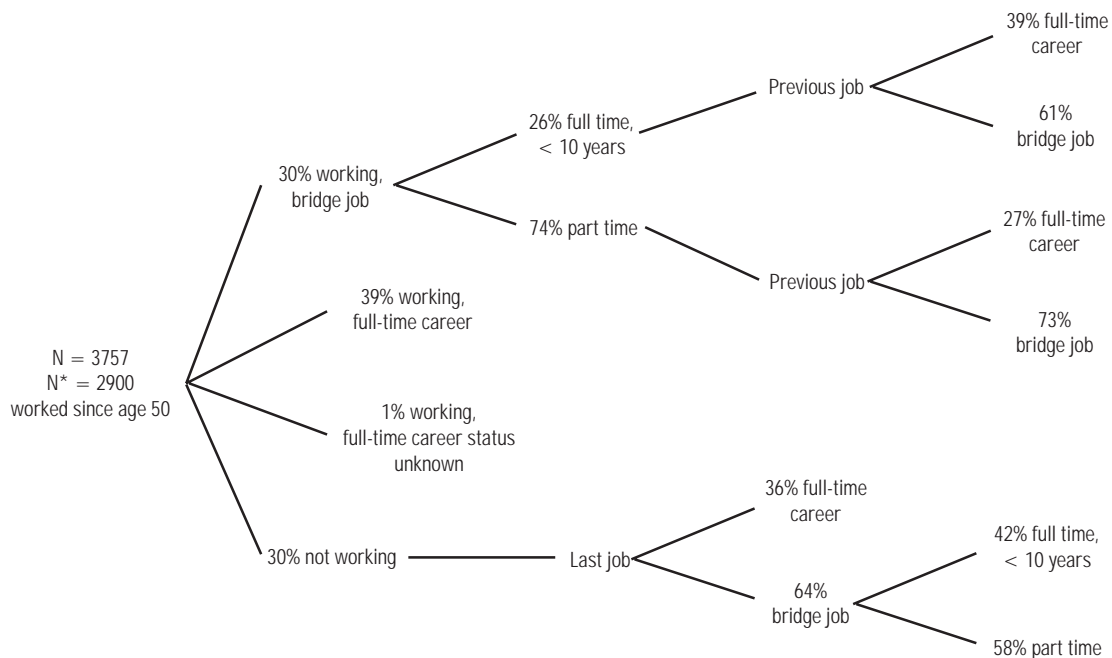
whether they were wage and salary workers or self-employed. Therefore, the samples in charts 3.6a and 3.6b total 8,015 (N). All the sample percentages in these “trees,” however, are based on weighted numbers (N*).

¹⁸ A small number (1.5 percent) are working, but we cannot discern whether or not this is a full-time career job.

Chart 3.4
Current Job Status



(B) Women



N* — weighted observations
Source: Health and Retirement Study, Waves I and II.

Current Status of Those with an Identified Full-Time Career Job

One objection to the equating of bridge jobs with retirement transitions is that some workers may have a lifetime of bridge-type jobs. If so, is there any reason to believe that the current bridge job is necessarily a step toward retirement? (For a 35 year old, it would not be; for some 55 year olds, it may not be either.) To focus on those for whom a bridge job does represent a change in behavior, we focus here on just the subsample for whom we can identify a full-time career job, whenever it was, and then try to observe the transition from that career job. By looking at current, last, and prior jobs, we can identify a full-time career job for 77 percent of the men but only one-half percent of the women in the larger sample among all those with some work experience after age 49.¹⁹

In charts 3.5a and 3.5b, we describe the retirement transitions of those men and women for whom we can identify a full-time career job. Over one-half (56 percent) of these men are still employed on full-time career jobs (chart 3.5a).²⁰ One-quarter moved out of the labor force directly from their career jobs, and the other 19 percent moved to a bridge job. (Over two-thirds of this 19 percent are still on that second job, but they would not accumulate 10 years tenure even if they remained there until age 62.) Of the men who have already left full-time status on their career jobs, 43 percent moved to a bridge job rather than directly out of the labor force.

Analogous transition data for the full-time career women are found in chart 3.5b and look similar to those of the career men. Although these women are more likely to still be employed on career jobs and less likely to be out of the labor force than the men (due partly to the fact that the women are younger, on average), a similar propor-

tion of those who have left full-time career status moved to another job rather than retired completely (47 percent, compared with 43 percent of the men). In general, the labor force behavior of career men and women looks more similar than does the behavior of men and women in general.

Of the men and women with identified full-time career jobs, 13 percent were self-employed on those jobs. Bridge-job activity appears important in this population as well.

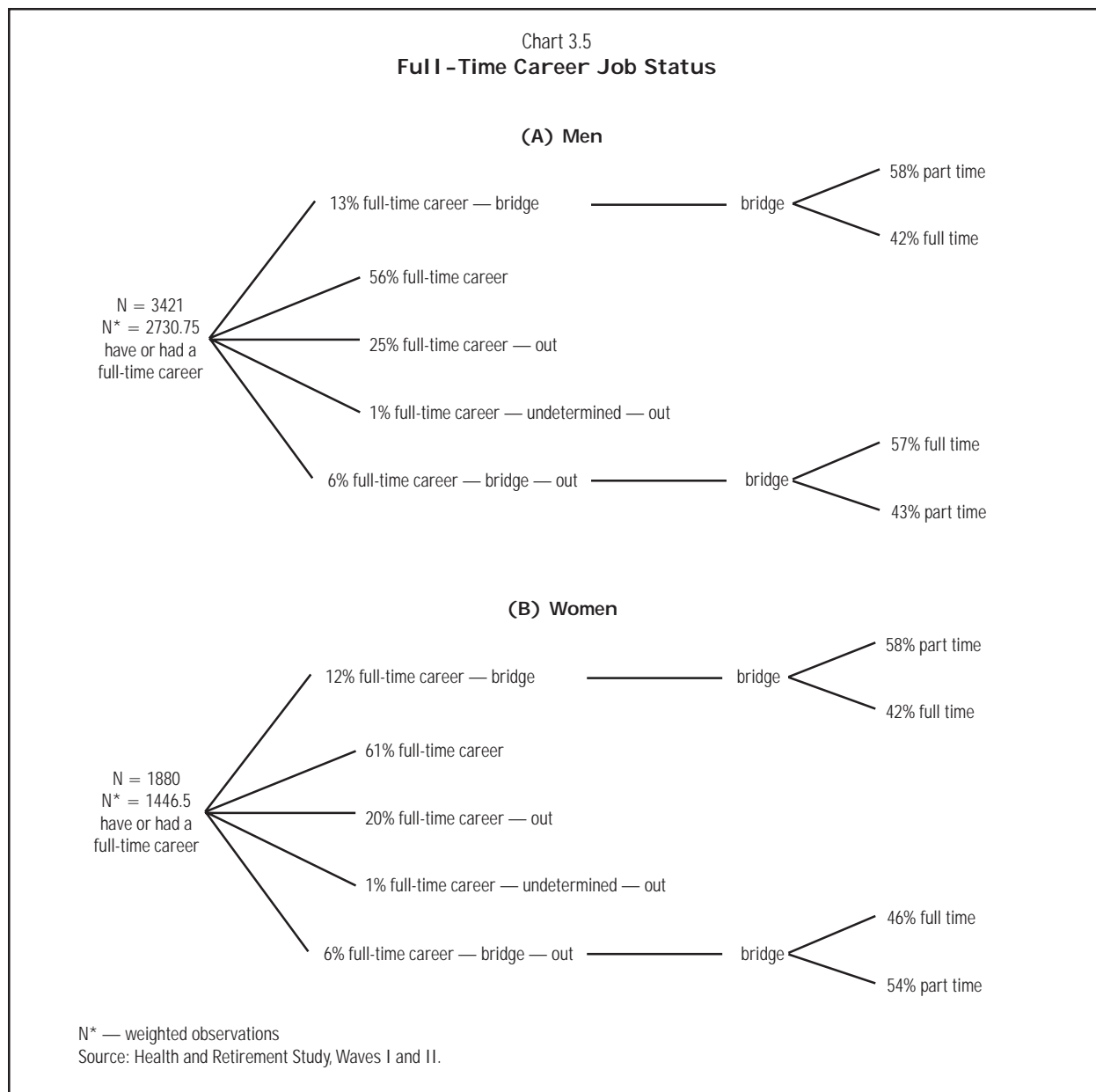
Because of their large numbers, the transition patterns for wage and salary workers look very much like the patterns for the career group as a whole. Fifty-six percent of these men and women (combined in chart 3.6a) are still on career jobs, 31 percent are no longer working, and 13 percent are working on a post-career bridge job. Among the self-employed, in contrast, over 70 percent are still on career jobs (higher than the wage and salary percentage, as expected), and only 18 percent (compared with 31 percent of the wage and salary population) are no longer working (chart 3.6b). But, similar to the experience of the wage and salary workers, of those who have left their full-time career positions, nearly one-half (46 percent) continued to work rather than leave employment altogether.

The prevalence of switches between wage and salary and self-employment status late in life can also be seen in charts 3.6a and 3.6b. Among the career wage and salary workers who switched jobs (and are either still on the new job or are no longer employed), nearly one-quarter switched to self-employment. Among the career self-employed who switched jobs, over one-half moved to wage and salary employment. Although the proportion of self-employed job switchers moving to a wage and salary job is higher than the reverse, there is still a net increase in the number of self-employed be-

¹⁹ In defining this sample of those for whom we can identify a full-time, career job, we do not assume that workers remain on their current jobs until age 62. The reason is that we will be looking at the transitions from these jobs, and we want to use the actual tenure at transition to define the job one leaves as either full-time career or bridge, not the tenure that would have occurred had the individual stayed on the job until age 62. On the other hand, for those who take another job when they leave their career jobs, we do assume they remain on the post-career job until age 62 when

deciding to describe it as a bridge job or as (another) career job.

²⁰ The vast majority of these are still on the career jobs we identified. About 7 percent have switched jobs but moved to new jobs early enough to be able to accumulate 10 years of seniority by the time they reach age 62. To the extent that some of these men do leave before 10 years tenure, we will underestimate the extent of bridge job activity.



cause of the much larger number of initial career wage and salary workers.

■ Comparisons Between Career and Bridge Jobs

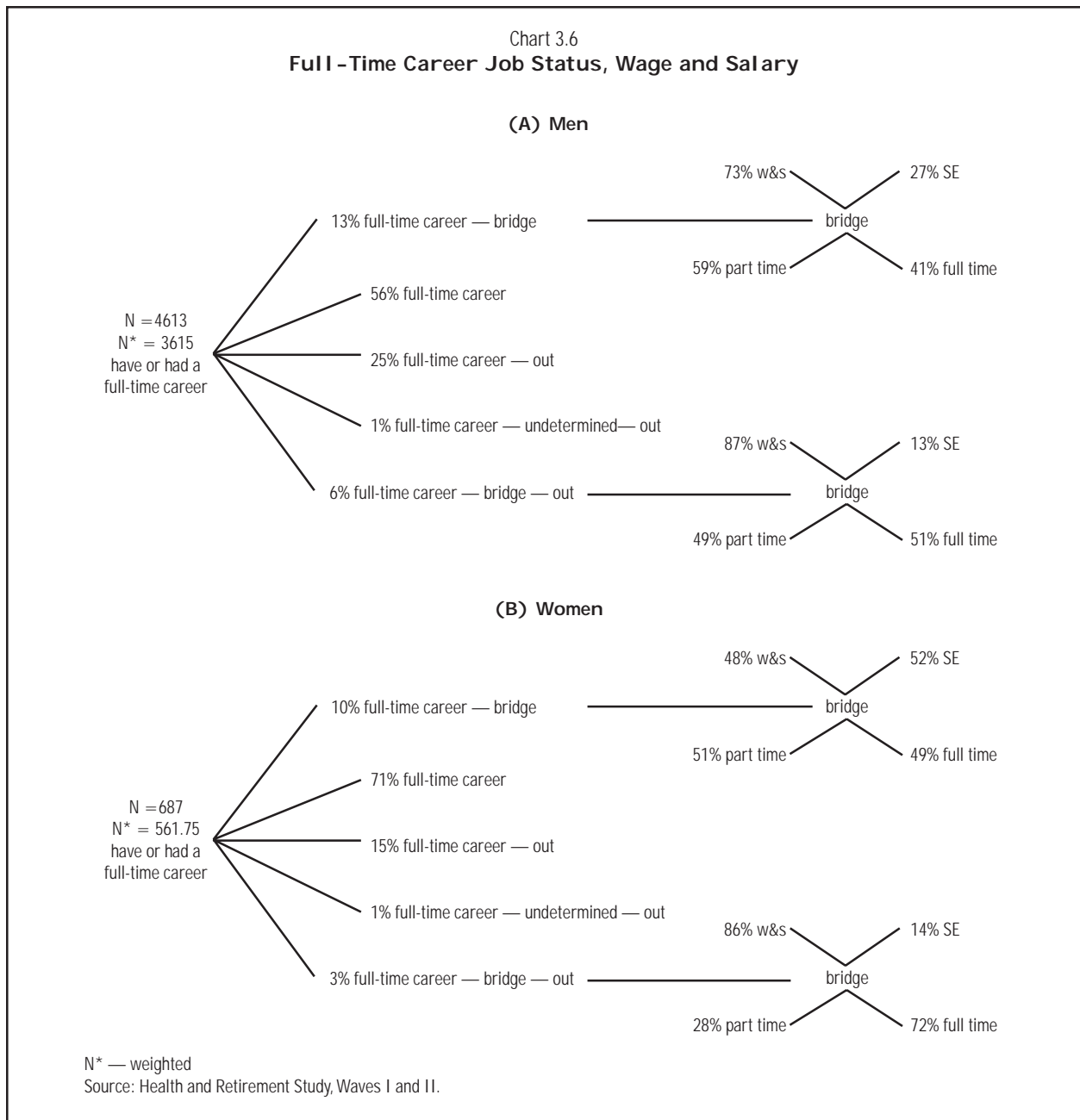
By looking at those workers who did move from their full-time career jobs to new jobs, we can ask how the two jobs compare. As seen in charts 3.5a and 3.5b, about 45 percent of new jobs were full time (at least 1,600 hours per year), and the proportions were similar for men and women.²¹ Of those working part time, over one-third were

working between 1,200 and 1,600 hours (a significant work commitment), and another quarter were working between 800 hours and 1,200 hours. The remaining 36 percent were working less than half-time, evenly distributed between 400 to 800 hours, and less than 400 hours per year.

Post-career jobs generally represent a movement down the socio-economic ladder. Table 3.1

²¹ These percentages are derived from the two groups in figures 5a and 5b who moved from a career to a bridge job—those still on a bridge job and those who have since stopped working.

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roughly disaggregates jobs by white collar/blue collar and skill status. About one-half (53 percent) of these late-life job changers remain in the same 4x4 cell, but of the half who do not, two-thirds move down and only one-third move up. The percentage of white collar workers drops from 58 percent to 50 percent, and the percentage of highly skilled, from 65 percent to 52 percent. The largest increase occurs among blue collar workers, not highly skilled—from 9 percent of the career jobs to nearly one-quarter of the bridge jobs.

The same slippage is seen in table 3.2, which

disaggregates by hourly wage rate on the career and bridge jobs. Whereas only 27 percent of these workers earned less than \$10 per hour on their career jobs, 60 percent did on their post-career jobs.²² The percentage earning between \$15 and

²² Fifteen percent of the sample who switched from a career to a bridge job had bad wage data on one or both of the jobs. The vast majority of these involved wages on a 1994 bridge job, as the 1994 data release is less clean than the 1992 public use sample. Table 3.2 includes only those with good data on both jobs. The wage rates are all inflated to 1994 dollars.

Table 3.1
Job Transition by Occupational Status

Bridge Job	White Collar Highly Skilled	White Collar Other	Blue Collar Highly Skilled	Blue Collar Other	Total
White Collar, Highly Skilled	53%	16%	7%	5%	25%
White Collar, Other	22	53	11	12	25
Blue Collar, Highly Skilled	14	13	52	19	27
Blue Collar, Other	11	17	29	64	23
Total	34	24	31	9	100

Source: Health and Retirement Study, Waves I and II.

Note: Occupational Status definitions, using 1980 Census occupational codes. White Collar, Highly Skilled: managers (003-037); professional (043-235). White Collar, Other: sales (243-285); clerical (303-389). Blue Collar, Highly Skilled: service, protection (413-427); mechanics and repair (503-549); construction and extraction (553-617); precision production ((633-699); operators, machine and transport (703-859). Blue Collar, Other: other services (403-407 and 433-469); farming, forestry, and fishing (473-499); operators, handlers (863-889). Other: armed forces (900).

\$30/hour (between \$30,000 and \$60,000 on a 2,000-hour basis) dropped from 37 percent to 15 percent. Overall, one-quarter (23 percent) of these job switchers stayed in the same wage category, as categorized in table 3.2. Of those who did not, three-quarters earned less on the bridge job, while only one-quarter earned more. Employee benefits tell the same story—pension participation and health insurance coverage are lower on the bridge jobs. These differences do not necessarily imply a problem. Many job changers may be voluntarily trading compensation (salary and employee benefits) for a change in pace, for more pleasant job characteristics, or for flexibility in hours not available on their career jobs.

■ Summary

The first two waves of the Health and Retirement Survey suggest that bridge-job activity is a very important part of the retirement process for a significant number of older Americans in the 1990s. The labor force participation rates of older Americans drop dramatically with age, with significant decreases at ages (such as 60, 62, and 65) that are important in pension and Social Security regulations. As participation drops, increasing proportions of those still employed are working part time or are self-employed, again with noticeable changes at key ages.

Bridge-job activity is observed both among those who have already stopped working, of whom

about one-half (one-third of the men and two-thirds of the women) last worked on a bridge job, and among those still employed, one-third of whom are either working on a part-time job or on one likely to end with less than 10 years duration. The labor market exit patterns of men and women working full time on career jobs are similar, but those of career wage and salary and career self-employed workers are not. There are transitions to and from wage and salary and self-employed status, with about one-quarter of the wage and salary workers who switched jobs late in life changing to self-employment, and about two-thirds of the self-employed who switched moving into wage and salary work. Because of the relative numbers of career wage and salary and career self-employed workers, there is a net influx into self-employment.

There is much to be learned from future waves of the HRS because the majority of the sample is still at work. But the first two surveys confirm that the retirement patterns of older Americans are rich and varied. Although many do leave their career jobs and the labor market simultaneously, many others utilize bridge jobs and second careers on the way out—often part-time jobs and sometimes self-employment—in order to retire more gradually. As the baby-boom generation contemplates retirement, and as Social Security reduces its remaining work disincentives, these nontraditional exit routes are likely to become all the more important.

Table 3.2
Job Transition by Wage Rate

Bridge Job	Full-Time Career Job								Total
	\$0-\$5	\$5-\$10	\$10-\$15	\$15-\$20	\$20-\$30	\$30-\$40	\$40-\$50	\$50+	
\$0-\$5	35%	27%	16%	14%	11%	0%	4%	0%	17%
\$5-\$10	38	52	52	37	40	22	24	26	43
\$10-\$15	20	12	18	22	15	14	7	6	17
\$15-\$20	3	4	6	8	10	10	0	10	7
\$20-\$30	2	2	2	9	15	28	29	19	8
\$30-\$40	2	2	1	3	6	10	15	6	3
\$50+	0	1	2	3	3	12	15	26	3
Total	7	20	26	18	19	5	2	2	

Source: Health and Retirement Study, Waves I and II.

Bibliography

Council of Economic Advisors. *Economic Report of the President*. Washington, DC: U.S. Government Printing Office, 1997.

Honig, M. "Partial Retirement Among Women." *Journal of Human Resources* 20 (1985): 613-621.

Honig, M., and G. Hanoch. (1985). "Partial Retirement as a Separate Mode of Retirement Behavior." *Journal of Human Resources* 20 (1985): 21-46.

Fuchs, V. (1982). Self-Employment and Labor Force Participation of Older Males. *Journal of Human Resources* 17, 339-357.

Juster, F. T., and R. Suzman "An Overview of the Health and Retirement Survey." *Journal of Human Resources* 30 (1995): S7-S56.

Organisation for Economic Co-operation and Development. *Employment Outlook*. Paris, France: Organisation for Economic Co-operation and Development, 1992.

_____. *The Transition from Work to Retirement*. *Social Policy Studies* No. 16. Paris, France: Organisation for Economic Co-operation and Development, 1995a.

_____. *The Labour Market and Older Workers*. *Social Policy Studies* No. 17. Paris, France: Organisation for Economic Co-operation and Development, 1995b.

Quinn, J. F. "Labor-Force Participation Patterns of Older Self-Employed Workers." *Social Security Bulletin* 4 (1980): 17-28.

_____. "The Extent and Correlates of Partial Retirement." *The Gerontologist* 21 (1981): 634-643.

_____. The Labour Market and Older Workers: United States. In J. Blackwell, ed., *The Labour Market and Older Workers*. *Social Policy Studies* No. 17. Paris, France: Organisation for Economic Co-operation and Development, 1995.

Quinn, J. F. & R. V. Burkhauser. Retirement and Labor Force Behavior. In *Demography of Aging*, L. G. Martin and S. H. Preston, eds. Washington, DC: National Academy Press, 1994.

Quinn, J. F., R. V. Burkhauser, and D. 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, J. F. & M. Kozy. "The Role of Bridge Jobs in the Retirement Transition: Gender, Race and Ethnicity." *The Gerontologist*, forthcoming.

Ruhm, C. J. (1990). Bridge Jobs and Partial Retirement. *Journal of Labor Economics* 8 (1990): 482-501.

Ruhm, C. J. "Career Employment and Job Stopping." *Industrial Relations* 30 (1991): 193-208.

_____. "Secular Changes in the Work and Retirement Patterns of Older Men." *Journal of*

- Human Resources* 30 (1995): 362–385.
- Social Security Administration. *Annual Statistical Supplement to the Social Security Bulletin, 1996*. Washington, DC: U.S. Government Printing Office, 1996.
- Turner, J. A., and D. J. Beller. *Trends in Pension 1992*. Washington, DC: U.S. Department of Labor, 1992.
- U. S. Bureau of the Census. *Projections of the Population of the United States, by Age, Sex, and Race: 1988 to 2080*. Current Population Reports, Series P-25, No. 1018. Washington, DC: U.S. Government Printing Office, 1989.
- _____. *Older Workers, Retirement and Pensions: A Comparative International Chartbook*. Washington, DC: U.S. Government Printing Office, 1995.
- U. S. Department of Labor, Bureau of Labor Statistics. *Employment and Earnings*. Washington, DC: U.S. Government Printing Office, January, selected years.
- U. S. Senate. Special Committee on Aging. *Aging America: Trends and Projections*. Washington, DC: U.S. Government Printing Office, 1991.

4

The Darwinian World of Reduced Expectations

by Curt Mikkelsen

■ Introduction

I am pleased to have this opportunity to address certain of the more compelling global retirement issues from the perspective of the corporate plan sponsor. Nothing I say should be construed as necessarily reflective of the past, present, or future policies or practices of my former employer, J.P. Morgan. To place my comments in perspective, I should note that I worked for Morgan for more than 25 years and retired last year as global benefits director. My responsibilities included the design, financial management, and investment management oversight for that firm's retirement and welfare programs for a work force of 15,000 employees, about half of whom were employed outside the United States in some 20 countries in Europe, the Americas, and Asia-Pacific.

It would seem that the theme of this policy forum, "Retirement Prospects in a Defined Contribution World," might be better titled: "Welcome to the Increasingly Darwinian World of Reduced Expectations." I was struck by the provocative question posed in the preamble to the forum: Will you ever be able to retire? In response, I am less than optimistic that most baby boomers will, in fact, retire in relative financial comfort, given the substitution of often less-generous defined contribution (DC) plans for defined benefit (DB) plans, reduced job tenure, increasing life expectancy, and high retiree medical and long-term care costs.

Those who bemoan anemic retirement savings rates may wish to confront the reality that the typical boomer is struggling to finance his housing and children's education expense, while being increasingly burdened with the current or prospective financial support of his parents, or his spouse's parents. This may imply that boomers are not in denial of their retirement income needs but, rather, that many of them simply face more imminent and compelling financial challenges.

■ Reshaping the Social Contract

I would like to identify 10 of the more important global business and work-force management considerations that I believe are increasingly reshaping the social contract. Within that contract, they also are reshaping the philosophy and plan design of retirement benefits.

- The more sophisticated integration of cash compensation and benefits into total compensation business planning.
- The increasing emphasis on professional and managerial level work force mobility as market and competitive changes often result in inter-country, inter-region, and global organizational restructuring, factors which underscore, in my opinion, the need for more benefits portability.
- Increasingly short shelf lives of products and services, which create pressure for work-force flexibility in terms of both size and composition.
- The trend toward corporate out-sourcing of so-called non-core activities, the emergence of corporate alliances, the creation of contingent work forces, and other nontraditional employment relationships, which prompts the not-so-tongue-in-cheek observation that we are all becoming temps.
- Enduring concerns about legally enforceable employee-"acquired rights" in Europe and elsewhere, which often inhibit employer freedom of action with respect to benefit plan changes, access to surplus pension assets, and the burden of statutory or customary cost of living increases under DB plans.
- The higher priority associated with cost control and corporate expense volatility reduction.
- The inverse relationship between employee value to the firm as a function of increased age and service after, say, age 35 to 40 and 10 to

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15 years of service. Simply stated, the forces of rapid technological change, enforced or voluntary “workaholicism,” and employee burn-out encourage the turnover of older employees with perceived diminished energy and ability levels, and their replacement by younger, better educated, and often less costly employees. As the highly respected benefits consultant, Tom Payne, began observing in the late 1970s and early 1980s, the ever-increasing adoption, by employers, of the role of benefit plan contributors and facilitators in place of their traditional role of sole providers of benefits.

- A related philosophical shift that results in a growing employer belief that employees should assume more financial responsibility for their own retirement capital-accumulation needs with less employer concern about the adequacy of the retirement benefit plan as an employer responsibility.
- More flexibility and choice in benefit plan design and selection, and more emphasis on employer return on investment, in terms of employee awareness and appreciation.

■ A New Philosophy for Employers

Given my recitation of the global benefits considerations, what, then, do I increasingly perceive as the thinking of senior line managers and their benefits directors? Very broadly speaking, the following developments related to retirement plans are occurring around the world:

- The desire to minimize longevity-based benefits, which foster an employee entitlements mentality.
- The perception that DB plans, with their benefit formulas based on age, service, and final average pay, are increasingly dysfunctional in an environment where an employee’s economic worth to the firm is no longer as age- and service-related as it once was.
- A desire to facilitate the geographical mobility of key professional-level specialists and managers, and the perceived need to eliminate benefit plans that inhibit international mobility.
- The recognition that DC plans afford better cost control and reduce expense volatility in a

FAS-87 world.

- An increasing interest in global employer stock-based plans, which are thought to better align the economic fortunes of shareholders and employees. To some degree, I suggest that the addition of these stock-based plans may well be at the expense of more traditional retirement programs.
- A changing social contract that leads to increased employer dedication of resources to employee investor education, so that newly empowered employees can better recognize, quantify, and respond to their increasing financial responsibility in providing for their own old-age income in a work life typically associated with several employers.
- The redefinition of a so-called full career in those companies still thought to offer career employment, from 30 to 35 years, to, say, 20 to 25 years, provided, of course, that increasingly demanding performance standards are achieved.
- The increasing utilization and justification of existing DB plans as management tools to induce early retirement, often in conjunction with different modalities of special early-retirement programs.
- The recognition, in global terms, that DB plans are increasingly burdensome to maintain, given the often inhospitable considerations of regulatory, tax, and labor law compliance.
- The recognition that DB plans are less adaptive to corporate mergers, acquisitions, and divestitures than are DC plans in the context of negotiable asset and liability transfers, annuity purchases, and FAS 88 curtailments and settlements.
- The perception by employees of benefit value versus the reality of benefit costs. Specifically, the low perceived value of the DB plan by employees under, say, age 35 or 40, argues for the replacement by often lower-cost, more highly visible, and more comprehensible, DC plans.
- The growing perception that recent and prospective reductions in Social Security benefit programs around the world can be better addressed by employers through non-integrated DC plans than through DB plans. The cost-conscious plan sponsors maintaining

DB plans are increasingly encouraged to eliminate Social Security integration—or, at least, to shift from Social Security offset to step-rate integration formulas to avoid the absorption by the corporate retirement plan of Social Security benefit shortfalls.

■ The International Experience

I would like to move on to a brief response to Scott Dingwell's discussion¹ with a few country-specific observations.

First, in Canada, many pension plans permit employees to opt out of, or to temporarily suspend participation, to maximize their ability to make tax-deductible contributions to registered retirement savings plans. This provision is highly attractive to both employees and to plan sponsors.

Second, with respect to the United Kingdom, I can confirm the trend to supplant traditional inflation-proof DB plans, with annual costs ranging from 10 percent to 15 percent of payroll, with lower cost hybrid DC/DB plans, and with pure DC plans. Five years ago, JP Morgan established a hybrid plan that better achieves corporate objectives for its 2,500-employee London office. At the time of plan change, all employees were offered a one-time choice: Either remain in the DB component of the plan or transfer to the DC section. All new employees were required to affiliate solely with the DC arrangement. Today, five years later, only about 20 percent of our U.K. employees are in the DB component of the plan.

Mr. Dingwell also observes that U.K. employers tend to be more paternalistic than their U.S. counterparts. In my opinion, this is likely to be more reality-based for British than for U.S. companies in the United Kingdom. That said, I can certainly attest to the very substantial dedication of resources by Morgan to educating its British employees about the immediate and longer-term consequences of our major plan changes. This educational effort included—but was not limited to—group and individual employee meetings, personalized benefit statements, and, very importantly, the availability of computer-based modeling

opportunities to assess the likely effects of plan changes on prospective plan benefits based on different economic and investment assumptions.

In addition, London office management, in conjunction with our benefits consultants, devoted much time to the assessment of DC fund managers to ensure that only longer-term, better-performing ones were eligible for employee and employer contributions.

The migration from DB to DC plans in the United Kingdom also is associated with an increasingly burdensome regulatory environment for pension plans, as well as increasingly costly benefit indexation and other compliance requirements.

As a long-time observer of the ever-evolving Australian pension system, it is very difficult for me not to express keen frustration at the far-reaching regulatory and tax-law changes experienced over the last 15 years. Aside from Mr. Dingwell's observation about the establishment of ever-more expensive mandatory retirement contributions—and he has projected these to rise to as high as 15 percent, total of employer, employee contributions—we have seen the following major changes since the 1980s: the addition of a significant tax on lump-sum benefits, which had been highly tax preferred prior to 1983; the absolutely dramatic change in the tax system in 1988, which imposed a 15 percent tax on employer contributions and investment earnings, which had the effect of advancing much of the tax on superannuation from the benefit receipt end to the contributions end of the process; and very recently, the populist-motivated change that very sharply reduces the tax advantages of plan participation for highly paid employees.

■ Conclusion

As a final comment, I would like to express, on behalf of its critics, some notes of caution about the increasingly popular Chilean Social Security privatization model. The Chilean model, for all of its purported attributes, has drawn criticism in certain quarters for the following reasons. First, the system has very high administration costs, which may approximate 15 percent of contributions, costs that are associated with fund-manager expenditures on sales and marketing. Second, the system has very high transitional costs, which many poor countries could ill afford. Third, while

¹ See Scott Dingwell, "Retirement Programs in Transition Worldwide: Non-U.S. Defined Contribution Experience," in this volume.

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85 percent of the labor force is affiliated with the system, only about 55 percent of the labor force is said to be contributing because of poor compliance.

In terms of social policy, some critics are arguing that the system puts workers at undue personal risk, has adverse distributional effects, and is inequitable within social groups of the same

generation. Despite these attacks, the Chilean model has certainly captured the attention—if not the imagination—of many countries, especially those in South America, where it has been selectively adapted to supplant bankrupt pay-as-you-go systems.

5

Retirement Security: A Market-Driven Approach

by Jack Bruner

■ Introduction

A very different approach to public policy is to rethink the issue from a very different viewpoint. If we could change policy to support shared successes between businesses and employees, we could create significantly greater private investment to deliver financial security.

■ Focusing on Perspective

We have had a veritable feast of data to this point, which is helpful; however, most of these data are macroeconomics in nature—broad, big-picture trends and averages. Another way to look at the battle for financial security, or retirement security in the future is to consider it at a microeconomics level. In many ways, the battle for success here is not going to be fought within policy forums, or within the halls of Congress, because the means to maneuver are relatively limited. Government funds are scarce, and there is dramatic resistance to tax increases. Instead, success depends on changing human behavior to prompt greater savings levels and effective investment strategies. In terms of education, it will be fought on the shop floors, in the retail outlets, and in all of those places where people live and work every day and exchange information.

Here is the ultimate microeconomics basis. I have three sons who may represent a spectrum that I would like to test here. Brady, my youngest, is 8 years old. He has bright blue eyes and more energy than anyone. When Brady gets up in the morning, he sees only an infinite world of possibilities. Everything is bright and new. He truly believes anything is possible. My middle son, Brice, a wonderful, quiet young man, is cautiously optimistic with regard to the world. He believes there is a possibility that he could play golf instead of go to school, but he is not naive enough to think that this

will necessarily take place. My oldest, Brant, is 15 years old now. As most teenagers, fundamentally, he is questioning everything about the world. It is literally the dawn of cynicism that occurs around this age.

I am hopeful that policymakers will choose to be cautiously optimistic but also be programmatic in exploring strategies to enhance financial security. That would provide the energy to sustain our efforts, with a healthy sense of responsibility to change our direction. Even among the cynics, there is hope and a sense of purpose. While they believe that the world literally is going down the tubes and there is little hope of redemption, they also believe that they, individually, can be successful, and, in fact, will be successful in this kind of environment. I believe this is the key insight for policymakers: the potential to shape a brighter future one individual at a time.

By focusing on individuals' attitudes and behaviors and the enlightened self-interest of individual employers, policymakers have a tremendous opportunity to support both retirement security and broader financial security.

■ The View Seen by Hewitt Associates

Hewitt Associates is a consulting firm working primarily with 1,000 of the largest companies around the world. We also interact with millions of individuals through our communication and benefit delivery services. Each day we have a chance to work on the front lines as companies and individual human beings make the decisions that shape retirement security outcomes. Because employers have such a powerful impact on employee security, we'll now explore how companies are sorting through five different questions.

The first question is: what is the business

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value of retirement financial security programs?

We sometimes begin our work on retirement strategy with the premise that “pension plans have no value.” A lot of people would disagree with the idea that pension plans have no value, but in essence would acknowledge that pension plans are a means to an end. There is nothing sacrosanct about pension plans. They are tools that people use to be able to achieve retirement, or some level of financial security. Similarly, companies do not exist to have pension plans. They have a pension plan because they believe that, by offering or investing in this particular device, their business ventures may have a greater potential to create success for their people. In terms of great advertising, when you see a Pepsi commercial, do you ever see a list of the ingredients? No. You see, “Be young, have fun, drink Pepsi.” And you see a lifestyle—people having a great time.

Advertisers understand what we in the policy-shaping world, or even those of us working to shape behavior and education, miss. People do not want to be educated on pension plans, savings plans, or financial schemes in general. Companies, at least CEOs, do not want to invest extensive amounts of their time understanding everything about how these things could be structured. Instead, the issues are: what are the outcomes that we can pursue and what tools can we use to do this? The outcomes they are pursuing are not primarily associated with public policy. Instead, they are associated with the issues the company is trying to confront.

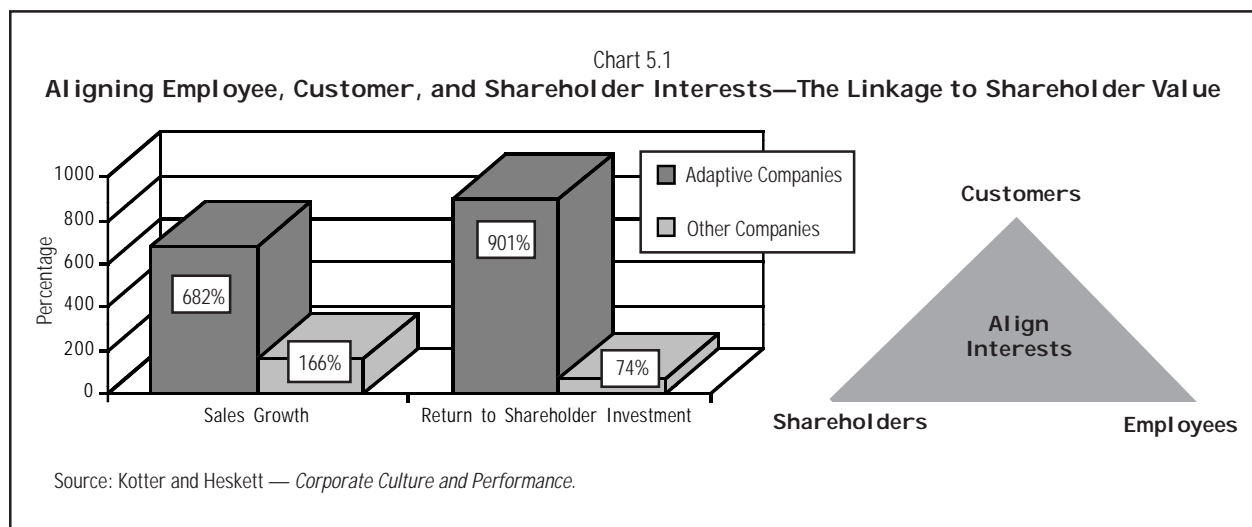
Similarly, what employees are trying to

accomplish falls into a hierarchy of needs. And retirement happens to be a very remote need in many instances. As we look at the programs’ changing structure, there is a lot to explain about why we are seeing some of the evolution that is occurring. Therefore, we need to spend a little time on data reflecting how these programs and practices are evolving, what the emerging current thinking is, and how companies are managing the transitions.

■ The Business Value of Retirement Security Plans

What is the business value of retirement and financial security plans? In the United States, \$1 trillion a year is spent on employee benefits. As companies cut costs to drive profitability, many questions arise as to why this money is being spent. We are beginning to come to the end of downsizing as we have known it, and many companies are concluding that we have cut back much of the gain we are ever going to have. We have become more profitable, but in terms of rewarding shareholders, and in terms of meeting customer needs, we are going to have to move to a new level that will require growth. To do this, we are going to need a focused strategy that makes us successful.

Larry Bossidy at AlliedSignal has said that to get to that next level, we have to engage people in a very different way. Chart 5.1 shows the results of a study of a couple hundred companies by Kotter and Heskett in *Corporate Culture and Performance*. They look at the cultures of organizations, across



industries, that have been exceptionally successful, and found that organizations that were adaptive grew 4 times as quickly—and were 11 times as profitable—as other organizations. (See chart 5.1.)

This superior growth and profitability is what companies are after. By linking investments in financial security to organizations' goals, we can encourage executives to maintain and enhance these investments. What the adaptive companies had in common was that they had strong cultures, they continually promoted change, and they worked to align the interests of their employees with those of their customers and shareholders.

In essence, businesses today are making dramatic changes in their operations and strategies that are driven by deregulation, reorganization, and global competition. To manage the transformation, they recognize that they either need different people in place or for the people that they are going to want to have in place to understand that the business is focused on different attitudes and behaviors moving forward.

To achieve these goals, businesses need to find a way to strike a new deal or craft a new relationship with employees. But they need to craft that relationship to get people's attention and offer a hopeful future for those who contribute to success in the new environment. Companies create this new deal by addressing the things that are most important to people. They also have begun grouping the subsequent programs and investments that they are making in people in a way that is consistent with words they are using to describe this new deal.

When businesses stake out a new business strategy or a new philosophy, and they begin acting to bring that initiative to life, there is a strong recognition that they need to look at who will be needed to be successful in that venue. And when they start looking both at their hiring patterns and who they are bringing into the organization—these are typical employers—they find they have lots of people coming in their 20s, and very few coming in later in their careers, relatively speaking.

Also, when they begin looking at the issue of retention, or how they keep the people whom they want most, they look at the employees they do not want to lose. They discover that they tend to be losing people in the time frame of 3 to 7 years, as opposed to those in the time frame of 20 to

30 years. It tends to be younger people whom they lose, and who are disenfranchised sooner, as opposed to later, because they feel a greater sense of mobility.

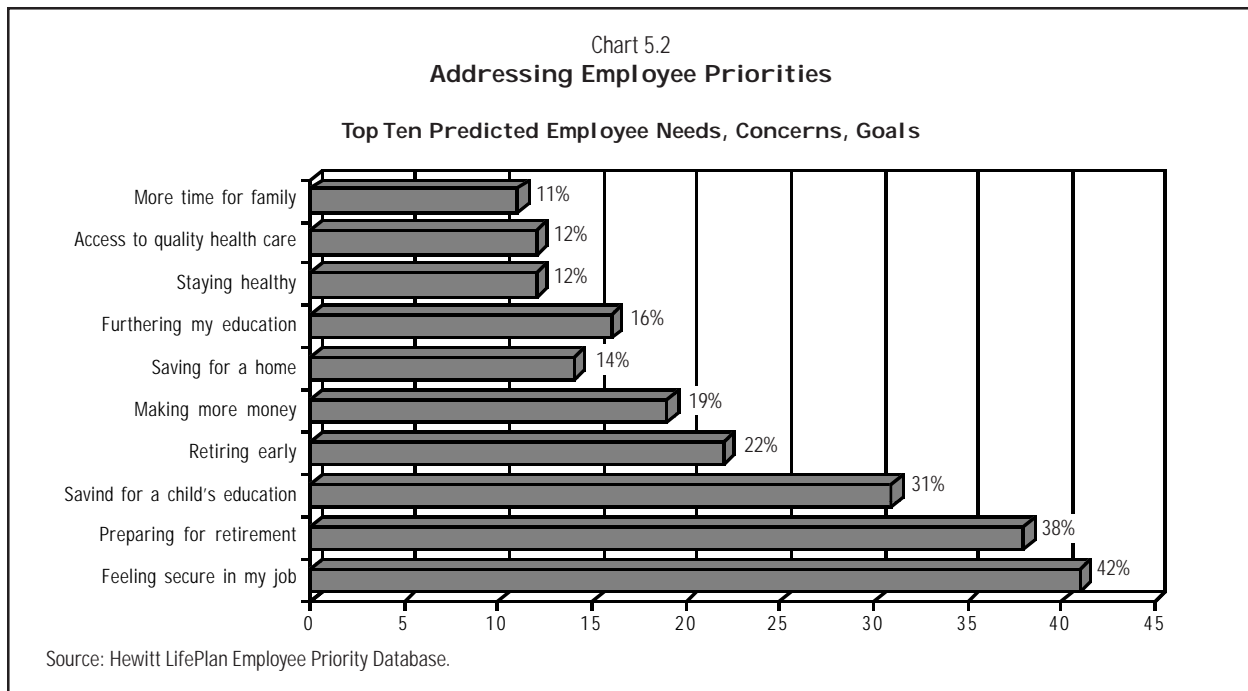
Combine this thought that businesses need to be more successful if they are going to improve their ability to attract and keep the right people, and keep them motivated at appropriate points in time, with the thought of all of the other things that they are trying to accomplish in the employment relationship. This combination leads to a broad acknowledgment that the things they are trying to accomplish in terms of what they need from their people to be successful as a business do not necessarily align with the programs they offer. They enter a mode of questioning, "How do we realign the programs so that they support our business needs?"

■ Evaluating Employee Priorities

From the perspective of employee priority, we see a very different picture. We see lots of employees today saying, "Hey, wait a minute. You're asking me to work longer than ever before. I'm not seeing the pay increases that I got used to in the 1970s and 1980s." There is less job security and more turnover." Then, finally, they see the CEOs getting phenomenal rewards, and that their (the employees') health care contributions are going up. They ask, "What's the deal here? What's in this for me? You say you want me to sign on to a new business strategy, work harder, change everything I do. What is going to motivate me to do that?"

We are working with 50 major organizations now that have gone out across their work forces to address this issue by asking, "What do you need most in your life today to be successful? What's keeping you awake at night? What concerns you? What are your goals in life? What are you trying to accomplish at the end of the day?" And we see that job security—because of the pervasive concern over this issue—is way up at the top of the list. But when people think about this in the longer term, retirement is number two on the list. Saving for a child's education, an another important financial goal, is number three. Retiring early, number four. Making more money is almost a means-to-an-end issue, as opposed to being an end in itself, and is number five. And saving for a home and furthering

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my education are six and seven, respectively.

These are almost all financial goals or goals that require capital accumulation of one type or another. And if you start looking at the list, is there any wonder that lump sums are being diverted, or used for other purposes than retirement? These other things happen first. You have to get another house. Your child has to go to school. If the money is there, you are going to spend it. So, perhaps if we want to secure retirement, we have to figure out a way to tackle these considerations more broadly.

The pattern with which we have distributed pensions and other benefit moneys, in terms of how we spread those dollars out, has tended to follow the priorities perceived by one group of people. (See chart 5.2.) The chart shows three composite people here. One is a mid-career person who earns a fair living, and, based on this database, saving for her child's education pops up before retirement among her priorities. This is relevant to how much we are saving, and for what purpose. (See chart 5.3.)

Another person, who is even younger and earns less, has a different hierarchy of needs: "I want to have a few dollars in the bank, but then I want to move into a house and I want to begin moving through things." (See chart 5.4.) And finally we get to a priority allocation that we might view from a traditional policy standpoint: a 50-year-old male who is earning \$100,000 a year and lists

retirement as his number one priority. (See chart 5.5).

One of the issues that we are seeing in terms of the changes in plans and in the distribution options is the fact that, with the more diverse work force, peoples' needs and the time frames are different. We also are seeing a difference in terms of timing. The data from across our employee priority database would show that early in your life, saving for a home, for your own education, making more money, are top priorities. It is only over time that retirement emerges as a top priority.

So if people have a variety of financial security needs, do we allow them to use corporate-sponsored programs to accomplish these goals? And we also have the question, with regard to education, of what do people believe is going to happen? The bottom line is, when we ask people where they are in planning for their own financial security needs, virtually all of them would say, "We're not very far. We need to do a lot more." If we are effective in education and planning, they will save enough for all of these needs.

■ Aligning Corporate Goals with Employee Goals

How are programs evolving, in the face of both these corporate needs and employee needs? Our

Chart 5.3

Illustrative Individuals—Commitment is an Individual Decision**Susan***Business Sales Operations***About Susan**

Age: 43
 Annual earnings: \$50,000
 Service: 14 years
 Family status: Married to Bob and has two children: Kevin (9) and Kristen (7)

Her Goals and Priorities

1. Saving for her children's education
2. Preparing for retirement/being able to retire comfortably
3. Feeling secure in my job
4. Financial security
5. Achieving balance between work and family
6. Flexible working hours
7. Quality life for my children/today's difficult environment
8. More time for family

Chart 5.4

Illustrative Individuals—Commitment is an Individual Decision**Kevin***Manager, Branch Technology***About Kevin**

Age: 25
 Annual earnings: \$30,000
 Service: 4 years
 Family status: Single

His Goals and Priorities

1. Financial security
2. Saving for a home
3. Making more money
4. Feeling secure in my job
5. Furthering my education outside of work
6. Having appropriate job opportunities
7. Having a family (spouse, child, adoption, infertility, etc.)
8. More flexibility to advance

Chart 5.5

Illustrative Individuals—Commitment is an Individual Decision**Robert***Regional Director, Auditing***About Robert**

Age: 50
 Annual earnings: \$100,000
 Service: 5 years
 Family status: Single

His Goals and Priorities

1. Retiring early
2. Staying healthy
3. Preparing for retirement/being able to retire comfortably
4. Financial security
5. Being the best employee I can be
6. More time for self
7. Making more money
8. Having fun in my personal life

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data are based on 1,000 large employers, trended over time. But interestingly, the data on pensions have not been changing as quickly as some of the other kinds of data. Almost 80 percent of these employers still provide a defined benefit plan, a drop from 91 percent. Nearly all now supplement this plan heavily with a defined contribution plan.

The benefit industry is currently focused on hybrid plans with elements of both defined benefit and defined contribution such as cash balance and pension equity plans. The hybrid plans are only about 10 percent of the total, even today. Options such as 401(k) savings plans are virtually uniform across this group of employers now. Finally, about one-third have a performance basis in their programs.

Changes in Benefit Value

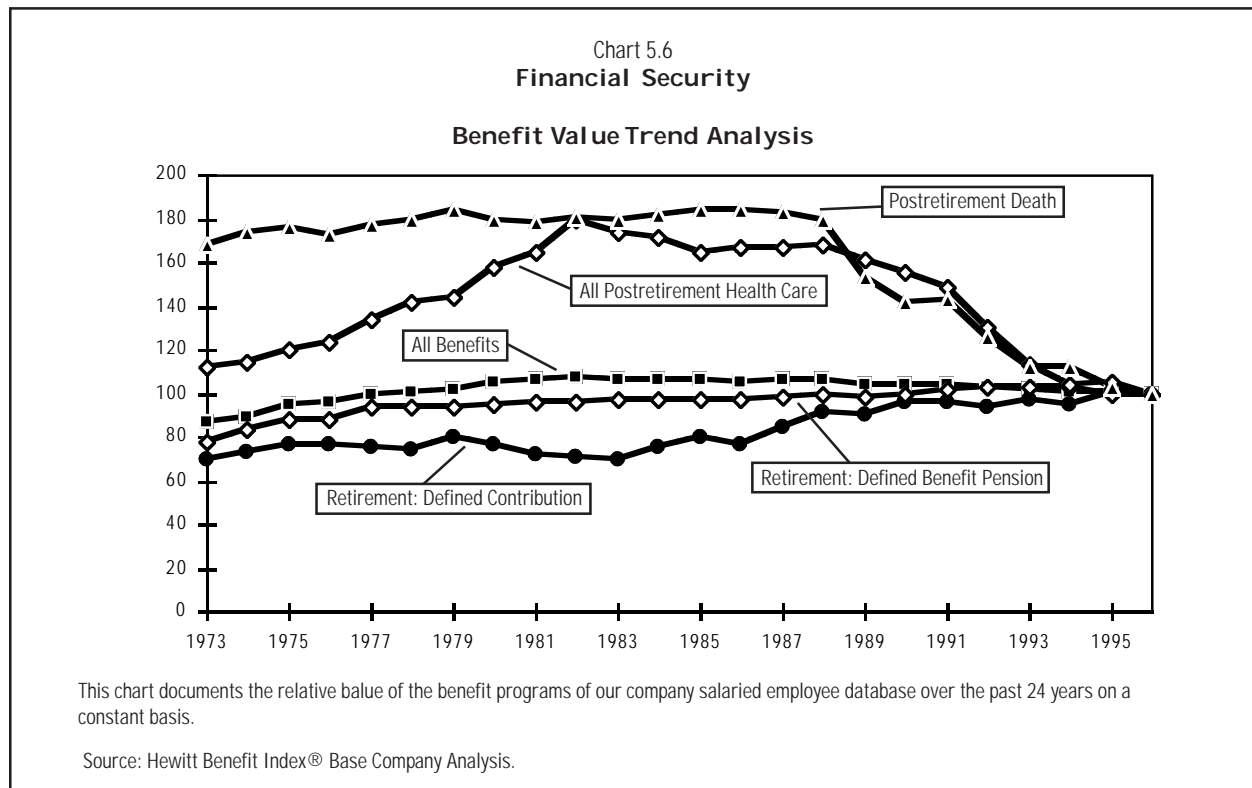
Hewitt's Benefit Index® measures the benefit value provided by a set of large employers and blue chip companies. Our base company index shows that defined contribution plans have increased the most. But the benefit value for large companies of the defined benefit plans has also increased fairly dramatically over the last 24 years. Post-retirement

health care and post-retirement life insurance benefits have fallen off quite dramatically. And if we look at all benefits, it's been a relatively level story. (See chart 5.6).

When we look at financial security today, we also see a reallocation of the dollars that might have been spent on post-retirement medical benefits to benefits such as stock-option plans. In viewing the total asset that is going to be available to meet the total need, we are going to see fairly dramatic changes in the mix, and we already are seeing some interesting and unusual programs, such as life-cycle accounts, beginning to emerge—for good reasons.

Employer Trends

What are companies in different situations doing? Glaxo Wellcome's U.S. group has just gone through a major redesign of their defined benefit and 401(k) savings plan. They ended up with a 5-percent-of-pay allocation to a cash balance plan, fully vested, day one; 5 percent matching on 6 percent of pay into a 401(k), fully vested, day one. This is very visible, very portable, and more total cap and recruiting oriented than retirement oriented,



although it will be quite adequate.

They also added something called a life-cycle account because when the company did the survey, saving for kid's education was ahead of retirement in order of priority. Saving for a home was way up on the list, too. The company did not want people to raid their retirement funds for this purpose. So more than 30 percent of their employees last month signed up to begin saving \$2,000 a year, which will be matched by \$500 from the company, on an after-tax basis for shorter-term and more intermediate-term needs.

Other organizations, such as First Union, are creating world-class employee education "tool kits" to help employees help themselves. This is a superior strategy to enhance financial security and satisfaction in a cost-effective manner that promotes flexibility.

Companies are beginning to make distinctly different decisions in terms of how they shape retirement and financial security plans, to align investments with employee needs and to create business success. These decisions are not based on public policy considerations but rather on what the companies are trying to accomplish to promote their business and on targeting the specific people they need.

■ Conclusion

We have a new environment. This process of education is not an economic or technical exercise. It is a psychological positioning of your goals. Here are the things you want most in life, and here is how you can accomplish them in the new environment. Our plans and our policies are only ways of

creating the means to your end goal. Basically, humans need three things to change. They need an understanding of why there needs to be change. That is why marketing the outcome, as opposed to the program or the public policy, becomes important. They also need energy, and that is why tax advantages and other kinds of government incentives can be a positive influence. The third thing they need is safety, a sense of security, that if they play the game, they will have a chance to get what they want.

As we begin to think about how companies are transitioning, we see ideas like the "\$60,000 pizza" emerge. In Nike's financial education, they have shown that if you take what you would spend on a pizza a week for your lifetime and you save it in their 401(k) plan, you end up with \$60,000. It literally is a bread-crumbs theory: Give people all of these small incentives to keep doing the right things all the time, and, eventually, they will get to the end of the road and feel pretty good about what is happening.

We are at a time of transition, which means we will need tremendous creativity to address retirement security issues. People are going to feel fairly confused and somewhat insecure. If we manage this process in the right way, we can focus their attention on doing more planning to be successful. But we have to recognize that the battle for success and real victory in the financial security arena is going to be fought in a very unusual way. It will come because policymakers seek to clarify organizational and employee goals and work to align tax incentives and regulations with these goals.

Section II

Retirement Plan Trends and Perspectives

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6

Defined Contribution Plan Dominance Grows Across Sectors and Employer Sizes, While Mega Defined Benefit Plans Remain Strong

by Kelly Olsen and Jack VanDerhei

■ Introduction and Background

Having existed throughout much of this century, defined contribution (DC) plans are nothing new (Employee Benefit Research Institute, 1997; Salisbury, 1996). The real novelty regarding these plans is the extent to which they have attracted legislators,' employees,' and private (and, to a lesser extent, public) employers' interests since the mid-1970s. Also novel is the increasing modification of traditional defined benefit (DB) plans to include features that have typically been associated with the DC approach.

Legislative interest in DB and DC plans began with an array of legislation and regulation preceding the Employee Retirement Income Security Act of 1974 (ERISA), yet none was as comprehensive as ERISA. For example, long-standing provisions of the Internal Revenue Code (IRC) permit and encourage the use of sec. 403(b) tax-deferred annuities for employees of educational and other nonprofit organizations. Along with officially sanctioning many preexisting employment-based plans, ERISA created a new type of DC plan—the individual retirement account (IRA). In 1978, Congress showed further interest in

DC plans when it added sec. 401(k) and sec. 457 to the IRC, providing a means for employees to make before-tax plan contributions. Other IRC provisions have since increased the relative attractiveness of two types of preexisting DC plans: employee stock ownership plans (ESOPs) and tax-deferred annuities for educational and nonprofit employees (Allen et al., 1997). Today, legislators continue to show interest, as evidenced in 1996 by the creation of a new type of DC option for small businesses, the savings incentive match plan for employees (SIMPLE) plan.¹

While legislators have facilitated the attractiveness and use of DC plans through various regulations, employers and employees have displayed their growing interest through increased usage. Since the 1970s, qualified² DC plans, participants, and contributions have grown as a percentage of the employment-based retirement system. From 1975 to 1993, the number of qualified private-sector DC plans rose rapidly from 208,000 to 619,000, with growth concentrated primarily among smaller firms. Meanwhile, the number of private DB plans declined from 103,000 to 84,000, and recent EBRI estimates project the number to have fallen further, to 53,000, by 1997.³ During

¹ This plan was enacted with the passage of the Small Business Job Protection Act of 1996. For more information, see Kenn Beam Tacchimo and David A. Littell, "Comparing 401(k) Plans with SIMPLEs—Which Is Better for Your Organization?" *Benefits Quarterly* (First Quarter 1997): 54-66.

² Qualified plans are those meeting the requirements of the IRC and associated regulations. For more detail on this highly technical topic, see chapters 3 and 4 of Allen, Melone, Rosenbloom, and VanDerhei (1977).

³ The trends in DB and DC plans may be presented in a number of ways. This paragraph refers to the total number of qualified plans, and is taken from information published by

the U.S. Department of Labor (1997). Other methods of analyzing these trends attempt to classify plans for sponsors offering multiple plans. Primary DB status will be assigned if participants within a taxpayer employer identification number (EIN) are either all covered by a DB plan only or are covered in approximately the same numbers by a DB and DC plan. See Ippolito (1995) for additional information. Another method of analyzing the decrease in defined benefit plans is to look at the number of plans insured by the Pension Benefit Guaranty Corporation (PBGC). According to their most recent estimates, in 1996 they insured 47,000 single-employer DB plans, down from an all-time high of 112,000 plans in 1985 (Pension Benefit Guaranty Corporation, 1997). The PBGC and the plan termination insurance program it administers are described later in this article.

1975–1993, the number of workers participating in a private DC plan increased from 12 million to 44 million, while DB plan participants remained roughly steady at 33–40 million. In the public sector, federal DC plans have grown from 0 percent of plans and participants in 1981 to 20 percent of plans and 30 percent of participants in 1995, and some evidence suggests increased use of DC arrangements among state and local governments as well. Like the growth in number of plans, the growth in DC participants is concentrated primarily among smaller private firms, with DB plans tending to be populated by large participant groups and more prevalent among public and large private-sector employers.

Many issues surrounding the growth in DC plans are subject to debate. This article represents an effort to clearly delineate these issues and to present related research. First, in an effort to orient newcomers to the field, it identifies the fundamental and typical differences between qualified⁴ DB and DC plans in relation to the current regulatory environment, as well as the types of decisions employers may consider in plan choice. The discussion then builds on others' analyses and past Employee Benefit Research Institute (EBRI) private plan tabulations to assess the current state of this trend in terms of the types of firms that are being affected by the increased use of DC plans and the number of participants involved. After continuing this prior EBRI time-series analysis, the discussion presents annual plan contribution data as a new way to measure the growth of the DC approach relative to DB alternatives.

The sections that follow discuss some of the most frequently proposed explanations for this

trend, identifying the state of research in this area. In addition, it discusses potential policy implications of the increased use of DC plans, focusing primarily on implications for retirement income security. Finally, it delineates legislative and regulatory efforts to amend the current employment-based system, and explores these efforts in terms of their potential impact on the use of DC versus DB plans.

■ Basic DB and DC Plan Features

Plan Definitions

A DB plan is a retirement plan in which benefits are calculated according to a formula or rule. Formulas are more common and are usually based on either years of service and a percentage of pay or a negotiated flat-dollar amount (Allen et al., 1997). Benefit levels, as determined by the formula used, are guaranteed as a stated retirement income commencing at a specified age. Although retirement benefits are usually expressed as a life annuity,⁵ lump-sum distributions are increasingly available.

While similar to DB plans in the provision of a tax-favored vehicle through which savings can accumulate for retirement, DC plans are an altogether different type of employee benefit arrangement. In the majority of DC plans,⁶ contributions are allocated to individual accounts according to a predetermined formula.⁷ Individual benefits are equal to account contributions (less any unpaid loans or withdrawals) and investment returns thereon,⁸ and are usually paid in the form of a lump-sum distribution,⁹ but can also be paid as a life annuity at retirement if the employer offers this option. While DB plans are always designed as

⁴ There is a universe of nonqualified plans, such as Supplemental Executive Retirement Plans (SERPS), that are not subject to the same standards as qualified plans. This paper addresses qualified plans only.

⁵ Life annuities provide a payment on a periodic basis for the life of the participant and possibly his or her spouse.

⁶ In sec. 457 plans, a type of DC arrangement available to state and local government employers, individual accounts exist only as accounting devices, not real separate accounts. In actuality, all sec. 457 plan contributions are placed in a common funding pool for the specific plan.

⁷ Although plan contributions may be made on a discretionary basis by the employer, how these contributions are

allocated among individual employee accounts must be based on a specified, predetermined formula meeting certain requirements if the plan is qualified. For a discussion of plan qualification, see the section on Qualified Plans on page 57.

⁸ Participants in both DB and DC plans, however, may forfeit some of their benefits if they leave before becoming fully vested (i.e., before earning a legal right to their pension benefits).

⁹ Employers have the legal right to require terminated employees to take lump-sum distributions for amounts less than or equal to \$5,000 in both DB and DC plans. In addition, an increasing number of DB plans are paying retirement benefits in the form of lump-sum distributions (Hewitt Associates, 1992).

retirement vehicles, certain DC plan types and designs have features that resemble capital accumulation plans (i.e., plans used for savings, not necessarily for retirement).

Traditionally, DB and DC plans have different features associated with each. For example, DB plans usually pay benefits in the form of life annuities, whereas DC plans typically pay lump-sums. However, one fundamental difference between DB and DC plans exists. Under a DB plan, a formula guarantees the final benefit level; in a DC plan, a formula stipulates how funds are allocated to individual accounts.¹⁰ Because so few fundamental differences exist between plan types, employers have significant leeway to design individual plans tailored to their specific objectives. Recently, an increasing number of employers have used this leeway to combine traditional DB plan features with features usually associated with traditional DC plans, and vice versa. (Many of these arrangements are called hybrid plans, and are discussed later.) As a result, the difference between DB and DC plans is becoming more nebulous.

Qualified Plans

Employers value maintaining qualified plans because of their tax advantages.¹¹ One primary tax advantage for qualified private plans is the deferral of federal income tax on employer contributions and investment earnings until benefits are paid to the employee, who then pays any taxes due. Employee contributions to private DC plans are allowed on a before-tax basis if the plan has a 401(k) feature. This tax advantage applies to public DC plan

participants in IRC sec. 457, 403(b), and 401(k) plans. In addition, public-sector DB plans often require employee contributions, which may be allowed on a before-tax basis. Of all tax advantages accorded qualified plans,¹² deferred federal income taxation on investment earnings until distribution is perhaps the most valuable, because this feature yields significantly greater benefit accumulations than if investment earnings were taxed annually (Ippolito, 1986).

How DB and DC Plans Operate

Benefit Calculation and Plan Funding

When establishing a DB plan, employers usually choose between flat benefits and pay-related benefits. A *flat-benefit formula* bases benefits on a flat-dollar amount for each year of service recognized under the plan (e.g., \$400 in annual retirement multiplied by years of service).¹³ Pay-related benefits can be divided into two variations, based on the definition of pay. *Career-average formulas* define pay as all earnings during plan participation in order to calculate benefits. *Final average formulas* define pay as only those earnings received during an averaging period just prior to retirement. *Career-average formulas* have two variations. Final retirement benefits can either equal: (a) the sum of a percentage of salary earned each year recognized by the plan (e.g., the sum of 2 percent of annual pay for each year of service) or (b) the average of all annual salaries recognized by the plan multiplied by a percentage (e.g., \$30,000 in average pay multiplied by 50 percent).¹⁴

Most DB plans retain an actuary to annually assess plan obligations based on the plan's specified

¹⁰ There is often a mistaken notion that a DC plan will commit the employer to a specific contribution (typically a percentage of compensation) each year. While this is true of one type of DC plan (a money purchase plan requires the same contribution each year unless the plan is amended or terminated), employer contributions to a DC plan may be made as a percentage of profits, a percentage return on investment or equity, or as a discretionary amount decided annually. Usually DC plans allocate the contribution as a percentage of employees' earnings or savings.

¹¹ Thirty-two percent of respondents report that their company provides a retirement plan to its employees in order to receive favorable tax treatment (Society for Human Resource Management, 1996).

¹² If a DB or DC plan meets the requirements of the IRC and associated regulations, it is said to be qualified and thereby

receives the following federal income tax advantages: (1) within limits, employer contributions are deductible as a business expense, (2) contributions are not counted as income to participants (and therefore not subject to federal income tax) until paid in the form of benefits, and (3) investment earnings, including capital gains, are not taxed until distribution. (Allen et. al, 1997; McGill et. al., 1996).

¹³ Flat-benefit formulas are often encountered under collectively bargained plans.

¹⁴ Under the latter formula, an employee would receive the same benefit at retirement regardless of the number of years worked (typically subject to some minimum threshold such as 10 years). Under the former, an employee typically earns more benefits for every year of additional service.

formula and to determine the amounts the plan sponsor should place in the pension fund in order to comply with funding requirements. (These amounts are based on the selected actuarial valuation method and appropriate actuarial assumptions.) The plan sponsor is then ultimately responsible for making required contributions as well as ensuring that the fund's assets are invested and benefits are paid; however, these responsibilities are often delegated to third parties. Although it is uncommon, private-sector workers may have the option of contributing to the DB plan as well, but their contributions are not given tax-favored status.¹⁵

Employer contributions made to a worker's DC account are typically based on a percentage of annual compensation. In some types of plans, employees may opt to contribute a certain amount on a tax-favored basis. Employers sometimes make contributions based on the rate of employee contributions, called an "employer match." For example, an employer might fully match an employee's contribution up to the first 3 percent of pay and match one-half of the employee's contribution between 3 percent and 5 percent of pay. Who makes contributions and on what basis—as well as whose contributions receive tax-favored treatment—depends on the DC plan type and design, with several combinations available.

In terms of plan funding, some types of DC plans do not require fixed annual contributions from employers. Instead, employers are often given more flexibility. For example, contributions can be based on profits or on a discretionary basis.¹⁶

Plan Distributions

Retirement and Job Termination Benefits—As mentioned above, DB plans have traditionally paid benefits in the form of annuities to retirees¹⁷ and those terminating employment with accrued benefits in excess of a particular threshold (currently \$5,000).¹⁸ However, there is some evidence that an increasing number of DB plans are offering lump-sum distributions (Hewitt Associates, 1992). DC plans, on the other hand, traditionally pay benefits in the form of lump-sum distributions to all departing plan participants. However, some DC plans also include an annuity option.

In-Service Withdrawals—In-service withdrawals are prohibited in DB plans and in DC money purchase plans,¹⁹ although loans are available in some rare instances. In contrast, profit-sharing DC plan sponsors may permit participants to take loans and/or make in-service withdrawals of plan assets for various reasons.²⁰ As a result, DC plan participants (excluding those in money purchase plans) tend to have more preretirement access to their funds. This is one way that some DC plans resemble capital accumulation (i.e., savings) plans more than retirement plans.

Assuming Retirement Income Risk

There are many risks associated with participants' assets in retirement savings vehicles:²¹

1. replacement rate inadequacy
2. longevity
3. investment risk

¹⁵ Employees' contributions to DB plans are only granted tax-favored status in public plans.

¹⁶ See footnote 7.

¹⁷ Ninety percent of retiring workers participating in a DB plan in a medium or large establishment were not offered a lump-sum distribution in 1993 (U.S. Department of Labor, 1994).

¹⁸ Employers have the legal right to require terminated employees to take lump-sum distributions for amounts less than or equal to \$5,000 in both DB and DC plans.

¹⁹ Although money purchase plans are DC plans, technically they are combined with defined benefit plans for IRC purposes in prohibiting in-service distributions from "pension plans." Most of the other DC plans are instead treated as "profit-sharing plans" by the IRC and allow the plan sponsors to make in-service distributions available as a plan feature.

²⁰ In-service withdrawals from elective deferral contributions made to qualified 401(k) plans are strictly limited to hardship, defined narrowly as "immediate and heavy financial needs," such as those involving certain medical, home purchase, education, or the prevention of eviction or foreclosure needs. For a more detailed explanation of the conditions for hardship withdrawals, see Allen et al., 1997, pages 194–195. For plan years after 1988, distributions from 403(b) arrangements of contributions made pursuant to an employee's salary reduction arrangement and any investment income on such contributions are subject to similar restrictions. See pages 214–215 of Allen et al. for more detail.

²¹ Bodie (1990) develops the first four and also includes a fifth risk: Social Security cuts. The latter refers to the political risk that the financial problems currently facing the Social Security system may be resolved by cutting back on benefits currently scheduled to be paid. See Olsen, VanDerhei, and Salisbury (1997) for a more complete discussion of this issue.

4. inflation risk
5. private plan sponsor bankruptcy risk (for DB plan benefits in excess of Pension Benefit Guaranty Corporation (PBGC)-covered maximums)

Replacement rate inadequacy risk deals with the possibility that the combination of Social Security, employment-based retirement income, and individual savings will be insufficient to maintain the same standard of living a preretiree enjoyed when he or she retires. While in the past, this risk could be caused by financial instability of an employer sponsoring a private pension plan, today PBGC will pay benefits (subject to prescribed limits) for most private DB plans²² whose sponsors are unable to meet plan obligations due to bankruptcy. As a result, plan sponsor bankruptcy risk among private plans today is limited to the risk of losing benefits above the amounts guaranteed by the PBGC, should the employer go bankrupt.²³ No equivalent protection exists for public DB plan participants; however, it has been suggested that the taxpayer essentially provides the equivalent of plan termination insurance protection for public plans because the plan sponsor often has a direct call on additional contributions from the taxpayer. For DC plan participants, replacement rate inadequacy risk relates more to both the risk of not contributing enough to the plan to ensure adequate retirement income and to investment risk (discussed below).

The second risk—longevity risk—can be defined in several ways. One definition (Bodie, 1990) defines it as the risk that the retiree will outlive the amount saved for retirement. A primary

rationale for paying retirement plan benefits in the form of life annuities is to insure against this risk. Hence, this risk can be insured against through either the DB or DC approach only if benefits are paid in the form of an annuity or if participants effectively self-annuitize.²⁴

The third risk—investment risk—is a relatively straightforward (albeit often misunderstood) concept. While many equate this term with variation in retirement benefits resulting from fluctuations in the financial markets, investment risk may also refer to the risk that investments will underperform the rate of return needed for sufficient retirement income. Indeed, underperformance can arise from down-side fluctuations in financial markets, but it also stems from investing in low-risk assets that do not earn adequate return rates.

While a DB plan offers no direct investment risk to participants,²⁵ the amount of this risk participants are exposed to under a DC approach is often misunderstood. Many assume that DC investments are risky because asset allocation choices may be subject to wide market fluctuations. However, many DC plan sponsors provide guaranteed investment contracts (GICs) and/or short-term income funds²⁶ as investment options, which guarantee that participants' investments will not decline in nominal or real value.²⁷ While many might assume that these options entail no investment risk for participants because investments are guaranteed, choosing such investments may entail investment risk if the rate of return on these investments is lower than that needed to grow a sufficient retirement nest egg.

The fourth risk—inflation risk—can only be directly addressed by the plan sponsor in

²² For an exhaustive list of plans specifically excluded from coverage by the PBGC, see pages 278–279 of Allen et al., 1997.

²³ For pension plans ending in 1997, for example, the maximum guaranteed amount is \$2,761.36 per month for a worker who retires at age 65. Hence, DB plan participants expecting benefits exceeding this amount do bear some risk if their benefits under the plan would have exceeded this amount.

²⁴ An individual can use self-annuitization as a strategy to ensure that he or she does not outlive a particular amount of principal. This may be accomplished by dividing the account balance each year by his or her life expectancy at that point in time and limiting annual consumption to the amount determined by the calculation. This step is typically repeated

each year, and the annual amount will vary from year to year depending on investment income and changing life expectancies.

²⁵ There may be second order impacts to consider. For example, a sponsor that has had extraordinarily favorable investment experience in recent years may be more likely to provide future benefit improvements or ad hoc cost-of-living adjustments (COLAs).

²⁶ See chapter 21 of Allen, et al. (1997) for a more complete description of these defined contribution investment options.

²⁷ It should be noted that the provision of a GIC does not necessarily ensure that participants selecting this option will receive the entire amount “guaranteed” by the fund.

DB plans,²⁸ and is perhaps the most difficult to deal with in the private sector. Social Security and many of the public DB pension plans have the perceived resources to commit to some type of guarantee²⁹ that inflation's impact on the purchasing power of this component of retirement income will be mitigated.³⁰ However, private sponsors generally have not been able to cope with this problem other than to hold out the possibility of providing ad hoc increases in pension payments on a somewhat periodic basis.³¹

■ Plan Choice Considerations

Strategic Use of Plan Types to Influence and Attract Desired Work Force

Because employers have different strategic objectives, the plan type suited to one employer may not suit another. While arguments have been made that one type of plan is better at providing retirement security, few would argue that, from a strategic business standpoint, one plan or combination of plans is always preferable. Thus, a plan's "pros" and "cons" often depend on the employer's plan sponsorship goals. (See table 6.1.)

Desired Employee Age

Assuming that potential employees are aware of the relative advantages of different plan types, employers can strategically offer plans in order to attract younger or older, or mobile or less mobile, workers. DB plans favor older workers for three reasons: the value of benefit accruals increases as a percentage of compensation as employees approach

retirement age, adverse selection in the annuity markets makes the employment-based group annuities that are often offered through DB plans difficult to purchase individually, and past service benefits can be awarded to older workers during the start-up of new DB plans.

Chart 6.1 shows the present value of benefits accrued as a percentage of compensation at various ages. The chart illustrates that it is the nature of a DB plan to provide present values³² that are a significantly higher percentage of compensation for older workers. For example, assume that a DB plan participant is age 25, is currently paid \$15,000 per year, and will retire at age 65. At that time, he or she will receive a pension benefit equal to 1 percent of average salary during the last five years times years of service. This concept can be illustrated by computing the present value of the pension benefit accrued from working an additional year as a percentage of the participant's compensation at ages 30–64. We will perform the calculations under two sets of assumptions: (a) the participant has no wage growth and the discount rate is 3 percent, and (b) the participant's wage growth is 7 percent and the discount rate is 10 percent. Chart 6.1 shows the change in the present value of accrued benefits from an additional year's work (expressed as a percentage of compensation) against the participant's age under both scenarios.³³ It is obvious from the results that the DB pension plan allocates a larger portion of employer contributions to older employees when expressed as a percentage of compensation, and that this phenomenon becomes more pronounced (for final-average plans)

²⁸ DC plan participants can address inflation risk in their asset allocation decisions by taking inflation expectations into account when calculating how much to contribute and what rate of return is required.

²⁹ The conventional wisdom that public plans commit to an unlimited guarantee that purchasing power of this component of retirement income will not be eroded by inflation does not appear to be supported in practice. For example, in Stan Wisniewski, *Characteristics of 100 Large Public Pension Plans*, NEA Research (August 1996), a review of the 100 largest public employee (teacher as well as other public employee plans) finds that almost all such plans either granted COLAs on an ad hoc basis, as an automatic fixed amount unrelated to the actual inflation rate, or as an amount related to the change in the Consumer Price Index (CPI) but capped at some level ranging from 1 percent to 3 percent. Moreover, a number of plans provided for such COLA adjustment only on the original amount of the benefit, i.e., they did not compound.

³⁰ Note that this is not the same as guaranteeing the standard of living will not be impacted. For an interesting discussion of the possible application of this concept to retirement plan, see Merton (1983).

³¹ See Clark, Allen, and Sumner (1983) for a survey of practices among private sponsors.

³² A present value is the current value of future cash flows discounted at the appropriate discount rate. Additional detail can be found in any corporate finance text.

³³ The assumption in the calculations provided below is that all participants will survive to age 65 and live exactly 17 more years. Moreover, the pension benefits will be paid at the beginning of each year. Although a much higher degree of technical precision is obviously required for actuarial valuations, the assumptions make the example more tractable and do not modify the implications that would be obtained from a more realistic set of assumptions.

Table 6.1
**Comparison of Traditional Defined Benefit (DB)
 with Traditional Defined Contribution (DC) Plans**

Strategic Business Considerations	DB	DC
Employees Attracted and/or Most Benefited	Longer-tenure and/or older employees	Shorter-tenure and/or younger employees
Job Tenure Patterns Encouraged	Longer tenure because employees receive greatest benefit accruals at end of long-time service. May lock people into jobs they would otherwise leave.	Although employees receive benefits based on salary, not tenure, may encourage employees to change jobs in order to receive access to lump-sum distribution from retirement accounts.
Influence on Retirement Patterns	Can be designed to encourage early retirement; may financially penalize workers for working additional years beyond the NRA. ^{1,2} May pressure workers who would not otherwise retire to do so.	Cannot be designed to encourage early retirement but instead rewards employees for working additional years. ²
Cost/Funding Flexibility Concerns		
a. Cost variability/risk ²	a. Employer assumes investment and possibly preretirement inflation risk ² and therefore annual plan costs are less predictable. While costs might be higher than anticipated, pension costs in a booming stock market may be zero because of the investment returns on past contributions.	a. Employer assumes none of the investment risk ² on retirement fund assets. As a result, annual costs are more predictable, although the employer cannot take advantage of high stock market or other investment returns on retirement plans assets.
b. Annual funding flexibility	b. However, there tends to be more flexibility as to when employer may meet these costs contributions in DB plans.	b. However, money purchase and some types of profit-sharing plans have less flexibility in when those costs are to be paid. In addition, DC accounts can be designed to entail no employer contributions at all, unlike DB plans.
c. Termination benefits	c. Termination benefits are usually small for employees with less job tenure.	c. Termination benefits equal account balances, when vested, based on both salary and years of plan participation. Tend to be larger than those for DB plans, <i>cet. par.</i>
d. Plan termination	d. Can be very costly if plan is underfunded.	d. Not applicable, because DC plans are by definition never underfunded.
e. Administrative costs	e. Managing a large pool of funds is less expensive than managing individual accounts, ² but may be more expensive because of the provision of annuities (which can be relatively complex to administer) and the need for professional actuarial and investment advice to ensure compliance with regulations.	e. While actuarial services are not required to the extent necessary for DB plans, the provision of participant investment education and the cost of administering many individual funds for loans, hardship, and/or retirement benefits may make DC plans more expensive. Generally, however, DC plans are less expensive to administer, especially for smaller employers.
Administrative Complexity	More	Less
Integration with Social Security Benefits ²	Employers fulfill a specific retirement income objective (e.g., to replace 60 percent of preretirement income with Social Security and pension benefits), and therefore Social Security integration is accomplished more efficiently under DB plans. ²	Integration can be accomplished, but the process focuses on disparity in contributions and does not attempt to target a specific replacement ratio.
Providing Substantial Benefits Over a Short Time Period	Employees can be grandfathered into a new DB system so as to provide special benefits that are not possible under a DC approach (e.g., the quick accumulation of benefits to participants who have not participated in the system for a substantial period of time).	Unless grandfathered into a DB plan, shorter tenure workers leave service with more substantial benefits under a DC arrangement.
Collective Bargaining	Unions prefer DB plans.	Less favored as primary plans by union leaders.

(continued)

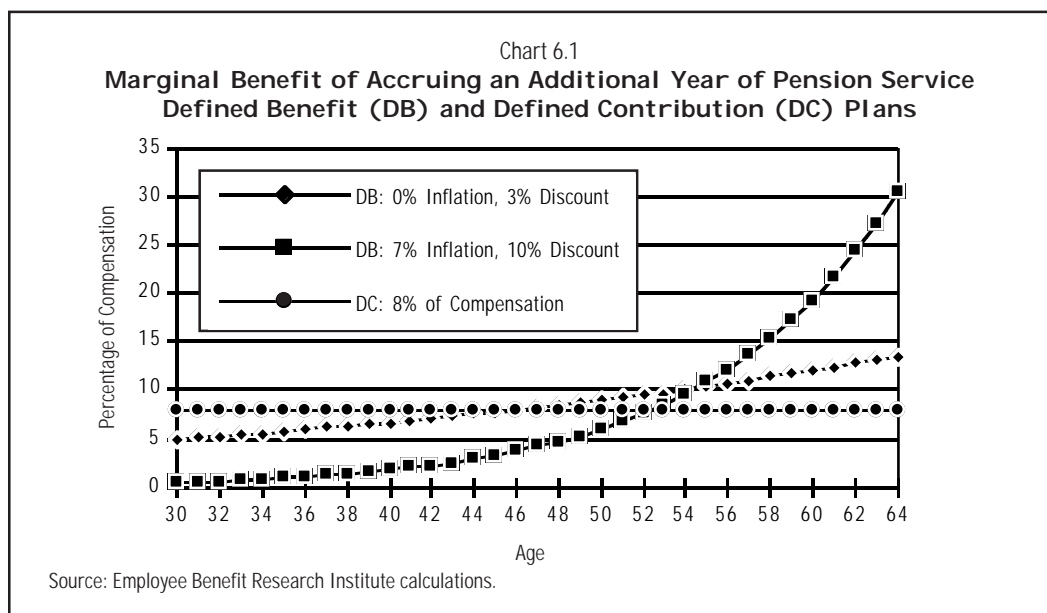
Retirement Prospects in a Defined Contribution World

Table 6.1 (continued)		
Strategic Business Considerations	DB	DC
Flexible Benefit Retirement Plan Provision	DB plans cannot be part of a flexible benefit package.	Some types of DC plans (401(k), profit sharing, and stock bonus) may be included in a flexible benefit package.
Company Identity/ Linking Benefits with Company Performance	Investment of pension assets in company stock is prohibited beyond 10 percent of assets.	Employer contributions may be in the form of employer stock so as to tie company performance to retirement funds. In addition, profit-sharing DC plans tie employee productivity to retirement security.
More Philosophically Oriented Considerations	DB	DC
Paternalistic View		
a. Responsibility given to participants	a. Generally do not require employee contributions. ³ Employer says, "Don't worry about your retirement plan. We'll take care of your retirement plan."	a. Employees usually help fund their own retirement accounts. Employer says, "We'll help you help yourself." Participant-directed accounts encourage financial literacy and awareness of savings.
b. Investment risk given to participants ²	b. Employer absorbs investment risk in exchange for investment control. ²	b. Employees absorb investment risk in exchange for potential investment rewards. ²
c. Inflation risk given to participants ²	c. COLAs ⁴ may be provided and are often done so for public plans. Employer may share responsibility for inflation after retirement if ad hoc COLAs ⁴ are used in private plans. ² Employer assumes preretirement risk if DB formula is based on final averages.	c. No room in plan design for COLA ⁴ adjustments. Employees assume risk for inflation both prior to and after retirement. ²
d. Access to funds	d. No preretirement access to accounts is usually provided.	d. Preretirement access to accounts is often provided.
e. Benefit provided at retirement	e. Benefits are usually paid in the form of life annuities.	e. Benefits are usually paid in the form of lump-sum distributions, which the employees may spend as they please.
f. Automatic enrollment	f. Enrollment is automatic.	f. Enrollment is usually not automatic.
Investment Horizons and Expected Impact on Investment Income ²	A DB plan allows the burden of retirement security (including the attendant investment risk) to be spread over a long period of time. In theory, DB plans may be expected to hold a larger percentage of more risky (and higher yielding) investments since their relevant investment horizon spans several decades, if the plan is assumed to be an ongoing operation.	A DC plan usually requires employees to invest for their retirement on an individual basis. This may cause them to increase their asset allocation in less risky (and lower yielding) investments to mitigate the impact of market downturns near retirement age. ²
Tax Advantages	In DB plans, only employer contributions are given tax-favored status.	In DC plans, both employer and employee contributions may be given tax-favored status.
Best Use of Employer Retirement Funds	In DB plans, all benefits accrue to retired workers and/or spouses.	In DC plans, account balances may be inherited by heirs other than spouse on beneficiary's death.
Approach to Informational Parity	Dedicated governance: investment expertise means that those buying and selling pension investment services have informational parity.	Employers sometimes offer participant education to increase informational parity between investors and investment services.
Source: Employee Benefit Research Institute.		
¹ Normal retirement age.		
² Fundamental features of DB and DC plans that cannot be modified without changing the plan into another type.		
³ Exception in state and local plan.		
⁴ Cost-of-living adjustments.		

when the inflation rate increases.

If, instead, we assumed an employee participated in a DC plan providing a contribution of 8 percent of compensation (i.e., a flat line at

8 percent of compensation, regardless of the employee's age), what conclusions could be drawn about the allocation of employer contributions under a DC plan vis-à-vis those of a DB plan? It is



apparent that the DC plan in this instance would be preferred by younger employees. The cross-over point for an employee starting at age 25 occurs at age 46 in the no inflation example and at age 53 when the inflation rate is 7 percent. After that point, the DB plan is more advantageous for the employee and hence more costly for the employer. Everything else being equal, this would imply that older employees would be more costly to retain for employers sponsoring DB pension plans.

A second reason DB plans tend to favor older workers is that they are more likely to offer annuities. Most beneficiaries would find it impossible to purchase an annuity through the private market at the same cost they could get under an employment-based annuity (Friedman and Warshawsky, 1988).³⁴

Third, for strategic business reasons, such as the desire to attract older workers with special expertise or to please current older workers, employers may seek to provide older employees with a substantial benefit over a short period of time. Current older workers may be grandfathered into a DB plan at its inception by being granted past service credits. These credits allow them to retire with substantial benefits without having to

participate in the system for the amount of time it would normally take a younger worker to earn those same benefits. DC arrangements do not offer similar mechanisms by which older workers can accumulate benefits quickly.³⁵

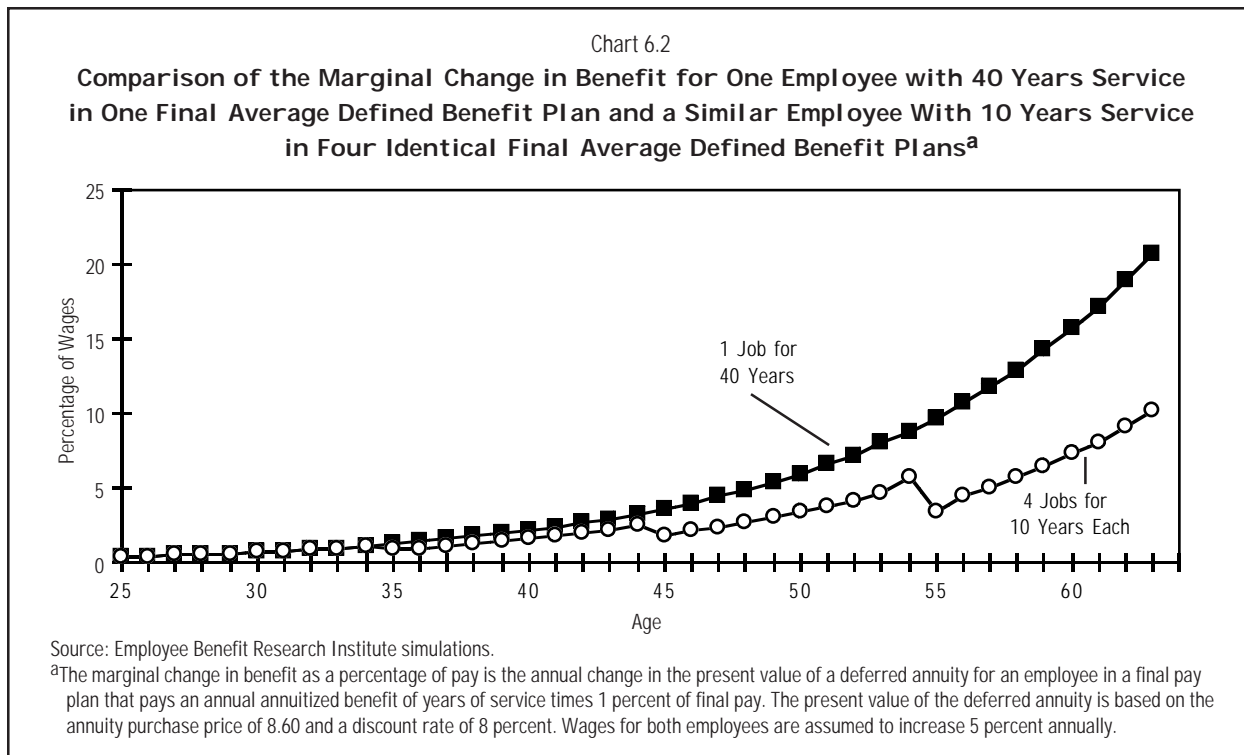
Desired Employee Tenure

Chart 6.2 shows that final-average DB plans penalize job change. If there is no variation in benefit formulas between plans (e.g., they all offer 2 percent of final-average compensation per year of service), then a worker who is employed by several employers will receive a sum of retirement benefits from the various plans that will be smaller than if he or she had been consistently covered by one sponsor. As a result, DB plans encourage employees (especially older ones) to continue service until reaching the plan's normal or early retirement age. On the other hand, mobile workers who are covered under various DC arrangements and who roll over their full benefits to another qualified plan or an IRA when changing employers may receive the same retirement benefits as workers covered under one plan for their entire careers. This explains why DC plans are often said to be more "portable" from job to job than DB plans.

³⁴ Were older employees simply given a lump-sum, the amount of money that the employer spent in providing his or her defined benefits, most retirees would not be able to afford an equivalent annuity in the private market. This is because of the adverse selection experienced in the private annuity market as opposed to risk-pooling that can be achieved

through group purchasing (i.e., covering all of a DB or DC plan sponsor's retirees).

³⁵ An exception to this general rule is an age-weighted DC plan that, within limits, attempts to mimic the benefit structure of a DB plan. See Campbell (1996) for additional details on this type of plan.



Employers might wish to implement a DB approach to encourage employee tenure, especially if the employer believes long-term employees make special contributions that are not reflected in wage payments. These include the fostering of loyalty to the firm and its traditions and the transmission of technical skill from older to younger generation workers (McGill et al., 1996). In addition, long-term workers may lower employers' expenses for recruiting and training new employees. A potential down side to this scenario is that workers who would rather leave the employer—and whom the employer would prefer to see leave—may be influenced to stay until reaching the plan's early or normal retirement age.

Because they are more portable, DC plans do not provide financial incentives to encourage longer job tenure.³⁶ Because the accrual curve is typically flat across age groups,³⁷ employers can contribute the same percentage of compensation for two employees with the same earnings, despite any age

or tenure differences. In addition, the lump-sum distributions that DC plans tend to offer more frequently than DB plans may actually encourage some workers to terminate employment in order to access their retirement funds (Ippolito, forthcoming). Assuming the same relative generosity in benefits, even if younger workers were offered lump-sum distributions through a DB plan, the amounts distributed would often be smaller because of the nature of benefit accruals for younger employees (chart 6.1).

Early Retirement Considerations

DB and DC plans differ in the way they strategically influence the work force in terms of encouraging early retirement. First, early retirement may be preferable in an environment of downsizing, because employees can "elect" to take early retirement benefits instead of being displaced. Early retirement benefits may reduce the need to displace workers while simultaneously preventing the negative publicity and lowered worker morale that can accompany downsizing (Kelly, 1996). Second, employers can deal with older workers who have lost productivity in three ways. First, employers can displace (i.e., fire) them. However, old-age discrimination laws can create legal repercussions,

³⁶ Paul Fronstin found that "workers whose primary pension plan was a defined benefit plan were more likely to expect to stop working before age 65 (23 percent) than workers whose primary plan was a defined contribution plan (18 percent)" (Fronstin, 1997).

³⁷ Age-weighted DC plans are an exception.

and terminating older workers after many years of service can have negative implications for worker morale and the company's public image. Second, pay can be reduced commensurately. However, this too might cause the same negative consequences. Finally, employers can offer early retirement benefits to encourage older workers to retire in an orderly manner that does not cause low morale or negative publicity. The most common way to provide these benefits is through a DB plan.³⁸

Plan Cost Considerations

DB plans enjoy several possible funding advantages over DC plans. First, employers may not need to make any annual plan contributions for several years during a booming stock market. This is currently the case with several large corporate pension funds (Dunn, forthcoming). Past contributions plus investment returns alone have been providing sufficient plan funding for some plans for more than a decade.³⁹ Another funding advantage of DB plans is their ability to provide employers more flexibility than some DC plans (such as money purchase plans) in terms of when required plan contributions must be deposited. In addition, neither participant investment education nor administration of preretirement withdrawals from individual accounts is a possible expense under a DB approach. Finally, because significant benefits (as a percentage of compensation) are not accrued under a DB plan until after a certain age (see

chart 6.1), the employer's cost when a younger worker leaves the firm is usually smaller than the lump-sum distributions that would be offered from a DC plan.

DC plans also enjoy some unique cost advantages. First, while qualified DC plans are required to meet certain tests,⁴⁰ they are not required to pay an actuary to annually assess plan obligations and assist with federal regulation compliance. Another primary advantage is that employer expenses as a percentage of compensation (as opposed to amounts contributed) are much more predictable under a DC approach.⁴¹ Just as an employer may have pension funding obligations lightened or eliminated by a temporary boom in the financial markets, an employer may be hit with large funding obligations during years that investment performance is poor and in which there is no credit balance in the funding standard account to serve as a buffer.⁴² Moreover, future DB plan obligations hinge on future investment returns. The uncertainty of annual plan costs inherent in the DB approach is especially troublesome for businesses with very uncertain profit margins, which tend to include the majority of small and new firms.

In addition to the foregoing cost advantages of DC plans, terminating an underfunded DB plan can be prohibitively costly,⁴³ and DC plan sponsors do not pay insurance premiums to the PBGC. Finally, the joint-and-survivor group annuities paid by traditional DB plans sponsors⁴⁴ are more

³⁸ One of the more common methods of providing these benefits is through so called "bridge benefits" that will pay retirees a temporary additional benefit from the sponsor's plan until the individual reaches Social Security retirement age. At that point the bridge benefit is extinguished. For a thorough economic analysis of this and other early retirement provisions offered by private pension plans, see Ippolito (forthcoming).

³⁹ Even if sponsors had wanted to make contributions to fully funded plans, some were prohibited from doing so on a tax-favored basis because the Omnibus Reconciliation Act of 1987 placed a cap of 150 percent of current liabilities over plan assets on the deductible contributions an employer may make to a pension plan. However, 1997 legislation has scheduled this limit to rise to 170 percent gradually. The limit rises to 155 percent for plan years beginning in 1999, 160 percent in 2001, 165 percent in 2003, and 170 percent for plan years beginning in 2005.

⁴⁰ The actual deferral percentage (ADP) test is a mathematical test to determine if a 401(k) plan satisfies the nondiscrimination-in-contribution requirements. If a DC plan involves after-tax employee contributions and/or matching employer

contributions, the actual contribution percentage (ACP) test must be met to satisfy nondiscrimination-in-contribution requirements.

⁴¹ Exceptions apply in the case of employer contribution variations caused by offering matching contributions and under true profit-sharing plans.

⁴² Each plan subject to the minimum funding standards must set up and maintain a special account called the 'funding standard account,' which provides a cumulative comparison between actual contributions and those required under the minimum funding standard (McGill, 1996, 596-597.)

⁴³ The cost of terminating an underfunded DB plan equals the entire amount of underfunding.

⁴⁴ Of all private DC plans, only money purchase plans require the offering of a joint-and-survivor annuity at retirement (Allen et al., 1997). Other plans are exempt if the plan provides that the employee's spouse is the beneficiary for 100 percent of the employee's account balance and if the employee does not elect an annuity option from the plan.

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expensive to administer than the lump-sum distributions more often paid under traditional DC plans.

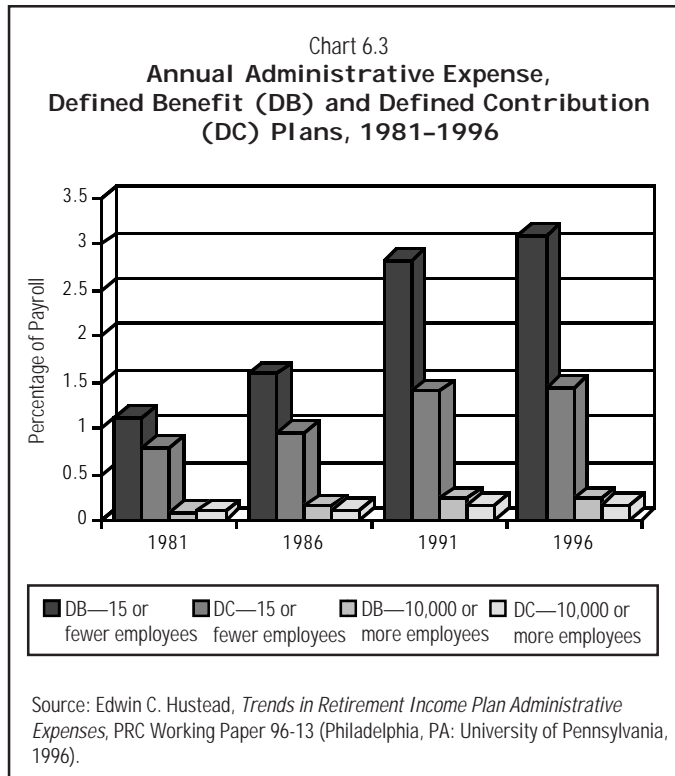
Administrative costs are the most determinable cost differential between DB and DC plans. Chart 6.3 illustrates how the differential in annual administrative expenses between DB and DC plans has changed over time. While the relative advantage to a 10,000-employee DC plan has remained constant, costs for a 15-employee DB plan have risen from approximately 0.32 percent of payroll in 1981 to 1.66 percent in 1996. However, depending on an employer's objectives, these additional costs associated with a DB plan may be outweighed by the plan's strategic advantages to the employer.

Administrative Complexity

Costs may not be the only administrative complexity about which employers are concerned. First, employers may not be attracted to plans they do not understand. More importantly, from a strategic business viewpoint, employees may not appreciate complex retirement plans unless they can be explained simply. In general, it is much easier for employees to understand a quarterly statement from a DC plan than to understand a DB formula. Also, from an employer's viewpoint, complexity means constraints on behavior, which can be a significant disadvantage in a competitive business environment.

Integration with Social Security

The Social Security program has a redistributive component by which lower earners receive a higher proportion of benefits as a percentage of preretirement income than higher earners. However, everyone pays the same rate of Federal Insurance Contributions Act (FICA) taxes on earnings in order to qualify for Social Security benefits, and employers match the employee contribution. Because the Social Security program is redistributive, when employers fund one-half of a lower paid worker's Social Security benefit, employers are helping to provide a higher proportion of preretirement income than when they match the same proportion for higher-wage earners. Integra-



tion allows employers who sponsor their own retirement plan to take credit for the fact that their FICA matches for lower-income workers—although contributed at the same rate as for those earning higher incomes—“buy” proportionately more generous benefits than their matches for higher earners.

DB and DC plans take different approaches to Social Security integration. Integration under DC plans basically focuses on the disparity in contributions as a percentage of pay for lower and higher paid workers. Although integration is accomplished through a more complicated procedure under DB arrangements, employers seeking maximum integration will often choose a DB approach (Allen et al., 1997).

Another alleged advantage of a DB plan would be the potential to deal with the political risk of Social Security cuts (Merton, Bodie, and Marcus, 1987). Theoretically, certain integrated DB plans would compensate for any benefit cuts in Social Security. However, in reality, the ability to compensate is somewhat speculative, given that any major structural modifications of the Social Security retirement benefits would likely result in some type of fundamental restructuring of the rules governing

the pension integration⁴⁵ allowed by qualified retirement plans. However, to the extent that formulas allowing retirement plan benefits to be reduced by the worker's primary Social Security benefit would still be permitted,⁴⁶ the employer utilizing this approach would be implicitly assuming a portion of this risk for the employee.

Other Considerations

One unique advantage of DB plans is their traditional appeal as primary retirement plans to union leaders, who can heavily influence an employer's choice of retirement packages. On the other hand, a unique disadvantage of DB plans is their unavailability for use in *flexible benefit packages* in which employer contributions are fixed and employees are allowed to choose from a range of benefit options. Another disadvantage is that DB plans are prohibited from investing more than 10 percent of the plan's assets in the plan sponsor's securities. Because some DC plans⁴⁷ have fewer company stock constraints, plans sponsors are able to tie employees' retirement benefits more closely to firm performance, which in turn may foster greater company identification and productivity. A final private DB plan disadvantage is that employees cannot contribute to them on a before-tax basis, which they can do under some DC plans. While employees may contribute to some DB plans, they must do so on an after-tax basis.⁴⁸

Philosophical Considerations in Plan Choice

Differing Views of Paternalism

Practitioners often disagree as to whether paternalistic motives play a part in retirement plan sponsorship or plan design. However, to the extent that paternalistic motives do exist, different views on how to help employees save for retirement will lead

to different plan types and designs. For example, some employers may be willing to assume all plan risk so that employees need not worry about preretirement inflation and investment performance. In such a case, a DB plan is required. Conversely, employers whose objective is to facilitate employees' preparation and responsibility for themselves would be more inclined to choose the DC approach.

Whatever the plan choice in terms of DB versus DC, plan design can be suited to meet the extent of the employers' paternalistic desires, which may or may not be influenced by cost constraints. For example, a DB plan sponsor may seek to minimize the paternalistic role by not providing a final-earnings DB formula (which protects against inflation to the extent wages are correlated with inflation), not providing ad hoc benefit COLAs, and paying benefits in the form of a lump-sum distribution. Alternatively, a DC plan sponsor requires employees to assume all investment risk but may maximize opportunities for paternalism under the plan by establishing extensive participant investment education programs and disallowing preretirement loans and/or hardship withdrawals.

Investment Horizons and Expected Impact on Investment Income

A DB plan allows the burden of retirement security (including the attendant investment risk) to be spread over a long period of time. In theory, DB plans may be expected to hold a larger percentage of more risky (and higher yielding) investments because their relevant investment horizon spans several decades if the plan is assumed to be ongoing. Conversely, a DC plan usually requires employees to invest for their retirement on an individual

⁴⁵ For example, IRC sec. 401(l) and the general nondiscrimination rules under sec. 401(a).

⁴⁶ Although the Merton et al. article was originally presented prior to the introduction of sec. 401(l) into the IRC by the Tax Reform Act of 1986 (TRA '86), it is actually still relevant for a substantial number of DB plans. Prior to TRA '86, many DB plans would implement the integration principle by providing for a gross retirement benefit and then reduce it by a percentage (not to exceed 83 1/3 percent but rarely over 50 percent) of the participant's initial primary Social Security retirement benefit (i.e., neither spousal benefits nor future COLAs would be used to increase the offset). When TRA '86 was passed, some thought that the new statutory offset approach provided in sec. 401(l) would be the standard benefit design for

sponsors that continued to desire this method (see chapter 13 of Allen, et al. (1997) for details on this plan design). However, as pointed out by LaBombardé (1991), depending on the overall demographics of the plans, it is still possible to qualify a so-called primary insurance amount (PIA)-offset approach.

⁴⁷ Money purchase plans are an exception.

⁴⁸ Public DB plans may allow employees to make before-tax contributions because the tax advantages that provide an incentive to private employers are less applicable to government entities, since they are not subject to federal income taxes.

basis. Thus, those nearing retirement age may increase their asset allocation in less risky (and lower yielding) investments to mitigate the impact of market downturns.⁴⁹

Perceived Best Use of Plan Assets

Employers (especially those funding a retirement plan) may want to ensure that plan contributions are used most appropriately. Some perceive a retirement insurance (i.e., a traditional DB) approach as the most appropriate use of plan resources, whereas others favor a personal property (i.e., DC) approach. The basic difference between these approaches is whether the perceived best use of plan assets is to use them solely for the benefit of plan participants and/or their joint annuitants (usually a spouse) or whether earned retirement benefits should be bequeathable wealth.

Because traditional DB plans are essentially insurance plans, a worker who lives longer than expected—thereby costing the plan more if benefits are paid in the form of a life annuity—will be cross-subsidized with funds that would otherwise accrue to a worker who dies soon after retirement—thereby costing the plan less. As a result, plan assets benefit only retired workers and/or their joint annuitants (usually spouses) in a DB plan. Some employers perceive this as the fairest approach because it pools risks that are largely unforeseeable for all workers, such as unexpected longevity. In response, some DC plan sponsors have incorporated a more insurance-type approach into their plan packages by requiring group annuitization of retirement benefits.

However, some perceive this insurance approach as unfair, because life annuities cannot be left to a worker's estate.⁵⁰ As a result, employees who work their entire lives to earn an annuity benefit but die early and without a surviving spouse or other joint annuitant will not be able to pass on this accumulated wealth to their heirs. For example, under mandatory annuitization, a retiring worker with a terminal illness would essentially be forced to relinquish most of his or her earned

retirement benefit to the annuity pool instead of having the option of leaving the money to benefit his or her adult children or grandchildren.

Approach to Informational Parity Between Financial Service Consumers and Providers

A final consideration relates to informational parity, which ensures that the buyers and sellers of a product are making equally informed transactions. A plan sponsor's approach to creating informational parity between the buyers and sellers of financial services and the importance assigned to it may influence plan choice. In a single-employer DB plan, sponsors select fund investment managers, whereas in a DC plan, plan participants choose among the investment options provided. To the extent that plan sponsors have a more sophisticated understanding of investment principles than plan participants, more informational parity exists between investment service consumers (e.g., the sponsors) and producers (i.e., financial service providers) in a DB plan. Some employers seek to reduce informational parity differentials that occur between DC plan participants and fund managers by providing participant education (Milne et al., 1995; Milne et al., 1996).

Choosing “Both” DB and DC Plans

Combining features of both plan types can be achieved two ways.

Mixed Retirement Packages

The first way to offer both plan types in one package is simply to offer both a DB and a DC plan. Because these plans tend to benefit different groups of employees, and each plan type has its own advantages, using both plans can sometimes satisfy a wider range of employees and objectives than sponsoring one type of plan exclusively. For example, DC plans can be used to supplement DB plans so that the overall retirement package is more attractive to younger workers, while retaining the DB base for employees nearing retirement age. According to a 1996 General Accounting Office

⁴⁹ This assumes that employees are able to direct the asset allocation of their entire retirement portfolio; however, many DC plan sponsors require at least a percentage of the total contributions to be allocated to employer securities. Investing a large percentage of the portfolio in employers' stock increases the risks and is at odds with the modern portfolio

theory of prudent investing, which emphasizes appropriate risk diversification.

⁵⁰ This will be mitigated to a certain extent if the participant chooses a joint-and-survivor, refund, or period certain option. See Allen, et al. (1997) for further discussion of these options.

Table 6.2
Private Pension Plans and Participants
Summary of Private-Sector Qualified Defined Benefit (DB) and Defined Contribution (DC)
Plans and Participants, Selected Years 1975-1993

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1997
	(thousands)															
Total Plans ^{a,b}	311	489	546	594	603	604	632	718	733	730	731	712	699	708	702	700
Defined benefit ^a	103	148	167	175	175	168	170	173	163	146	132	113	102	89	84	53
Defined contribution ^a	208	341	378	419	428	436	462	545	570	584	599	599	598	620	619	647
Defined contribution as percentage of total	67	70	69	71	71	72	73	76	78	80	82	84	85	87	88	92
	(millions)															
Total Participants ^{b,c}	45	58	61	63	69	74	75	77	78	78	76	77	78	82	84	86
Defined benefit ^c	33	38	39	39	40	41	40	40	40	41	40	39	39	40	40	40
Defined contribution ^c	12	20	22	25	29	33	35	37	38	37	36	38	39	42	44	46
Defined contribution as percentage of total	26	34	36	39	42	45	47	48	49	48	48	50	50	52	52	53
Active Participants	31	36	37	37	39	40	40	41	42	42	43	42	43	45	45	25
Primary plan is defined benefit ^d	27	30	30	29	30	30	29	29	28	28	27	26	26	25	25	25
Primary plan is defined contribution ^d	4	6	7	8	9	10	12	13	13	14	15	16	17	19	19	20
Defined Contribution as percentage of total	13	16	19	22	23	25	30	32	31	33	35	38	40	42	42	80

Source: Employee Benefit Research Institute tabulations and estimates based on U.S. Department of Labor, Pension and Welfare Benefits Administration, *Private Pension Plan Bulletin* (Winter 1997) and Pension Benefit Guaranty Corporation, *Pension Insurance Data Book 1996: PBGC Single-Employer Program*, No. 1 (Summer 1997).

^aExcludes single-participant plans.

^bDue to rounding, sums of individual items may not equal totals.

^cIncludes active, retired, and separated vested participants not yet in pay status. Not adjusted for double counting of individuals participating in more than one plan.

^dFor workers covered under both a DB and a DC plan, the DB plan is designated as the primary plan unless the plan name indicates it provides supplemental or past service benefits.

(GAO) report, only 3 percent of employers offering a retirement plan in 1993 sponsored both a DB and a DC plan simultaneously. However, because those offering both plans tend to be larger firms, 43 percent of employees offered any type of retirement plan were given both a DB and DC option.

Hybrid Retirement Plans

Although still relatively rare, hybrid retirement plans are gaining attention (Campbell, 1996) and are blurring the nonfundamental distinctions between DB and DC plan types. While hybrid plans are either fundamentally DB or DC in nature, they combine features of both. Some common hybrid plans include cash-balance plans, age-weighted profit-sharing plans, target-benefit plans, and life-cycle pension plans.⁵¹ The existence of hybrid plans

shows that not all benefits and shortfalls attributed to traditional DB or traditional DC plans are inherent in these plans.

■ Private Plan Trends

Between 1975, when ERISA became effective, and 1993, the latest year for which these data are available, the total number of private tax-qualified plans more than doubled, from 311,000 to 702,000. The total number of participants in these plans, including active workers, separated vested, survivors, and retirees, rose from 45 million to 84 million over the same period (table 6.2). Data on active participants in private primary plans show similar trends. The number of active participants increased from 31 million in 1975 to 45 million in 1993.

While the number of private employment-based pension plans and plan participants has been

⁵¹ For a thorough description of each of these plan types, see Campbell, 1996.

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increasing, proportionately fewer of these plans are DB plans. An increasing number of employers have been offering primary and supplemental DC plans as well as an array of hybrid plans. The total number of private DB plans increased from 103,000 in 1975 to 175,000 in 1983, and then decreased to 84,000 in 1993. The total number of private DC plans increased from 208,000 to 619,000 between 1975 and 1993, increasing from 67 percent to 88 percent of total private pension plans.

The number and percentage of individuals participating in private DC plans is increasing relative to the number and percentage participating in DB plans. The total number of participants in all DB plans was 33 million in 1975. Participation increased to 40 million in 1983, and has remained in the 39 million–41 million range since that time. The total number of participants in DC plans increased from 12 million in 1975 to 44 million in 1993.

The trends for active participants in private primary plans are similar to those for total participants.⁵² In 1975, there were 27 million active participants in primary DB plans. This number decreased to 25 million by 1993. Between 1975 and 1993, the number of active participants with a primary DC plan significantly increased, from 4 million to 19 million.

Putting the Past in Perspective

An examination of the change in the aggregate number of private pension plans and participants is potentially misleading because it ignores trends in plans by size. Examining DB and DC plans by plan size allows us to determine the number of participants being affected by trends in plan sponsorship. This section examines private DB and DC plan trends using EBRI and U.S. Department of Labor (DOL) tabulations of 1985 and 1993 Form 5500 annual reports filed with the Internal Revenue Service (IRS). It presents the number of plans and

participants in these plans by participant size categories, using various participation definitions. The analysis examines DB and DC plan trends individually and then combines them to evaluate the extent to which a shift from DB to DC plans has occurred.

DB Plans

Examining private primary DB plan trends by plan size shows that the vast majority of plan terminations were very small plans: those with two to nine active participants. Between 1985 and 1993, the net number of primary DB plans decreased by 51 percent, or 86,000 plans. The net number of plans with two to nine active participants decreased by about 56,000 plans, or 65 percent of the total reduction in DB plans (table 6.3). Some suggest that very small plans were often top-heavy plans used by employers as tax shelters. Enactment of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), which imposed penalties on top-heavy plans, and the Tax Reform Act of 1986 (TRA '86), which lowered basic income tax rates and imposed faster minimum vesting standards, created less incentive for these employers to maintain their DB pension plans. TRA '86 also included a minimum participation provision that eliminated the tax-qualified status of some small DB plans, primarily single-participant plans. Under this provision, a plan is not qualified unless it includes the lesser of 50 employees or 40 percent of an employer's work force.⁵³

Between 1985 and 1993, the net change in the number of primary DB plans was generally greater for plans with fewer active participants. The number of DB plans with 10–24 active participants decreased 55 percent between 1985 and 1993, while the number of DB plans with 500–999 active participants decreased 22 percent. Changes in individual plans' demographics account for some of the change in the number of plans by plan size. For example, a plan that had 400 participants in 1985

⁵² There is little difference between the total number of participants and the number of active participants included in DC plans. These participants represent individuals other than active participants who are still included in the plan, such as retired participants, participants who have separated from service and are vested in the plan, or survivors. Fewer individuals remain participants in a DC plan than remain in a DB plan after terminating employment with the plan sponsor because most DC participants receive lump-sum distributions on leaving.

⁵³ IRC sec. 401(a)(26). The number of single-participant DB plans increased from 9,000 in 1977 to 54,000 in 1985. Data on the number of single-participant DB plans are not available for 1993 due to changes in reporting requirements. However, it is likely that this TRA '86 provision caused many small plans to terminate, particularly plans covering a relatively small number of employers' higher-paid employees (e.g., partners in law firms and accounting firms). This rule was eliminated for DC plans effective January 1, 1997.

Table 6.3
Primary Plan Trends by Plan Size
Primary Defined Benefit (DB) and Defined Contribution (DC) Plan and Active Participant Trends, Selected Years 1985-1993

Active Participants	Primary Plans										Active Participants (thousands)				
	1985	1990	1991	1992	1993	Net Change 1985-1993	Net Change 1992-1993	1985	1990	1991	1992	1993	Net Change 1985-1993	Net Change 1992-1993	
											DB Plans			DC Plans	
2-9	88,124	45,796	38,424	34,316	32,121	-56,003	-2,195	353	189	168	147	141	-212	-6	
10-24	24,267	15,624	18,095	12,452	10,903	-13,364	-1,549	369	244	273	191	168	-201	-23	
25-49	14,178	8,605	7,374	7,745	7,252	-6,927	-494	491	304	255	271	252	-239	-19	
50-99	11,303	8,346	8,060	8,114	7,499	-3,804	-615	808	599	585	588	537	-271	-51	
100-249	9,534	6,563	6,183	6,290	6,209	-3,325	-81	1,498	1,040	979	995	978	-520	-17	
250-499	4,670	3,647	3,514	3,447	3,444	-1,226	-3	1,651	1,293	1,245	1,220	1,224	-427	4	
500-999	3,149	2,463	2,328	2,378	2,450	-699	72	2,222	1,751	1,655	1,686	1,751	-471	65	
1,000-2,499	2,360	2,090	2,028	2,065	2,122	-238	57	3,636	3,221	3,119	3,180	3,285	-351	105	
2,500-4,999	847	798	780	796	790	-57	-6	2,930	2,802	2,704	2,797	2,790	-140	-7	
5,000-9,999	455	434	469	445	428	-27	-17	3,141	3,015	3,261	3,033	2,966	-175	-67	
10,000-19,999	198	223	219	224	223	25	-1	2,749	3,134	3,134	3,132	3,088	339	-44	
20,000 or more	175	161	167	167	167	-8	0	8,985	8,711	8,324	8,073	7,912	-1073	-161	
None or None Reported	10,280	18,139	13,944	9,960	9,909	-371	-51	-	-	-	-	-	-	-	
Total ^a	169,540	112,890	101,585	88,400	83,517	-86,023	-4,883	28,834	26,303	25,701	25,313	25,091	16,257	-222	
2-9	199,704	266,129	266,298	270,764	266,284	66,580	-4,480	852	1,127	1,151	1,180	1,165	313	-15	
10-24	70,424	97,054	99,188	112,560	112,889	42,465	329	1,056	1,476	1,508	1,737	1,735	679	-2	
25-49	31,406	45,737	49,132	54,488	55,094	23,688	606	1,091	1,584	1,695	1,889	1,915	824	26	
50-99	17,620	27,446	29,528	32,548	33,835	16,215	1,287	1,224	1,911	2,067	2,273	2,374	1,150	101	
100-249	8,878	13,658	13,890	16,187	16,902	8,024	715	1,331	2,071	2,117	2,466	2,572	1,241	106	
250-499	2,552	4,144	4,314	5,051	5,187	2,635	136	737	868	1,428	1,488	1,786	1,049	298	
500-999	1,185	1,838	1,952	2,242	2,376	1,191	134	808	1,266	1,345	1,532	1,632	824	100	
1,000-2,499	784	1,103	1,169	1,332	1,400	616	68	1,194	1,671	1,790	2,028	2,144	950	116	
2,500-4,999	219	310	325	355	372	153	17	752	1,072	1,124	1,199	1,272	520	73	
5,000-9,999	97	130	126	156	148	51	-8	683	869	850	1,048	984	301	-64	
10,000-19,999	34	44	47	50	50	16	0	460	626	644	694	683	223	-11	
20,000 or more	29	27	31	40	35	6	-5	1,100	1,151	1,361	1,704	1,518	418	-186	
None or None Reported	13,082	40,473	40,067	34,855	37,970	24,888	3,115	-	-	-	-	-	-	-	
Total ^a	346,014	498,093	506,066	530,627	532,542	186,528	1,915	11,420	16,251	17,141	19,486	19,779	18,359	293	

Source: Employee Benefit Research Institute tabulations of 1985, 1990, 1991, 1992, and 1993 Form 5500 annual reports filed with the Internal Revenue Service.
^aTotal may not equal the sum of individual items due to rounding.

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may have had 600 participants in 1993. The number of large primary DB plans remained relatively stable between 1985 and 1993. In fact, the number of plans with 10,000 or more active participants increased 5 percent.

Because most of the decline in primary DB plans occurred in plans with two to nine participants, the decline in the number of employees covered by a primary DB plan is relatively small. Approximately 80 percent of active participants in primary DB plans in 1993 were in plans with 1,000 or more active participants. Even if the 70,000 plans with fewer than 1,000 participants in 1993 were to terminate, 80 percent of active participants with primary DB plans would continue to accrue benefits in their pension plans, while 20 percent of DB participants (5 million) would have their pension benefits frozen. Many of these latter employees would still be covered by an existing DC plan or contribute to another retirement arrangement.

DC Plans

Between 1985 and 1993, the number of private primary DC plans increased by 54 percent, or 187,000 plans. However, most of this increase was in plans with two to nine active participants. The net number of such plans increased by 67,000 plans, or 36 percent of the total increase in primary DC plans (table 6.3).

The net increase in the number of primary DC plans is smaller as plan size increases. Primary DC plans with 10–24 active participants increased by 42,000 plans, while plans with 100–249 active participants increased by 8,000 plans. The increase in primary DC plans with 1,000 or more active participants was 800 plans, or 3.3 percent of the total increase.

Much of the growth in DC plans has been through primary and supplemental 401(k) plans. Unlike some other DC plans, these plans generally require employee contributions as a condition of participation, and it is often up to the employee to decide how much current pay to defer (within plan and legal limits). Many 401(k) plan participants also receive employer contributions that match all or a fraction of the employees' contribution. In 1993, 62 percent of 401(k) participants were in plans to which the employer contributed (Yakoboski, 1994). These DC plans, while providing

an effective means for individuals to save, require individuals to take more responsibility in their retirement planning than they would take in DB plans. Between 1984 and 1993, the number of 401(k) plans increased from 17,000 to 155,000, or from 4 percent to 25 percent of all DC plans, representing 22 percent of all private-sector pension plans.

Interpreting the Trends

Previous research in this field has concentrated on either the change in the number of DB and DC plans or the number of participants. This section reviews the relevant literature and then suggests an alternative approach to measuring the extent to which plan sponsors may have moved from the DB approach to one or more DC approaches in providing retirement income to their employees.

Number of Plans

The trends in the number of DB and DC plans may be analyzed either in the aggregate on a time series basis or by examining individual sponsors for evidence of direct substitution. As an example of the first method, Warshawsky (1995) uses IRS statistics on determination letters to analyze the growth of both qualified DB and DC plans, and concludes that the recent trends are even more dramatic when compared with longer-term secular trends. For example, his figures show that the net growth (defined as formations less terminations) of both types of plans accelerated from 1960 to 1973. This was followed by slow or negative growth in the next four years, presumably as a result of the severe recession in 1973–1975 and the impact of ERISA in 1974. Positive growth of both types of plans resumed in 1977; however, growth in DC plans clearly began to dominate that of DB plans. By 1989, the growth of DB plans turned negative and remained in that status until 1994 (the most recent year for which data are available). In 1990, there were actually more terminations of DC plans than formations. This result was reversed a year later; however, the annual net growth of DC plans has remained far below the levels achieved in the 1980s.

Perhaps the major contribution of Warshawsky's study is his time series regression analysis of the determinants of the net growth of

pension plans by plan type from 1960 through 1992. He concludes that external forces as well as economic forces impact these trends. Specifically, he finds that net business formation, bond yields, and marginal tax rates are important factors explaining DC plan growth, and that excess medical inflation and possible real earnings growth and marginal tax rates are factors in explaining DB plan growth.

There are two methods of addressing whether there has been direct substitution of DC plans for DB plans. Using the first method, Papke, Petersen, and Poterba (1993) found only one sponsor in their sample of 43 plans that reported a DB termination as a result of introducing a 401(k) plan between 1986 and 1990. The other method involves meticulous matching of plan information for more than 10,000 distinct sponsors for various time periods. Papke (1996) compared pension plan offerings by DB plan sponsors in 1985 with their offerings in 1992 and found evidence that 401(k) and other DC plans were substituted for terminated DB plans.

Between 1985 and 1993, an inverse relationship existed between the net change in primary DB plans and that in primary DC plans across plan sizes. The smaller the plan size, the greater the net increase in primary DC plans and the greater the net decrease in primary DB plans. The smaller the plan size, the greater the net increase in primary DC plans and the greater the net decrease in primary DB plans. Across all plan sizes, the net increase in DC plans was greater than the net decrease in DB plans, indicating that the growth in DC plans must have resulted from something more than a shift from DB to DC plans (chart 6.4).

Participants

Research has shown that some of the increase in the proportion of pension plan participants covered by primary DC plans can be explained by employment shifts in the economy or by federal regulation of pension plans.⁵⁴ Kruse (1995) found that very little of the growth in DC plan coverage between 1980 and 1986 was due to companies terminating DB plans. He attributed the decline in DB plan participation primarily to a decrease in partici-

pants in these plans rather than a decrease in plans.

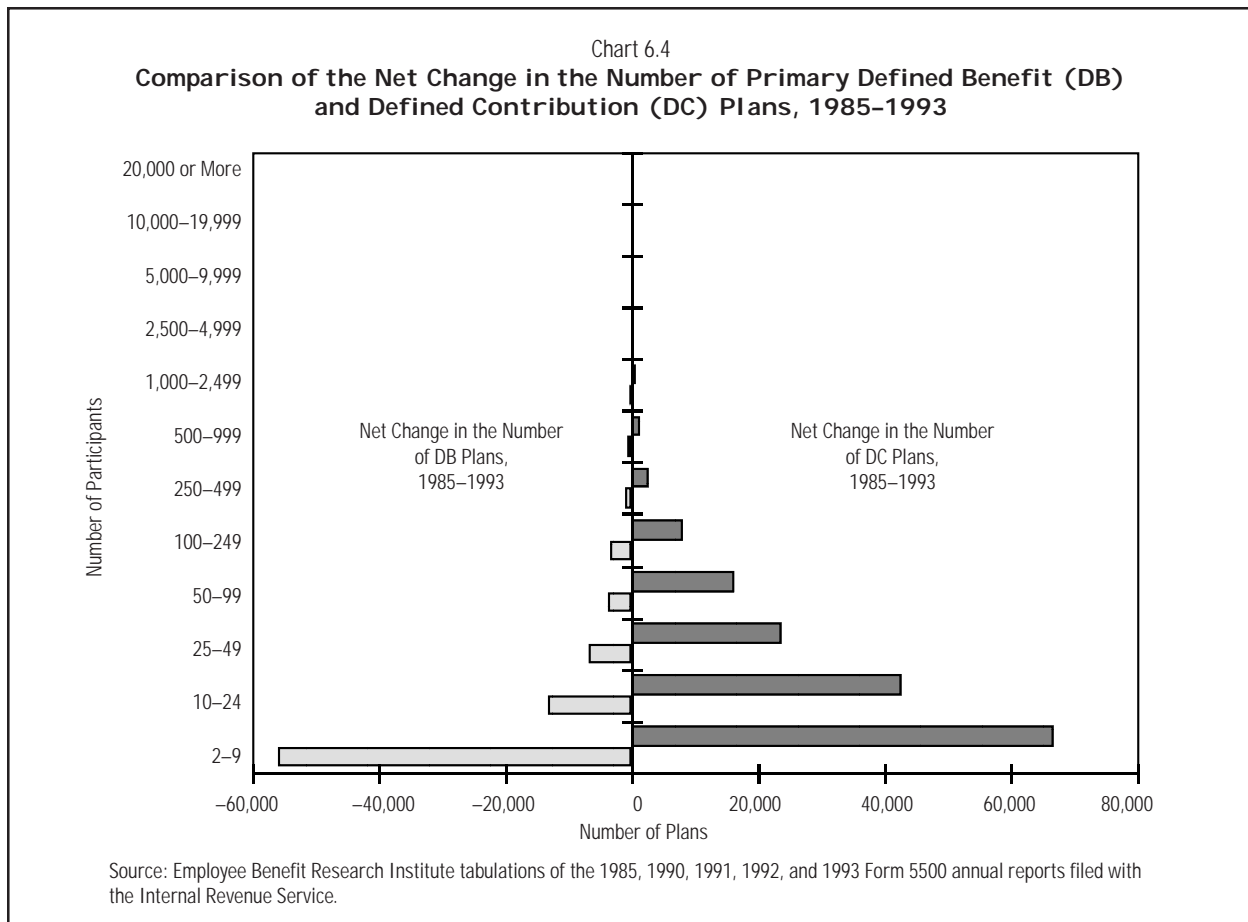
Ippolito (1995) considers the hypothesis that the introduction of 401(k) plans caused the increase in the percentage of pension plan participants covered by these DC plans that could not be explained by employment shifts in the economy or by federal regulation of pensions. According to his analysis, roughly 50 percent of this increase in DC plan market share can be explained by employment shifts away from union jobs, large firms, and industries that traditionally offered DB plans. Furthermore, he argues, federal regulations affecting administrative costs are only relevant to small plans, because plans with 500 or more workers have roughly equivalent costs for both DB and DC plans. He finds that, after their introduction in 1981, 401(k) plans absorbed market share from both DB plans and the then existing forms of DC plans. Specifically, he finds that 74 percent of 401(k) plans in existence in 1988 would have been DB plans if 401(k) plans had not been allowed, and 26 percent of 401(k)s would have been another type of DC plan. However, this analysis assumes that all firms that adopted a 401(k) plan would have sponsored a DB plan or another type of DC plan. It is possible, given the unique advantages of 401(k) plans and their rapid growth, that the creation of 401(k) plans caused employers that otherwise would not have sponsored a pension plan to establish a 401(k) plan. Perhaps the creation of 401(k) plans expanded the DC plan market rather than, or in addition to, taking market share away from other plan types.

Contributions

While the trends in the relative number of plans and participants are certainly important, public policy analysis of the retirement prospects in the next century requires that we also consider the financial aspects of these plans and what they will likely provide for individuals at retirement, separation, etc. A potential limitation of considering only the number of plans and/or participants is that many employers (especially those sponsoring larger plans) will provide both DB and DC plans for their participants. If there really has been a general change in the preferences for DC plans, it may be more likely to be implemented by a relative increase in the generosity of benefits offered through

⁵⁴ See Andrews (1989), Clark and McDermed (1990), and Gustman and Steinmeier (1992) for results from earlier work in this field.

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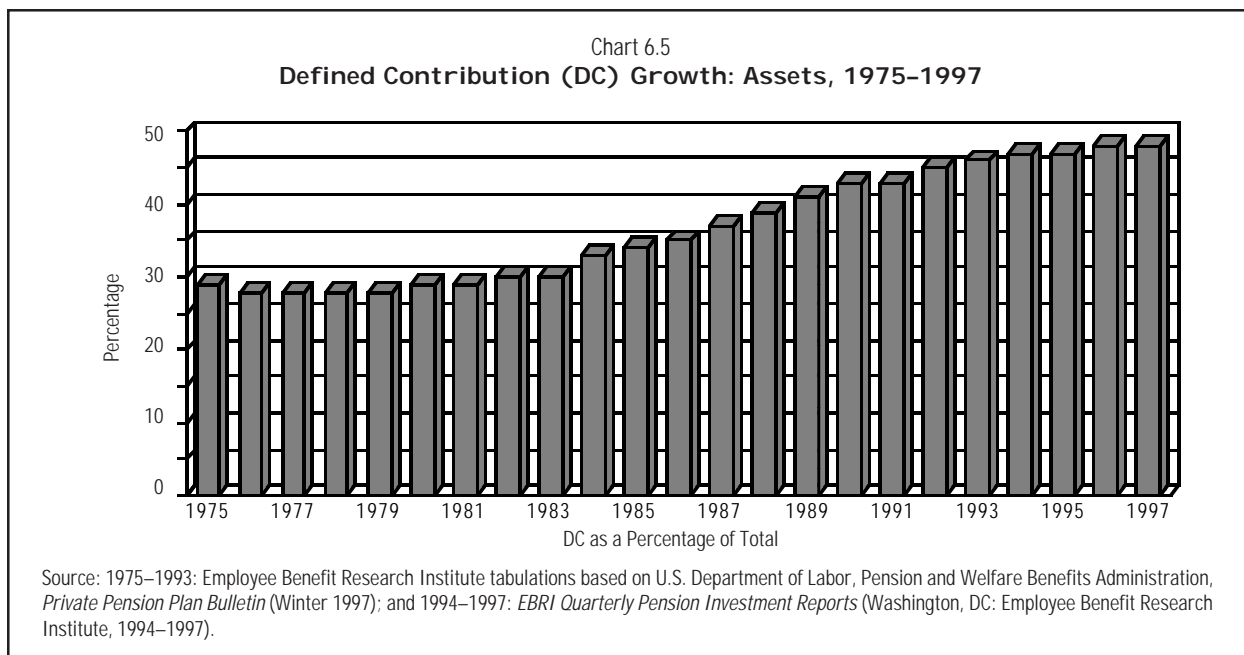


the DC plans as opposed to the DB plans. This may be done either by increasing the generosity of the DC plan (perhaps by increasing the employer match on a 401(k) plan) and/or by *prospectively* reducing the generosity of the DB plan (e.g., converting accruals for future service from final average to career average, or reducing the frequency and/or amounts of future ad hoc COLAs). Unfortunately, neither of these very significant changes in the overall portfolio of qualified retirement benefits could be accounted for by analyzing trends in either plans or participants.

One way to analyze the financial aspects of these trends is to consider the percentage of total qualified retirement assets held in DC plans. Chart 6.5 shows that at the time ERISA was passed, approximately 29 percent of the total assets were held in DC plans. This figure held relatively constant until the early 1980s, and then escalated consistently, reaching a high of nearly 48 percent in 1997. Unfortunately, just looking at the aggregate numbers may be a bit misleading, because they consist of three components that have not experi-

enced similar time series movements. The first of these—investment income—is difficult to analyze at this point because of its dependence not only on the financial markets' performance but also on the asset allocation decisions of the parties making the investment decisions. Although the literature is replete with studies detailing the decisions made by DB plan investment managers, the behavioral aspects of asset allocation in participant-directed account plans have only recently been investigated. Conclusive evidence on the disparity between asset allocation in DB and DC plans (and hence the expected rate of return on their respective portfolios) awaits collection of more representative data on DC plans.

Fortunately, the other two components can be observed from Form 5500 statistics made available by DOL. Chart 6.6 shows the percentage of qualified retirement plan contributions made to DC plans. Again, the time series remains relatively constant from the passage of ERISA to the early 1980s, and then increases annually throughout the decade. However, the trend definitely peaked in



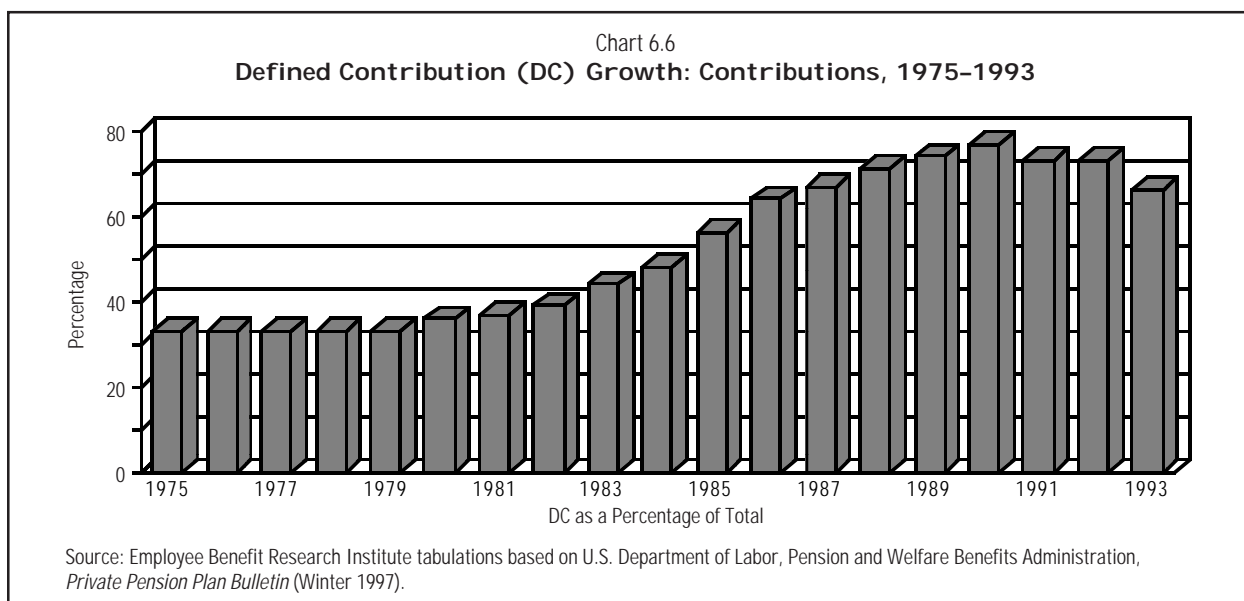
1990, and by 1993 it had fallen back to its 1987 level. A possible explanation for this trend would be that DB plans became relatively more generous vis-à-vis DC plans in the 1990s.

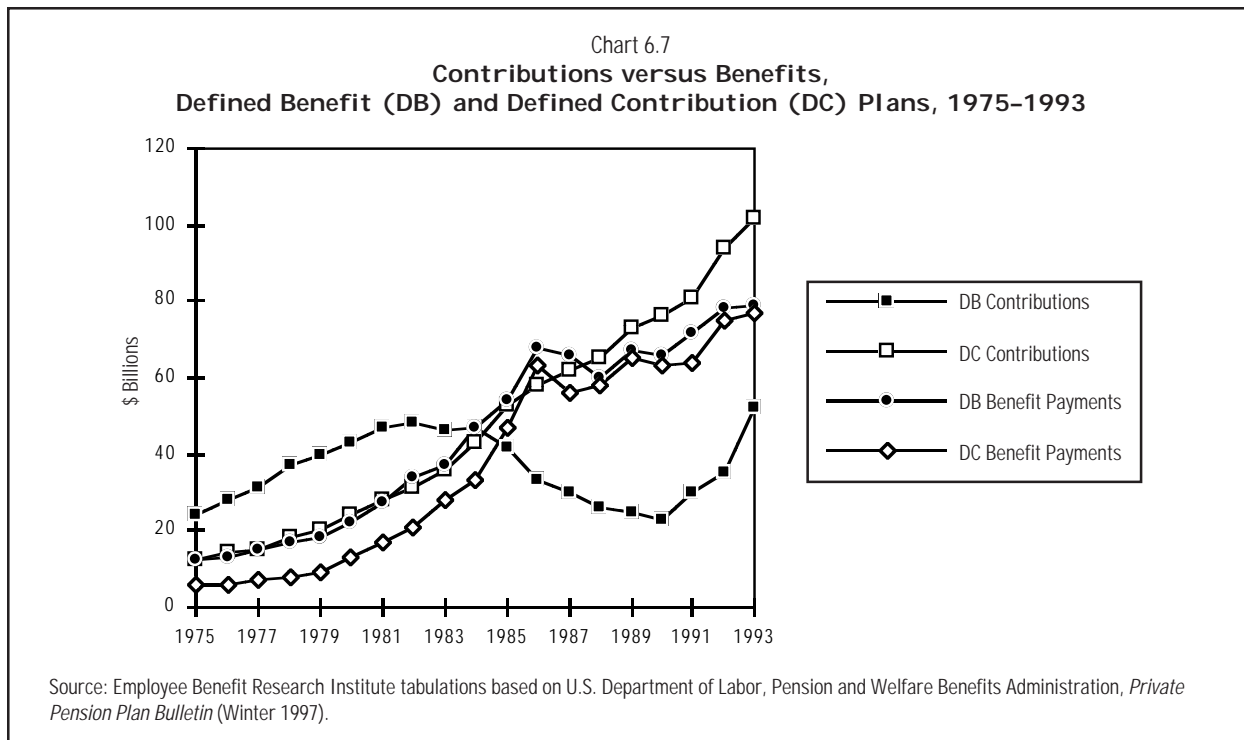
While there is still no precise method of measuring DB plan benefit accruals, in order to compare them with contributions made to DC plans, one can get a first order approximation of the trends (albeit on a lagged basis) in chart 6.7. This chart reveals that the trends in benefit payments between DB and DC plans have been extremely consistent over time, even as the contri-

bution trends have varied considerably. In other words, the relative drop in DB contributions in the late 1980s and their subsequent rise in the early 1990s have come without a corresponding modification in benefits paid out by DB plans.⁵⁵

The results shown in charts 6.6 and 6.7 reflect the bull market in stocks and bonds in the

⁵⁵ This obviously ignores the fact that timing of the receipt of the benefits in DC plans (and to an increasing percentage DB plans) is largely a function of the participant's decisions regarding rollovers and lump-sum distributions. See Yakoboski (1996) for further discussion of this important topic.





early 1980s that resulted in full funding of a large percentage of DB plans (Munnell and Ernsberger, 1987). They also partially reflect the minimum required contributions and the full-funding limitation modifications made in the Omnibus Budget Reconciliation Act of 1987 (OBRA '87). The former theoretically increased annual contributions for all underfunded DB plans with more than 100 participants, and the latter artificially suppressed aggregate DB contributions from the OBRA '87 effective date in 1988 or 1989 until the funding ratios among the overfunded plans fell below 150 percent sometime in the 1990s.

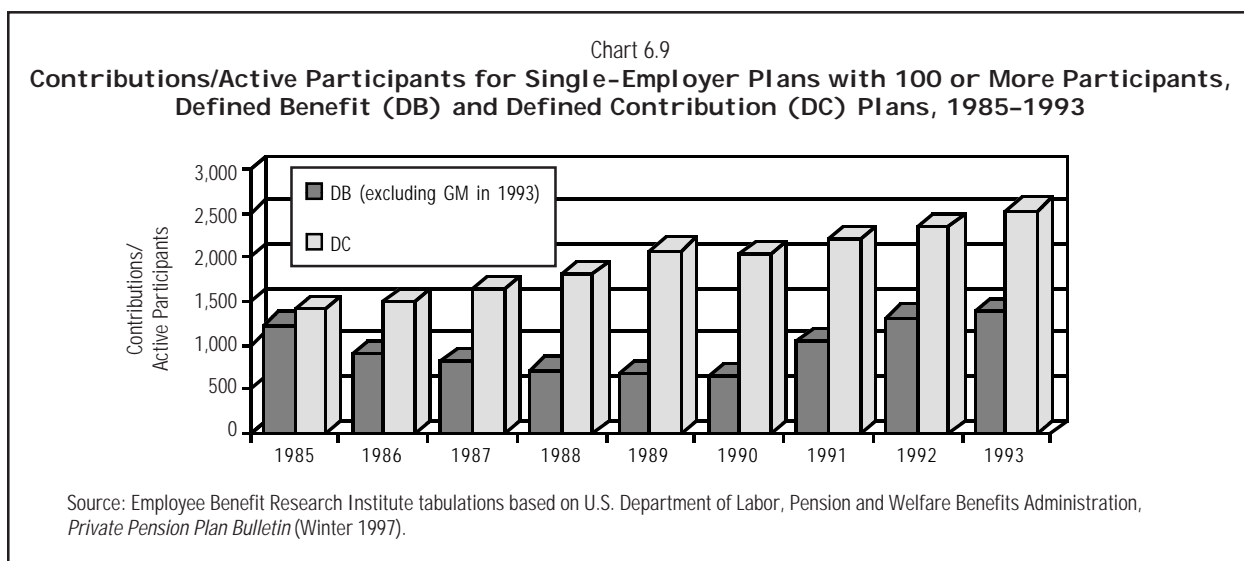
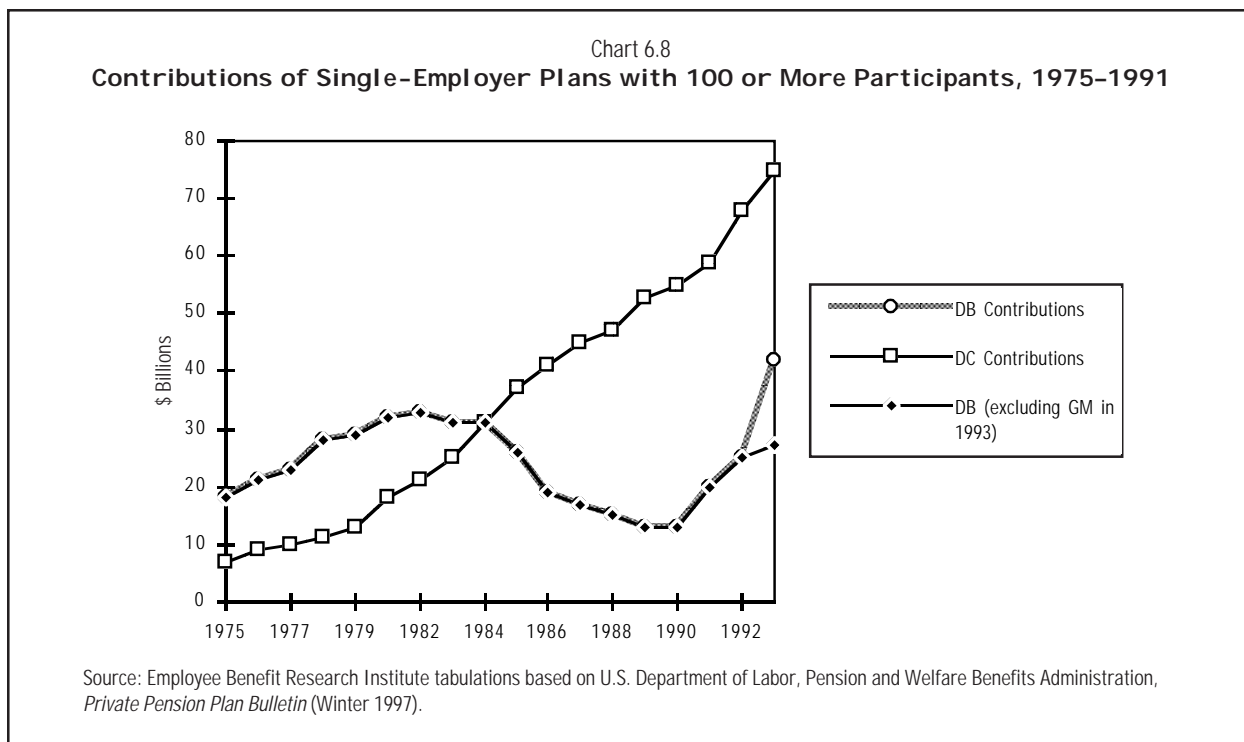
Due to differences in legislative treatment for funding of multiemployer plans and plans with fewer than 100 participants, we have chosen to concentrate only on contributions to single-employer plans with at least 100 participants for the remaining analysis in this section. As of 1993, these plans accounted for over 80 percent of the DB contributions and nearly 75 percent of the contributions to DC plans. Chart 6.8 is similar to chart 6.7 except that only large single-employer plans (with at least 100 participants) are included. The DB trend is shown with and without the very large contribution of plan 003 for General Motors in 1993. Because this is most likely to be a one-year anomaly, the following analysis excludes this

particular sponsor in all years.

Chart 6.9 shows the contributions from chart 6.8 as a dollar amount per active participant for the years 1985–1993. This time period was chosen for the following analysis for two reasons. It begins in 1985, after plan sponsors had an opportunity to react to the proposed regulations for 401(k) plans published in November 1981 but prior to the introduction of the new nondiscrimination requirements in the TRA '86 and the new funding requirements in OBRA '87; and it utilizes the most recent Form 5500 data currently available (1993). The results for the DB trends are consistent with Gale (1994), who estimates that between 1987 and 1991 real contributions per covered worker fell by \$375, and that OBRA '87 reduced annual contributions by \$154.⁵⁶

Methodology—In an attempt to analyze the factors influencing the change in relative contributions to DC plans (or subsets thereof), we collected Form 5500 information for 1985 and 1993 for all large, single-employer sponsors other than General Motors. We then combined all plan information for each sponsor using the Employer Identification Number as a proxy for the decision making entity.

⁵⁶ Both numbers are expressed in 1987 dollar amounts.



We determined a ratio equal to total DC plan contributions divided by total qualified retirement plan contributions for each plan sponsor⁵⁷ for both years.

⁵⁷ For example, if a sponsor only made contributions to DC plans in 1993, the ratio would be 1 (this would be true even if the employer sponsored DB plans that received no contributions for the year). Sponsors that only made contributions to DB plans for the year would have a ratio of 0. Those making contributions to both types of plans for a year would have an intermediate value.

Modifying the methodology adopted by Clark and McDermed, Gustman, and Steinmeier, and Ippolito cited above, we used logistic regression analysis to attempt to explain the percentage of a sponsor's total qualified retirement plan contribution that was allocated to the DC plans. These models were then used to control for employment shifts in unionization, firm size, and industry. The result of each analysis is an estimate of how much the percentage of total contributions to

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DC plans changed as a result of factors other than employment shifts.

Results—Table 6.4 provides the results of the analysis for all DC plans combined. The second column shows what percentage of total contributions to DC plans was provided by various categories. For example, 30 percent of the contributions to DC plans were provided by employers with unionized employees, and 70 percent were provided by those without unionized employees. Column three shows how much that percentage changed between 1985 and 1993. Firms with unionized employees accounted for 9 percent less over this period, and ended up providing only 21 percent of the contributions to DC plans in 1993. The drastic impact of firm size is evident in this column, as sponsors with fewer than 200 employees increased from 6 percent to 28 percent of the total contributions for DC plans and firms with more than 5,000 employees decreased from 72 percent to 42 percent.

Column 4 shows the average percentage of total contributions directed to DC plans for each of the categories. For all plan sponsors included in the analysis, 61 percent of the 1985 retirement plan contributions were of a DC nature. Unionized firms averaged 53 percent, the same as firms with less than 200 employees. The final column may be the most interesting for public policy purposes. Focusing on the top row (total), this analysis concludes that by 1993 there would have been a positive 11 percent growth in the percentage of DC contributions had there been no employment shifts in the intervening period. Unionized firms would have decreased 3 percent, while nonunionized firms would have experienced a 19 percent growth. All size categories would have experienced positive growth, but there is a strict inverse relationship between firm size and the calculated growth. Sponsors with fewer than 200 employees would have gained 28 percent, those with 5,000 or more would have gained only 8 percent.

Table 6.5 provides the same analysis but confines the analysis solely to plans with 401(k) features.⁵⁸ As expected, there is an even stronger size impact in 1985 (column 2) for these plans since

Table 6.4
Change in Percentage of Total Contributions to Defined Contribution (DC) Plans, 1985–1993

Variable	Distribution of Contributions to DC Plans		Percentage of Total Contributions to DC Plans	
	Actual 1985	Change 1985–1993	Actual 1985	Change 1985–1993 independent of employment shifts
Total	100%	0%	61%	11%
Unionization				
Union	30	–9	53	–3
Nonunion	70	9	65	19
Firm Size				
200 or fewer employees	6	22	53	28
200–500 employees	5	3	68	20
500–1,000 employees	4	2	64	22
1,000–1,999 employees	5	2	59	19
2,000–4,999 employees	9	1	63	11
5,000 or more employees	72	–30	61	8
Major Industry				
Mining	1	0	74	2
Construction	1	1	81	11
Manufacturing	51	–8	61	6
Transp ^a	13	–1	47	26
Wholesale trade	2	2	77	9
Retail trade	7	–1	84	7
FIRE ^b	14	0	69	7
Services	8	8	66	10
Other	2	–2	46	32

Source: Employee Benefit Research Institute calculations.

^aTransportation, communication, electric, gas, and sanitary services.

^bFinance, insurance, and real estate.

large plans would be more likely to have adopted this feature by that time. Likewise the relative change between 1985 and 1993 (column 3) shows even more “catch-up” on the part of small employers. Column 4 shows that, even by 1985, 69 percent of the total DC contributions were already going to plans with 401(k) features (c.f., column 4 in table 6.5 with column 4 in table 6.4). The final column in this table is very similar to the previous one although the numbers are generally larger; even the unionized firms show a positive gain. It is interesting to note that the medium size firms (200–1,000 employees) show as much growth, independent of employment shifts, as do the small

⁵⁸ Although it is common to refer to certain types of DC plans that provide the employee an opportunity to make before-tax contributions as a “401(k) plan,” it may be easier to think of these entities as profit-sharing (or stock bonus) plans with a 401(k) feature.

firms.

Finally, table 6.6 shows what happened to DC plans without 401(k) features. Focusing on the last column, it is clear that some of the gain for DC plans with 401(k) features shown in the previous table came at the expense of DC plans without 401(k) features; however, most of it was a direct substitute for DB plans. This was particularly true for small firms whose change for non-401(k) DC plans was 0 percent after controlling for employment shifts.⁵⁹

Future Research—Although tables 6.4 through 6.6 shed considerable light on recent trends in funding retirement promises through a DB and/or DC entity, and more specifically a DC plan with or without a 401(k) feature, a more complete understanding of the factors related to managerial decisions requires (1) a control for the impact of full-funding limits on DB plans⁶⁰ and (2) additional (nonpension) financial information on the sponsoring firm. Considerable research has already been undertaken with respect to the influence of these factors on the propensity of an overfunded DB plan to take a reversion, and future research combining Compustat and Form 5500 information will no doubt further our understanding of this important public policy issue.⁶¹

Public Plan Trends

DB Plans Are Predominant

Lower demand for DC arrangements has contributed to the significantly slower growth rates of public-sector DC plans. One explanation for lower demand for primary DC plans from public employees is the fact that government workers have historically been universally covered under DB plans, partly as a result of the exemption of public employees from participation in the (DB) Social Security system. In response, public

⁵⁹ See Ippolito (forthcoming) for a detailed explanation of his sorting hypothesis on why 401(k) plans may be a substitute for defined benefit plans.

⁶⁰ Readers are cautioned not to interpret the results as evidence of what would have transpired had certain binding constraints (such as the full-funding limits) not been in place.

Table 6.5
Change in Percentage of Total Contributions to Defined Contribution (DC) Plans with 401(k) Features, 1985–1993

Variable	Distribution of Contributions to DC Plans with 401(k) Features		Percentage of Total Contributions to DC Plans with 401(k) Features	
	Actual 1985	Change 1985–1993	Actual 1985	Change 1985–1993 independent of employment shifts
Total	100%	0%	42%	15%
Unionization				
Union	32	–9	39	5
Nonunion	68	9	43	20
Firm Size				
200 or fewer employees	4	25	27	28
200–500 employees	3	4	30	32
500–1,000 employees	3	3	33	29
1,000–1,999 employees	4	2	35	23
2,000–4,999 employees	8	1	38	20
5,000 or more employees	78	–36	45	11
Major Industry				
Mining	1	0	47	15
Construction	1	1	39	22
Manufacturing	53	–8	44	8
Transp ^a	13	0	30	35
Wholesale trade	1	2	36	29
Retail trade	7	–2	60	7
FIRE ^b	15	–1	50	11
Services	7	8	36	20
Other	2	–2	24	31

Source: Employee Benefit Research Institute calculations.

^aTransportation, communication, electric, gas, and sanitary services.

^bFinance, insurance, and real estate.

employers have often augmented the DB guarantee that would otherwise be received through Social Security benefits with DB plans that tend to provide higher benefit levels than those in the private sector. Unlike private plans, public employees often finance part or all of the defined benefit that they receive from DB plans, and their contributions are given tax-favored treatment. The demand for the creation of DC plans is presumably smaller from public employees who are allowed to make before-tax contributions to DB plans, which tend to provide higher benefit levels than those in the private sector.

Such work is currently in progress, but awaits further empirical refinements such as the appropriate standardization of normal cost measures across various plan types and combinations of actuarial assumptions.

⁶¹ See VanDerhei and Wang (1997) for a preliminary attempt to integrate these concepts.

Retirement Prospects in a Defined Contribution World

On the supply side, government employers have been more likely to sponsor DB plans. The reason is that public employers are more likely overall to have had the required administrative and fiscal resources to fund these plans, which tend to be more unpredictable to fund than DC arrangements.

Governments' ability to control their incomes and hire administrative staff through tax increases and revenue borrowing has given the public sector more funding flexibility than private plans enjoy. In addition, public DB plans are exempt from many of the regulations pertaining to private-sector DB plans,⁶² obviating for the public sector one of the private sector's main arguments for the use of DC arrangements as opposed to DB plans. Because supply and demand for DC plans have been lower in the public sector, DB plans remain the primary plan type for state, local, and federal employees, with over 90 percent⁶³ of state and local employees and nearly all federal employees participating in a DB arrangement between 1994 and 1995 (U.S. Department of Labor, 1995; and Zorn, 1996).

DC Plans Attract Interest and Use

The public sector has nevertheless increased its use of DC arrangements, although not to the same extent as the private sector. Federal plan trends show movement over the past decade toward increased utilization of DC arrangements, following the adoption of the Federal Employees Retirement System (FERS) (table 6.7). Enacted on January 1, 1987, FERS was created in part to replicate the mix of DC and DB arrangements increasingly available to private-sector workers (Merck, 1994). FERS includes a voluntary DC plan—the Federal Thrift Savings Plan (TSP)—

⁶² For example, ERISA applies only to private retirement plans. However, in 1978, Congress extended ERISA's financial and actuarial reporting standards to federal pension plans in Public Law 95-595. Standards in the IRC apply to state and local plans. In addition, state and local plans are subject to state trust laws and regulations. On the whole, public plan design and reporting regulations tend to be less strict than those applying to private pension plans. However, public plans are subject quite often to more stringent investment restrictions than private plans.

Table 6.6
Change in Percentage of Total Contributions to Defined Contribution (DC) Plans without 401(k) Features, 1985–1993

	Distribution of Contributions to DC Plans		Percentage of Total Contributions to DC Plans	
	Actual 1985	Change 1985–1993	Actual 1985	Change 1985–1993 independent of employment shifts
Total	100%	0%	19%	-4%
Unionization				
Union	25	-9	14	-8
Nonunion	75	9	22	-2
Firm Size				
200 or fewer employees	9	14	26	0
200–500 employees	8	1	39	-12
500–1,000 employees	6	1	31	-7
1,000–1,999 employees	6	1	24	-4
2,000–4,999 employees	11	0	26	-9
5,000 or more employees	59	-18	16	-3
Major Industry				
Mining	1	0	26	-13
Construction	1	1	42	-10
Manufacturing	45	-10	17	-1
Transp ^a	15	-4	17	-10
Wholesale trade	3	1	41	-19
Retail trade	6	1	24	0
FIRE ^b	13	3	19	-4
Services	12	8	30	-10
Other	4	-4	21	1

Source: Employee Benefit Research Institute calculations.

^aTransportation, communication, electric, gas, and sanitary services.

^bFinance, insurance, and real estate.

in addition to its DB base. Until 1987, federal employees were covered under a DB plan exclusively, the Civil Service Retirement Service (CSRS).

Employees hired prior to January 1, 1984, were given the option of switching to FERS or staying with CSRS. All employees hired after that date are required to participate in FERS. Both FERS and CSRS employees have the option of

⁶³ The Bureau of Labor Statistics reports that 91 percent of employees in state and local governments were covered by a DB plan in 1994.

⁶⁴ Thrift Savings Plan (TSP) participants contribute either a percentage of basic pay or a fixed dollar amount each period through payroll deductions. FERS employees can contribute up to 10 percent of basic pay on a pretax basis, whereas CSRS employees may contribute up to 5 percent of basic pay on a pretax basis. Participants are also subject to annual deferral limit set by IRC sec. 402(g)—the same limit as for sec. 401(k) deferrals. The limit is subject to annual adjustment and was set at \$9,500 in 1997.

Table 6.7
Federal Public Pension Plans and Participants
Summary of Selected Federal Public-Sector Plan Trends, Selected Years 1981-1995^a

	1981	1983	1985	1987	1989	1991	1993	1994	1995
Total Participants	6,408	8,321	8,591	9,849	10,644	10,919	10,779	10,813	10,825
Defined benefit plans	6,408	8,321	8,591	8,860	9,190	9,143	8,743	8,694	8,630
Civil Service Retirement System	4,756	4,754	4,919	4,295	4,332	4,086	3,808	3,808	3,731
Federal Employees Retirement System	b	b	b	800	1,086	1,325	1,764	1,764	1,512
Military Service Retirement System ^c	1,652	3,567	3,672	3,765	3,790	3,732	3,511	3,451	3,387
Defined contribution plans	d	d	d	989	1,454	1,776	2,036	2,119	2,195
Thrift Savings Plan ^d	d	d	d	989	1,454	1,776	2,036	2,119	2,195
Defined contribution as a percentage of total	0%	0%	0%	10%	14%	16%	19%	20%	20%
Total Active Participants (thousands)	3,043	4,838	4,992	6,056	6,448	6,643	6,418	6,360	6,345
Federal retirement systems ^f									
defined benefit plans	3,043	4,838	4,992	5,109	5,158	5,050	4,606	4,484	4,415
Civil Service Retirement System	2,755	2,690	2,800	2,080	1,918	1,726	1,525	1,443	1,525
Federal Employees Retirement System	b	b	b	800	1,052	1,260	1,318	1,375	1,318
Military Service Retirement System ^c	288	2,148	2,192	2,229	2,188	2,064	1,763	1,666	1,572
defined contribution plans	d	d	d	947	1,290	1,593	1,812	1,876	1,930
Thrift Savings Plan ^d	d	d	d	947	1,290	1,593	1,812	1,876	1,930
Defined contribution as a percentage of total	0%	0%	0%	16%	20%	24%	28%	29%	30%
Defined contribution as a percentage of total, excluding military plans	0%	0%	0%	33%	43%	53%	64%	67%	68%

Source: U.S. Department of Defense, Office of the Actuary, *DOD Statistical Report on the Military Retirement System*, fiscal years 1981-1995 (U.S. Department of Defense, n.d.); U.S. Office of Personnel Management, *Civil Service Retirement and Disability Fund Annual Report*, fiscal years 1986-1995 (Washington, DC: U.S. Office of Personnel Management, 1987-1996); *U.S. Civil Service Retirement System Annual Report*, fiscal years 1983-1985 (Washington, DC: U.S. Office of Personnel Management, 1984-1987); and unpublished data from the Office of Personnel Management, the Federal Retirement Thrift Investment Board, and the Department of Defense, Office of the Actuary.

^aData for the Civil Service Retirement System, Federal Employees Retirement System, Military Service Retirement System, and state and local retirement systems are expressed in fiscal years, beginning on October 1 of prior calendar year and concluding on September 30 of calendar year indicated. Data for the Thrift Savings Plan are expressed in calendar years.

^bThe Federal Employees Retirement System was established June 6, 1986.

^cIncludes all personnel and their families with the exception of reserves.

^dThe Thrift Savings Plan was established April 1, 1987.

participating in the TSP, although FERS employees are allowed to contribute a higher percentage of basic pay on a pretax basis because the DB plan under FERS is less generous than that under CSRS.⁶⁴ As a result of the implementation of FERS, the percentage of active federal employees (excluding military personnel) participating in a DC plan has grown from none in 1985, to 33 percent in 1987, and to 68 percent in 1995 (table 6.7). As of 1997, voluntary TSP participation by employees covered by FERS stands at 82.9 percent, and voluntary participation by employees covered by CSRS is approximately 56 percent (Mehle, 1997).

Individual State and Local Plans Explore DC Approaches

Two issues emerge when considering whether DC plans have expanded in state and local governments. The first is whether the market is growing

for DC plans that have been traditionally used to cover state and local employees. The second is whether preexisting DB plans are being terminated, or converted, into DC arrangements.

Some DC plans have been offered to state and local employees for decades. For example, many public educators have traditionally been covered by sec. 403(b) plans. In addition, a portable (DC) retirement plan for municipal managers has existed since 1972, and sec. 457 plans began in the late 1970s. For some government employees, DC plans have supplemented DB plans, and for others, DC plans have been their primary plan. In 1994, 67 percent of state and local government workers with a money purchase (401(a)) retirement plan were not covered by any other type of employment-based retirement arrangement (U.S. Department of Labor, 1996).

The number of DC plans in state and local governments has grown significantly. For example,

36 states reported assets totaling \$1.5 billion in 1985, compared with 50 states and 56 localities reporting combined assets of over \$28 billion in 1997 (Olsen, 1996). Some of this growth is attributable to state and local government employers with DB plans sponsoring DC plans as a supplement. For example, the Public Employee Retirement System (PERS) of Idaho has expanded its 401(k) plan, and Utah has had a supplementary 401(k) plan for several years.

As mentioned above, some growth of DC plans among state and local employers resulted from converting purely DB systems into exclusively DC systems. Several public employers have made this switch (at least for new employees), including Michigan PERS, Michigan Municipal Employees' Association, Genesee County (MI), the city of Wichita (KS), and the city of Detroit (MI). In addition, Maine has converted its DB plan into a DC plan for appointed and elected officials. Meanwhile, other public employers have adopted hybrid retirement systems, including Washington Teachers (Plan 3), Colorado PERS, and South Dakota. And, some states such as Nebraska, Texas, and West Virginia now have major statewide defined contribution plans as their primary benefit structure (Stella and Steffen, 1997). Reasons cited for these initiatives include state and local governments' desire for increased pension portability (Gates, 1996),⁶⁵ competition with the private sector to attract employees (Eitelberg, 1996), and the fiscal constraints currently faced by many state and local governments (Eitelberg, 1996).

Despite the above evidence of a trend toward greater usage of DC plans among government employers, recent studies by the Government Finance Officers' Association (GFOA) found that the percentage of government plans offering DC plans exclusively has remained relatively constant at 3 percent–4 percent of responding plans from 1991 to 1995. In addition, the Bureau of Labor Statistics reports that 97 percent of full-time employees in state and local governments offered a DB plan were not offered a DC plan. However, these data may change, as other states with

increased interest in DC plans⁶⁶ implement changes, and these changes affect aggregate state and local data.

■ Understanding the Trends

Speculative explanations outweigh empirical data concerning exactly why DC plans have grown to such an extent in terms of plans, participants, assets, and contributions. When empirical data are available, however, it is sometimes limited and/or contradictory. This section discusses three broad, commonly proposed explanations for the increased use of DC plans, and cites the research and lines of reasoning used to support them. First, some have claimed that government regulation has had a profound impact on plan choice (*Employee Benefit Plan Review*, 1995; Healy, 1997; Paul, 1995). Second, increased employee appreciation and demand for DC plans has been proposed as a driver of DC plan expansion (Eitelberg, 1995; Steinberg and Graffagna, 1993; and Williamson, 1995). Finally, increased global competition and employers' subsequent need for more flexibility has been proposed as a factor heavily influencing plan design choices (Salisbury, 1997).

The Government Role

Many argue that, intentionally or unintentionally, government legislation and regulation have greatly increased the attractiveness of DC plans over the DB approach (Clark and McDermed, 1990; Academy of Actuaries, 1992; McGinn, 1984; Friend, forthcoming). This section highlights some of the governmental actions most frequently cited as contributing to the trend toward DC arrangements in the private sector.

Administrative Complexity and Frequency of Administrative Change Have Disproportionately Affected DB Plans

Prior to ERISA, federal regulations governing retirement plans were neither as complex nor as comprehensive as they subsequently became.

⁶⁵ Gary I. Gates (1996) notes the opposing incentives present for most state and local employees, stating that while "effective public service requires the movement of personnel within the public sector and between public and private employers . . . most public employers now provide final

earnings defined-benefit retirement plans, which reward long tenure with a single employer."

⁶⁶ States showing increased interest in DC plans include California, Connecticut, Idaho, Iowa, Kansas, Montana, Ohio, Oregon, and Pennsylvania (Stella and Steffen, 1997).

ERISA's efforts to improve the security of pension promises made by employers to employees brought about significant changes.⁶⁷ Changes since ERISA, including at least 22 legislative acts, have added to plan administrative cost and complexity (McGill, 1996).

Because of the nature of retirement benefits, the need for legislation to accommodate various interests and exceptions, and the sheer frequency of change, pension law and legislation are now very complex areas. In fact, an entire field of specialized expertise has grown up around ERISA and its accompanying regulations. More than ever, retirement plan specialists (e.g., consultants, actuaries, accountants, and others) are needed to advise employers on which retirement packages will meet their strategic business objectives as well as comply with legal requirements. In fact, the ERISA Industry Committee (ERIC), a membership organization representing the employee benefit interests of America's largest employers, states "federal rules regarding the operation of pension plans have grown so complex and, in some instances, so contradictory, that it is impossible to operate a plan in total compliance with the law at all times" (ERISA Industry Committee, 1996).

Although administrative complexity and expenses have risen for DC plans as a result of the multitude of regulatory and legislative initiatives over the past two decades, DB plans have been most affected. Many argue that new laws and regulations have raised DB administrative costs enough to make DC plans more attractive to many plan sponsors (Clark and McDermed, 1990; Husted, 1996), especially smaller employers who do not have the economies of scale available to mitigate the administrative costs of larger plans. However, others in the business community argue that the growth in DC plans is primarily fueled by the relative frequency with which DB plan regulations change, not the complexity of DB plan administration itself. Some experts claim that small changes in plan regulation, which might not have

been problematic if they had been implemented at the outset, can cause significant financial burdens if enacted today.

Increasing PBGC Premiums Add to the Cost of Private DB Plans

Because DC plans are not insured by PBGC, rising PBGC premiums only increase the cost of private DB plans. Although the premium was a flat rate of \$1 per participant per year when the program was established, legislation has since increased it to a flat rate of \$19 per participant⁶⁸ along with an additional variable premium that increases with underfunding. In addition to increasing the cost assessed to sponsors of existing underfunded plans, the higher premiums have raised the cost of starting new DB plans, because many new plans begin with unfunded liabilities for older workers who have been "grandfathered" into the plan with past service credits.

The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) and The Tax Reform Act of 1986 (TRA '86)

As discussed in the section on Private Plan Trends, much of the decline in DB plans is attributable to small plan terminations. One suggested explanation for this is that many of these small plans—sometimes covering fewer than 10 participants—were established as tax shelters for higher paid persons, not retirement plans for rank-and-file workers. When legislation removed many of the incentives to maintain a DB plan for tax-sheltering purposes, these plans were terminated. For example, the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) imposed penalties on top-heavy plans, and TRA '86 lowered basic income tax rates, imposed faster minimum vesting standards, and eliminated the tax qualification of some small DB plans, primarily single-participant plans. Under the latter provision, a plan is not qualified unless it includes the lesser of 50 employees or 40 percent of an employer's work force.⁶⁹

⁶⁷ Among other things, ERISA established new participation, vesting, funding, reporting, fiduciary, and disclosure requirements and created PBGC to provide plan termination insurance for DB plans.

⁶⁸ This includes retirees and vested participants who have terminated employment with the plan sponsor.

⁶⁹ IRC sec. 401(a)(26). The number of single-participant DB plans increased from 9,000 in 1977 to 54,000 in 1985. Data on the number of single-participant DB plans are not available for 1993 due to changes in reporting requirements. However, it is likely that this TRA '86 provision caused many small plans to terminate, particularly plans covering a relatively small number of employers' higher-paid employees (e.g., partners in law firms and accounting firms). This rule was eliminated for DC plans effective January 1, 1997.

Full-Funding Limitations and Liquidity Requirements Mitigate One DB Advantage

Funding flexibility, when defined as the percentage of assets available to cover the plan liabilities, is still a funding advantage of DB plans. After all, DC plans are always 100 percent fully funded, but DB plans are allowed to overfund. However, this advantage was mitigated by OBRA '87, which was designed to increase funding among underfunded plans by increasing minimum required contributions and cutting back on funding waivers. The expected revenue loss from this increase in funding was to be offset by cutting back on maximum tax-deductible contributions for overfunded plans. By establishing a stricter upper limit on tax-deductible contributions, OBRA '87 rendered nondeductible any additional contributions to a plan with assets covering more than 150 percent of termination liabilities.⁷⁰ Before OBRA '87 was enacted, businesses with uncertain profit margins were able to create a financial cushion in their DB plan by overfunding during profitable years. The accumulation of financial cushions takes the pressure off of plan funding during less profitable years, and is still a unique advantage of the DB approach.

The Retirement Protection Act of 1994 also mitigated the funding flexibility of DB plans. This act increased minimum contributions for underfunded DB plans by imposing liquidity requirements, which mandate that a plan have enough liquid assets to cover approximately three years of benefit payments. If the plan misses a liquidity contribution, there are restrictions on paying distributions other than regular annuities (e.g., lump-sum distributions) (Allen et al., 1997).

Employee Appeal of DC Plans

Small survey and anecdotal evidence suggest that employees may appreciate DC plans more than DB plans of equal employer cost (Eitelberg, 1995; Steinberg and Graffagna, 1993; Williamson, 1995). Employees may better appreciate the DC approach for several reasons.

1. DC plans tend to be easier to understand than DB arrangements, in large part because

DC plan benefit statements are not projected based on life expectancy, interest rate, and salary projections, but instead are reported at their present value.

2. Employees may favor DC plans because they often allow self-directed investments, and employees desire this the flexibility and the control involved.
3. Employees may prefer the in-service distributions that are available under many DC plans but are prohibited under a DB approach. While retirement planning is important, many workers find saving for childrens' education, purchasing a home, and other consumption activities equally or more important (Yakoboski, 1997).
4. The relatively high average rates of return available from the equities market over recent years, and the subsequent growth of marketing efforts from financial firms, may have enticed employees to seek plans that allow self-directed investing. The equities market may seem attractive enough that employees are willing to exchange a DB guarantee for the ability to self-direct assets into this market. And, as more people believe they can benefit from self-directed investments, fewer people are likely to demand risk-pooling arrangements such as DB plans.
5. Employees may prefer the tax advantages granted to their contributions to 401(k)-type DC plans to the benefit promises of the DB approach.
6. Employees may expect to change employers several times during their career, and seek the increased "portability" that DC plans tend to allow over traditional DB plans. Unfortunately, the concept of portability has many interpretations in the pension field. For some this refers to the loss (or more precisely, the lack thereof) of pension benefits and/or account balances when an employee leaves the organization. However, if an employee is already vested in the pension plan, then there will not be any forfeiture of any rights already acquired under the plan.⁷¹ For others, the concept of portability refers to the concept of "losing" the increase in value that would be obtained for previously accrued

⁷⁰ 1997 legislation has scheduled this limit to rise to 170 percent gradually. The limit rises to 155 for plan years beginning in 1999, 160 percent in 2001, 165 percent in 2003, and 170 percent for plan years beginning in 2005

⁷¹ The concept of vesting applies somewhat differently for multiemployer plans. According to Drinkwater (1997):
Although they might work for numerous employers over the course of their work lives, employees covered under

benefits under a final-average DB plan if the employee would have experienced future wage increases had he or she remained with the current employer (see chart 6.2 for an illustration of how final average DB plans penalize job change). Given the increasing numbers of DB plans paying lump-sum distributions on job termination (Hewitt, 1992), the distinction between the portability of DB versus DC plans may be lessening.⁷²

7. Employees may not trust their employers to accurately calculate their DB pensions, and DC plan statements allow employees to keep a closer eye on their benefits.⁷³
8. And, finally, employees may simply not understand the relative advantages and disadvantages of different plan types and designs. For example, Mitchell (1987) found widespread misinformation among worker reports of pension provisions.

Market Forces: Increased Global Competition

Global competition among many U.S. firms increased with the onset of widespread globalization during the 1980s. As a result, many businesses increasingly deal with uncertain profit margins. The ability to quickly divest a business venture or to go out of business with the least obligations can be a competitive advantage for a firm competing internationally. DC plans—because they are always 100 percent funded and because they tend to have fewer regulatory constraints—are perceived as preferable to DB plans by some firms that are unsure of their stability and profits. In addition, some contend that increased global competition has forced some U.S. firms to cut compensation costs, thereby freezing their DB plans and replacing them with less generous retirement benefits in the form of DC plans. Finally, using a DC plan may also

allow U.S. firms overseas to offer benefits similar to those being offered by other countries, as Dent and Sloss (1996) identify a “prevalence of DC plans around the world.” Unfortunately, despite the weight that some practitioners assign to increased global competition in the growth of DC plans, obtaining quantitative data to support or disprove these allegations has proven difficult for researchers.

Taxpayer Pressures

Taxpayer pressures have also contributed to the increased use of DC plans in the public sector (Miller, 1997). Given federal initiatives to decrease taxes, state and local government employers may be less willing to deal with cost uncertainty and open-ended liabilities. As a result, some are moving toward greater or exclusive use of DC plans, which provide better budgetary predictability. As explained above, DC plans present no risk of unfunded liability, as DC funds are, by definition, 100 percent funded.

Public Policy Implications

Retirement Income Provision

Traditional DB plans typically required participants to wait until retirement age before receiving any benefits,⁷⁴ at which time a life annuity was issued to the participants (and possibly their spouses). Annuity payments (typically monthly) continued until the participants’ death (or the death of the survivor if a joint-and-survivor annuity was purchased). While some retirees receiving a pension may have needed to worry about having enough money, none were at risk of running out of money altogether. As long as they were alive, they could look forward to another pension payment.

A smaller proportion of retirees are likely to

collective bargaining agreements that require employer contributions to multiemployer plans usually do not have to be concerned with losing benefits from or transferring benefits among employers’ plans. In multiemployer pension plans, for example, employees will be credited years of service for vesting and participation purposes as long as they work for a contributing employer in covered service or in contiguous noncovered service with the same employer.

⁷² However, DC plans will remain more “portable” for most workers as long as DB plan benefits tend to favor older workers, because the lump-sum distributions available

through DB plans will be relatively small for workers not near retirement age.

⁷³ Note the extensive coverage that DB plan miscalculations received in the popular press in 1997. For a discussion of this issue, see Shutan, 1997.

⁷⁴ DB plan participants could (and can) be forced to take a lump-sum distribution on termination if the accrued vested benefit is worth less than or equal to 3,500 in present value. The threshold has been increased to \$5,000 in present value.

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experience such an arrangement in the future, and tomorrow's retirees' retirement income security is likely to depend increasingly on a worker's lifelong money management decisions regarding employment-based retirement savings. Workers will need to manage these funds successfully over the course of their working lifetimes and during retirement itself, in order both to accumulate sufficient retirement savings and then to manage this money in such a manner that they do not outlive it. This increasing dependence on individual responsibility for retirement security is a result of the growth in lump-sum distributions from DB plans (Hewitt, 1992) and the proliferation of DC plans, as these plans continue to pay their traditional lump-sum distributions and generally to offer more preretirement access to funds. (See Plan Distributions on page 58.)

From a policy perspective, concerns have arisen about individuals mismanaging employment-based retirement savings during their working lifetimes and/or during retirement and, as a result, needing government support. Some worry that the increase in the need for government support because of financial mismanagement of employment-based retirement savings will occur just when society is projected to be supporting an unprecedented proportion of older persons. Given future entitlement program cost projections, how much additional assistance will the government be able to provide and at what cost to the rest of society? And, if government supports persons who mismanaged employment-based savings, is this fair to people having equal lifetime resources and expenses who sacrificed past consumption in order to manage their money effectively? However, if the government does not support the elderly who become impoverished as a result of mismanaging their employment-based retirement savings, can society accept the human costs?

As a result of these concerns, public policy has sought to encourage the preservation of retirement money accumulated on a tax-deferred basis through income and penalty taxes. However, despite these penalties, 60 percent of distributions to job changers from large plans are not rolled over into an IRA or qualified employment-based plan (Yakoboski, 1997). Because the data are limited, it is not known how persons used money that was not rolled over; however, it is possible that the 60 percent of distributions not rolled over result in

leakage from the retirement savings pool equal to one-fifth of all "retirement savings" paid in lump-sum distributions to job changers.

Opinion poll survey research on the rollover behavior of current workers also suggests significant leakage from the retirement savings pool as a result of lump-sum distributions that were not preserved. The 1997 Retirement Confidence Survey shows that 55 percent of current workers who reported ever having received a lump-sum distribution did not roll over any of the funds into an IRA, 61 percent did not leave the funds in their former employer's plan, and 91 percent did not roll any of it over into their new employer's qualified retirement plan. What happened to funds that were not rolled over or left in the former employer's qualified plan? Thirty percent of respondents reported spending and/or using at least some of the money to pay off debt (Yakoboski, forthcoming).

Although retirees seem more likely to roll over lump-sum distributions (recent large firm data show that about 87 percent of dollars from lump-sum distributions to retirees are rolled over), this amounts to only 52 percent of all distributions. Hence, about 48 percent of retirees who are given a lump-sum distribution do not roll it over.

These rollover patterns among retirees and job changers is not problematic from a public policy perspective if it results in leakage of funds that are not needed for retirement. However, data show that the smaller the distribution, the less likely it is to be rolled over (Yakoboski, 1997a and 1997b). Assuming that at least some persons who do not roll over their lump-sum distributions have smaller distributions, lower incomes, and less retirement savings, these are the people who need to save for retirement most—those most at risk of retiring without sufficient savings—who are cashing out their lump-sums most frequently.

Some view the leakage of employment-based retirement savings through in-service access and lump-sum distributions as necessary in order to allow individuals more control and responsibility with respect to their own earnings. In addition, others have claimed that preretirement access can actually increase retirement savings if it is used to make investments such as a home purchase or the participant's own education. Finally, some employers believe that offering employees preretirement access entices them to save in the first place, which then encourages them to contribute to retirement

saving after they have met their more immediate consumption needs.⁷⁵ However, others have dismissed the allowance of lump-sum distributions cashouts and preretirement access to funds as simply bad public policy (Blitzstein, 1997). Moreover, the justification of federal tax expenditures for employment-based plans is also an issue.⁷⁶

■ Looking Forward

Tax Policy Change

Capital Gains

As a result of the Taxpayer Relief Act of 1997, the maximum tax rate on net capital gains (i.e., the excess of net long-term capital gains over net short-term capital losses) will be reduced in two ways. For certain net capital gains, the maximum rate is reduced from 28 percent to 20 percent. Second, the maximum tax rate is further reduced to 18 percent for net capital gains on property held more than five years.⁷⁷ The increased differential between tax rates on ordinary income and capital gains may cause some employees to rethink their strategy of choosing elective deferrals, especially as they near retirement age. However, the net impact of the new tax bill for these individuals is mitigated to some extent by the permanent repeal of the 15 percent excise tax on excess distributions and excess retirement accumulations that applied for annual distributions from most retirement plans (including IRAs) in excess of \$160,000 (indexed for inflation).⁷⁸ In the long term, the capital gains modifications may reduce the aggregate demand for DC plans relative to DB plans. This would occur if enough highly compensated employees perceive that their net retirement accumulations will be maximized if at least a portion of the elective deferrals that would otherwise be allocated to the qualified retirement plan sector were held (long term) in individual securities or mutual funds with low turnover. This would most likely apply to

portions of elective deferrals not eligible for employer matching contributions under the plan formula.

Flat Taxes and Consumption Taxes

Various flat tax and consumption tax proposals, which would radically alter the way that the federal government collects tax revenues, have been proposed. Although the details vary from proposal to proposal (and some proposals lack detail), some fundamental elements are basic to most. These are: the tax would be based on consumption rather than income; consumption would be taxed only once; and all consumption would be taxed at the same “flat rate.” Employment-based retirement income programs would generally lose their tax-preferred status. This means that employer expenditures for retirement programs would be subject to immediate taxation. Many analysts automatically assume that such tax changes would signal the end of the employment-based retirement system; however, such results are far from clear. Employers offer such benefit plans for reasons other than preferential tax treatment, such as work force management.⁷⁹

Small Business Job Protection Act of 1996

SIMPLE Plans

In August 1996, President Clinton enacted the Small Business Job Protection Act (SBJPA '96). This legislation contained numerous changes in pension law and established the new savings incentive match plan for employees (SIMPLE) for employers with 100 or fewer workers. It is anticipated that more small employers will adopt SIMPLE plans than those who used simplified employee pensions (SEPs) under existing law. With some exceptions, SBJPA gives employers the alternative of matching employees' before-tax contributions dollar for dollar, up to 3 percent of compensation, or providing a nonelective contribu-

⁷⁵ For a more in-depth discussion of the issue, see ERISA Industry Committee (1996).

⁷⁶ For a detailed discussion of this topic, see Salisbury (1994).

⁷⁷ This applies only for assets whose holding period begins (e.g., by purchase) after December 31, 2000.

⁷⁸ Special provisions were available for lump-sum distributions.

⁷⁹ See “Employee Benefits in a Flat Tax or Consumption Tax World,” EBRI Notes, no. 9 (September 1995): 1–11 for an examination of the specifics of congressional proposals and an exploration of the issues that such potential tax changes raise for employers to consider. See also Dallas L. Salisbury, ed., Tax Reform: Implications for Economic Security and Employee Benefits (Washington, DC: Employee Benefit Research Institute, 1997) for multiple perspectives on this topic, including labor, employer, consultant, actuary, and lawyer practitioner.

tion of 2 percent of compensation. Until more is known about which alternative employers will elect, it is difficult to predict whether the absence of nondiscrimination rules (including top-heavy rules) will lead to a proliferation of plans with little participation on the part of lower-income employees.

Discrimination Testing

The creation of a safe harbor for ADP/ACP⁸⁰ testing provision in SBJPA '96 is almost certain to have an impact on the relative desirability of private-sector DC plans. Beginning in 1999, a 401(k) plan sponsor will no longer need to perform annual nondiscrimination tests for elective contributions if one of two safe harbor tests is satisfied. Moreover, ACP testing will not be required for matching contributions (however, it will still be required for employee after-tax contributions) if two provisions are satisfied.⁸¹ This administrative relief may create an opportunity for increased demand for DC plans for those employers who considered adopting 401(k) plans in the past but were opposed to the administrative detail and uncertainty concerning compliance with the ADP/ACP tests. SBJPA '96 also eliminated the so-called combined plan limit for plan years after 1999—another important change. Currently, if an employer sponsors both a DB and a DC plan covering the same participants, it is not allowed the full sec. 415 compensation limit on both plans.⁸² In many cases, this has resulted in plans with primary DB plans and secondary DC plans, limiting the contributions to the secondary plan. The elimination of sec. 415(e) should increase DC contributions among these plans, and may make it feasible for the creation of more secondary plans among employers that found this provision too constricting in the past.

With respect to the public sector, the Taxpayer Relief Act of 1997 (TRA '97) exempts state and local governmental plans from several of the

nondiscrimination tests;⁸³ in the case of sec. 403(b) plans, contributions (other than those made under a salary reduction agreements) are also exempt.⁸⁴

Highly Compensated Employees

A final change brought about by the SBJPA '96 dealt with the definition of a highly compensated employee. This definition is necessary to establish that a qualified plan is nondiscriminatory. The new definition is much more understandable than its precursor in TRA '86. While this has no obvious advantage for DB or DC plans, it is likely that the simplicity will have the largest impact on small employers and, given their historical preferences for DC plans, this may have a marginal increase in the overall demand for DC plans.

Taxpayer Relief Act of 1997

Full-Funding Limits Increase

Effective for plan years beginning after December 31, 1998, the full-funding limit will gradually increase from 150 percent to 170 percent. This will allow sponsors of plans with funding ratios higher than 150 percent to increase (perhaps from zero) the deductible contributions to the plan, at least in the short term. This will increase the amount of funding flexibility for well-funded plans, but not necessarily to the extent that existed prior to the enactment of OBRA '87. Nevertheless, it is likely that increasing the full-funding limits will increase the relative demand for DB plans relative to DC plans, and it will almost certainly result in increased funding for some existing DB plans.

Employer Stock Investment Limitations

Effective for plan years beginning after December 31, 1998, 401(k) plans will be subject to a provision limiting investment in employer stock or real property for employee elective deferrals. There are several exceptions that limit the applicability of this ban. For example, it does not apply to employee stock ownership plans (ESOPs), and it is based on a 10 percent test across *all* qualified plans and a 1 percent of compensation test. However, for

⁸⁰ Actual deferral percentage/actual contribution percentage.

⁸¹ The safe harbors are relatively technical and beyond the scope of this discussion. For complete details see Appendix B of *Employee Benefit Research Institute, Fundamentals of Employee Benefit Programs, Fifth edition (Washington, DC: Employee Benefit Research Institute, 1997)*.

⁸² This is a very technical topic and beyond the scope of this discussion. For complete details see pages 88–89 of *Allen et al. (1997)*.

⁸³ Specifically, they are exempt from the minimum coverage, nondiscrimination, ADP and ACP tests, and minimum participation rules.

⁸⁴ Specifically, they are exempt from minimum coverage rules, nondiscrimination rules (including the ACP test), and the minimum participation rule.

those plans that are impacted by the new limits (e.g., an employer that only sponsors a 401(k) plan and requires elective deferrals to be invested in employer stock), the motivation to continue to sponsor this type of DC plan may be reduced significantly.

IRA Modifications

Effective for tax years beginning after December 31, 1997, IRAs will be expanded in several ways, including the creation of a new back-loaded “Roth IRA.”⁸⁵ Although it is not likely that these changes will impact an employer’s desire to sponsor a DB or a DC plan, there is one modification that may impact the amount of contributions that some employees (typically the non highly compensated employees) are willing to contribute to 401(k) plans. Unlimited penalty-free withdrawals will now be allowed from all IRAs before age 59½ for college education expenses, and penalty-free withdrawals up to \$10,000 will be allowed for first-time home purchase.

■ Conclusion

Despite the many changes in government regulation regarding DB plans and the increased prevalence of DC plans, DB plans are still an important part of both the private and public retirement systems. The data in this discussion show that DB plans are firmly entrenched in large companies and in plans covered by collective bargaining agreements. It is unlikely that many of these plans will be shifted—at least completely—to DC plans.

These historical trends—the stability of the large DB system, the growth of the DC system, and the decline in small DB plans—all lead to the question of what will be the future of DB and DC plans. It seems clear that, for the majority of large employers, large DB plans will remain the basic component of the retirement system for long-service employees, and employers of all sizes will continue to use DC plans for employees with all lengths of tenure.

However, the dynamics of government regulation, individual preferences, and the perfor-

mance of capital markets make it difficult to predict the future roles of DB and DC plans. During the 1980s and the first half of the 1990s, despite increasing regulatory complexity and cost, reduction in marginal tax rates, increased minimum required contributions for underfunded plans, and tighter maximum contribution limits, large private employers continued to offer DB plans. Policy enacted in the future could provide incentives to encourage sponsorship of DB plans and/or DC plans, or it could discourage plan sponsorship.

Historical data on plan and participant trends document the stability of DB plans among large employers, the decline in both DC and DB plans among very small employers, and the increased prevalence of DC plans as primary and supplemental plans. Employers will continue to sponsor both DB plans and DC plans because of the unique benefits offered by each plan type. As the composition of the work force becomes more diverse, employers will likely respond by continuing to offer both DB and DC plans, as well as hybrid plans, in order to appeal to a broader range of employees.

Although the relative importance of DB and DC plans in the future depends on too many unpredictable factors to permit a full evaluation of the relative growth of these plans, this analysis has taken a first step in attempting to determine the level of contributions committed to both types of plans. The results suggest that, at least for single-employer private retirement plans with at least 100 participants, employers’ contributions to DC plans have increased relative to DB plans significantly more than could be explained by employment shifts since 1985. After controlling for the impact of firm size, unionization, and industry composition, the percentage of total contributions devoted to DC plans increased 11 percentage points between 1985 and 1993. While this is an aggregate measure that does not control for the differential impact of various governmental constraints on plan sponsors (e.g., the full-funding limit modifications in 1987), it does provide insight into the degree to which retirement benefits are being financed in increasing measure through the DC approach. A significant portion of this movement may be attributed to DC plans with the 401(k) feature. In fact, after controlling for the features mentioned above, aggregate contributions to these plans increased 15 percentage points between 1985 and

⁸⁵ For details on all of the IRA modifications, see Paul Yakoboski, “IRAs: It’s a Whole New Ballgame,” EBRI Notes, no. 9 (Employee Benefit Research Institute, September 1997): 1–4.

1993. It is clear from the data in this discussion that some of this gain came at the expense of DC plans without 401(k) features; however, most of it was a direct substitute for DB plans.

In sum, the pension system is strong and continues to grow. More workers are earning vested rights in plans than at any other time in history. The aging of the population suggests that both employers and employees will continue to find value in employment-based DB and DC plans.

■ Bibliography

- Allen, Everett, Joseph J. Melone, Jerry S. Rosenbloom, and Jack L. VanDerhei. *Pension Planning: Pension, Profit-Sharing, and Other Deferred Compensation Plans*. Eighth edition. New York, NY: Irwin/McGraw-Hill, 1997.
- American Academy of Actuaries. *Preliminary Report: Results of the American Academy of Actuaries Survey of Defined Benefit Plan Terminations*. Washington, DC: American Academy of Actuaries, 1992.
- Andrews, Emily S. *Pension Policy and Small Employers: At What Price Coverage?* Washington, DC: Employee Benefit Research Institute, 1989.
- _____. "The Growth and Distribution of 401(K) Plans." In J. A. Turner and D. J. Beller, eds., *Trends in Pensions*. Washington, DC: U. S. Department of Labor, 1992.
- Bodie, Zvi. "Pensions As Retirement Income Insurance." *Journal of Economic Literature* (March 1990): 28-49.
- Campbell, Sharyn. "Hybrid Retirement Plans: The Retirement Income System Continues to Evolve." *EBRI Issue Brief* no. 171 (Employee Benefit Research Institute, March 1996).
- Clark, Robert, and Ann McDermed. *The Choice of Pension Plans in a Changing Environment*. Washington, DC: American Enterprise Institute, 1990.
- Clark, Robert L., Steven G. Allen, and Daniel A. Sumner. *Inflation and Pension Benefits*. Final Report for the Department of Labor Contract No. J-9-P-1-0074. Washington, DC: U.S. Department of Labor, 1983.
- Dent, Kevin, and David Sloss. "The Global Outlook for Defined Contribution Versus Defined Benefit Pension Plans." *Benefits Quarterly* (First Quarter, 1996): 23-28.
- Dunn, Richard. "Encouraging Saving as a Business Tool." In Dallas L. Salisbury, *Retirement Prospects in a Defined Contribution World*. Washington, DC: Employee Benefit Research Institute, forthcoming.
- Eitelberg, Cathie G. The Segal Company, Advanced Employee Retirement Administration Training. Mimeograph Chicago, IL: Government Finance Officers Association, 1996.
- _____. "DB versus DC." 1995 Conference Wrapup, *Managing for the Next Century*, Las Vegas, NV, July 28-August 2, 1995.
- _____. *Employee Benefit Plan Review*. "Pension Consultant Discusses Trends in Pension Plan Market, Effects of Laws and Regulations." *Employee Benefit Plan Review* (September 1995): 12-14.
- Employee Benefit Research Institute. *Fundamentals of Employee Benefit Programs*. Washington, DC: Employee Benefit Research Institute, 1997.
- ERISA Industry Group. *Getting the Job Done: A White Paper on Emerging Pension Issues*. Washington, DC: The ERISA Industry Committee, 1996.
- Friedman, Benjamin M., and Mark Warshawsky. "Annuity Prices and Saving Behavior in the United States." In Zvi Bodie, John Shoven, and David Wise, eds., *Pensions in the US Economy*. Chicago, IL: University of Chicago Press, 1988.
- Friend, Ed. "Introduction to Power Point Presentation." In Dallas Salisbury, ed., *Retirement Prospects in a Defined Contribution World*. Washington, DC: Employee Benefit Research Institute, forthcoming.
- Fronstin, Paul. "Employee Benefits, Retirement Patterns, and Implications for Increased Work Life." *EBRI Issue Brief* no. 184 (Employee Benefit Research Institute, April 1997).
- Gale, William. "Public Poles and Private Pension Contributions." *Journal of Money Credit and Banking* (August 1994): 710-732.
- Gates, Gary I. *Pension Portability for State and Local Governments*. New York, NY: Milbank Memorial Fund, 1996.
- Gustman, A.L., and T.L. Steinmeier. "The Stampede Toward Defined Contribution Pension Plans: Fact or Fiction?" *Industrial Relations* (Spring 1992): 361-369.
- Healy, David H. "Defined Benefit Plans: Under Attack Outside the United States." In this

- volume.
- Hewitt Associates. *Early Retirement Windows, Lump Sum Options, and Postretirement Increases in Pension Plans*. Lincolnshire, IL: Hewitt Associates, 1992.
- Hustead Edwin C. *Trends in Retirement Income Plan Administrative Expenses*. Pension Research Council Working Paper 96-13. Philadelphia, PA: University of Pennsylvania, 1996.
- Ippolito, Richard A. *Pensions, Economics and Public Policy* (for the Pension Research Council). Homewood, IL: Dow Jones-Irwin, 1986.
- _____. "Toward Explaining the Growth of Defined Contribution Plans." *Industrial Relations* (January 1995): 1–20.
- _____. *Pensions and Employee Performance* (Forthcoming).
- Kelly, Peter M. "Downsizing and Other Related Workforce Trends: An Employee Benefits Perspective." *Benefits Quarterly* (Third Quarter 1996): 8–42.
- Kruse, D. L. "Pension Substitution in the 1980s: Why the Shift Toward Defined Contribution Plans?" *Industrial Relations* (April 1995): 218–241.
- LaBombarde, A. Richard. "Nondiscrimination and the PIA Offset Plan." *Benefits Quarterly* (Third Quarter 1991): 31–37.
- McGinn, Daniel F. "Changing Role of Defined Benefit and Defined Contribution Pension Plans." *Record of the Society of Actuaries*. Vol. 10, No. 3 (1984): 1379–1401.
- Mehle, Roger W. Summary Statement by the Honorable Roger W. Mehle, Executive Director, Federal Retirement Thrift Investment Board, Before the Subcommittee on Securities, Senate Committee on Banking, Housing, and Urban Affairs, April 30, 1997.
- Merck, Carolyn L. *Federal Retirement Systems: Background and Design Concepts*. Washington, DC: Congressional Research Service, 1994.
- Merton, Robert C. "On Consumption-Indexed Public Pension Plans." In Zvi Bodie and John B. Shoven, *Financial Aspects of the U.S. Pension System*. Chicago, IL: University of Chicago Press, 1983.
- Merton, Robert C., Zvi Bodie, and Alan Marcus. "Pension Plan Integration as Insurance Against Social Security Risk." In Zvi Bodie, John Shoven, and David Wise, eds., *Issues In Pension Economics*. Chicago, IL: University of Chicago Press, 1987.
- Miller, Girard. "Why Government Plans Are Adding Defined Contribution Plans to Their Retirement Programs." Presented at conference on Adapting a Defined Contribution Plan to Your Public Retirement System, Institute for International Research, San Francisco, CA: May 29–30, 1997.
- Milne, Deborah, Jack VanDerhei, and Paul Yakoboski. "Can We Save Enough to Retire? Participant Education in Defined Contribution Plans." *EBRI Issue Brief* no. 160. (Employee Benefit Research Institute, April 1995).
- _____. "Participant Education: Actions and Outcomes." *EBRI Issue Brief* no. 169 (Employee Benefit Research Institute, January 1996).
- Munnell, Alicia, and Nicole Ernsberger. "Pension Contributions and the Stock Market." *New England Economic Review* (November/December 1987): 3–21.
- Olsen, Kelly. "457 Plans Continue to Grow." *EBRI Notes* no. 10 (Employee Benefit Research Institute, October 1996): 1–4.
- Olsen, Kelly, Jack L. VanDerhei, and Dallas L. Salisbury. "A Framework for Analyzing and Comparing Social Security Policies." *EBRI Issue Brief* no. 183 (Employee Benefit Research Institute, March 1997).
- Papke, L. E., M. A. Petersen, and J. M. Poterba. *Do 401(K) Plans Replace Other Employer Provided Pensions?* NBER Working Paper No. 4501. Cambridge, MA: National Bureau of Economic Research, 1993.
- Paul, Robert D. "Innovative Pension Proposal Shares Cost with Employees; Builds Retirement Security." *ACA News* (December 1995): 3–5.
- Pension Benefit Guaranty Corporation. *Pension Insurance Data Book 1996: PBGC Single-Employer Program*. Washington, DC: Pension Benefit Guaranty Corporation, 1997.
- Piacentini, Joseph S. "Pension Coverage and Benefit Entitlement: New Findings From 1988." *EBRI Issue Brief* no. 94 (Employee Benefit Research Institute, September 1989).
- Salisbury, Dallas L. "The Costs and Benefits of Pension Tax Expenditures." In Dallas L. Salisbury and Nora Super, eds., *Pension Funding & Taxation*. Washington, DC: Employee Benefit Research Institute, 1994.
- _____. "The Future Role of Pensions in the

Retirement Prospects in a Defined Contribution World

- National Retirement System." Comments presented at the General Accounting Office conference, Retirement Income Security in the 21st Century. Washington, DC, July 15, 1997.
- _____. "The Regulatory Environment of Employee Benefit Plans." In Jerry S. Rosenbloom, ed., *The Handbook on Employee Benefits*. Chicago, IL: Irwin, 1996.
- _____. *Trends in Pension Benefit Management: DB, DC, or Hybrid?* Washington, DC: Employee Benefit Research Institute, 1997.
- Salisbury, Dallas L., ed. *Tax Reform: Implications for Economic Security and Employee Benefits*. Washington, DC: Employee Benefit Research Institute, 1997.
- Salisbury, Dallas L., and Nora Super Jones, eds., *Pension Funding & Taxation*. Washington, DC: Employee Benefit Research Institute, 1994.
- Shutan, Bruce. "Experts Spar over DB Plan Miscalculations." *Employee Benefit News* (August 1997).
- Society for Human Resource Management. *1996 Tax Reform Survey*. Alexandria, VA: Society for Human Resource Management, 1996.
- Steinberg, Allen T., and David B. Graffagna, "Defined Benefit Plans: A New Paradigm." *Journal of Pension Benefits* (1993): 8-14.
- Stella, David, and Karen Steffen. "The Case for Alternative and Hybrid Plan Designs." Presented at Adapting a Defined Contribution Plan to Your Public Retirement System, Institute for International Research. San Francisco, CA: May 29 and 30, 1997.
- U.S. Department of Labor. Bureau of Labor Statistics. *Employee Benefits in Medium and Large Establishments, 1993*. Washington, DC: U.S. Department of Labor, 1994.
- U.S. Department of Labor. Pension and Welfare Benefits Administration. Office of Research and Economic Analysis. *Private Pension Plan Bulletin: Abstract of 1993 Form 5500 Annual Reports* (Winter 1997).
- U.S. General Accounting Office. *Private Pensions: Most Employers that Offer Pensions Use Defined Contribution Plans*. Washington, DC: U.S. General Accounting Office, 1996.
- VanDerhei, Jack. L., and Jennifer Wang. "The Relative Importance of Defined Contribution Plans in the Provision of Retirement Income: A Re-Examination of the Defined Benefit/Defined Contribution Trend Analysis Literature." Presentation of the American Risk and Insurance Association annual meeting, San Diego, CA, August 1997.
- Warshawsky, Mark J. "Determinants of Pension Plan Formations and Terminations." *Benefits Quarterly* (Fourth Quarter 1995): 71-80.
- Williamson, Christine. "Profit Sharing, 401(k) Plans Are Tops with Employees." *Pensions & Investments* (November 13, 1995): 9.
- Wisniewski, Stan. *Characteristics of 100 Large Public Pension Plans with Special Emphasis on Plans Covering Education Employees*. Washington, DC: National Education Association, 1996.
- Yakoboski, Paul J. "Employment-Based Retirement Income Benefits, Analysis of the April 1993 Current Population Survey." *EBRI Issue Brief* no. 153 (Employee Benefit Research Institute, September 1994).
- _____. "Lump-Sum Distributions: Fulfilling the Portability Promise or Eroding Retirement Security?" *EBRI Issue Brief* no.178 (Employee Benefit Research Institute, October 1996).
- _____. "The Reality of Retirement Today: Lessons in Planning for Tomorrow." *EBRI Issue Brief* no. 181 (Employee Benefit Research Institute, January 1997).
- _____. "Large Plan Lump-Sums: Rollovers and Cashouts." *EBRI Issue Brief* no. 184 (Employee Benefit Research Institute, April 1997a).
- _____. 1997 Retirement Confidence Survey. Washington, DC: Employee Benefit Research Institute, forthcoming.
- Yakoboski, Paul, and Bill Pierron. "IRAs: It's Whole New Ballgame." *EBRI Notes* no. 9 (Employee Benefit Research Institute, September 1997b): 1-4.
- Zorn, Paul. *1991, 1993 and 1995 Survey of State and Local Government Employee Retirement Systems*. Chicago, IL: Government Finance Officers Association: 1991, 1994, and 1996.

7

Changing Roles for Providers and Participants

by Donald H. Sauvigné

■ Introduction

Last week, after several hours flying to Dallas, the plane began its descent. Wheels went down. Flaps went up. We literally were 300 feet off the runway, at the point where you can see the runway, and with that, acceleration on the jets, and pull back on the stick, and up we went. Not a good sign.

We circled the field and when we came back, the pilot came on and said, “Sorry for that. There was another plane coming across our pattern, so we had to pull out.” The metaphor, of course, in relation to defined contribution investments, is that when individuals appear to be ready to land and retire, they may not be able to. And they will keep on working. So I think defined benefit plans have a place to stay for a long time to come.

■ Employer Responsibility

As the U.S. economy and the work force evolve, and particularly from the perspective of a large employer, the question is, what is the evolving role? From the employer’s role, is it a recommitment to that which existed in the 1950s through the 1970s? Is the employer making a recommitment to a relationship with the employee? I believe we are, but the commitment is something different in that it is a rebalanced approach to a total approach to the delivery of the commitment.

On the other hand, the most material change with which we are dealing is the trend to place responsibility on the part of the participant, or the employee. To that extent, as we look at the world of defined contribution and retiring with savings in a world of defined contribution, if the pattern of responsibility will be so dramatically different—as it probably must be—then we have a rather serious responsibility, as employers, for education.

Suppose, for example, that everything we cover in this volume was read by 60,000 of our

average employees. I would suggest that if they read all of the good information, they would retreat rather rapidly from any interest whatsoever in dealing in a defined contribution world. Why? We would have confused them to such a degree that they would literally retreat from being a participant.

So when we ask, “What is education?” and “What is awareness?”, we have to understand what we are trying to deliver. Are we talking about the role of the individual? The role of the government? The contributions of the employer? The investment returns in a defined contribution world? The rate of return? The absolute amount of dollars? The replacement ratio at age 55 or age 65? What is it that we are trying to communicate? It is very important, to use that famous phrase, to keep it simple, as well as understand the diversity of the work force.

■ Changes at IBM

At IBM, we have been fortunate. I would put us in the category of having good results and good education. Our scores are not excellent, nor are they just adequate, but good. Even so, we have a long way to go. We have a defined benefit plan and a defined contribution plan. If we assume our hybrid defined benefit plan is the one that is going to be used in the future, and we live in a hybrid world with a hybrid work force, I think it works well. Even after a 30-year career, that plan generates about a 40 percent replacement of income ratio at age 60. And that is not going to make it. And if we live in a world of middle- to higher-income employee populations, where Social Security is going to replace 15 percent to 20 percent, there is a big gap. And that is the defined contribution world.

So what happened in our world of defined contribution through aggressive education from 1991 to 1996? With good education, we turned our

accumulated asset allocation from an equity representation of about 40 percent in 1991 to equity representation of 67 percent today. Of new contributions on a pay-period basis, 71 percent of new contribution dollars are going to equity. However, if you look closely at 200,000 accounts, of which 110,000 or so are active employees and the rest are retirees who have retained their accounts, you might become somewhat alarmed.

The aggregate, again, can be misleading. If you look at some of the behaviors by age or income group, you find that 20 percent of the population has nothing in equities; it is all in fixed income investments. One may jump to the conclusion that 20 percent without equity investments is terrible, but you need to find out who these people are to develop targeted communications and properly respond to the people in that situation.

As we talk about education and we set horizons or awareness of what we want in terms of expectations from our work force, one expectation we have is to enrich people with information and enrich them with knowledge. But once that is done, we need to decide if they really will have the ability to translate this education into effective action and reaction on a continual basis.

■ Conclusion

I do not think we, as a nation, are running away from this new defined responsibility. The Business Roundtable's position on Social Security reform clearly stated that it must be preserved; it ought to be funded; and that large employers probably represent a responsibility of 30 percent to 40 percent of income replacement outside of Social Security. That does not seem like a retreat from an employer responsibility, and we need to keep that in focus.

Lastly, we need to focus on the role of the plan sponsor. Is it to maximize the output from the participants with plans that they perceive are better; or should the role of the plan sponsor be to maximize the results of investment on replacement income? While I do not have an answer, I believe we need to think about questions like these as we evolve our plans and our roles in support of employees.

8

Defined Benefit Plans: Under Attack Outside the United States

by David H. Healy

■ Introduction

From the perspective of our clients—large employers—defined benefit plans around the world are being threatened. There are three reasons: oppressive legislation and regulation of defined benefit plans; Social Security reform, real or imagined, in various countries; and employer perception of their changing employee profile (e.g., shorter careers, diverse needs).

■ The Forces Working Against Defined Benefit Plans

Onerous legislation and regulation principally are driven by dissimilar forces trying to both enhance the security of pension promises and raise tax revenue. The imposition of benefit limits in many of the plans around the world is exemplified in the Australian example. Currently in Australia, part of the driving force behind defined contribution plans is that defined benefit plans, the predominant existing plan, cannot cover any compensation above U.S. \$50,000. That eliminates management of the large employers from effective participation.

Another aspect of regulation that has driven some large employers over the edge is the powers invested in trustees. Employers no longer believe they can control the investments in their defined benefit pensions, formerly one of the major attractions of these plans. In many of the legal environments around the world, the trustees have gained the upper hand; often independent trustees or employee trustees must be at least 50 percent of the group. So employers have lost one of the great advantages they perceived in defined benefit plans, the ability to control the plan and investments.

In other areas of regulation related to asset management, employers also have been particularly frustrated. The European Union has promised

to facilitate commingling assets across Europe for many years. The directives have been postponed; nothing is happening. Japan has been promising to lift their 5332 rule for many years. Now, it is postponed again to the turn of the century. The result is that employers are saying, “If we can’t manage our assets efficiently, we’re not going to invest in defined benefit plans.”

From the perspective of Social Security reform, newspapers around the world are full of articles on increasing contributions, cutbacks in funding levels, raising retirement ages, and privatization. By and large, privatization means defined contribution accumulation-type vehicles, which has employers worrying about their defined benefit plans. They no longer dare to integrate them with the defined benefit Social Security, and they have difficulty communicating them properly to employees.

■ The Benefits Effectiveness Index: Surprising Results

In terms of employers’ perception of their changing work force, and employee perceptions, here are the results from a recent survey we did across three countries. This survey, the Benefits Effectiveness Index, was a benchmark survey in the United States, the United Kingdom, and Canada. The purpose was to establish a benchmark against which we can compare future changes in perception both of management and employees of large employers.

In the three countries, standard questionnaires were used to interview approximately 2,500 employees in pension plans. In all cases, they were employees of large employers who had primarily defined benefit pension plans. We interviewed 500 management people of the same large companies to get their perceptions. Two common themes

arose in all three countries. One is the somewhat paradoxical opinion that benefits are not the deciding factor in attracting and retaining employees—but benefits are required to be “in the game.” The second common theme was that the perceived value of the retirement benefits is out of sync with their costs. That was common across all three countries from a management point of view. Management also agreed that the future would see more links to performance and more flexibility in the retirement benefits.

The survey also produced a few variations, such as management’s views on motivation. Interestingly, many more U.K. managers perceive that pension plans motivate employees. Of U.K. managers surveyed, 41 percent thought that the retirement plans motivated employees. Only 30 percent in Canada and 17 percent in the United States agreed with that view. That communicates two things. First, that the vast majority of managers in all three countries do not believe that retirement plans motivate employees. Second, the United Kingdom ranks well above the United States in positive perception of the motivating power of retirement plans.

On the issue of retention, there is an interesting comparison between employee perception and management perception. Employees perceive retirement plans as likely to retain them in their current job. This was strongest in the United States, where 44 percent said it was a factor. In Canada, 31 percent agreed, and in the United Kingdom, 24 percent agreed. The U.K. number is particularly surprising because conventional wisdom was that U.K. employees value their retirement plan very highly in their existing companies. The management views track the employees’ views on retention across the countries.

Another surprising result is that employees appear to be quite happy with the status quo. In

the United Kingdom, 80 percent of employees said that they are happy with their current retirement arrangements. That number was 67 percent in Canada and 52 percent in the United States. Yet this contrasts with employees’ beliefs concerning whether they will have adequate retirement income. While 80 percent in the United Kingdom said they are satisfied with their arrangements, only 51 percent said they believed they would have adequate retirement income. Only 40 percent in Canada and 33 percent in the United States thought they would have adequate retirement income. So there is a dichotomy between their satisfaction with their retirement plans and the expectations of sufficient retirement income.

■ Conclusion

In closing, it is important to note a fundamental difference between the United States and foreign defined benefit plans—the lack of portability in U.S. plans. Hence, in many cases overseas, the defined benefit plans have overcome one of the major shortcomings of similar plans in the United States. Of course, this enhancement comes with additional costs. However, it may result in more “staying power” for defined benefit plans, when confronted with the “defined contribution solution.”

Portability tends to be built into defined benefit plans overseas, either through indexing of terminated vesteds or in various other forms. For example, in most of the countries in Europe, an employee who has had seven to nine jobs at the end of his working life, to which Dallas Salisbury¹ referred, gets a fairly large percentage of the intended private pension from those seven or nine jobs because of the portability features.

¹ See Dallas L. Salisbury, “Retirement Income in America: Where Are We Now and Where Are We Going,” in this volume.

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Retirement Programs in Transition Worldwide: Non-U.S. Defined Contribution Experience

by Scott Dingwell

■ Overview and Context

This paper provides a general overview of defined contribution (DC) pension systems in major world markets. Its scope is not intended to provide an in-depth review of each country it covers. It instead provides a framework for understanding how other countries are addressing the challenges of providing retirement income in aging populations, and the shift of this burden to individuals. The primary focus is on company (as opposed to government) sponsored pension systems.

Employment-based pension plans—both defined benefit (DB) and defined contribution (DC)—are common in developed economies. Defined contribution plans have until relatively recently taken the form of profit-sharing or supplemental savings plans. These plans were considered supplementary to company and government pensions with assured payouts. The plans were part of an individual's personal savings—as opposed to the principal source of an individual's overall retirement income.

Today, retirement income themes worldwide include several important factors:

- Each country's baby-boom generation will place an increasing strain on existing pay-as-you-go systems—and future generations of workers—as this group moves into retirement. According to the World Bank, 31 percent of the population in OECD countries is expected to be older than age 60 in 2030; a projected increase of 65 percent over 1990 levels.
- The costs and risks of traditional DB pension plans to their sponsors, compared with DC plans, is leading to their decline in many markets.
- Companies and governments are recognizing their inability to remain the primary source of funding for the retirement of an aging population.

- Portability of pensions is desired by a changing work force that no longer expects lifetime employment with a single company.
- While some companies remain somewhat paternalistic, responsibility for planning and saving for retirement is shifting to the individual.
- Companies are concerned about individuals' ability to manage this new responsibility, and are attempting to assist employees through education and investment structures.

Many countries are in various stages of adapting current retirement systems to increase individual responsibility for planning and investing for retirement. Many are shifting to some form of fully funded, employment-based, DC system.

■ Global Experiences

Outside the United States, experience with defined contribution plan structures is very recent. The following provides an overview of three different approaches, as well as a brief description of emerging DC systems.

■ Canada

Canadian companies provide pension provisions for their employees on a voluntary basis. The Canadian pension market most closely resembles the U.S. market, with DC plans that are very similar to 401(k) plans.

It is estimated that approximately 55 percent of all registered pension plans in Canada are DC plans. However, when one looks at the actual number of individuals covered by each type, 89 percent (4.6 million individuals) are covered by a DB plan, while only 10 percent (518 thousand individuals) are covered by a DC plan.

There are two forms of company-sponsored DC plans: money purchase plan and the group

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Registered Retirement Savings Plan (RRSP). While both plans are of the DC type, there are differences in structure and regulation. Money purchase plans are pools of pension capital to which plan members and employers contribute during the members' employment. At retirement, a payout is made based on the amount in the pool and the fund's current actuarial obligations.

Group RRSPs, on the other hand, are merely individual tax-deferred accounts set up by companies for their employees. Companies provide investment information but do not necessarily contribute to the account. Some employers are involved in arranging the investment options for employees; others rely on the employees to invest on their own or make arrangements with a full-service broker. Group RRSPs are not subject to the same regulations as money purchase plans.

Investment choice and education are outstanding issues for the Canadian DC plan sponsor. Regulations similar to 404 (c) in the United States do not exist, yet plan sponsors have recognized a need to provide greater choice and education services to employees. A recent survey by William M. Mercer found that the number one concern among Canadian plan sponsors was the need to provide guidance to employees regarding their investment decisions. Most employers who offer DC plans insist that employees are responsible for how their assets are invested; some employers plan to take action to assist employees in advance of government regulations.

Most plans offer at least four options to their employees: Canadian equities, balanced funds, investment certificates, and guaranteed investment contracts (GICs) are the most widely used options. To date, money purchase plan members have preferred balanced investment options (54 percent of assets). Members of group RRSPs have invested more heavily in GICs (51 percent of assets).

Tracking the conversion rates of DB plans to DC plans has been challenging for the Canadian government, because many companies choose a group RRSP structure—which the pension commission does not regulate or track. Plan sponsors converting existing DB plans to group RRSPs drop off the government tracking system. When new group RRSPs are created, they never appear on the Pension Commission's system.

A growing number of companies are expected

to switch to DC plans in the future due to increasing costs associated with the administration of DB plans. A single regulatory structure does not exist in Canada; therefore, companies can be regulated by up to 10 different rule structures, depending on the number of provinces in which they operate. Cost control is the primary motive of most plans making a change to the DC plan structure.

In contrast to the United States, some Canadian companies have closed the company DB plan to new employees, providing only the new DC plan as an option. Existing DB members are permitted to switch to the new plan and generally receive some form of credit to their account. The overall cost of administering the new plan may only decrease marginally due to the need for education programs. However, employers feel more in control of current and future costs due to decreased regulation and the lack of specified member benefits on retirement.

Based on the most recent participation statistics for DB and money purchase plans, membership in DC plans has increased 1.6 percent since 1990; membership in DB plans decreased 2.1 percent. Assets in DC plans have doubled between 1990 and 1996. Assets in DC plans are estimated to be C\$40 billion, with nearly one-half of the assets in group RRSPs.

■ United Kingdom

The United Kingdom has more experience with DC plans than elsewhere in Europe. Small companies have used money purchase plans with young workers, or as top-up pension plans. Since 1988, all company-sponsored defined benefit plans—called final salary occupational schemes in the United Kingdom—are required to provide members the ability to make additional contributions up to 15 percent of pay.

In the past few years, more companies have chosen to move toward money purchase plans as the preferred pension plan structure. An estimated 10 percent of U.K. pensions are DC plans; 6 percent of companies have only a DC plan. Recent statistics revealed that 3 percent of plans moved to a DC plan in 1996—mostly large banks and pharmaceutical companies.

A more rapid shift to DC style plans is

anticipated over the next decade, as the costs associated with compliance to regulatory changes for DB plans that go into effect in 1997. Experts believe that 10 years from now, nearly 25 percent of companies will rely solely on a DC plan; 50 percent of companies are expected to use a combination of DB and DC plans. U.K. policy experts have expressed some concern over the shift to DC plans, due to recent statistics showing that company contributions to DC plans are one-half as large as contributions to DB plans—8.2 percent versus 15.4 percent of payroll. As in Canada, DC plans are predominantly created for new employees, and participants in the DB plan are permitted to move to the new plan.

The U.K. implementation of DC plan structures is different from the U.S. approach in that many companies are choosing to limit individual investment choice by offering lifestyle fund options that automatically rebalance as individuals approach retirement. These funds are often the default option for plan members. According to a survey of 1996 activity, 76 percent of companies selected these lifestyle funds; 21 percent balanced funds; and 3 percent self-directed options for their DC plans. This is in contrast to 1993, when 45 percent of companies chose self-directed options, and 3 percent selected lifestyle options.

U.K. companies tend to be more paternalistic than their U.S. counterparts, and want to ensure that participant assets are appropriately allocated to provide adequate retirement income. A recent survey found that 53 percent of companies would top-up benefits—if the money was available—in the event of poor investment returns. U.K. companies are also implementing education programs to assist their employees with the increased responsibility of managing their DC accounts.

The U.K. approach toward pension provision can be considered a hybrid of traditional voluntary corporate-sponsored pensions and a compulsory privatized system. In addition to company DB or DC pensions, there is a compulsory pension system called the State Earnings Related Pension Scheme (SERPS). This is above and beyond the basic old age government pension system. SERPS is funded with contributions from employer national insurance contributions, and employee payroll contributions amounting to 4.8 percent of pay each. (Both companies and individuals are eligible to contract

out of the SERPS system under specific provisions).

Companies that contract out of SERPS contribute the premium amount directly to the company pension plan. If the employer-sponsored plan is a DB plan, companies must insure a benefit at least equal to the benefit (the Guaranteed Minimum Pension) the employee would have received under the SERPS. If the employer-sponsored scheme is a DC plan, in addition to an employer contribution (at least equal to the rebate received), the employee would receive the premium rebate as a contribution to his or her individual money purchase account.

Recently, the current U.K. government proposed to further privatize the state pension system. There is no consensus regarding whether the proposed reforms will be adopted in the near term.

■ Australia

Australian pension plans—called superannuation schemes—have existed for decades; however, availability was limited to civil servants, professionals, and the executives of major corporations. Superannuation operates similar to traditional DB plans. Employers and employees make regular contributions to the retirement fund, and after a lifetime of service an individual retired with a lump-sum based on a multiple of annual salary. Individuals without access to a superannuation program relied on individual savings and the government-provided old age pension for retirement income.

During the 1980s, Australian labor unions successfully negotiated the establishment of mandatory retirement contributions to superannuation plans on the behalf of their members. This was in the form of productivity bonuses and offset against increases in individuals' take-home pay. Subsequently, the members of the Labor governments have approved legislative changes that created today's compulsory DC retirement savings system.

Today, superannuation plans are set-up as trusts, and are operated by the trustee. Employers contribute 6 percent of pay to each employee's account; this amount is scheduled to increase to 9 percent of pay by 2002. Starting this year, employees make a mandatory contribution of

1 percent of salary; this amount will increase annually to 3 percent by 1999. The Australian government is scheduled to begin contributing an additional 3 percent of salary for low wage earners in 1999. This private form of savings is very important to Australians because the government-provided old age pension is provided to retirees based on a means test.

Total assets in superannuation plans are estimated at A\$248 billion. The majority of plans do not provide for member choice; assets are generally invested in balanced funds. However, the issue of increasing member choice is a topic of much discussion. With the introduction of compulsory employee contributions, there is a stronger sense of ownership among individuals. As account balances grow in value, it is anticipated that individuals will want more control over where the assets are invested. Companies are attempting to determine the most prudent means of implementing a variety of options for members, as well as educational programs in support of a shift to individual control.

■ Emerging Defined Contribution Structures

Several other countries have recently approved or are in the process of drafting legislation that would provide for the creation of funded pension plans with structures similar to defined contribution plans.

- Several Latin American countries—Argentina, Bolivia, Columbia, Peru, and Mexico—have followed the Chilean model by creating similar

privatized pension systems.

- The Italian government is encouraging the creation of private industry pension plans by allowing individuals to contribute 10 percent of salary on a pre-tax basis.
- Legislation in France provides for the creation of DC plans by companies and industry wide organizations; 69 percent of large companies surveyed indicated they would launch the new plans in the next three years.
- Legislation in Germany provides for the creation of a private pension system that would encourage companies to set up DC plans in place of the current book-reserve defined benefit system.

■ Conclusions

The issue of how to provide adequate levels of retirement income to a growing number of elderly individuals is common to many countries. The way in which each country approaches implementing a solution has been and will continue to be uniquely customized to reflect each country's culture and history.

It is apparent that responsibility for retirement savings is shifting to private enterprise—and ultimately to the individual. As managers of corporations, we face similar challenges in ensuring a smooth transition, by adequately preparing individuals to take control of their financial future. There appear to be similarities among the solutions and we can learn from each other's experience, incorporating best practices where feasible, to better serve our constituents.

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Dissent and Transition: Consequences

by Edward H. Friend

■ Introduction

These are a few major issues that deserve particular attention at this time.

The first major issue is tax policy. I would ask where we would be today if employee contributions to defined benefit (DB) plans had been made deductible at the time 401(k) plan employee contribution deductions were “discovered” and if employee contributions to defined contribution (DC) plans would be deductible only if preretirement lump-sum distributions were prohibited.

I think most would agree that the growth of DB plans would have continued in favor and that DC plans would not have become popularized as they are today.

The second major issue is asset allocation. I would opine that asset allocation by individuals to DC plans will eventually settle down around the lifestyle asset allocation concept. Such an approach is unnecessary for DB pension plans, whose assets are invested by the employer, with a long view. I think most would agree that (on average) a significant difference in investment return exists as between the returns on the DB asset allocated pension funds and the DC asset allocated results on a set of DC funds, particularly when additional individual account administrative expense is included as a consideration.

As a matter of fact, I would conjecture that the very argument being made for DC plans, namely portability, would be fundable under a DB plan with the extra return. Indexed vested pensions for those who remain for 5 or 10 years of service would likely be provided with the excess return. It would be interesting to determine the likely break-even vesting point.

Based on the foregoing, I would argue that the nation and Congress need to look hard at changing direction. I recognize this is very late because we have gone down the DC path for the

last 5 or 10 years, and we are heavily committed to it. But the points that have been made above and in some of the material that is included in our PowerPoint presentation make it clear that DB conceptualization is far superior to DC.

A third major but unrelated issue is the observation that small employers reject defined benefit plans because of concern over the commitment they cannot afford to make. A “stop and start” checkoff system for supplemental Social Security benefits becomes the solution here. Moreover, this solution helps the long-range solvency of Social Security.

I urge immediate action.

■ DB or DC?

Only 3 percent of United Kingdom employers—mostly in banking and pharmaceutical sectors—switched to a DC plan last year, contrary to popular perception of a wholesale shift, according to the National Association of Pension Funds’ (NAPF) annual survey.

In contrast, 1 percent of schemes (five employers) replaced money purchase plans with DB plans. “The final-salary scheme is not dead,” said NAPF Director General Ann Robinson.¹

The evolution from retirement plans to financial security plans (translation: “the evolution from DB pension plans to DC savings plans”) has been driven mostly by cost and competition considerations.

DB plans sponsored by Corporate America have been mostly noncontributory, whereas DC plan supplements and stand-alone DC plans involve employee contributions; thus DC plans provide the opportunity for cost shifting.

¹ See Ann Robinson, *Pensions & Investments Daily*, 3 March 1997.

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State and local DB systems have been mostly contributory; hence, evolution to DC is not occurring in these systems (despite heavy marketing pressure) because cost shifting is not a consideration and employee contribution tax sheltering is already in place.

Can (or should) Corporate America find its way back ... using the contributory DB model ... or is it too late?

The contributory DB model delivers more retirement dollars, spreading the risk and enabling asset allocation to deliver significantly higher returns. There is no need for “life-cycle” investing. Moreover, because in-service distributions of employee contributions are not available, preretirement spending of account balances is avoided.

But DC design permits portability, you say!

Yes, but at what price? Lump-sum spending? Is it not virtually impossible to deny access? Are we not confronted with the consequences of conservative or “unlucky” investing?

Conceivably, extra return on contributory DB assets could finance indexed pensions for vested terminations ... a much preferred type of portability.

■ Have We Asked the “Killer” Questions?

- If we do not disburse heavy sums to early vested job leavers, and

if we capture the difference between the investment returns flowing from traditional DB asset allocation and the investment return flowing from typical unenlightened DC asset allocation ...

will the difference in available dollars enable the awarding of *indexed pensions* ... perhaps phasing-in for vested terminations with 10 years of service and reaching full flower for vested terminations with, say, 15 years of service?

- Suppose we *also* take into account those dollars that are spent before retirement and not used to provide retirement benefits?

- Do voluntary matching employee contribution arrangements really work? Or must we go to mandatory contribution programming to assure proper participation by the employee?
- Can we (should we) manage the transition back?
- If the contributory DB design is to be preferred, why not?
- If the current trend is more popular but not as wise, do we have an obligation to encourage a reversal?
- Could we not persuade Congress to make employee contributions to DB plans deductible as an inducement?

■ Let’s Look at Some Fundamental Questions

- Is the issue one of equitable deferred compensation or providing for retirement?
- Does society have the funds to “pay twice” ... once on the way to retirement and then again when its retirees need welfare support because retirement funds are gone?

■ Related Questions

- Where do “hybrids” fit into these observations? If DC plans cannot be justified, can “half” DC plans stand up?
- What about Social Security reform?
- Given all this, what could be done if we still have to recognize equity—e.g., 25 years of service is entitled to 25 years of accumulated value, regardless of age attained?
- Call it deferred compensation ... or a savings program, not a retirement program.
- But what if we are a small employer and can’t afford a DB plan?

■ Solutions Are Easily Constructed, But Society Must First Want the Solutions

What are solutions in a DC world?

Answer: They are all likely unacceptable to DC advocates:

- No access to account balance
- Mandatory employee contributions not available even on leaving a job
- Mandatory investment in sponsor asset allocation trust funds
- Sponsor support when assets fall below contributions plus a savings rate, with employees collectively assessed (or sponsor paying for) the guaranteed floor of return
- When in a DB plan, transfer to a DC plan permitted only prospectively; not giving up accruals in the old DB plan
- On retirement, lump sum may not reduce the aggregate annuitized remainder amount below a specified economic minimum.

■ Question: Is the Decline in Traditional Final Pay Annuity-Only DB Pension Plans Driven Only by Cost and Business Competition?

No! A significant and powerful second reason is sales pressure from the financial markets.

A third reason is employee receptivity: “I’m not going to be here long ... so let me have a pension design which rewards my short service.”

A fourth reason and one which drove the only state pension system conversion to DC in 1995–1996 (West Virginia Teachers) was the fact that DC systems do not award COLAs. (Apparently, West Virginia legislators were unable to resist awarding *ad hoc* COLA benefits.)

Believe it or not, the West Virginia

DC Teachers System is more expensive than the old DB system. People forgot that the cost of the old system included a cost component that just didn’t go away ... the cost of amortizing the old, unfunded past-service liability.

Finally, a fifth and not to be forgotten reason is the introduction of Internal Revenue Service (IRS) restrictions: full-funding limitations, compensation limits, and sec. 415 limits, which dampen employer interest in company-funded pension systems.

■ Some Observations

Let’s go back to September 20, 1988, to a roundtable meeting co-sponsored by the Employee Benefit Research Institute (EBRI) and the Pension Benefit Guaranty Corporation (PBGC), during which experts from business, government, academia, and labor came together to discuss the question: *What implication do [recent events] have on traditional DB plans and on the nature of the private pension system?*

The following quotations from the transcript of the roundtable discussion entitled “What is the Future for Defined Benefit Pension Plans” are pertinent:

Harry Garber:

“The 1989 [Treasury Code] integration changes force us to decrease benefits for high-paid employees or to increase them for low-paid employees, with all the intended increased cost. Rather than making such a clear choice, we believe it would be a good idea to scramble the whole situation and put in a new defined contribution plan which would not involve increased costs and would not involve obvious reductions in future benefits.

“... As a rule, defined benefit plans do not appear to be valued highly by employees until just before retirement. Defined contribution plans tend to be valued because the employee has an account that belongs to him or her and is visibly growing. There are many factors that will accelerate the trend toward defined contribution plans, but I think basic employment trends and attitudes will be among the most important.

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“. . . As a rule, defined benefit plans do not appear to be valued highly by employees until just before retirement. Defined contribution plans tend to be valued because the employee has an account that belongs to him or her and is visibly growing. There are many factors that will accelerate the trend toward defined contribution plans, but I think basic employment trends and attitudes will be among the most important.”

Dallas Salisbury:

“When we took it [the withdrawal provision] out, only two employees chose to stop participating in our [DC] plan. Their intent was that the plan be used to help them save to buy a home. And in spite of the match, in spite of every economically rational reason, vis-a-vis the effective return attributing with a match, they would rather have 50 cents after tax on the savings account for that house than a multiple of that locked up in the other account.”

Michael Gordon:

“If the end result is to require mandatory rollovers into individual retirement accounts (IRAs), I am not sure that is going to end up assuring delivery of needed retirement incomes for the people to whom it is intended. Individual employees will be responsible for the investment of the IRA, and it may come out that, generally speaking, they cannot obtain the kind of return that would have been provided had the money been kept with the employer, even though in a minority of cases it may work out better.”

Gay Haynie:

“. . . defined benefit plans are not without drawbacks . . . the value of vested benefits is frozen upon termination of employment and is subject to erosion by inflation.”

B. J. Ralston:

“The outlook for small defined benefit plans is bleak at best. The legislative explosion of new rulings, primarily meant to increase retirement security, has critically under mined the viability of these plans for all but the largest employ-

ers. While any one of the changes may have made sense at the time, in the long run, the volume, frequency, and magnitude of the changes have placed a burden on plan sponsors that cannot be justified.

“Unless some rationality is injected in our current legislative policy, defined benefit plans covering fewer than 1,000 employees are a thing of the past, at the cost of valuable benefits, for the majority of American workers.”

Edward H. Friend:

“It has been noted by Ed Davey and Bob Paul that the deductibility of employee contributions is a factor in the popularization of defined contributions systems . . . this in contrast to the fact that employee contributions are not deductible in defined benefit plans.

“. . . [employees] of state and local entities who are able to make mandatory employee contributions deductible from gross wages under a special public sector provision of the Internal Revenue Code (IRC) sec. 414(h). [Accordingly], defined contribution systems are not prevalent in the public sector.”

Frank Swain:

“I think regulation is not the principal reason that small firms do not have pension plans. The principal reason is unpredictability, not of inflation, but of basic income and existence in the first place.”

Mike Falivena:

“In Europe, *increasing* [indexed] deferred vesting benefits for terminated employees is prevalent.”

■ What Is Happening Now?

“Social Security should be brought into actuarial balance and IRC should be reformed to encourage employment-based pensions and individual savings,” according to a recent Business Roundtable report, *Retirement Income Security Principles*. The report calls on Congress to act now to make adjustments to the Social Security system and the tax code. The report recommends that tax reform

proposals be evaluated based on their impact on employment-based plans and individual retirement savings.

Considered in conjunction with the Committee on Economic Development (CED) report, *Fixing Social Security*, major corporations appear to be favoring moderate reform of the Social Security system combined with a strengthened private pension and savings system.

While this development is consistent with the views of the author of these remarks, it falls short in two respects: it fails to recognize the need to prevent lump-sum withdrawals from DC plans, and it fails to address the DC tax advantage tilt.

The Business Roundtable support of Social Security could be the genesis of a rehabilitation of the nation's DB system.

Social Security could be a vehicle for the small employer to enhance retirement benefits on a voluntary "stop and start" schedule. This would not only encourage small employers to find a way to contribute to retirement benefits when they can, without a commitment, but also could enable another means of bringing Social Security system into a long-term projected cash flow solvency position (an appropriate definition of actuarial balance for a national system expected to continue indefinitely into the nation's future).

■ Consider the Following Possible Details of Reform

Initiative 1

Reaffirm Social Security by enabling all employers with fewer than 1,000 lives to use a Social Security check-off system to provide supplemental Social Security retirement benefits for employees:

Start and stop supplementation shall be acceptable, enabling businesses that fluctuate between good times and bad to fund retirement benefits when they are able.

Limit the contribution to, say, 3 percent of pay, to prevent abuse. In so doing, provide a flow of new money, which will enhance long-term cash flow solvency of the Social Security program.

Let the benefits be the average providable, perhaps with tilt toward the younger employee. Note that the elderly will get a break if the tilt is somewhat dampened. And if hiring the elderly is

induced by the process, so much the better for society.

Initiative 2

Make employee contributions to the defined benefit pension plans of this nation fully deductible, just as contributions to sec. 414(h) plans are deductible in the public sector. (Taxes are paid when benefits are received.)

Initiative 3

Separate defined contribution programming into two different types: savings type programs and retirement programs.

Take these together when making tests as to nondiscrimination, consistent with 401(k) testing procedures.

Initiative 4

Let the retirement type DC system be constructed with the following key provisions:

- Prohibit lump-sum withdrawals; employer vested reserves and employee contributions are to be invested inside the program and not released until age 59.
- Employee contribution tax deductions continue.

Initiative 5

For savings type DC plans:

- No lock-in; lump sums are available.
- There will no longer be deductions for employee contributions.

Initiative 6

For employers with fewer than 1,000 lives who want to continue their own plan and not use Social Security, make the nondiscrimination provisions much less onerous for DB programs, keep the same provisions in place, but use a self-reporting mechanism and IRS audits with stiff penalties for violations as a protective shield against abuse.

Initiative 7

Ease up on sec. 415 limits, compensation limits, and full-funding limitations. Phase these easements in over a five-year period to curtail abuse.

■ Costs

The cost of this package of initiatives is either self-financing (the proposed Social Security DB enablements), or may be expected to be financed out of the elimination of employee deduction for employee contributions to savings-type DC plans.

Solve the problem of excessive deductions for entry age normal prefunding of employer-financed benefits by requiring that the *funded* reserves for all terminated vested employees be the reserves for the projected benefit under the retirement system. This reserve, inclusive of employee contributions, becomes a locked-in reserve to provide a future indexed vested component.

■ Another Way Out

Per Ron Gebhardt, Senior Pension Fellow of the Academy of Actuaries

A precedent exists that may convince Congress to recognize future revenue from pension plans. The Credit Reform Act of 1990 requires that government loan amounts be offset by the present value of future loan payments, some of which are due 40 years in the future.

Some Federal Housing Administration loans have negative subsidies, and thus reduce the budget, because payments are determined using market rates, but are discounted for budgetary purposes by using low Treasury rates.

Congress is showing increased interest in such ideas. The Congressional Budget Office (CBO) recently studied applying present value techniques

to the Pension Benefit Guaranty Corporation (PBGC), and House Budget Committee Chairman John Kasich (R-Ohio) has requested a similar study on the federal retirement system.

Finally, an advisory group that suggested that Congress take back the underfunded Washington, DC, retirement plan was told by CBO staff that such a move might not score well. Apparently, the plan's \$3 billion in assets might be offset by the \$8 billion in future benefit liabilities—which will be paid outside the five-year budget window—because of the Credit Reform Act.

Actuaries can point to this act when urging Congress to recognize the positive value of pensions. In fact, we should emphasize that deferred taxes on future pension distributions could give Congress \$1 trillion or \$2 trillion to offset the national debt, in the same way that insurance companies offset the present value of future premiums against their future liabilities.

In addition, each year's pension contributions could create new deferred taxes that could justify an annual \$100 billion of deficit!

■ Conclusions

It's easy to see why it happened. But Congress can fix it in a hurry. The price now may be far less than the price later on.

We can try to fix it by encouraging savings ... but if we fail ... Can we afford to wait?

I leave you with Grampa and his Four-O-One-Kay.

Section III

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11

Defined Contribution Plans: Some Observations on the Risks and Rewards

by Thomas J. Healey

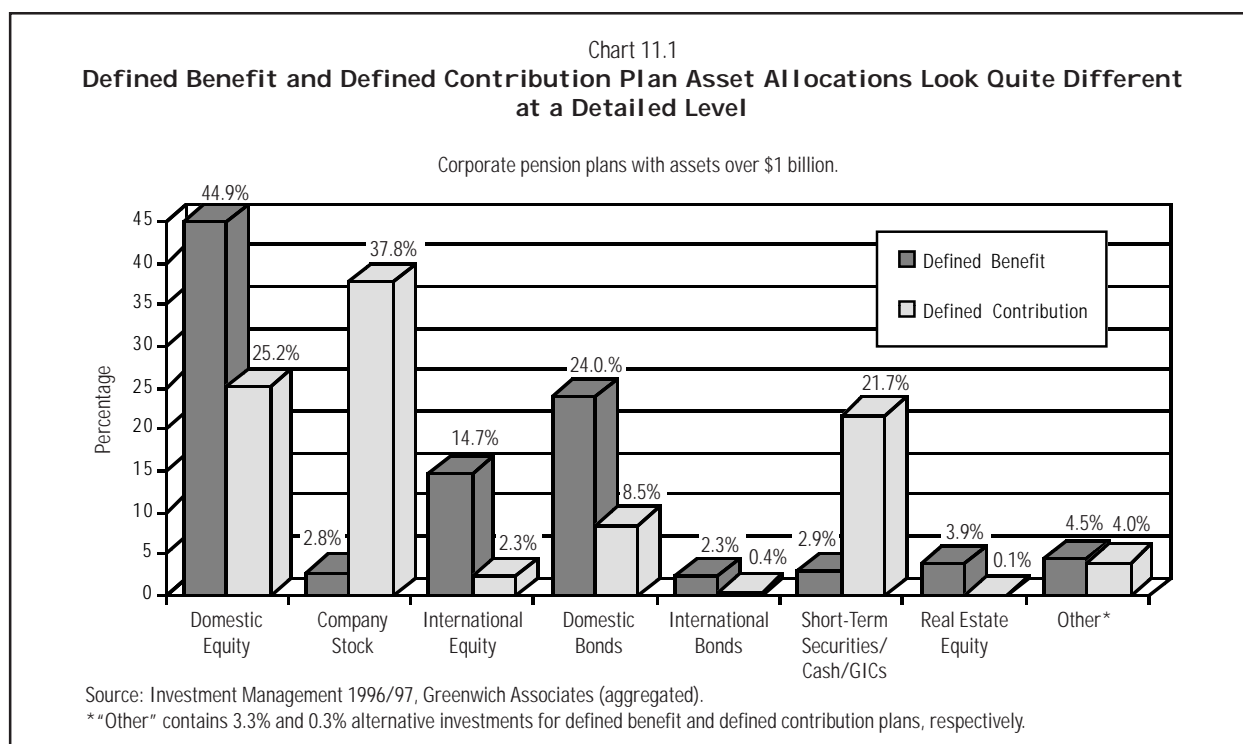
Introduction

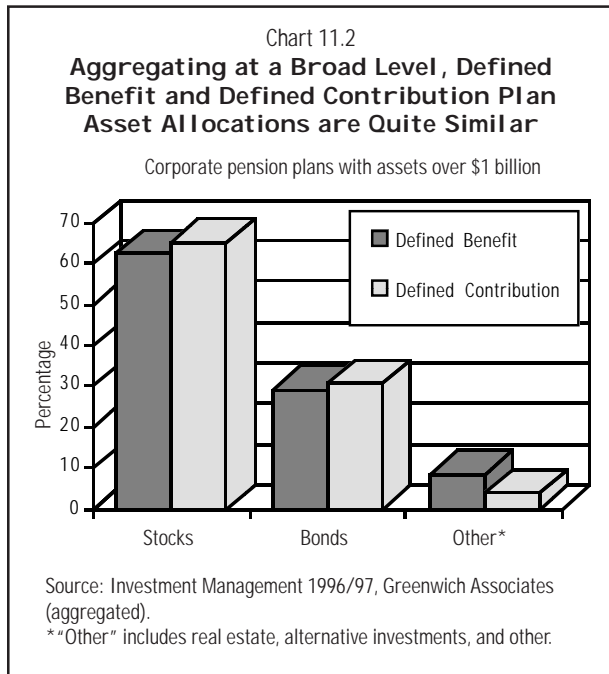
Today I want to explore the “conventional wisdom” that defined contribution (DC) plans are invested too conservatively, at least in the corporate environment. Analysis of the most recent data show that, contrary to conventional wisdom, the aggregate asset allocation and expected returns of DC plans are actually quite similar to those of typical defined benefit (DB) plans. Both are remarkably similar to the typical mix of 60 percent equity/40 percent fixed income.

The source of the data is the 1996/97 Greenwich Associates survey, which covered 260 DB plans and 267 DC plans with over \$1 billion in assets. From that survey, DB and DC plan asset allocations look quite different at a detailed level. As chart 11.1 shows, DB plans have a great deal

more domestic equity, domestic bonds, and international equity. DC plans have much more company stock and short-term (cash) securities. But if you aggregate these asset allocations at a broader level, it turns out that DC plans, on average, actually have about 3 percent more equity exposure and slightly higher bond exposure (chart 11.2). DC plans have less exposure to real estate and alternative investments (included in “other” in chart 11.2), which do not fit easily in a DC context because of their illiquidity.

We also measured “expected returns” of both plan types. At 9.6 percent, the expected return of DC plans is not much lower than the 9.8 percent return of DB plans (based on the allocation found in the Greenwich Associates survey). Indeed, the trends in DC plans toward increased allocations to equities and lower allocations to cash and guaran-





ted investment contracts (GICs) are consistent with the trends you see in DB plans across the United States.

Question: If the returns for DC and DB plans are almost identical, is there really a problem with DC plans? Is Sen. Barbara Boxer (D-CA) right when she says that we need a bill to restrict DC plan investment in company stock, which is the key component causing DC and DB plans to have similar returns?

We would argue that the real problem is not with having some company stock in your DC portfolio but rather that having too much is poor diversification that may create unnecessarily high levels of risk. We can look at poor diversification in two ways: the first is the portfolio theory perspective.

■ The Portfolio Theory Perspective

From the portfolio theory perspective, many DC plan participants concentrate too large a percentage of their retirement assets in the sponsoring company's stock. To try to make this concept more concrete, we looked at Wal-Mart (chart 11.3). Wal-Mart's DC plan has 85 percent of its assets in the company's stock. Wal-Mart did terrifically for the first six years, horribly for the last four, and had substantial volatility compared to the

S&P 500. The S&P 500 on the other hand increased almost every year over the 10-year period. Wal-Mart and the S&P 500 end up at the same point (a return of over 310 percent), but the measure of risk differs—the annual standard deviation in the Wal-Mart plan was 31.8 percent, compared with 13.4 percent for the S&P 500. Clearly, had you been in the Wal-Mart plan you would have been happier retiring in 1992 and diversifying your assets than waiting until 1996. This presents one clear example of the dangers of a lack of diversification.

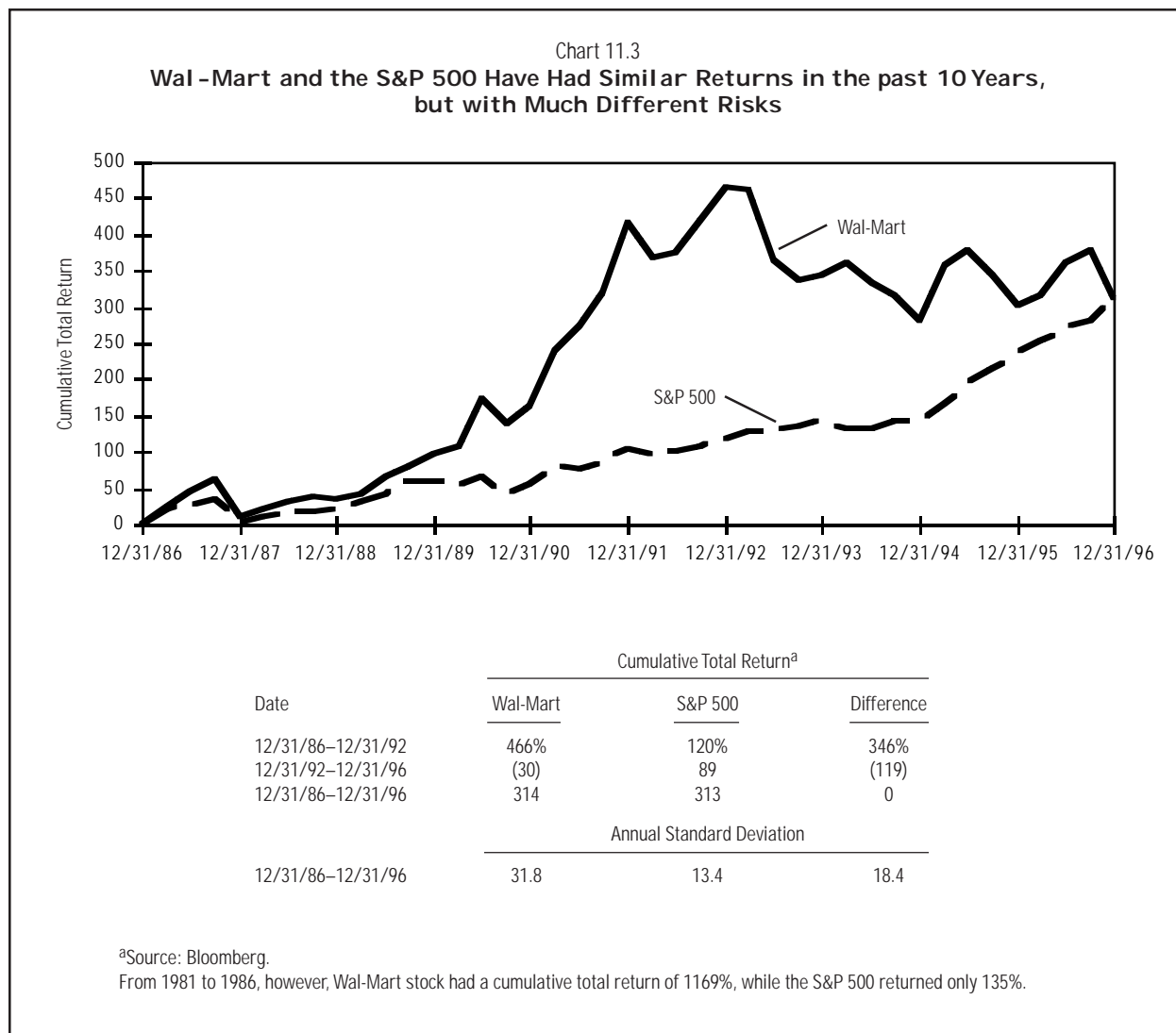
■ The Perspective of Correlation of Income Sources

Another way to look at the problem is from the perspective of correlation of income sources. Where DC plan participants have a large percentage of their retirement assets invested in company stock, the source of their retirement benefits is highly correlated with the source of their current income. Here the potential for a financial catastrophe is high. The infamous Color Tile, Inc. exemplifies this issue. In January 1996, Color Tile shut down its stores and filed for bankruptcy protection. About 85 percent of the company's 401(k) plan assets were invested in the company's real estate assets. Employees lost not only their jobs but their retirement savings as well.

■ Allocation

When Fischer Black was alive—he was a partner of ours at Goldman Sachs—he had his whole retirement plan invested in GICs, which many would think was extreme. But Fischer, when asked, said that he had more than enough exposure to the stock market in his daily livelihood, and that owning GICs provided diversification through his retirement plan portfolio. Now Fischer was smarter than I am, and although I do not follow his example in my own retirement plan, I think his argument was intellectually valid.

We can use numbers to support this theory, and put it into more of an investment context. Go back to chart 11.1, which shows the detailed level of DB and DC plan asset allocations. Besides calculating the expected return, we calculated that the expected standard deviation is 11.5 percent in a typical DB plan, based on data from this table,



compared with 15.2 percent for a DC plan. We can see that the resulting risk, as measured by standard deviation, is much higher in DC plans than in DB plans. When looking at standard deviation, the typical DB plan is virtually on the efficient frontier, while the typical DC plan would lie somewhat away from the efficient frontier, as shown in chart 11.4.

■ Investment in Employer Securities

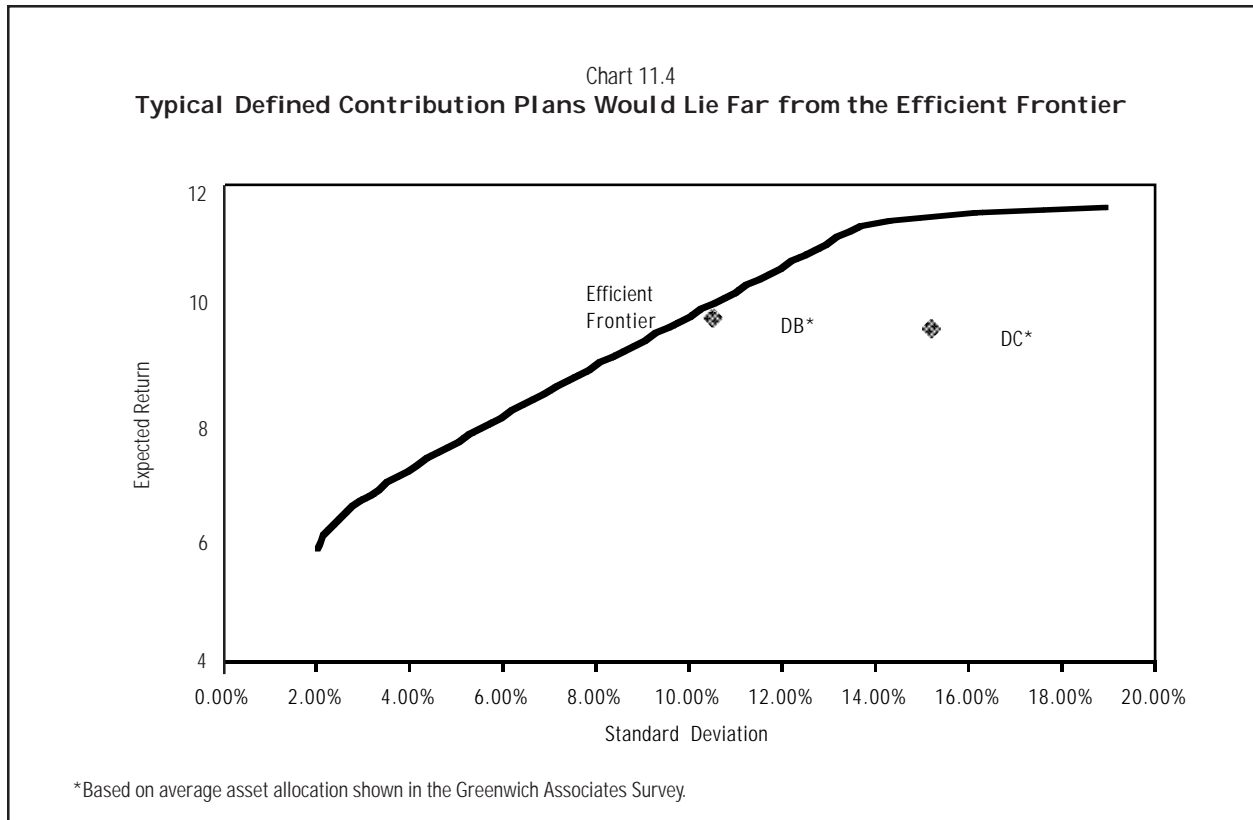
Let's return to the question of whether DC plan regulations should be amended to prohibit investment in employer securities. If solutions are needed, one approach would be to restrict the size of allocations to employer stock. How would employers react to this rather draconian restriction?

Some employers may say, "Fine. We'll just write checks, and we'll let our employees diversify as they will, because we're trying to provide them retirement security." Other companies, however, might either lower the company's contribution to the plan or eliminate their DC plan altogether. Many companies legitimately offer generous matches in their stock with the goal of creating identity of interest between the company and the employee. Arguably, it would be much worse for the employee to receive no company stock than it would be to have some amount of undiversified company stock.

■ Conclusion

Let me conclude with a potential solution to the

Retirement Prospects in a Defined Contribution World



debate. Under current law, Employee Stock Ownership Plans must allow an employee who is age 55 and has 10 years of service with the employer to diversify up to 25 percent of his or her holdings. An employee who is age 60 and has 10 years of service with the employer is permitted to diversify up to 50 percent of his or her holdings. This rule may provide a model for very modest change to

DC plans, if indeed any change is needed, and a change that would be unlikely to provoke companies to reduce current DC plan benefits in the form of company stock.

The author thanks David J. Gordon and David J. Wolf for the research underlying this presentation.

12

Changes Underway in Defined Contribution Plans

by Alfred R. Ferlazzo

■ Introduction

I believe we are entering a period of major transition for defined contribution plans and that this period will bring about significant, long-lasting changes for providers, plan sponsors, and plan participants. The changes I have in mind will result from market trends now developing.

As defined *contribution* assets surpass defined *benefit* assets, investment managers and other providers are becoming increasingly concerned with defined contribution market share. Having witnessed the success of bundled providers in the defined contribution market, “unbundled” providers, including investment managers, record keepers, and custodians, are pursuing various strategies to maintain or increase their presence in this market.

■ The Old Defined Contribution Paradigm

In most cases providers now follow what I call the old paradigm; it emphasizes three strategies that have been successful in the past:

- Selling to the corporate plan sponsor, usually a human resources executive; in some cases, the chief investment officer is included. The needs of plan participants are usually not explicitly considered. Providers and plan sponsors assume that if their efforts succeed, participants’ needs will be met.
- Offering a wide array of mutual fund options. In some cases, it’s virtually an unlimited array, presumably responding to employee requests. Employee interest may be driven by mutual fund advertising and media coverage, which tend to focus on recent performance. In many cases, plan sponsors simply pass through what the mutual fund families or other providers are

marketing, without adding any value, such as investment option selection, due diligence, or cost reduction. Plan sponsors should ask themselves whether they are assuming sufficient fiduciary responsibility.

- Trying to solve as many problems as possible for plan sponsors by providing all required services, including recordkeeping, communications, and education. These are provided either on a bundled or alliance basis, and their cost is usually subsidized by investment management revenue. Since all costs are usually passed through to plan participants, plan sponsors may not be conducting rigorous cost-benefit assessments of these services. Furthermore, plan sponsors may not be evaluating the effectiveness of these services to ensure that they provide value to participants.

■ Dangers of the Old Paradigm

The fundamental flaw in the old paradigm is that it does not do a good job of addressing the needs of plan participants, who, after all, are the ultimate customers of defined contribution services.

This is demonstrated by one of the findings of the RogersCasey/IOMA 1996 Defined Contribution Survey: one of every three plan sponsors believes that fewer than 50 percent of their plan participants will be adequately funded for their retirement. Clearly, defined contribution plans are not meeting the needs of many plan participants. The growth in defined contribution assets demands change.

Because providers (and plan sponsors) have not truly addressed the needs of many plan participants, there is disequilibrium in the defined contribution business. On the surface, we see positives, such as more investment options, higher asset allocation to equities, and apparent satisfaction of employees. But behind these superficial

appearances, trouble is brewing.

Plan sponsors are offering investment options without the same care and due diligence as on the defined benefit side. In the words of one plan sponsor who has taken a very different approach, they are “asking for trouble.” Trouble could take the form of participant dissatisfaction and perhaps even lawsuits when the equity markets generate losses for participants who have moved into aggressively managed mutual funds late in the bull market.

It is clear that many plan participants have recently moved substantial assets into equities at historically high valuation levels. Survey results consistently tell us that they have done so without adequate investment knowledge or quality investment advice.

Thoughtful plan sponsors would agree that there is potential for change to the favorable market environment, leading to a substantial equity market decline. Many of the plan participants who have moved into equities recently will see paper losses. Furthermore, without adequate investment knowledge or counsel, participants may be so affected by paper losses that they move back to more conservative investment options and thereby realize permanent losses in their retirement accounts.

In such a scenario, plan sponsors who have not exercised due diligence with regard to prudent investment options and/or provided sufficient information about their investment options to gain Employee Retirement Income Security Act (ERISA) sec. 404(c) protection will be more vulnerable to participant dissatisfaction and potential legal action.

Additional concerns are raised when we look at the asset allocation of individual participants. On a macro basis there has been a movement to equities more in line with the approximately 60 percent ratio of defined benefit plans. However, plan sponsors need to look at *individual* participants' asset allocation decisions before declaring success. One large defined contribution plan sponsor has done so and found a disturbing bimodal distribution of asset allocation choices—many plan participants at the zero and 100 percent equity allocation percentages—rather than the cluster around 60 percent that we would like to see.

This plan sponsor has long provided a thoughtful communications and education program. Employees' asset allocation decision pattern is obviously a cause for concern.

■ The New Paradigm of Defined Contribution Plans

The disequilibrium just described will induce changes by providers and plan sponsors. Change for some will occur on a proactive basis, before equity markets become much less favorable. Change for others will occur in a reactive way, in response to plan participant reaction to increasingly volatile equity markets.

Fundamental to all such change will be the recognition of two facts. First, the plan participant—not the plan sponsor—is the ultimate customer. Second, success and failure in the marketplace will be determined by the ability of plan sponsors and providers to accurately assess and meet the participants' needs. The primary plan participant need is for better tools to use in making asset allocation decisions. Changes will have to be made in the structure of investment options, overall plan design and costs, and communications and education.

■ Investment Options

Plan sponsors will have to change their approach to selecting investment options. In situations where decisions had once been made primarily by non-finance managers (e.g., human resources), financial managers will become more involved, and they will concern themselves with fiduciary issues, including due diligence review of investment option providers. In selecting investment options, there will be more focus on covering the primary asset classes in the risk/return spectrum. At the same time, plan sponsors will become more concerned about employee preferences that may be driven by illusory advertising and media coverage.

One plan sponsor, noting a lack of sufficient oversight by some of his peers, said it best: “Some plan sponsors have forgotten that what they are doing is running an ERISA plan. They think it's an investment club.”

■ Using Defined Benefit Investment Managers

Changes in investment option structures will be most noticeable in situations where plan sponsors offer only defined contribution plans. Longer term, plan sponsors who offer both defined benefit and defined contribution plans will gradually move away from the use of mutual funds for defined contribution investment options. These plan sponsors will increasingly use their defined benefit investment managers to construct their defined contribution investment options.

These plan sponsors will become more aware of the advantages of using their defined benefit investment managers instead of mutual funds. These advantages include:

- Significantly lower investment management fees; hands-on control of other costs.
- The application of defined benefit due diligence to their defined contribution plans.
- Increased flexibility in creating investment options suitable for defined contribution plans.

■ More Help in Making Decisions

Plan sponsors will recognize that the majority of their employees need more help in making asset allocation decisions. As a result, some of them will focus increasing attention on their communications and education programs and ways to make them more effective.

Some will try to simplify employee decision making by offering “pre-mixed” or “lifestyle” investment options that combine asset classes in varying mixes to provide a few choices, such as conservative, moderate, and aggressive. But many employees do not really understand the purpose of such options, as indicated by their tendency to use them as additional investment options, rather than as total asset allocation solutions. The success of lifestyle options will be determined by the way these choices are communicated to employees and the guidance provided.

Other plan sponsors will provide, as part of their benefit packages, third party investment advice or financial planning, which employees may select, usually for a fee.

Plan sponsors will be more reluctant to add

mutual fund windows and self-directed brokerage options, recognizing that these are costly features and do not add value for the vast majority of their employees. These options also have the disadvantage of raising fiduciary concerns related to due diligence and sufficient information for 404c protection.

■ Plan Design and Costs

Plan sponsors will increasingly develop defined contribution plans that are more user friendly. For example, eligibility for participation in defined contribution plans will move from the one-year (after hire) default that most plans have adopted to more or less immediate eligibility. Additionally, plan sponsors will begin allowing plan participants to “roll over” defined contribution assets from prior employer plans, and they’ll begin allowing employees to keep assets in their plans after separation.

The “retail” emphasis that began with plan sponsors moving to daily valuation and expanding investment options, with significant assistance from providers, will continue to make defined contribution plans more user friendly.

Advances in technology will facilitate these changes, as data links improve among investment managers, custodians, record keepers, plan sponsors, and plan participants. These advantages will enable defined contribution plans to deliver superior investment performance at institutional cost levels and with all of the user friendly features now offered only by mutual funds.

Defined contribution costs will decline even as these structural improvements occur. *Money Magazine*, in its April 1997 issue (“Protect Yourself Against the Great Retirement Rip-Off”) says: “Excessive 401(k) fees skim an estimated \$1.5 billion a year from workers’ retirement savings.” As media coverage of this issue increases, more employees will demand change.

Plan sponsors will increasingly focus on the cost of the services provided, and providers currently operating with excessive fee structures, primarily in the smaller plan market, will respond to competitive pressure by finding ways to operate more cost effectively or by exiting the business. Providers will no longer be able to increase investment management fees to subsidize additional services. Fees will decline.

■ Communications and Education

Perhaps the greatest degree of change will occur in this aspect of defined contribution plans. Plan sponsors will focus increasingly on the effectiveness of their communications and education efforts. Communications and education, previously developed by benefits communicators, will be increasingly developed by investment communications specialists. These specialists will employ a more marketing oriented approach that is intended to change the behavior of plan participants. The goal of communications and education will shift from providing information to increasing participation, preparing employees to take more responsibility for their retirement savings, and, where necessary, providing more direct asset allocation guidance.

Data from record keeping systems on employee demographics, savings, and asset allocation will become more useful in developing communications strategy. For example, nonparticipants will be targeted with personalized mailings. Plan sponsors will be able to tailor their communications and education efforts more directly for specific groups.

Advances in technology and data handling have already created the capability to address asset allocation issues. Specific employee information, including age, compensation, current asset balances, and savings rates, will be used regularly to provide employees with probabilistic distributions of retirement income replacement for different asset allocations. Employees can be led through personally relevant what-if scenarios that will help them make informed asset allocation decisions. At the same time, employees can be educated about risk and return, historic asset class performance, and short- and long-term volatility of asset classes.

Technological advances include the ability of recordkeeping systems to handle complex employee data and personal computers to distribute and manipulate vast arrays of information. Using the Internet and intranets, and by developing robust

software interfaces, providers and sponsors will be able to put data and information in the hands of plan participants in a user friendly way.

Academic work in the field of behavioral finance will begin to play a role in providing information about employee decision making, and it will add a framework of academic discipline to the development of effective communication and education techniques. Investment communication specialists well versed in behavioral finance and investments will play a leading role in developing these techniques.¹

Employees who want to take responsibility for their own asset allocation decisions will be helped by the greater relevance of the education they receive and by the interactive way in which it is provided. For others, new technologies will make it possible to obtain individual guidance cost effectively.

■ Conclusion

Change in the defined contribution business will be brought about by a shift in the provider's perception of the target market. The plan participant's role as ultimate customer will be recognized; the plan sponsor will be seen as an intermediate customer.

This shift will itself be driven by providers' competitive responses to two developments. The first is plan participants' growing demand for more effective communications and education, assistance with asset allocation, consistent investment performance, and lower costs. The second is plan sponsors' growing recognition of their fiduciary responsibilities—to monitor investment options and performance and to ensure that plan participants receive effective support services.

¹ For a recent discussion of behavioral finance, see "Why Bulls and Bears Are Often So Bird-Brained," *New York Times*, 30 March 1997.

13

Risk Aversion or Myopia: Implications for Retirement Savings

by Shlomo Benartzi and Richard H. Thaler

■ Introduction

Over 30 years ago, Paul Samuelson (1963) wrote an interesting paper called “Risk and Uncertainty: A Fallacy of Large Numbers.” He described a lunch-time conversation with a colleague in which Samuelson offered his colleague a bet: heads you win \$200, tails you lose \$100. The colleague turned the bet down, justifying this choice by stating “I won’t bet because I would feel the \$100 loss more than the \$200 gain.” However, he expressed a willingness to accept 100 such bets. In the paper, Samuelson proves that these preferences are irrational: one should not be willing to accept many plays of a bet that one will not accept once.¹ Of course, the fact that two choices are logically inconsistent leaves open which of the choices is mistaken. Nevertheless, Samuelson makes it clear from his title that he feels that his colleague erred in accepting the multiple play gamble. The “fallacy of large numbers” that he accuses his colleague of committing is the erroneous belief that the variance of outcomes decreases as the number of trials increases. While we agree with Samuelson’s logic that his colleague’s choices are irrational, we disagree about which choice should be criticized. Indeed, we think that turning down a gamble with an expected value of \$5,000 and less than a .005 chance of losing money (i.e., 100 plays of Samuelson’s bet) is crazy. Rather, we believe that the mistake was in turning down one bet. We call this mistake “myopic loss aversion”—excessive sensitivity to short-term losses.

Loss aversion is the term used by Kahneman and Tversky (1979) to refer to the psychological

tendency to feel losses more acutely than gains (as nicely expressed by Samuelson’s colleague in the quoted passage). In a previous paper (Benartzi and Thaler, 1995) we used the notion of myopic loss aversion to offer an explanation of what economists call the equity premium puzzle, namely the large discrepancy in returns between stocks (equities) and fixed income securities (bonds). Historically, stocks earn a real return of about 6 percent–7 percent, while bonds earn only 1 percent–2 percent. Over any prolonged period such as 20 years, the chance of stocks outperforming bonds approaches one. Yet if investors are concerned with short-term losses, they will find stocks uncomfortably risky. Using simulations we showed that the historic difference in returns could be explained if investors acted as if they had horizons of about one year.

In this paper we continue our explorations of myopic loss aversion using laboratory experiments. We use what we have learned about myopic loss aversion to address the problem of getting people to do a better job of investing their retirement funds. Specifically, we show that different ways of displaying the same historic return data can have a dramatic influence on portfolio choices.

■ Retirement Savings Survey

In recent years, U.S. employers have dramatically changed the way they provide pension benefits to their employees. The traditional defined benefit (DB) plans (in which employers promise to pay a specified retirement annuity based on salary and years of service) are rapidly losing favor to defined

¹ More precisely, if the single play would be rejected at any wealth level that could occur over the range of outcomes that could obtain over the multiple plays of the bet (in the example this would be current wealth plus \$20,000 to minus \$10,000) then multiple plays

should always be rejected. For a more general result, see Tversky and Bar Hillel (1983).

² Greenwich Associates (1995) report that more than 60 percent of the cash inflows are directed to defined contribution plans.

contribution (DC) plans (e.g., 401(k) plans).² In these plans each employee has an individual retirement account, with contributions coming from the employer, the worker, or both. Along with the obvious change in the nature of the employer's liability (from a DB to a DC), the responsibility for investing the retirement funds has changed. In traditional DB plans, the employer (usually with professional help) manages the retirement fund. In the newer DC plans the employee makes his or her own asset allocation decisions. By most accounts the employees are not doing a very good job. In most 401(k) plans, the most popular investment vehicle (besides stock in the company—a poor choice on diversification grounds) is some kind of fixed income account, typically a guaranteed investment contract (GIC).³ These investments provide meager returns and (we believe) are a poor choice for young workers. Many employers agree with this assessment but are not sure what to do about it.

We have concluded from several related studies we ran that individuals would find the repeated play of a gamble much more attractive if they were shown the explicit distribution of possible outcomes.⁴ This suggests that workers making retirement choices might invest more of their funds in higher/riskier return securities such as equities if they were shown the equivalent distributions. In this case the multiple plays occur over time. The following study investigates this idea.

■ Methods

The subjects in this experiment were recently hired (nonfaculty) staff employees at the University of Southern California (USC). USC, like many universities, has DC pension plan—the university contributes 10 percent of the worker's salary into the pension plan contingent on the worker contributing 5 percent. The workers can choose among three investment vendors (TIAA/CREF, Fidelity, and Prudential). Each vendor offers a range of

investment options. Since all the workers we interviewed have this plan, they have all had to make a decision of which vendor to choose and then how to allocate their retirement funds.

The survey included some background questions about the respondents and their retirement planning process. Not all respondents answered these questions, so we will briefly describe the answers of those who did here. Most of our respondents did not devote much time to their asset allocation decision; 58 percent spent an hour or less. This finding is disturbing because asset allocation is arguably the most important financial decision of their lives, and many will never change their initial choice. Most respondents read only the material provided by the vendors and did not consult with anyone other than family members. Still, most were confident they had made the right choice. Perhaps this was due to their age—most had 30 years or more before retirement.

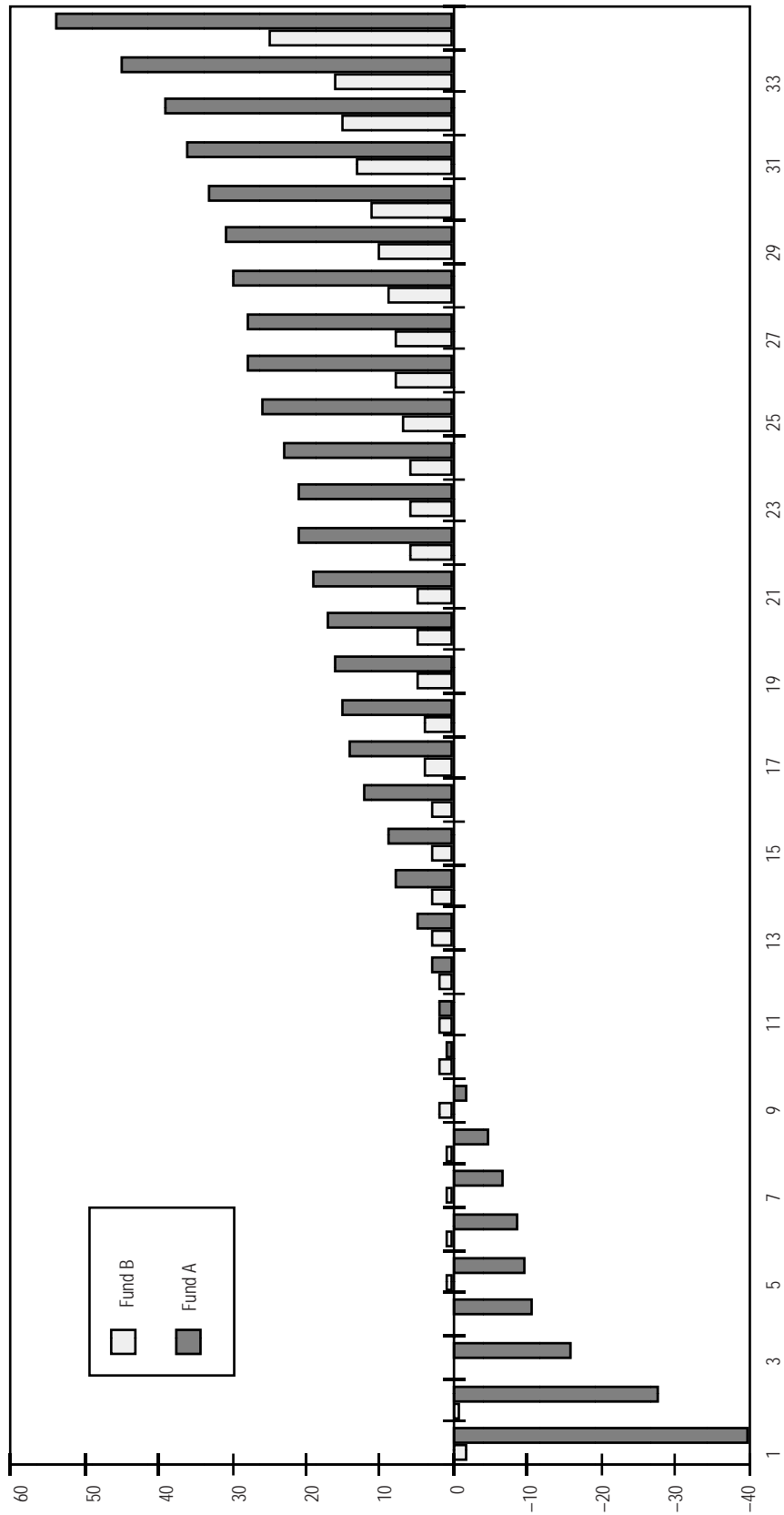
The experiment per se consisted of one question about asset allocation. Respondents were told to assume that they could only choose between two funds, A and B. They were then given some information about the historical returns of these funds and were asked to decide, based on this information, how much of their retirement funds they would invest in each fund. The terms “Fund A” and “Fund B” were used to avoid any association the respondents might have with particular asset categories such as stocks or bonds. However, the returns for the funds were derived from CRSP value weighted NYSE index for stocks and Ibbotson's annual returns on five-year bonds.

The experiment manipulated the manner in which the returns on the funds were displayed. There were three versions. In the One-Year version, subjects were shown a distribution of one-year rates of return. This was the actual distribution of historic returns in 33 increments. Each bar on the histogram represented an event that would be expected to occur about 3 percent of the time. Since we had 67 years of data (1926–1993), the chart was constructed by taking the average return in the worst two years for the first entry, and so forth. (See chart 13.1 and the accompanying text.) In the

³ *The Institute of Management and Administration (1995) report the following asset allocation mix for defined contribution pension plans in August 1995: company stock: 38.1 percent; GICs: 27.9 percent; Equities: 16.4 percent; Balanced: 11.2 percent; Bonds: 2.6 percent; Cash: 3.2 percent; Other: 0.8 percent.*

⁴ *The complete version of this paper, which includes all the related studies we ran, is available from the authors upon request.*

Chart 13.1
One-Year Returns



Source: Shlomo Bernartzi and Richard H. Thaler.

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Thirty-Year version subjects were shown simulated 30 return distributions. These were the instructions they read:

The information we are going to show you will give you some idea of what kind of annual rate of return (growth rate) you can expect over a 30 year-period. To provide this information we have created simulated distributions of 30-year returns using 66 years of historic data. This is done as follows. We pick years at random from history, thirty times, possibly with some years repeated. This creates one possible 30-year experience. Then we compute the average annual rate of return over this 30-year period. This process is then repeated 10,000 times, each time computing an annual rate of return. These simulated 30-year experiences are now ranked from worst to best, and then combined into 50 groups, each having 2 percent of the outcomes. This was done for both of the funds. Chart 13.2 shows the results. The way to think about this chart is that if the future is like the past, each of the outcomes displayed has a 2 percent chance of occurring. The outcome on the extreme left represents the worst outcome, which is expected to occur about 2 percent of the time. The outcome labeled “50” is the median outcome: half of the expected outcomes are better, and half are worse. The outcome on the extreme right, labeled “100” is the “best case scenario” which is expected to happen only 2 percent of the time.

The final version also used 30-year distributions but instead of displaying rates of return we made calculations of final year salary replacement rates. Here are the relevant instructions for this version:

One way of comparing the results of investment options is to consider how much income you would get in retirement if you invested in the fund consistently over a period of years. To give you one concrete example, we have assumed that you are 40 years old and plan to retire at age 70. In making your choice below, please try to put yourself in that situation. We have also assumed that you will work at USC over that time period, and that the University will contribute 10 percent of your salary into the retirement plan and you will contribute

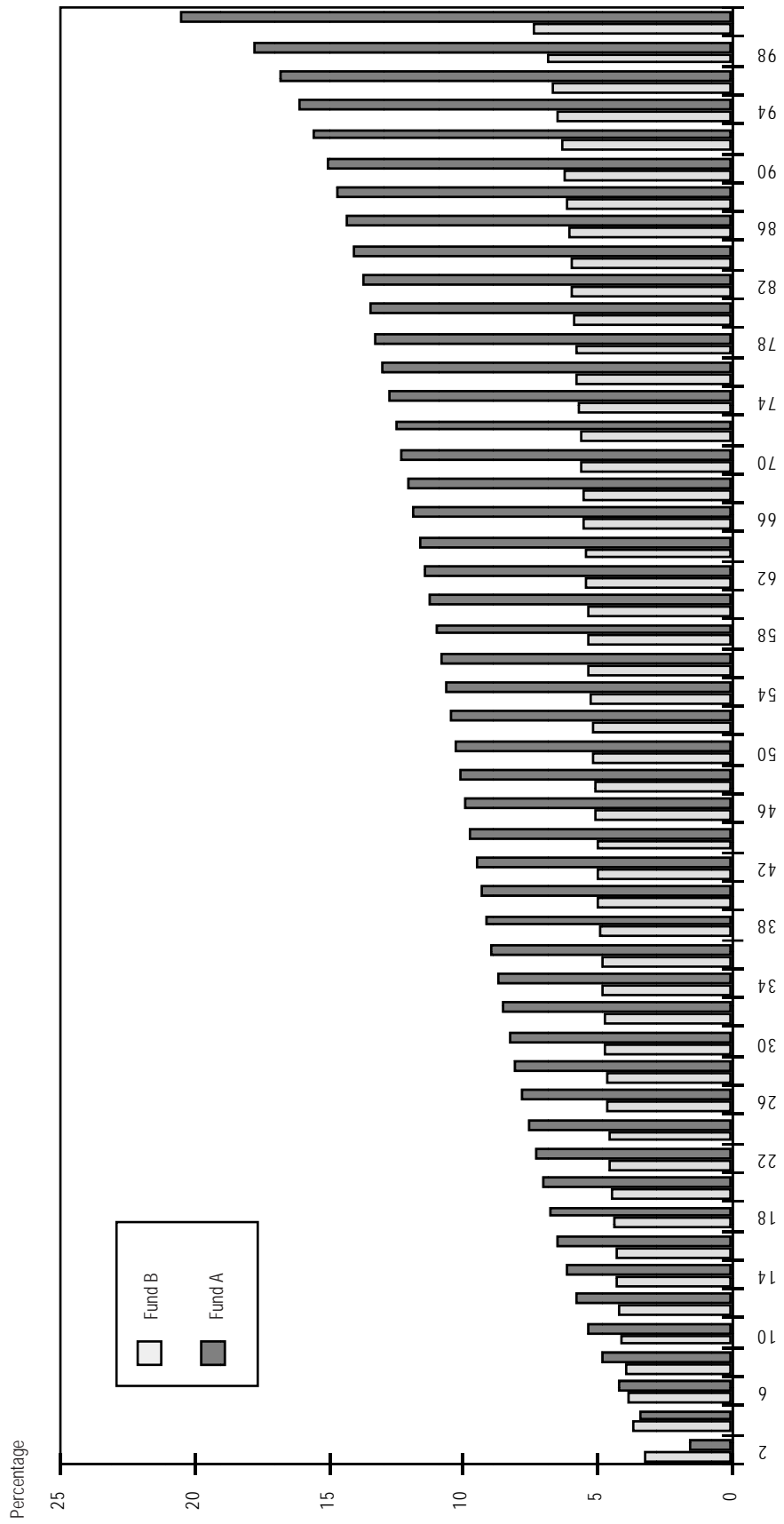
5 percent. Finally, we have assumed that your salary will grow at 1 percent a year above the rate of inflation. We then want to compute what percentage of your final salary you would receive in retirement income as a result of this pension saving.⁵ (We are not including income from Social Security or any other savings you might have.)

With these assumptions set your retirement income will depend on the rate of return your savings earns over the 30-year period in which you are saving. We have estimated the distribution of such returns using historical data for both Fund A and Fund B over the period 1926–1993. This is done by assuming that each year in the future will be like one of the years we have had in the past, picked at random. We have created 10,000 of these constructed 30-year histories. These simulated 30-year experiences are now ranked from worst to best, and then combined into 50 groups, each having 2 percent of the outcomes. This method was used for both of the funds. If the future is like the past, each of the outcomes has a 2 percent chance of occurring. The worst outcome is expected to occur about 2 percent of the time. The median outcome—“50”—indicates that half of the expected outcomes are better, and half are worse. The outcome representing the “best case scenario” is expected to happen only 2 percent of the time.

Chart 13.3 indicates the estimated distribution of retirement income if you invest all your money in either Fund A or Fund B. Each bar indicates one possible outcome. The white bars indicate possible outcomes for Fund A and the black bars indicate possible outcomes for Fund B. As you can see from the chart, Fund A has a higher average retirement income, but that income is more variable. The retirement income could be as high as 890 percent of your pre-retirement income or as low as 30 percent of your pre-retirement income. The average is

⁵ This footnote appeared in the instructions at this point: “It is possible to elect instead a retirement income that continues until both you and your spouse die. We are only showing the figure for you since to compute the other we would need to know the age of your spouse.”

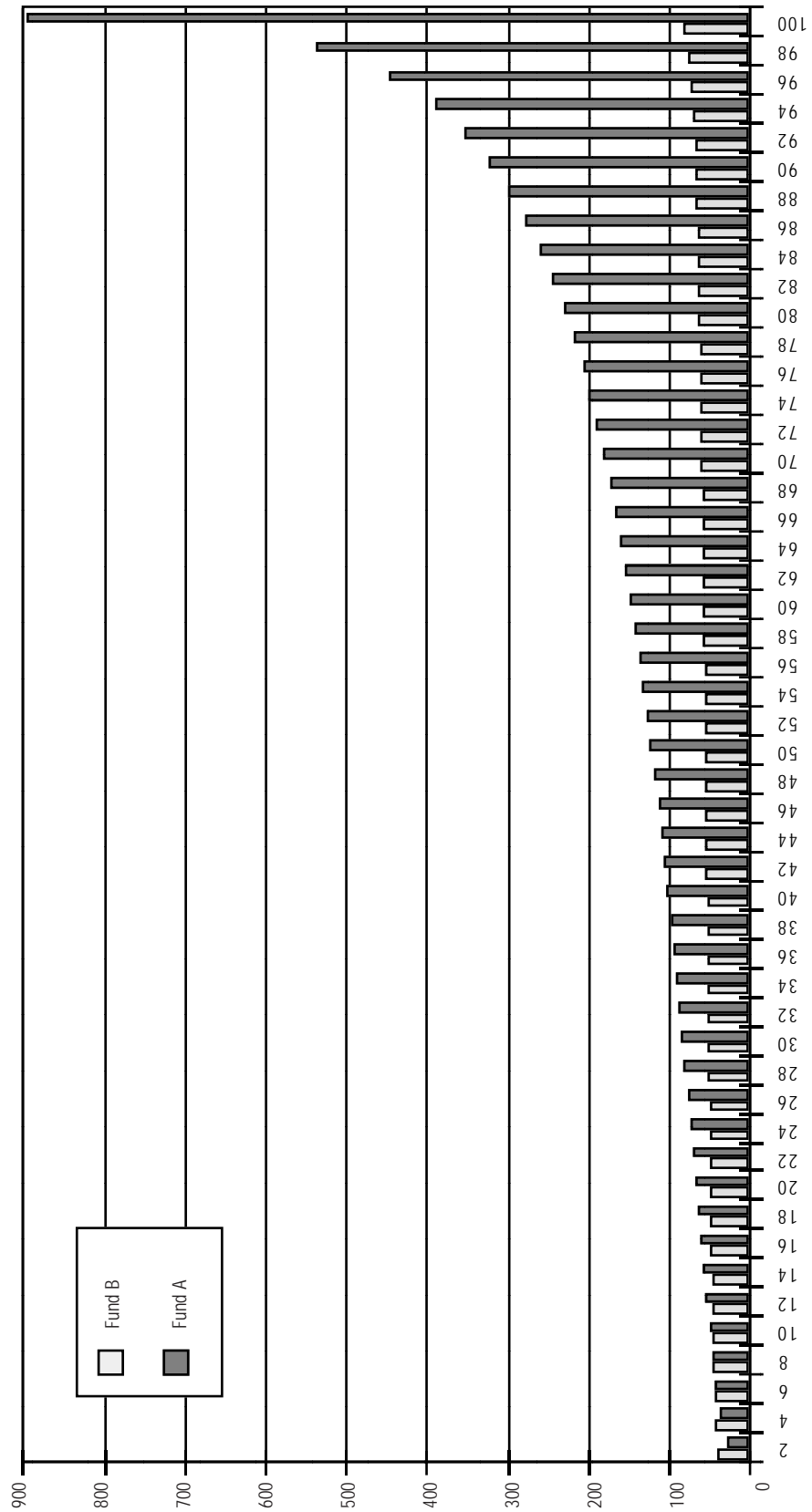
Chart 13.2
Annual Rates of Return for 30-Year Investments



Source: Shlomo Bernartzi and Richard H. Thaler.

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Chart 13.3
Retirement Income as a Percentage of Preretirement Income



Source: Shlomo Bernartzi and Richard H. Thaler.

about 170 percent percent. Fund B offers a lower average retirement income (about 55 percent of preretirement income) but less variability. The estimates of retirement income are all between 40 percent and 85 percent of preretirement income.

Results

The results of the experiment are shown in table 13.1. There is a pronounced difference in allocation between the group that saw the annual returns and the other groups who saw one of the longer-term charts. The median allocation to stocks for the respondents who saw the one-year returns was only 40 percent, whereas the median allocation to stocks for either of the long-term displays was 90 percent. There was obviously no difference between two long-term versions. We had expected the retirement income display to be the most powerful in inducing investment in stocks, but with the allocation so high in the simple 30-year return version there was no room for an additional effect.

Conclusions

This is our second paper on myopic loss aversion. In the first one we used the concept to try to “explain” the equity premium puzzle. We did so by estimating what time horizon loss averse investors would need to have to make them indifferent between stocks and bonds. The answer was one year. We were unable to actually “test” our explanation other than by asking whether this time horizon seemed plausible. In this paper we have tried to put the concept to a more direct test. We showed that this

aversion to short-term losses could be overcome by providing the subjects with the explicit distribution of potential outcomes. Specifically, we found that subjects were willing to invest up to 90 percent of their retirement funds in stocks when they were shown distributions of long-run returns. Again, this is consistent with our theoretical predictions.

This research has interesting implications in the spirit of Howard Raiffa’s proposed asymmetrically prescriptive/descriptive research program (1982, p. 21). The idea is that when one party is making decisions that are inconsistent with the axioms of rational choice, another party must make decisions that are cognizant of these departures from rationality. Raiffa offers many examples in the context of negotiation—what should one negotiator do if she knows that her counterpart is making a particular mistake? The same approach applies, however, whenever one party controls the information provided to another party, and has an interest in the choices the other party makes. Marketing strategies, for example, should reflect consumers’ decision-making processes. In these settings the seller would choose to construct the information offered to potential consumers to maximize sales (or profits) subject to the constraints imposed by the law and by the seller’s own sense of ethics.

In other contexts, the information provider may not have a profit incentive to push the decision making in one direction or another, but instead is just trying to improve the decisionmaker’s choices. In these situations economists have traditionally recommended giving individuals a full range of choices and lots of information. If decisionmakers are rational, this is a sensible policy. However, if

Table 13.1
Percentage Allocated to Stocks Given 1-Year Returns, 30-Years Returns, and Retirement Income

Version of the experiment	Panel A: Overall Comparison of the Percent Allocated to Stocks		Version	Panel B: P-Values for Pairwise Comparisons of the Median (and Mean) Allocation to Stocks		
	Median	Mean		One Year Returns	Thirty Year Returns	Retirement Income
One Year Returns (N=25)	40	41	One Year Returns (N=25)	N/A	0.0001 (0.0001)	0.0002 (0.0001)
Thirty Years Returns (N=25)	90	82	Thirty Years Returns (N=25)	0.0001 (0.0001)	N/A	0.7308 (0.3662)
Retirement Income (N=25)	90	75	Retirement Income (N=25)	0.0002 (0.0001)	N/A	0.7308 (0.3662)
P-Value	0.0001 (Kruskal-Wallis test)	0.0001 (One-way ANOVA test)				

Source: Shlomo Bernartzi and Richard H. Thaler.

individuals are less than fully rational, then simply providing the information may not be enough. As we have seen, the manner in which the information is displayed can have a pronounced effect on choices. Of course, this is not a new result. For example, Russo (1977) found that shoppers paid much more attention to unit prices (price per unit of quantity) in grocery stores if the unit prices were displayed in an ordered list from cheapest to most expensive. And Kahneman and Tversky (e.g., 1984) have created many examples of framing effects where choices depend on whether outcomes are characterized in terms of survival probabilities or mortality probabilities (even though one is the complement of the other).

These situations create a real dilemma in terms of what information should be provided to a decision maker. If we know that shoppers are more likely to buy the cheapest unit price product if we display them ranked, should we do that? Or, if we know that a surgeon is more likely to operate if outcomes are described in terms of mortality rates, which form should we use? These choices depend on whether we think that one choice is somehow "better." For example, if we have reason to believe that the best values are the products with the highest prices, as appears to be the case for dishwashing liquid (see Russell and Thaler, 1985), then a display of unit prices could easily make shoppers worse off. Instead, we would want to rank the products in terms of "price per dish washed." In general, unless there is a good reason to believe that decisionmakers are making a systematic mistake, there will be no way of choosing which display of the relevant information is best.

In the case of asset allocations, we personally believe that the average 401(k) participants are making a mistake in investing most of their funds in GICs, and many employers may share this view. However, current law forbids employers from offering "advice." This raises difficult questions. If an employer knows that employees will invest more of their retirement funds in stocks if they are shown a 30-year chart, is the employer "advising" employees to invest that way? Can it be sued if the market falls? What information could the employer provide that would be neutral? If the employer shows only the traditional one-year return charts, can it be sued if its employees invest all their

money in GICs and the market skyrockets? It may be time for the courts to also recognize the difficult issues raised by the asymmetric prescriptive/descriptive approach.

References

- Benartzi, S. and R. H. Thaler. "Myopic Loss Aversion and the Equity Premium Puzzle." *Quarterly Journal of Economics* (1995): 73–92.
- Greenwich Associates. *Greenwich Reports: Investment Management 1995*. Greenwich, CT: Greenwich Associates, 1995.
- Institute of Management & Administration. *IOMA Report on Defined Contribution Plan Investing, August 15, 1995*.
- Kahneman, D., and A. Tversky. "Choices, Values and Frames." *American Psychologist*. 39 (1984): 341–350.
- _____. "Prospect Theory: An Analysis of Decision Under Risk." *Econometrica* 47 (1979): 263–291.
- _____. "Subjective Probability: A Judgment of Representativeness." *Cognitive Psychology* 3 (1972): 430–454.
- Raiffa, H. *The Art and Science of Negotiation*. Cambridge, MA: Harvard University Press: Cambridge, 1982.
- Redelmeier, D. A., and A. Tversky. "On the Framing and Evaluation of Multiple Prospects." Working Paper. Stanford University, March 1991.
- Russell, T. and R. H. Thaler. "The Relevance of Quasi Rationality in Competitive Markets." *American Economic Review* 75.5 (1985): 1071–1082.
- Russo, J. E. "The Value of Unit Price Information." *Journal of Marketing Research* 14 (1977): 193–201.
- Samuelson, P. A. "Risk and Uncertainty: A Fallacy of Large Numbers." *Scientia* 98 (1963): 108–113.
- Thaler, R. H., and E. J. Johnson. "Gambling with the House Money and Trying to Break Even: The Effects of Prior Outcomes on Risky Choice." *Management Science* 36.6, (1990): 643–660.
- Tversky, A., and M. Bar-Hillel. "Risk: The Long Run and the Short." *Journal of Experimental Psychology: Human Learning, Memory, and Cognition* 9 (1983): 713–717.

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The Reality Behind the Numbers

by Richard Hinz

■ Introduction

The discussions by Shlomo Benartzi and Richard Thaler, Thomas Healey, and Alfred Ferlazzo focus in some very disparate ways on the current development and perceived associated flaws of the evolving system of defined contribution plans.¹ Their analyses are based on a number of what are clearly compelling statistics about the nature of investment decisions of participants in these plans, focusing in particular on the average levels of investment in employer securities and low-risk, fixed-income instruments.

Before contemplating the policy ramifications of these observations, some further examination of the nature of the statistics is warranted. Averages are an attractive and easily understood approach to illustrating many of the characteristics of the pension system. However, it is also important to consider the distributions behind the averages. I think this is best illustrated by pointing out that Michael Jordan and I averaged nearly 15 points per game over the last NBA season, a number that, while accurate, tells you very little about either one of us.

■ Investment in Employer Securities

Benartzi and Thaler, as well as Healey, tell us that defined contribution plans have on average about one-third of their assets in employer securities. Recently, a number in excess of 40 percent has been widely cited in the popular press. The analyses that indicate levels of investment in employer stock of

this magnitude are generally obtained through a survey of large corporate sponsors. These numbers no doubt reflect the plans from which the data are derived, but they may not tell us much about what is really occurring in the system.

The Form 5500 data filed with the Department of Labor indicate that employer securities represent about 17 percent of the assets of privately sponsored defined contribution plans with more than 100 participants. A substantial number of these plans are employer stock ownership plans (ESOPs) for which, by definition, we would expect a high level of these assets. When ESOPs are excluded, the level of assets in employer securities is 13 percent.

I point out this difference not to dispute the veracity of the data cited, but rather to highlight the importance of the distribution. It is the largest plans that are likely to hold employer stock. This is no surprise given the “qualifying employer securities” requirements that stock must meet to be held by the plan at all.

Looking further at the Form 5500 data, we find that fewer than 1 percent of these defined contribution plans hold more than 10 percent of their portfolio in employer securities. We also find that these plans with substantial holdings in their sponsors’ stock account for nearly one in five of all defined contribution participants. In other words, it is the largest of the large, with these substantial holdings (more than one-quarter of those with more than 5,000 participants exceed the 10 percent threshold) and these very large plans, which hold a very significant proportion of all defined contribution assets, that produce the commonly cited impressive averages.

What is most important about this is what it implies for the significance of these holdings of employer securities to the overall retirement income portfolio of the typical participant and the level and distribution of risk these holdings impose.

Virtually all of these very large sponsors that

¹ See Shlomo Benartzi and Richard Thaler, “Risk Aversion or Myopia? Implications for Retirement Savings”; Thomas J. Healey, “Defined Contribution Plans: Some Observations on the Risks and Rewards”; and Alfred Ferlazzo, “Changes Under Way in Defined Contribution Plans,” in this volume.

account for the vast majority of the dollars that are producing these high averages cover the same workers through defined benefit plans. Again using the Form 5500 data, we can observe that about 85 percent of the participants in these defined contribution plans with substantial employer securities exposure (in excess of 10 percent of assets) have established these plans as a supplement to a primary defined benefit plan. The typical benefit formula for a defined benefit participant at one of these large firms is designed to produce a replacement rate between 50 percent and 80 percent of final pay for a full-career worker.

This leads me to conclude that in most instances the defined contribution plans with large employer stock investments represent the gravy on the retirement income train. If we were to measure the holdings of employer securities as a proportion of the total portfolio of the average participant (rather than the dollar value of plan assets), I would expect to find that the average exposure is in the single digits.

For what I suspect is the vast majority of these participants, this level of exposure represents a pretty efficient overall asset allocation strategy, making it very important for us to effectively distinguish between the baby and the bath water in assessing the policy options. While there surely remains the obvious potential for abuse of employer securities and real estate in individual account plans that is highlighted by the Color Tile case, we must be continue to be careful not to reach too many conclusions on the basis of the first pass at the statistics.

In the case of most individual workers, the exposure to employer stock is actually rather modest. We should be very careful not to foreclose the potential for many to make a reasonable investment in what is probably the one stock they actually know something about. More broadly, however, the distribution of these investments in employer securities, a large portion of which are made at the worker's direction, may in fact tell us more about the extent to which the system has evolved in response to participants' needs and desires.

■ Employees as Investors

Benartzi and Thaler provide a more general

perspective on the challenges inherent in a pension system that is more and more evolving toward the participant-directed individual account model by addressing the perceived unwillingness of many workers to exploit what has long been a basic article of faith among the financially literate: the well documented equity premium.

Their analysis confirms what we have long believed about the assumed inability of typical workers to make reasonable assessments about their capacity to bear financial risk and make investment decisions accordingly. The presumption behind the analysis here is that in fact these workers are making investment decisions in the context accumulating and investing a portfolio over the extended time periods typically associated with retirement savings.

Fundamentally, the underlying issue is the same as that concerning the magnitude of investments in employer securities: What really is the role of these defined contribution plans, and can we presume that there is an "average" economic purpose that permits analysis in the aggregate of investment patterns? We may better explain the seemingly irrational behavior we observe by setting aside our interpretation of what behavior ought to be and questioning whether we are simply attributing too simplistic a role to these arrangements as retirement savings vehicles and consequently assuming too narrow an average role in the investment strategy.

A variety of widely cited statistics are relevant to this consideration. Of the nearly 40 million participants in defined contribution plans, nearly one-half are also covered by a defined benefit plan. It has only been in the last five years or so that the majority of defined contribution plans appear to be the primary source of pension savings for the workers they cover. Our latest estimate of 401(k)s shows fully three of five participants as covered under another plan. Effectively all of the workers in these arrangements are now covered by the Social Security system as well. While it is not the case for the average worker (who currently has perhaps only about a 60 percent probability of receiving some type of employment-based benefit at retirement), it is not unreasonable for those enrolled at any time in a defined contribution plan to expect that most of their retirement income will be from some other source than that plan.

My point here is that the balances we observe in 401(k)s in many circumstances represent something entirely different from retirement savings of the form we typically associate with that concept. They may, in many instances, be better represented as a sort of tax subsidized liquidity hedge, a kind of fungible financial asset that is rolled over through a variety of forms during the financial ups and downs of a working lifetime. The risk-averse behavior we observe may in fact be simply a logical element of a far more rational strategy for the component of the overall portfolio that it actually represents. What is termed risk-averse myopia may be simply a short-term investment horizon and a liquidity preference that makes more sense than many of us would like to accept.

While recent years have been a notable exception, the year-to-year volatility of stocks, no matter how great the equity premium, is ill-suited to an asset whose primary purpose may be insurance against what we might obtusely term “unanticipated household liquidity shocks”—what most people call an unexpected need for some quick cash. It is now widely known that about 60 percent of preretirement distributions from these plans are not rolled over to another retirement savings vehicle. In the long run, a large part of this money may ultimately find its way into the retirement savings stream, cycling its way through mortgage payments that are not missed while between jobs or a car that was necessary to get or keep a job with those precious accruals in the defined benefit plan.

I believe that we need to far better understand the full complexity of the financial circumstances of the households of the 1990s and the role of these defined contribution plans in the perpetual juggling act it takes to keep them afloat before we are ready to dismiss the investment decisions we observe as simply myopic. This view provides a nice transition into the discussion by Ferlazzo and a chance to tie this all together.

■ Paradigm Shift

Ferlazzo essentially tells us that the paradigm is shifting, from a sponsor-directed industry to a participant-responsive one. I tend to suspect that this has already occurred to a far greater extent than we are generally willing to recognize. My assessment of the first two discussions can be interpreted as an inclination to give participants

the benefit of the doubt in the logic and wisdom of their investment decisions and a suspicion that they have already taken control of the system in ways that its designers never fully intended.

What we often perceive to be inefficiencies and flaws are, in substantial part, merely reflections of rational behavior, the logic of which we often fail to initially grasp. The capacity of the average worker to rationally “muddle through” often eludes us, as our vision is obscured by prior assumptions or because we misinterpret the limited evidence available.

Were we able to better discern the full nature of the many factors influencing individuals’ asset allocation decisions, they would likely comport far better to our sophisticated models, and I suspect diminish our tendency to engage in the level of hand wringing that seems to have characterized recent discussion of the direction of the private pension system.

Typical workers may in fact have a better intuitive grasp of investment markets and portfolio structure than we are willing to credit them with. They may believe the “efficient frontier” is some place where Davy Crockett and Daniel Boone lived, and their notion of “serial autocorrelation” may be breakfast in the car, but they do know when the family station wagon is going to bite the dust and that it is possible to lose your shirt in a hurry in the stock market.

■ Conclusion

We might not like the implications of the role assigned to these presumed retirement savings vehicles in many circumstances, but that is somewhat of a separate question. If we can accept the notion of an elemental form of economic democracy that permits participants to assign whatever role their circumstances dictate to these savings vehicles, their behavior appears far more logical than at first glance. Our primary focus should remain on getting more people into the system and getting them to start saving, rather than worrying too much about their asset allocation; whether they have too much exposure to guaranteed investment contracts; or, in circumstances where they are covered by multiple plans, whether they are holding too great a percentage of employer securities.

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Changing Retirement Perceptions

by David Skovron

■ Introduction

I wondered why Dallas Salisbury asked me to participate in this forum. After all, I was trained as an actuary, and, as we learned earlier, actuaries generally walk backward and can tell you exactly what has happened in the past. And this forum is about predicting the future to some extent. So I read, with great scrutiny, the biographies of all the participants, and it became clear to me: they are all theoreticians; I am retired. I am the case model, the example of what is occurring. So I actually can talk about it. And, in addition to that, I did everything wrong. All of my 401(k) money was invested in fixed income. My employer had a cash-balance plan, and I took a lump sum when I retired. So I did it all wrong.

I imagine that with all the horror stories that we're hearing, at some point in the future there will be little groups forming called Retirees Anonymous. And I will say, "I'm Dave, and I invested in fixed income, and I took a lump sum." And someone else will say, "Well, I worked for AT&T, and when I started working there, Don Harrington told me, 'You don't have a thing to worry about. Between all of our programs and the federal program, you're going to be taken care of for your whole life.' And I get to be about 52, and they tell me, well, we're changing the program a little bit, and we're doing this, and we're doing that, and by that time, I've got three kids, one of them is in college, and two of them are about ready to go to college. I'm trying to keep up with the guy across the street who has a new Buick, and there was no way I could save for retirement."

There's a seriousness to this story. We all bear some degree of responsibility for the message that was heard between the mid-60s, when I started work, and maybe 12 or 15 years ago: the message given by most large employers and the federal government was, "Don't worry about anything.

We'll take care of you." That also applies to most of the boomers. They started in that period. And so it is very, very difficult to change their perception and get them to be involved personally in what is going on. And in fact, not having been participants in the decision-making process, they do not know anything about retirement plans. And when people say, "Well, you don't know anything about defined benefit plans," that is right. And they were told, "Don't worry about it. When you get to retirement, you'll sit down and we'll show you what you're going to get."

It seems to me, then, that part of the prediction of what is going to happen to retirement in the future concerns how effective we will be as a country, including both employers and government, in changing people's perceptions. And I think that's probably age-related.

■ Four Steps to Involvement

There probably are four steps to getting people involved. One is a general awareness that there is some sort of a problem brewing. The second step is to personalize the problem and say, "Yes, it can happen here, too. It's not that it's just going to happen to somebody else." The third step is to come up with some personal, rational plan, and the fourth is to actually implement it.

With regard to the first step, increasing general awareness, it is pretty clear to me that there is a general awareness that benefits, pensions, and Social Security are important. On an anecdotal note, when I proudly started in my profession in the mid-60s, and I would happen to be on a plane, my seatmate usually would ask, "What do you do?" I would proudly say, "I'm an actuary. I work on employee benefits—pensions." Then I usually would get a shoulder facing me in that direction, as if I had the plague. In the last 10 or 15 years when that question comes up, having

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become more sophisticated of course, I would say something like, "I'm a consultant on employee benefits and related human resource matters," and the response was different. People would say, "Oh, really. Well, what do you think is going to happen with Medicare?" Or, "What is going to happen with Social Security?" Or "I have this thing in my own plan. Could you explain it to me?"

The next three steps will be more difficult. On the good news side, I have two children who joined the labor force 10 and 7 years ago, at a time (a) when no one was promising them the world and (b) in which there had already been significant discussion in Washington about where do we conserve and how do we take care of the problems of people with inadequate retirement income. They are now ages 29 and 32 and they and their friends are all talking about the need to save for their own retirement and take some responsibility for their own financial security.

So I think there is a positive potential for the younger members of the work force. Now, are they all actually saving money? No. And interestingly, I was just speaking to someone at Merrill Lynch who said his experience with people under age 35 at seminars and meetings is that they talk a good game about what they are going to do, but they are not really saving the way they should. But I suspect there is *enough* time and *enough* awareness on their part, and they will make saving a part of their life.

The bigger problem, of course, occurs with people who are older than that, people who have

had the rules changed in midstream and do not have the ability to significantly alter their consumption and savings patterns. And I guess folks more learned than I have talked about all of the things that they will do to get by.

However, I would not underestimate the value of advertising and the financial service firms that view this as a fabulous opportunity to get more assets under management, which is their goal. The advertising and the services and education they provide will be a push from another direction that will probably help people do a better job about their own saving.

In early 1993, a potential member of the Clinton administration said in an interview that he had run the numbers and concluded that individual retirement accounts do not work. They just transfer savings from one place to another. But President Clinton said, "They do work, and I'll tell you why they work. It's because firms like Merrill Lynch advertise the hell out of them and it gets people's attention, and they do something."

■ Conclusion

I leave you with really optimistic news. When the subject of retirement becomes a cartoon in the *New Yorker*, I think we are getting somewhere. This cartoon has a little kid, 3 or 4 years old, on a little scooter, and another little kid, wearing a suit, carrying a briefcase, saying, "Do you have a moment to talk about your retirement years?" If this indicates that it is chic to discuss retirement issues, then the future will work out.

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Mandatory Defined Contribution Accounts from an International Perspective

by Estelle James

■ Introduction

One of the major developments in the retirement security area in recent years has been a global movement in the direction of mandatory systems that include a funded, privately managed defined contribution component or “pillar.” Typically, these new systems also contain a tax-financed or pay-as-you-go defined benefit (PAYG DB) publicly managed component, to provide a social safety net. Thus the mandatory system is made up of two “pillars,” one of which is defined contribution (DC). This is a feature of new social security systems around the world.

This development has been spurred by problems observed in single pillar PAYG DB systems that have predominated until now. These problems exacerbate the slowdown in economic growth found in many countries and, in turn, will be exacerbated by rapid population aging in most countries over the coming decades. The problems include: overly generous benefits that are not closely linked to contributions, early retirement that leads to a smaller labor force, high contribution rates that will grow still higher as populations age, evasion and escape to the informal sector, a failure to augment national saving, misallocation of public resources to cover social security deficits, a lack of redistribution to low-income groups, undesirable intergenerational redistributions (in which future generations will lose real income), and the growth of a large implicit social security debt that eventually makes the system unsustainable.

These problems hurt the old, who depend on sustainable old age systems, and they also hurt the broader economy. Therefore, many countries are concluding that reform is essential. The reforms typically include a large component that is DC-funded and privately managed.

■ The Shift to Mandatory DC Systems

In a DB system, the government—which means taxpayers at large—bears the risk that longevity will turn out to be longer or revenue growth smaller than expected, whereas in a DC system workers bear some of the risk. More important is the impact on incentives—when government bears the risk and when benefits are not closely linked to contributions, we have moral hazard problems—people trying to become eligible for benefits but evading their contributions or underreporting their required contributions. Eventually this can lead to the financial breakdown of the PAYG DB system. In many Latin American countries, 40 percent of the labor force works in the informal sector, where essentially they escape taxes and regulations. In some cases they still collect benefits, imposing the cost on others. In many cases, they are working less productively than they would in the formal sector.

In contrast, in a DC plan, benefits are linked closely to contributions. Workers and their employers may be less likely to evade and distort their labor market choices in this case. Even if they evade, they bear the cost in terms of lower capital accumulation and benefits when they retire. System sustainability is not threatened.

Another form taken by moral hazard is the incentive for workers to retire early when they are not penalized on an actuarially fair basis. In many countries with mandatory PAYG DB plans, workers retire well under age 60, sometimes under age 50. In Hungary, for example, the average retirement age is 54. This puts a huge financial strain on PAYG systems. And longevity is likely to increase—every time the Social Security trustees take stock, longevity has increased faster than previous predictions. Politically, it is very difficult to raise

the retirement age in a DB system. In a DC system in which the capital accumulation is annuitized upon retirement, if longevity increases, the worker has the option of retiring at the same age and getting a lower benefit or retiring at a later age and receiving a larger benefit. Within specified limits, the retirement decision and its costs are left to the individual worker, the decision is removed from the political arena, and an automatic financial adjustment mechanism is built in. The number of people taking early retirement may decline and those who do retire early do not impose a heavy financial burden on others and on the system as a whole.

Politically, DC plans have other advantages. They can help eliminate the privileges granted to special groups, which are found in many countries. In some cases there are 10 or more different regimes, as groups with more political power get a regime that awards higher benefits or charges lower contributions—again imposing a cost on others. In a DC plan, these special privileges are more transparent, because they require explicit contributions by the government into the workers' accounts, and therefore they are more easily avoided.

■ The Shift Toward Funding

As part of the recent wave of structural reforms, we are also observing a shift toward funding and away from heavy reliance on PAYG. Funding is important because it reduces the likelihood that countries will make promises in the short run that turn out to be unaffordable in the long run—because money is paid up front to finance the promised benefits. Funding also minimizes the need for tax increases as populations age. It avoids the intergenerational transfers that are inherent in PAYG systems. And it can help a country build its national saving, which is committed for the long term. Many countries believe this is very important for their economic growth. For example, in the United States we have a very low rate of savings, and funding of old age systems is a way of increasing the national savings rate—one that may be more politically acceptable and less economically distorted than other ways.

■ Private Management

Finally, we are also observing a trend toward

private management of the funds. The experience in most countries with publicly managed pension reserves has been dismal. Many countries have lost money; there have been large negative rates of return. The basic reason is that political, rather than economic, objectives have determined the investment strategies of these funds. In some cases the availability of public pension reserves may have led governments to deficit finance more than is healthy for the economy, because of their exclusive nontransparent access to a large pot of money. The hope is that private management will do better because competition will lead governments to maximize investment returns and the productivity of capital that this implies. This, in turn, results in a higher Gross National Product (GNP) and a higher rate of economic growth. Economic growth is further helped by the financial market development that takes place as a result of having a funded decentralized scheme, especially in middle-income countries. In Chile, for example, the shift toward a funded, privately managed system has been credited in preliminary econometric studies with increasing the rate of national saving substantially and total factor productivity by as much as 1 percent per year.

■ Three Approaches to Reform

In the generic model for structural social security reform, countries retain a publicly managed tax or PAYG-financed component, which is intended to provide a social safety net. This could take the form of a small flat benefit that is uniform for all, a means-tested benefit (that is cheaper), or a minimum pension guarantee. Then they add a funded privately managed DC component. But actually, there are many variations on this theme. Each country is doing it a bit differently. Three broad approaches have developed.

The Latin American Model

First we have the Latin American model, of which Chile was the pioneer. Chile adopted its new system in 1980. The system was so successful that, within the past few years, it has spread throughout Latin America, including Argentina, Peru, Colombia, Mexico, and Bolivia. Practically all of Central America is on the verge of moving in this direction. I would expect that five years from now, perhaps

80 percent of Latin America will have this model. Hungary is also on the verge of adopting a variant of this system. It probably is fortuitous that very high rates of return were earned in the first 15 years of the Chilean system, which is encouraging other countries to adopt its plan.

The key feature of the Latin American model, as compared with other reform models, is that workers have their own DC accounts and choose their own investment managers. The worker typically contributes 7 percent to 13 percent of his or her wage, and chooses the pension fund that will invest the money. Of course, the pension funds are subject to extensive government regulation, as is necessary in a mandatory system.

Another key feature of the Latin American model is that it involves transition costs. A financing gap develops because current pensioners and older workers who will retire soon must continue to be paid their defined benefits, but some of the contribution has now been diverted to the worker's individual DC account. These countries therefore have to find other revenue sources to cover the financing gap. Typically, bonds are issued recognizing the acquired rights, and these are paid off in a lump sum on the worker's retirement (Chile) or in a stream of compensatory pensions after retirement (Argentina). These financing needs are thus stretched over 50 to 70 years, although they are greatest in the first two decades. The financing needs are covered out of a variety of sources, including a preexisting budgetary surplus (Chile), privatization proceeds (Peru), and keeping some workers in the old system so their contributions continue to flow into the PAYG coffers (Argentina). The task was facilitated in the Latin countries by the fact that their coverage rates were far from complete, their populations are relatively young, and so their implicit pension debts were relatively small—far below 100 percent of GNP in most cases.

The Chilean system (and that in other Latin American countries) has been criticized on grounds that its administrative costs are high compared with what they would be in a well-run centralized scheme, and this leads to a net rate of return that is considerably lower than the gross return. Much of this cost comes from the fact that there are funds to be invested in a diversified portfolio, and this involves some administrative costs. This is understandable and unavoidable in a competitive funded

system. But part of the cost stems from marketing expenses—the high commissions that are paid to salesmen who lure workers into their pension funds. Marketing and switching costs account for about one-third of the administrative expenses.

Although this is a valid criticism of the Chilean system, I think this criticism has been overestimated. First, it is based on data from the first 5 or 10 years of the system. If you are setting up a whole new pension apparatus, with new financial firms, there are bound to be high start-up costs. Over the longer run, these costs may be small compared with the assets that the firms manage. Second, the charges are front-loaded. That is, they are levied on new incoming contributions rather than on assets. At the beginning of a worker's contributory lifetime, current contributions and therefore charges will be very high relative to assets, but later on they are low relative to assets and have a much smaller impact on the net rate of return.

If you were to ask Chileans whether they wanted their old PAYG DB system returned, with its old problems and somewhat lower administrative costs, as compared with their new DC system with its high administrative costs, there is no doubt which would win. That is why the Chilean model (with variations) is spreading throughout Latin America. So I do not think we should overemphasize the administrative cost problem. At the same time we should try to devise mechanisms that contain these costs—such as allowing pension funds to charge lower fees to long-tenured affiliates to create disincentives to excessive switching.

The Funded OECD Model

A second model is found in several countries of the OECD—Australia, Switzerland, Denmark, and the United Kingdom. In these countries, DC accounts are set up for workers on a companywide or occupational basis and the investment managers are chosen by employer or union trustees. This system was chosen in part for historical reasons—it built upon an extensive system of voluntary employer-sponsored or union-negotiated pensions.

These countries typically had little or no transition costs because they had a very small public system with low benefits and contributions in the old system. In Australia, for example, the old system was simply a means-tested public pension

financed out of general revenues. The government realized that, as the population aged, even this modest system would become increasingly expensive. Moreover, Australia wanted to increase its rate of national saving. So the government instituted a requirement that employers must provide “superannuation” for their workers. The mandatory contribution rate began at 4 percent and will gradually rise to 15 percent of wages, of which 3 percentage points will be paid by the government. These rates should not surprise anyone here because we know that to provide minimally decent retirement income indeed requires that 12 percent to 15 percent of wages be set aside each year. Australia continues to back up this mandatory DC scheme with its first pillar—a means-tested tax-financed benefit.

One problem with the OECD model, where the employer or union representatives make the investment decisions, is the principal agent problem. Perhaps the employer or union will make investment decisions that do not please the workers—yet workers bear the risk. For this reason, political pressures are likely to build to allow workers to opt out of the companywide scheme. That is exactly what you observe in the United Kingdom, for example, where the employer can opt out of the state earnings-related scheme, and the worker can opt out of the employer’s scheme, if the worker thinks he can do better. In Australia, too, we observe movement toward giving workers the right to opt out to their own retirement scheme that may be held in custody by a bank. Opting out increases monitoring difficulties and costs, but it also allows greater responsiveness to differing preferences about risk versus yield for different workers. This is one of the ways I would expect the OECD model to evolve in the coming years.

The Swedish Model

Yet a third model is the Swedish model, a notional defined contribution system. In this system each worker has an individual DC account but the accounts are not funded; they are empty or notional accounts. The money that is paid in today is used to pay pensions today—the system remains PAYG. Each year the accounts are credited with a notional interest rate and the notional accumulation is converted into a real annuity upon retirement. The pension is presumably set so that the present value

of the expected stream of benefits equals the notional capital accumulation.

This system has many of the advantages of a DC plan but not the advantages of funding. That is, it produces a close linkage of benefits to contributions, which should reduce labor market distortions. It may also reduce evasion or the negative consequences of evasion to system sustainability. If the rate of conversion to the annuity depends on the expected future life span of the retiree, it should reduce early retirement; and if the worker chooses to retire early, he bears the full cost in terms of lower annual benefits, rather than imposing extra costs on others. However, because the imputed interest rate and rate of conversion into an annuity are politically determined rather than market-determined, some of these advantages of the DC system may be lost. For example, the rate of conversion into an annuity may not be set to reflect expected life span, in which case the incentive for early retirement and the cost it imposes on others may remain.

A big advantage of the notional DC system is that it avoids transition costs because it remains PAYG. For this reason, it is especially attractive to countries with a large implicit pension debt that would be difficult to pay off in a transition to a funded system. Although Sweden developed this plan, it was adopted first in Latvia, in the hopes that switching from DB to DC would help reduce early retirement and special privileges, thereby cutting system costs. Italy has also adopted this plan in principle, although not yet in practice. While China aims to have funded DC accounts, so far, in many localities, the high costs of the present system have required almost all incoming revenues to be used to pay off the present obligations, leaving the accounts largely unfunded or notional.

While the absence of transition costs is an advantage from the financing point of view, it is a disadvantage from the real economic point of view because it implies the absence of funding. This in turn means that national saving is not increased, financial markets are not developed, contribution rates will have to increase substantially as populations age, and the notional rate of return is likely to decline for future generations. To avoid these problems, Sweden is planning to build a “buffer fund” over its notional system; however, this brings the problems associated with publicly managed

funds. Poland hopes to use notional DC accounts only as the first PAYG pillar, while adding a second DC pillar that is funded. This solution, however, requires yet another arrangement to provide a social safety net or minimum pension; the overall system and its contribution rate are likely to be larger than most countries would want in a mandatory scheme.

Over the next five years, I expect many countries in Eastern and Central Europe and the former Soviet Union, which have aging populations and large nonsustainable PAYG DB systems, to move toward structural reforms built on the Latin American model or the Swedish model with a funded second pillar. Given its demography, pension debt, and contribution rate (which are low compared to other industrialized countries), the United States could adopt a variant either of the Latin American model or the OECD model, with a mandatory DC diversion or add-on that could be employment-based or individual.

■ Conclusion

Two points in conclusion: First, I believe this partial shift from PAYG DB to funded DC and from public to private management is inevitable, pushed by basic economic and demographic forces as well as by the favorable experience of other reforming countries. Second, I want to reemphasize the importance of public education. It is very important at the prereform stage, so the public understands the problems with the current system, the reasons for change and the reform options. You simply cannot change the Social Security system without a lot of prior public education. And at the post-reform stage it is very important because if you give workers the right to manage their own retirement savings accounts, they must be educated on how to do that well, or we will simply be building another social problem for the years ahead when they retire.

17

Encouraging Saving as a Business Tool

by Richard Dunn

■ Introduction

I enjoy participating in the Employee Benefit Research Institute sessions because you learn as much from the audience as you do from the speakers and the discussants. Having been designated a discussant for today, I took function literally, and so I hope my response here is not too impressionistic. I listened to all of the presentations and give you my impressions as someone who has fiduciary responsibility for some of the largest plans in the country—those at General Electric.

I also will make one fearless prediction. We were talking about how we will fare in a defined contribution world. As long as the S&P continues to go up sevenfold every 15 years, and 179 points a day, we are going to do *great*. The problem is, though, that I think we may be at the high watermark of that era. Of course, I have been saying this since 1993. As my friends on Wall Street, Kidder Peabody, used to say, “If you’re five years early, you’re not only early, you’re wrong.” So I have been wrong, but I hope my fear did not greatly affect our communication efforts to people.

■ Gaining Perspective

As a plan sponsor, I am expected to inject a dose of reality, but I have a quotation from philosopher David Hume in my office that says, “Reality is that set of inferences we have forgotten were inferences.” I find that when people look at pension plans and savings plans, they see very different things than I see. The government sees them as its biggest tax expenditures, and, in some sense, that is true. The unions see them as entitlements, and, in some sense, that is true. I see them as a business opportunity, and that is what I would like to discuss.

We do an interesting thing at GE, and it’s the only company I know that perhaps has the luxury

to do this. Every three years, we negotiate with the union, and I talk to the leadership directly about what they would like to have—and they would like to have a lot more than we usually want to give, which makes for a difficult discussion sometimes. But for those nonunion employees, who are now 80 percent of our work force, I try to go to as many of the locations as possible and find out not so much whether we are doing the right thing but rather how they perceive what we are doing.

This year was a high watermark year for investments and defined benefit plans, and we have both a terrific pension plan and a savings plan. Interestingly enough, the two major comments I took away this year as criticisms were that employees do not have enough leisure time—which is something I have not heard since 1979—and also that there is a sense that there is a big party going on and they’re not invited. Unfortunately, both of those observations have the ring of truth.

When I looked into it, it turns out that leisure time is one area in which progress has not been made. In fact, we have regressed since 1979. One study said that we have only half a day more of leisure than people did in 1929. And in terms of there being a party to which they are not invited, the discussion by Jack Bruner¹ showed that, when you see CEOs with pay 400 times that of an assembly worker, that is the issue that will arise. I find it hard to understand why that is relevant to people’s decisions, but it is, and that’s a reality you have to consider.

In terms of the difficulty of getting people to save, and it has come up in many, many different ways, here is what I find amazing. I understand David Blitzstein’s point that some people cannot

¹ See Jack Bruner, “Retirement Security: A Market-Driven Approach,” in this volume.

afford to save.² There is a small group of people for whom that is true. But Americans spend, on average, \$2,000 per person on gambling. The same people who cannot afford to put money into our 401(k) can afford to buy lottery tickets. That is the education process we have to explore. I see a lottery ticket as just an investment in the future—a foolish investment, of course, because if you understand statistics, you are unlikely to get something back.

■ The Reality of the Marketplace

First of all, we should remember that in the United States, establishing a plan is a voluntary act. And unfortunately, more than half the employers do not do it. GE does it, and does it big time. We do it not because we are nice guys but because it is a business tool. That point is the least understood in the academic community. And secondly, when we establish plans, it is not just to subsidize retirement, although that is probably the major reason. We want to give incentives to certain kinds of behavior. We want people to be able to leave at age 60 if that is their choice. That is why we have an age 60 retirement. In effect, there is a penalty for staying on, in that you are working for 60 cents on the dollar. But that's a decision that we have made, by the way, in concert with the unions. Everybody likes that.

What has been an amazing surprise is that while we may spend only half the money on savings as we do on pensions, we have many people that embarrass me because they now are millionaires. These are union workers who put their money in and left it in for 33 years. I met one white collar employee the other day who has 12,000 shares of GE, or \$1.2 million. That does not even include the value of his pension.

What I do not like about the charts presented at this forum is that they predict the past. If rising markets were always true, you would know what to do. The issue is that it may not be true. It has not been true for any other society in history, other than ours. But you have to use some model. We are very careful to give people the correct academic discussion of how to allocate their investments. And it scares me because no matter what I do, every

² See David Blitzstein, "In Defense of Defined Benefit Plans," in this volume.

time I go out to the factories, I ask, "How's the education? Is it good?" The answer is: "Yes, great. We don't care because we're putting all our money in GE stock."

Another thing about the magic of defined benefit plans, which I think is somewhat overstated, is funding. The reason employers still have these plans at all is that, many of the plans, such as GE's and those of a lot of other big companies, are overfunded. So there is no reason to get out of them. Another reason employers still have defined benefit plans is that you cannot easily get out of them even if you want to. There are all kinds of restrictions.

Furthermore, employers vote with their feet every day. There has not been, in my experience, a new defined benefit plan in 20 years. Now, you may tell me there are one or two. But the new ones that are reported are, as far as I can tell, spin-offs of existing plans. I am suggesting that if we were starting a business today, or had started one over the last 15 years, we would not have a defined benefit plan. By the way, GE has 50 subsidiaries that needed to make this decision, and not one of them in the marketplace has decided that a defined benefit plan is the way to go.

So I return to Dallas Salisbury's point.³ We may not like it—I don't like it. I like defined benefit plans; that is my expertise. The union is my best friend in this because it likes them, too. But it is not the reality of today's marketplace.

In response to Professor Joseph Quinn's⁴ question about retirement ages, we like a set retirement age. We use it very advantageously. We have a retirement age of 60, and people leave on average at 60 years and two months. Essentially, they are leaving as soon as they can because we have constructed a successful way for them to do it.

■ Legislative Initiatives

There have been two pieces of legislation that I think have been brilliant in their results, if not

³ See Dallas Salisbury, "Retirement Income in America: Where Are We Now and Where Are We Going?" in this volume.

⁴ See Joseph F. Quinn, "The Role of Bridge Jobs in the Retirement Patterns of Older Americans in the 1990s," in this volume.

their design. One is the Employee Retirement Income Security Act of 1974 (ERISA). Twenty years ago, we established a voluntary system that is now approaching \$7 trillion in assets, more than the amount of all the stocks on the New York Stock Exchange. I am writing a paper now in which I am trying to compare this legislation with a domestic equivalent of the Marshall Plan. It is a way that we put money into the economy, have people not touch it for 30 or 40 years, and build it up. And I do not believe that people were so smart when they contributed that money, but it has worked out well.

A second piece of legislation that has worked out very well is the Tax Reform Act of 1986. Why? Some people are millionaires because this legislation included a 10 percent penalty on distributions and the penalty worked. They used to take the money out every three years and spend it. Now, they say, "I'm going to pay taxes plus 10 percent?"

On the other hand, having said that, I think the single biggest problem that we have is that, generally speaking, Congressmen and their staffs view pensions and savings plans as a revenue drain without understanding that they are an engine for the economy. We are not going to cure that during this forum, but that would be the educational point we'd like to get across about the value of the plans.

■ Conclusion

Finally, I would like to make a few comments on some of the words I have heard at this forum, such as "paradigm." If you notice, employers use the word "paradigm" when they want to take something away. They never have to say it if they want to give you something. "There's a new paradigm, and you're going to have more money." No. If it is a new paradigm, it always is take away.

Another issue is education. I am a big believer in education for two reasons. One is that it is easy to go back to upper management, and say, "You know what employees really want? Education. They don't want 2 percent more in wages. They want education." Education is very easy. But the more destructive part about education is that the people who used to come to me when I was a consultant to help them with education were paying their people \$7 an hour. And I thought, "There's nothing to educate about this. If you were concerned about those individuals' retirement, you wouldn't be paying them \$7 an hour." What they really wanted was to educate them to put money in the plan so the higher paid people could maximize contributions, vis-a-vis the 401(k) rules.

I also would like to emphasize that there is only one group of people in the United States who can set up the plans that we all want, and that group is the employers. And the employers view these plans, like it or not, as a business tool, and that is the mind set we must consider.

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Annuity Redesign: Proposing Flexibilities in Payout Arrangements

by Mark J. Warshawsky

■ Introduction

I will limit my remarks to discussing some of the statistics highlighted in Dallas Salisbury's very interesting presentation,¹ to drawing some inferences from them on future issues and problems that may arise in ensuring lifelong financial security for the citizenry, and offering one possible solution.

Chart 4 in Mr. Salisbury's presentation, which gives poverty levels by age group, shows two disturbing patterns. Poverty levels are higher in the population over age 65 than for most of the rest of the population, and, for the older group, poverty levels increase dramatically with age. The explanation offered by Mr. Salisbury for the first observation is that because today's retirees did not save enough or have good pensions, poverty levels are higher for them than for the rest of the population. That explanation might very well be true, but this hypothesis does not explain the second observation that poverty levels increase with age among those over age 65.

■ The Problem of Existing Arrangements

Many of today's 85-year-olds have seen their annuities from defined benefit plans dwindle slowly over time in real terms, owing to the progressive cancer of inflation. The younger retirees, those between ages 65 and 75, came to retirement with accumulations of defined contribution plans and other saving vehicles, and, increasingly, lump-sum distributions from defined benefit plans. And they simply don't know how to spend the money over their retirement years, particularly in the face of uncertainty over their length of life.

I do not want to suggest that most retired people are so imprudent as to spend all of their sometimes small amount of retirement money on a second or vacation home, and then they are left with little or nothing. But it is likely that many retired people simply tend to spend more quickly than is optimal, and this would be consistent with Mr. Salisbury's contention that people tend to underestimate their life expectancy.

In fact, the options available to them under the federal requirements for minimum distributions force them to draw down their finances over their life expectancy. By definition, one-half of them will live beyond that, and some will live many years beyond that. And of course, with life expectancies increasing significantly—and this is even since the time the Internal Revenue Service wrote its regulations for minimum distributions—the problem can be expected to grow.

The traditional solution to this problem was to mandate that retirees take their pension accumulations through an immediate fixed life annuity, preferably as a joint and survivor payment. This neatly gets around possible imprudence and the uncertainty about the length of life problems, although, as we noted, the inflation risk remains. But in many circles, annuities are not popular. This is evidenced by the fact that they are not even offered as an option in many qualified plans. Additionally, in individual insurance-product markets, single-premium, immediate fixed annuities are currently not big sellers.

This aversion to annuities may have two causes. One is a psychologically irrational reason, and one is quite rational. In terms of the irrational reason, in refusing or ignoring an annuity, many people seem to be reluctant to make what will be an irrevocable investment choice involving a significant sum of money. This is irrational because they then expose themselves to significant risk of outliving their assets, as well as various types of

¹ See Dallas L. Salisbury, "Where We Are and Where We May Be Going," in this volume.

imprudent behavior. Yet it may be a rational decision if they are exposed to other types of risks that present-day forms of annuity cannot insure against, such as future uninsured health expenditures and long-term care needs. It also may be rational if there are available alternative investments that are better correlated with inflation, and a variable payout option from a variable annuity product is not available.

As Mr. Salisbury says, most of the population does not get supplemental retiree health coverage from their employers, and, by all accounts, among those who do receive this benefit, it is being eliminated or cut back by employers. Therefore, more and more retirees will need to purchase expensive coverage in the individual market. Few people obtain long-term care coverage, either in the group or individual markets, and many are therefore forced to play spend-down games to qualify for Medicaid or to impoverish themselves and their spouses when long-term care needs arise. This may be another explanation for the increased poverty levels in the very older populations.

■ A Solution

There is one possible solution. It is still an annuity, but it is a better annuity than what we have currently. I will combine three elements in the annuity. It will have an element of long-term care. It will have an element of real payments, adjusted to inflation. And it will be a life annuity, so that it solves the length-of-life risk problem. It will pay benefits that respond to inflation, the level of benefits will increase when an individual needs extra support to cover long-term care expenses, and benefits will continue for as long as the individual (or couple) lives.

The best party to offer this long-term care real annuity is not the individual products markets, with their relatively high level of expenses, or the federal government, with its rigidity and lack of credibility, but the qualified plan, with its low costs, and government regulation permitting, capacity for innovation. I believe that this modest proposal is supported by Mr. Salisbury's statistics.

19

Adapting to the Changing Needs of Retirement

by Barbara Quilty

■ Introduction

How should individuals think about retirement? After Joseph Quinn's presentation¹—and what we have seen in the Retirement Confidence survey²—it is clear that retirement also will involve work. The vision of retirement as golden years is going to be a myth for most people. At this policy forum, we have only been talking about people who are fortunate enough to have private plan coverage. The majority of people do not have this benefit, let alone the ability to argue about how retirement benefits are delivered. They are dependent on Social Security and their own savings without any support from their former employers.

■ The View as an Individual

My personal level of comfort is highly dependent on my personal planning and saving. Social Security is going to be available at later ages. That means early retirement may be further in the future. Turnover has not increased dramatically in jobs, but it perhaps becomes more prominent as it affects those large employers who sponsor these plans that we are concerned about.

The defined benefit plans that we do have are designed for full careers. They generally are not designed for 7- to 10-year careers. The sum of the private benefit plans—unless there is some indexation, or way to address that shortcoming—will not add up to the full career plan that we design when we, as private employers, create our defined benefit plans.

¹ See Joseph F. Quinn, "The Role of Bridge Jobs in the Retirement Patterns of Older Americans in the 1990s," in this volume.

² Employee Benefit Research Institute, *The 1996 Retirement Confidence Survey* (Washington, DC: Employee Benefit Research Institute, 1996).

Thus my second point is that we need to expect that it will be necessary to supplement our retirement income with some kind of paid work. It could be by choice, or it may be by need. Early-retirement programs will help people leave the businesses, but for those who had different planning horizons, the early retirement programs also will result in shorter accumulation periods. That means shorter time to build that retirement income they expect to need when they retire from a full-career job. And so, if I go out early, it may exacerbate the need for me to find that bridge job to carry me to my full retirement.

And the third thing that I would take away as an individual is the ongoing need for financial planning—during my career and during my retirement. During my career, I need to build up a nest egg, to create as much capital as I possibly can. And one of the points raised at this policy forum was the value of those \$3,500 distributions that we make from our plans all the time. How can that produce a significant value if I take it at age 25 and save it until I am age 65?

■ The View as a Plan Sponsor

As a plan sponsor, this all says to me, "Maybe I ought to be giving people another piece of paper when they take those distributions that says, here's your distribution and if you invest it from age 25 until age 65, this is what it may be worth." While \$3,500 today buys a nice vacation, if you put that \$3,500 away, roll it over, it will make a significant difference in your retirement.

And, as an employer leaving this policy forum, I need to think about the design of my benefits with the expectation that my employees will have a multilayered retirement income, that a 30-year design is not going to work for everybody because most people will not work for a single employer for 30 years. Only about 15 percent of my employees

Retirement Prospects in a Defined Contribution World

will do that. One of the benefits of defined contribution plans is that they help create layers of valuable income at retirement and do not provide me with seven frozen layers of a retirement income.

■ Conclusion

It is clear that it is in my interest, as an employer, to have my employees educated and to be planning on their retirement when they are with another

employer because it is important that the layers of retirement income have been built appropriately. When we are mutually ready for their retirement, they need to have sufficient income for their retirement years. What they do when they participate in your plan is as important to me as what they do when they come to my plan because I will want them to have a satisfactory retirement, so that we can have a mutually beneficial retirement.

What Does It All Mean for the Future of Retirement?

by David S. Blitzstein

■ Introduction

In its unique way, the Employee Benefit Research Institute has raised a series of critical social policy questions in this forum that go beyond the scope of retirement security. Many of the issues discussed in the papers and presentations go to the very heart of what kind of country America will be in the 21st century. Will our economy continue to grow at a rate that will support the nation's economic, social, and retirement needs? Will that growth be distributed fairly among workers and retirees? Will our retirement programs deliver the economic security we expect of them?

As a representative of organized labor, with the direct responsibility for negotiating and administering pensions and health insurance benefits, I have developed strong views on the subject of retirement security based on 20 years of practical experience. I do not pretend to speak for all of labor on this subject, but I believe my comments would be supported by most trade unionists.

■ The Lack of Security in the Self-Reliance Model

From my perspective, discussing retirement security in the same breath as defined contribution plans is a contradiction in terms. Defined contribution plans, by themselves, without a strong defined benefit foundation, do not and will not support a viable system of retirement security for the great majority of American workers. A retirement system based on defined contributions will promote a society divided between winners and losers, where retirement security will be a hostage to capital-market risk, a pre-1935 landscape where old age and poverty will become synonymous again.

One of the major themes for this forum is the so-called shift in paradigms from a retirement

system based on paternalism to one based on self-reliance and individual responsibility. The sweeping downsizing and restructurings of the 1990s have popularized this self-reliance model. The model of individual responsibility has been promoted by various interest groups as a means of undermining the welfare state and weakening the social contract between employees and employers. In terms of retirement security, labor rejects the model of individual responsibility as much as we historically fought the model of paternalistic corporations.

There is nothing new about the model of individual responsibility. It existed in this country prior to the Great Depression. Government responded to the economic crisis of the 1930s by instituting broad social insurance programs based on income redistribution and community responsibility to protect individuals from the hazards of life. These successful reforms brought huge benefits to American society by raising the living standards of workers and retirees, by civilizing our labor markets, and by expanding the middle classes and generating economic growth.

At the same time, I take exception to the notion that the defined benefit pension system and employer-sponsored health insurance are products of corporate paternalism. More accurately, the post-World War II benefits system evolved from the actions of the War Labor Board and the collective bargaining demands of organized labor. From labor's perspective, these benefit programs were deferred compensation in lieu of direct wage increases.

The fact is, corporate America did not give employee benefits to workers out of the goodness of its heart. Unions, such as the United Mineworkers in 1946 and United Autoworkers in 1947, demanded them; and millions of workers took economic actions to gain pensions and health insur-

ance. Other unions, such as the construction trades and my own union, the United Food and Commercial Workers (UFCW), challenged management's traditional right to control these new benefit plans by demanding an equal administrative voice through multiemployer funds. These social-compact principles spilled over to the nonunion sector, where employers provided similar benefits to their employees to keep out the union.

I disagree with the premise of the article, "Retirement Income in America: Where Are We Now and Where Are We Going,"¹ that the need for flexibility and reinvention by large organizations means more reliance on defined contribution plans. Defined benefit plans have offered employers substantial flexibility in terms of a range of benefit designs, including account balance plans, early retirement incentives, and the provision of meaningful benefits for mid-career hirees. Also, reinvention often leads to a restructuring of tasks that still could mean continued employment for current employees that does not preclude a defined benefit solution.

■ The Savings Affordability Issue

Another recurring theme that troubles me in some of the papers is the assertion that today's elderly would be living better if they had saved more, and today's active workers must learn to save more to secure their benefit future. This assumes that workers can, in fact, afford to save more than they currently do. However, the economics of long-term wage deterioration in the 1980s, which is continuing in the 1990s, doesn't support this critical assumption. According to the Economic Policy Institute, the typical American family was worse off in the mid-1990s than it was at the end of the 1970s. In the five-year period from 1989 to 1994 alone, the median family income dropped \$2,168, or 5 percent.

The issue of savings affordability requires more in-depth research. Many of the statistical facts provided in the various papers indicate that an affordability problem exists. If rates of sponsor participation are a proxy for the ability to contribute to a defined contribution plan, then the tables

¹ Dallas L. Salisbury, "Retirement Income in America: Where Are We Now and Where Are We Going," in this volume.

presented in the Employee Benefit Research Institute's *EBRI Databook on Employee Benefits*,² would seem to demonstrate the economic inability of low-wage workers to afford to contribute to defined contribution plans.

Two points worth mentioning from the article, "Retirement Programs in Transition Worldwide"³ have to do with the magnitude of actual contributions being made in various national retirement systems. The article states that, in the United Kingdom, policy experts are concerned about the shift to defined contribution plans because company contributions to defined contribution plans are half as large as contributions to defined benefits plans—8.2 percent versus 15.4 percent of payroll.

In comparison, the mean U.S. employer contribution to large corporate pensions, both defined benefit and defined contribution, was only 2.9 percent of payroll in 1993. Moreover, the Australian superannuation plans, with their mandatory contributions, required 9 percent of payroll employer contributions by the year 2002, with an additional 3 percent contribution paid equally by employee and federal government, totaling 15 percent of payroll. These contributions indicate the true cost of a pure defined contribution retirement system, and their size deserves reflection by all employers.

■ Structural Flaws in Defined Contribution Plans

The amount of print devoted to lump-sum distributions highlights one of the most serious design flaws in both defined contribution and defined benefit plans. My union opposes lump-sum distributions as bad public policy. In their recent negotiations, the UFCW eliminated the lump-sum distribution option prospectively in a large multiemployer defined benefit fund because members were squandering their pensions at early ages and because the fund was suffering invest-

² *Employee Benefit Research Institute, EBRI Databook on Employee Benefits, Fourth edition (Washington, DC: Employee Benefit Research Institute, 1997).*

³ Scott Dingwell, "Retirement Programs in Transition Worldwide: Non-U.S. Defined Contribution Experience," in this volume.

ment losses from the lump-sum distributions due to low interest rates, which was, in effect, defunding the plan. Lump-sum distributions raise an important policy question: Are defined contribution and defined benefit plans retirement plans or severance packages?

Finally, it would be interesting to analyze what proportion of new retirees in a given period are electing lump-sum distributions versus annuities, where there is a choice. In the UFCW plan I cited, 40 percent of the benefit payments were elected in the form of a lump-sum distribution.

Investment self-direction by employees is another structural flaw in defined contribution plans. Regardless of the level of investment education, nonprofessional participants cannot outperform professional money managers retained by defined benefit plans. The whole issue of self-directed retirement investing is a conundrum to me. How is it that stringent fiduciary rules require me, as a trustee of a \$2.2 billion defined benefit plan, to hire professional money managers and consultants to invest fund assets, but the same rules create safe harbors for corporate sponsors of defined contribution plans that pass off investment risk and responsibility to individual participants?

Alfred Ferlazzo raises some of these points in his article⁴ by criticizing the way plan sponsors have selected investment options, and he even recommends utilizing defined benefit money managers over mutual funds. But that still leaves the decision of asset allocation square on the shoulders of the nonprofessional participants. Ferlazzo also raises some interesting questions about excessive costs of defined contribution plans that require further research in terms of their impact on retirement security.

The article by Shlomo Benartzi⁵ reinforced my concerns about participants' self-directed investing. The fact that 58 percent of respondents to the Benartzi survey spent less than an hour on the decision of asset allocation does not promote much confidence in self-directed retirement investing. Moreover, the results of Benartzi's exercise on the

communication of return distributions are frightening. The fact that participants decided to allocate 90 percent to stocks does not suggest successful education to me; it is merely further evidence as to why noninvestment professionals should not be making these decisions in the first place.

Thomas Healey⁶ raises an important point about the fact that defined contribution plan asset allocations are poorly diversified because of high allocations to employers' stock. This is another contradiction in the Employee Retirement Income Security Act of 1974 (ERISA). Why doesn't the 10 percent rule for employers' stock in a defined benefit plan apply to defined contribution plans? It is absolutely absurd that 33 percent of defined contribution plan assets are invested in employer stock. How many more Color Tiles and Carter Hawley Hales do we have to experience before we end this charade? Are defined contribution plans legitimate retirement plans, or are they corporate mechanisms for controlling stock ownership and stock prices?

At the same time, I do not accept Healey's argument that, by adding employer stock and domestic equity together, defined contribution and defined benefit plans therefore have similar asset allocations. His own analysis contradicts this theory, based on poor diversification and unnecessarily high levels of risk.

Healey's analysis of Wal-Mart's defined contribution plan is instructive. Those Wal-Mart associates retiring since 1993 could have experienced as much as a 30 percent loss in their retirement account balances in just four years. This is a prime example of the shifting of market risk to employees. Carry out the same exercise with K-Mart, and the numbers become even more dramatic. And remember, these two companies employ a million workers.

I will make one observation concerning the opinion polls described in *The Reality of Retirement Today*.⁷ It has to do with the high expectations of

⁴ Alfred R. Ferlazzo, "Changes Underway in Defined Contribution Plans," in this volume.

⁵ Shlomo Benartzi and Richard Thaler, "Risk Aversion or Myopia? Implications for Retirement Savings," in this volume.

⁶ Thomas J. Healey, "Defined Contribution Plans: Some Observations on the Risks and Rewards," in this volume.

⁷ Paul Yakoboski, "The Reality of Retirement Today: Lessons in Planning for Tomorrow," EBRI Issue Brief no. 181 (Employee Benefit Research Institute, January 1997).

workers that the retirement contributions and the employer contributions made to their pension plans will be the most important source of their retirement income. If these expectations are frustrated, we can expect major workplace conflict in the 21st century.

Most of you have figured out that I am not very optimistic about our retirement prospects in a defined contribution world. I do not believe American workers can afford the real costs of a defined contribution retirement in terms of actual contributions necessary to fund sufficient replacement income or the ability to absorb market risk. I think we all agree that the average employee contribution rate of 7.1 percent of salary for salary-reduction plans will generate inadequate retirement income.

In addition, the information we have on average account balances for salary-reduction plans—only \$13,000 in 1991, and only 6.2 percent of plan participants, with more than \$50,000 in account balances—does not offer encouragement about the future of defined contribution retirement. Before we adopt this model so wholeheartedly, we should conduct thorough research regarding the pattern and economics of defined contribution benefits actually being paid today.

■ Conclusion

So what can be done to secure America's retirement future? I believe Edward Friend's presentation⁸ offers some viable solutions. The Friend thesis calls for reversal from where we seem to be headed with defined contribution plans, substituting a regenerated defined benefit pension model. This defined benefit generation would include employee contributions, maybe even mandatory ones; in addition, Friend would address portability by indexing pensions for vested terminations.

Voluntary pretax employee contributions for defined benefit plans also deserve consideration. Robert Paul has written about such concepts in what he called a Retirement Account Pension Plan, or RAPP, which would create a 401(k)-like plan built within a defined benefit plan. To make this successful, Congress would have to reconsider its revenue-driven policies and its obsession with budget deficits to support a real national retirement policy.

In the near future, it is hoped that we will all be attending an Employee Benefit Research Institute policy forum titled, "Back to the Future: The Return of the Defined Benefit Plan."

⁸ Edward H. Friend, "Dissent and Transition Consequences," in this volume.

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Legislative Initiatives for a New Retirement Model

by Congressman Earl Pomeroy

■ Introduction

As the final presenter in this discussion and as a Congressman from North Dakota, the only unique analysis I can bring is in the context of the Grand Forks flood. The flood was a rare event. A city of 50,000 became inundated, most particularly along the broken dikes but also through virtually every corner, every neighborhood of the city. In this very flat area, the storm sewer system—which works efficiently to take rain water from the streets to the river when the river is lower than the streets—works just as efficiently to take river water to every street corner when the reverse was the case. Thus the inundation. And we learned that just when you think things cannot get worse, they do.

The downtown caught on fire while it was under water. They could not get the fire trucks there because the water was too deep. So they put the fire trucks on a flatbed, hauled them in, and then dove through the water to find the hydrants to hook up the hoses, only to find no pressure. And so the downtown burned down. Murphy's Law was absolutely confirmed. And then finally, block by middle-class block, middle-income Americans knew that they had not understood their risk, had not prepared for it adequately, and now faced the very disturbing realization that they had lost tens of thousands of dollars of their net worth, and perhaps, in many instances, all of their net worth.

■ Baby Boomer Retirement: A Nondiscriminating Event

The same is absolutely true for the retirement conundrum facing the baby boomers. Again, it will be a nondiscriminating event. We are all going to get old, and we all will be inundated with old age. When we think things cannot get worse, they will. It will not be enough to get old. We will have

business setbacks, health setbacks, any number of things that will worsen our situations beyond what we can foresee. And the data we have been discussing today show that people are not particularly aware of the risks they face and may not be positioning themselves to address these risks adequately.

A congressional strategy to address this problem will focus on three primary components: education, expanding opportunities for individuals to accumulate retirement savings, and mitigating, to the extent possible, the new levels of risk that are being shifted to the employees in the new design of retirement savings plans.

Our task regarding education is multifaceted. Certainly, we have to deal with the public at large. We have an aging cohort. We know that only one in three boomers is on track with retirement savings. We must accelerate a broad public information campaign to make people aware that they simply have to do more relative to saving for retirement saving. They have to view retirement savings as a priority which has the same immediacy as other crucial matters, and we have a long way to go in this regard.

Last year, for example, BankOne proposed the notion of a credit card that could draw on 401(k) balances. That is a perfect illustration of the consumptive framework in which we find ourselves. We need to tackle this problem of consumerism, and we need to continue to pound on it, just as we are pounding on the hazards of smoking and a lot of other issues that we are trying to undertake in terms of broad public education.

It is in the work place that the best and most thorough pension and retirement savings education is taking place. But we need to do more. As we are all aware, substantially more risk is associated with the 401(k) design than with the defined benefit (DB) design. I like the analogy of the person

who walks on to the airplane. In the DB plane, you are met by the stewardess at the door. She says, "Please take a right, sit down, make yourself comfortable, the plane will be taking off shortly." In the defined contribution (DC) plane, you are instructed to turn left into the cockpit, and told, "You will be flying the plane, and by the way, before you take off, top off the tank." Data that show increasing rates of investment in equities and improving rates of plan participation indicate that we are making progress in work place education. Unfortunately, the statistics also show that we have a long way to go.

■ Education on Capitol Hill

Finally, we have a lot of work to do relative to education on Capitol Hill. There has never been, to my knowledge, a congressional hearing contemplating the policy ramifications of the broad-based shift to DC plans and the attendant shift of risk from employers to employees. That level of analysis has not begun on the Hill relative to the private retirement system.

Many of you have helped us organize a brown bag luncheon seminar to provide a regular series of briefings to members and staff on retirement savings issues. We still have a very long way to go because it is very dangerous when Congress acquires an interest in a topic without the attendant knowledge to know how to address the interest appropriately. The broad-based public interest in retirement savings has translated into a broader, much deeper political interest in retirement savings, and that is a mixed blessing. The good news is: Congress is interested in your issue. The bad news is: Congress is interested in your issue.

To continue our efforts at shaping a sound national investment policy, we need a retirement savings commission to look at the private component of how we save for retirement. I have co-sponsored legislation to establish such a commission in each of the last three congressional sessions. My initial goal with the commission was simply defensive: to try and build a picket fence around retirement savings vehicles, so that Congress would not undermine the tax expenditures that support retirement savings and would not continue to overregulate and actually discourage employers from creating new savings opportunities. Now I

have moved away from the defensive agenda and believe that we actually have a wonderful opportunity to take some positive steps forward, given the critical role that private savings will play. It makes sense to take a comprehensive look at whether existing retirement-savings vehicles that do provide tax incentives are interacting with optimal efficiency.

■ Expanding Personal Savings

In terms of the second strategy—expanding savings opportunities—there are a few basic ways to do this. First, we need to make it easier for employers to offer plans. We have a lot of work to do in this regard in the small employer context. Only about one in four workers in companies with fewer than 100 employees has a retirement-savings opportunity at work. In firms with fewer than 20 employees, only about 13 percent have this opportunity. In North Dakota, these small businesses represent the bulk of the work force. The SIMPLE plan passed last year was a good start at expanding coverage among small businesses. Now we need to study whether it is meeting our goals and whether more ought to be done in that respect.

In addition to employment-based activity, we ought to make tax-favored individual retirement account (IRA) participation much more readily available. I favor raising the IRA tax deduction from its current \$50,000 per household cap to allow households earning up to \$100,000 to contribute to tax-deductible IRAs. I would retain the \$100,000 cap—as opposed to some of the proposals on the Hill that would completely eliminate the cap—because we need to use some of our IRA resources to target lower-income workers. We need to figure out what we can do to help these workers help themselves relative to retirement savings. Obviously, the lower the income, the more demands are placed on it and the less discretionary income is available, making it harder to save. And that means you need a richer incentive to encourage people to save.

Rather than establish back-loaded IRAs, which address the tax quandary of affluent retirees, we need to enrich the incentives so that we get better participation rates at lower income levels. It simply makes sense from the viewpoint of long-term public policy. If low-wage workers can do more for themselves, we will have to do less by way of a

public safety net for individuals who retire without any savings at all. Otherwise, today's statistic that of one in six retirees is wholly dependent on Social Security will increase. If nothing else, we certainly will prove Professor Quinn's point about people working in retirement because they simply do not have any alternatives.¹ And these include people of rather advanced age in rather poor health. We can do better than that.

■ Minimizing Risk in Retirement Saving

Finally, a risk-mitigation strategy also should be part of the mix. By this I mean let us not give up on the DB plan. New DB plans are not being created today, as was mentioned, and we continue to see an absolute collapse in the number of DB plans, particularly in the small employer context. The number has gone from 150,000 in 1986 to 65,000 in 1993. And it may be considerably smaller today. I favor legislation that tries to address some of the structural insufficiencies of DB plans in light of the mobility of today's work force, as well as the realities facing employers, particularly the small employer as to the expense of creating or maintaining a DB plan.

The American Society of Pension Actuaries has produced some very interesting work on this point, and Congresswoman Nancy Johnson (R-CT) and I are working on a bill that would establish a DB equivalent to the SIMPLE deferred contribution plan passed last session. We want to make it easier and less costly for small employers to open or retain DB plans. There is a lot to be said for the DB plan, and we need to figure out how to we can create hybrid plans that capture some of the benefits of both DB and DC plans.

¹ See Joseph F. Quinn, "The Role of Bridge Jobs in the Retirement Patterns of Older Americans in the 1990s," in this volume.

We also need to discourage early access to 401(k) accounts. It is appalling that 66 percent of people are not fully reinvesting at the time of rollover. We need to address this leakage from their 401(k) accounts. The political tendency is to do exactly the wrong thing and give people easy and early access. People want access to their money, and it is the tendency to give it to them. All of the IRA proposals include early-access features to deal with pressing financial needs people face at various times in their lives. But these provisions do nothing from a retirement policy perspective. We have to be pretty tough on early access if we are going to ensure the accumulation of adequate retirement income.

We also need to be tough on lump-sum distributions, especially if, after studying the data, we see that giving people easy access to the lump sum is not leaving them well positioned to manage their longevity risk. And we need to consider this defined benefit to defined contribution shift in the private retirement system as we debate what future changes we need to make to Social Security.

The 401(k) design shifts much more risk to the employee in the private work force, and we will not be able to stop this trend. While I would like to slow the trend, we need to be cognizant, as we deal with reforming the public pension system, not to go in exactly the same direction, leaving individuals with all of the risk and none of the protections of a safety net.

■ Conclusion

The ultimate goal that we should strive to achieve in retirement savings was well captured in a recent column by E. J. Dionne in the *Washington Post* describing Tony Blair's political philosophy. He wrote, "Tony Blair favors a nation in which the strong know the weak need help, and the weak know they need to stay on the move and look after themselves." By way of a retirement model, that is precisely what we should pursue.



List of Policy Forum Attendees

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Shlomo Benartzi (speaker)
The Anderson School at UCLA

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David Blitzstein (discussant)
United Food & Commercial Workers Intl. Union

Fran Bonsignore
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Ron Boster
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Jack Bruner (speaker)
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Retirement Prospects in a Defined Contribution World

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