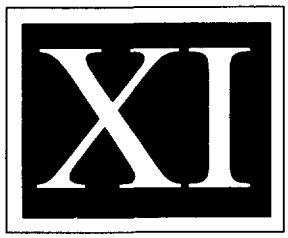

Responding to the Challenges of Living Longer: Recommended Changes in U.S. Pension Legislation and Retirement Plan Design

by Beverly J. Orth

Abstract

Current retirees in the United States face two major problems related to maintaining sufficient income in their later retirement years. First, Americans in all demographic subgroups and income levels are expected to live longer as mortality rates continue to decline. Second, retirees generally need more income in the second half of retirement to meet nondiscretionary needs due to price inflation and the greater need for medical and long-term care at older ages.

Existing pension legislation in the United States and the current plan design of most employer-sponsored retirement plans exacerbate these problems.

This paper identifies a number of legislative changes, educational efforts, and changes in annuity products and asset allocation software that could assist workers and retirees to better prepare for and respond to these two challenges.

Introduction

The aging of the Baby Boom generation, born between 1946 and 1964, has focused national attention on the structure and funding of the U.S. Social Security system. Private pension systems have largely escaped serious scrutiny, except for periodic legislative activity devoted to "simplifying" the mind-boggling array of regulations. Yet private pensions, with some simple redesign and more flexible regulation of distributions, could be better positioned to meet the financial strain that the Baby Boom retirement will create.

Both current and future retirees in the United States face two major problems in funding for adequate retirement income, particularly in their later retirement years. First, Americans in all demographic subgroups and at all income levels are expected to live longer as mortality rates continue to decline. Although there is substantial disagreement concerning life expectancy forecasts, most research indicates that longevity will increase faster than the assumptions being used by the Social Security Administration. And, at the older ages, mortality improvements have been accelerating, suggesting that mortality is not yet reaching a biological or technological limit.[1]

Second, retirees generally must devote a larger portion of income in the second half of retirement to nondiscretionary expenses, including medical care and long-term care. Although retirees in their early retirement years

[1]National Institute on Aging, National Institutes of Health, "Aging Trends & Forecasts," Issue no. 5 (January 1997), p. 1.

may experience little or no reduction in their cost of living, compared to their preretirement years, many of their expenses during the first 10 to 15 years of retirement are related to discretionary spending. These expenses include the costs of travel, recreation, and entertainment. Retirees younger than age 65 may actually see their cost of living increase relative to their preretirement years, as they have more time to devote to these leisure activities.

Retirees past the age of 75, however, generally have reduced discretionary spending and increased nondiscretionary spending. Ignoring nursing home costs, retirees over age 75 devote 8% of their spending to health care costs, compared to only 4% for retirees under age 65.[2] Longer life expectancies, especially for individuals at older ages, suggest that retirees could spend an increasing portion of retirement years with mental or physical disabilities. Research in this area has produced conflicting results. Data from a U.S. longitudinal study indicated a lowering of disability rates among the elderly during the 1980s.[3] Data from an Australian study, in contrast, suggested the opposite.[4] Clearly, more study is needed to determine whether longer life expectancies will translate into higher levels of disability among the aged.

Regardless of whether future elderly generations will spend more or fewer years in disability, it is clear that the likelihood of illness and disability does increase with age.[5] Also, the probability of having multiple chronic illnesses increases with increasing age. In one study 70% of women and 53% of men over age 80 had two or more chronic conditions.[6] U.S. Census data from 1990 and 1991 indicate a strong relationship between age and the need for assistance among the noninstitutionalized population. At older ages the proportion needing assistance ranged from 9% of individuals between ages 65 and 69 up to 50% for those aged 85 and older.[7]

There are significant differences in disability by both gender and race. Data from a 1991 U.S. Census survey show that elderly women are more likely than men to have functional limitations due to a physical or mental health condition. The same survey also indicated that the rate of functional limitation is higher among elderly Blacks than Whites.[8]

Data from the U.S. Health Care Financing Administration demonstrate that personal health care expenditures increase dramatically with increasing age. In 1987 these expenditures ranged from $3,700 annually for individuals between ages 65 and 69 to $9,200 for those aged 85 and older. Private funds (such as private health insurance and individual out-of-pocket expenses) pay about 40% of the total for both age groups. Of the total expenditures nursing home costs also showed dramatic increases with increased age, ranging from $165 annually for individuals between ages 65 and 69 to $3,738 for those aged 85 and older. In contrast to overall expenditures, private funds pay about 60% of the nursing home expenses in all age groups.[9]

Apart from higher medical care and long-term care expenses, older retirees need more income, in absolute dollars, due to price inflation. In addition, the sheer increase in the number of retirement years means that a longer income stream is needed. As retirees live longer, and retire at younger ages, the percentage of adult life spent in retirement has increased from less than 5% in 1960 to 13% in 1990 for U.S. males, and from 14% in 1960 to over 20% in 1990 for U.S. females.[10] The trend among American men toward earlier retirement was very pronounced during the second half of the twentieth century. In 1950, 68.6% of U.S. males over age 55 were in the labor force, versus only 37.6% in 1993. For U.S. males over age 65, 45.8% were in the labor force in 1950, versus only 15.6% in 1993. Labor force participation by American women has been relatively stable by

[2]Karen Cheney, "Panic-Free Saving and Investing," *Money* (October 1995):85.

[3]Kenneth G. Manton, Eric Stallard, and Larry S. Corder, "Changes in Morbidity and Chronic Disability in the U.S. Elderly Population: Evidence from the 1982, 1984, and 1989 National Long Term Care Surveys," *Journal of Gerontology: Social Sciences* 50B/4 (1995):S194–204.

[4]Colin Mathers, *Health Expectancies in Australia 1981 and 1988* (Canberra: Australian Government Publishing Service, 1991).

[5]Kevin Kinsella, and Yvonne J. Gist, *Older Workers, Retirement, and Pensions: A Comparative International Chartbook.* U.S. Department of Commerce, Bureau of the Census, and U.S. Department of Health and Human Services, National Institute on Aging (1995), p. 36.

[6]Jack M. Guralnik, Andrea Z. Lacroix, Donald F. Everett, and Mary Grace Koviar, *Aging in the Eighties: The Prevalence of Comorbidity and Its Association with Disability, Advance Data,* National Center for Health Statistics, no. 170, 1989, p. 3.

[7]U.S. Bureau of the Census, 1990 and 1991 panels of the Survey of Income and Program Participation (SIPP) files.

[8]Frank B. Hobbs, and Bonnie L. Damon, *65 + in the United States,* U.S. Department of Commerce, Bureau of the Census (1996), p. 3-20.

[9]Ibid., pp. 3-23–3-25.

[10]Kinsella and Gist, note 5 above, p. 43.

comparison: 18.9% of women over age 55 in 1950 versus 23.0% in 1993, and 9.7% over age 65 in 1950 versus 8.2% in 1993. The trend toward early retirement among men, however, appears to have leveled off since the mid-1980s and may even reverse in the future.[11] To the extent that American workers retire at later ages in the future, the financial burden on retirees will be moderated somewhat.

Women, in particular, experience multiple challenges at older ages. Single and widowed women have the highest poverty rates among older Americans. Generally, men are older than their wives and experience greater mortality rates at all ages. These two factors contribute to a high percentage of older women living alone. Lower Social Security benefits following widowhood, combined with smaller pension benefits earned by women, result in a disproportionately high level of poverty among older women.[12]

The "oldest" old also tend to be predominantly female. In 1994 women constituted 72% of the U.S. population aged 85 years and older. Although there may be a narrowing of mortality differences between men and women in the future, women will still be more likely than men to survive to the oldest ages. Although more women are earning pension benefits in their own right than earlier generations, the health and financial problems of the "oldest" old will probably remain primarily the problems of women, due to their much greater longevity.[13]

Effects of U.S. Pension Legislation

Current federal tax and pension legislation in the Untied States exacerbates the problems identified above that are faced by existing and future retirees. Longer life expectancies indicate the need for a longer stream of retirement income. Yet Internal Revenue Code (hereafter "Code") Section 401(a)(9) forces pension benefits to begin no later than age 70 $\frac{1}{2}$, regardless of need. This arbitrary rule applies to both Individual Retirement Accounts (IRAs) and retirement plans that are established under either Code Section 401(a) or 403(b). While active workers may defer pension distributions from Section 401(a) or 403(b) plans sponsored by their current employer until actual retirement, IRA distributions must begin at age 70 $\frac{1}{2}$ regardless of employment status.

[11]Hobbs and Damon, note 8, p. 4-1.
[12]Ibid., p. 2-11.
[13]Ibid.

Further, Code Section 401(a)(9) requires that a minimum level of distributions, based on Internal Revenue Service (IRS) life expectancy tables, occur after age 70 $\frac{1}{2}$. These minimum required distributions reduce the retiree's ability to conserve funds for later years. Funds withdrawn from an IRA or a retirement plan are subject to federal, state, and local income taxes. Withdrawal also eliminates the ability to generate further tax-deferred investment earnings, as these distributions cannot be rolled over to another tax-deferred investment vehicle.

Effects of U.S. Retirement Plan Design

Although Social Security benefits and many public pension benefits in the U.S. are indexed for post-retirement inflation, most private pensions in the U.S. are not.[14] For those plans that pay benefits in the form of an annuity, the monthly payment amount is fixed at the time of retirement. Price inflation causes the relative value of the annuity payments to decrease over time. Many U.S. employers who sponsor defined benefit plans provide periodic, ad hoc retiree benefit increases to counteract the erosion caused by post-retirement inflation.[15] These benefit increases, however, are not legally mandated and are not guaranteed or promised by the employer in any way. Sponsors of defined contribution plans cannot offer any kind of post-retirement increases, as the size of the benefit is determined by the invested account balance.

Further compounding the problem is the fact that most defined benefit plans in the U.S. offer annuity choices only among various fixed-dollar payment amounts. Other than joint and survivor annuity options, there usually is no ability to adjust the payment amount based on future events or needs. Some defined benefit plans offer a "Social Security adjustment option" to early retirees. Under this option the qualified plan pays a higher annuity amount until Social Security benefits begin, and a lower amount thereafter. Variable annuities, whose payment amounts are tied to the performance of underlying equity investments, are available in some plans. Little survey

[14]HayGroup, "1998 Hay Benefits Report" (Philadelphia, 1998), Executive Summary, pp. VI-14–VI-15.
[15]Ibid. See also Watson Wyatt Worldwide, "The ECS Survey Report on Employee Benefits: 1998/99" (Washington, D.C., 1998), p. 59.

data is available on the current prevalence of these types of flexible annuities in U.S. defined benefit plans.

Among defined contribution retirement plans, only money purchase plans are legally required to offer a life annuity form of distribution. Most defined contribution plans in the U.S. today are Code Section 401(k) plans, which do not have to offer any type of annuity options, unless they contain grandfathered accounts from a predecessor plan that had an annuity option. Because of the added cost and complexity to administer a plan with annuity options, most 401(k) plan sponsors avoid annuity features in their plans. Offering annuities requires that the sponsor notify employees and their spouses of the availability of all annuity options, including details of the monthly amounts payable to the employee and to the surviving spouse for each option. Notification must occur no more than 90 days and no less than 30 days before the payments commence. Furthermore, the sponsor must obtain competitive bids from several insurance carriers and research the carriers' creditworthiness. For these reasons, only 21% of 401(k) sponsors give employees the option of purchasing an annuity, according to statistics compiled by the Department of Labor. A larger number, 34%, offer a periodic installment payment option.[16] The periodic installments are subject to the minimum distribution rules under Code Section 401(a)(9) described above. Therefore, there is limited ability to match the time of payment to the time of need.

Recommended Legislative and Plan Design Changes

Minimum Distribution Rules

Code Section 401(a)(9) may have outlived its intended purpose. Prior to the enactment of the Employee Retirement Income Security Act of 1974 (ERISA), Code Section 401(a)(9) applied only to qualified retirement plans in which owner-employees (for example, sole proprietors or partners) participated. The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) extended the minimum distribution rules to all qualified plans, with an even more onerous requirement for key employees in top-heavy plans: They were required to begin receiving benefits at age 70 $\frac{1}{2}$ even if they were still actively employed. The Deficit Reduction Act of 1984 (DEFRA) extended the pre-retirement distribution commencement to all 5% owners, regardless of the plan's top-heavy status. The Tax Reform Act of 1986 (TRA '86) extended the pre-retirement distribution rule still further, to all qualified plan participants, other than those in governmental or church plans. Finally, the Small Business Job Protection Act of 1996 (SBJPA), amended Code Section 401(a)(9) yet again to revert to the DEFRA version. However, the right to take distributions at age 70 $\frac{1}{2}$ while actively employed is a protected benefit under Code Section 411(d)(6) that must be preserved. Plans can preserve the benefit either by continuing to require that benefits begin at age 70 $\frac{1}{2}$ for all active employees who attain age 70 $\frac{1}{2}$ before January 1, 1999, or by offering active employees who are not 5% owners the option to begin benefits at age 70 $\frac{1}{2}$.

This tortured history of Code Section 401(a)(9) suggests the congressional struggle to achieve the right balance between current tax revenues and retirement income flexibility. Before ERISA Congress perceived that owner-employees could avoid receiving taxable income by deferring pension benefits as long as possible, even until death. The original version of Code Section 401(a)(9) attempted to prevent this form of abuse. Similarly, the TEFRA extension of the rule to key employees in top-heavy plans had a similar goal. Top-heavy plans, as defined in Code Section 416, generally are sponsored by closely held companies, whose owners participate in the qualified plan. Pension consultants and estate planning experts advised these owners to avoid taking taxable retirement plan distributions, leaving the funds for their heirs, thereby postponing taxation for one or more generations. The TEFRA amendments attempted to curtail this form of tax deferral. DEFRA broadened the net still further by expanding the 401(a)(9) coverage to all 5% owners. TRA '86 made the coverage universal, arguably not to stem abuse of the tax-deferral mechanism, but to increase tax revenues.

Interestingly, the rule for IRAs has always required that minimum distributions begin at age 70 $\frac{1}{2}$, regardless of employment status. The twin results of these rules, for both IRAs and employer-sponsored plans, are earlier tax revenues for federal and state coffers and decreased flexibility for retirees to pay for retirement needs. In particular, retirees are forced to take IRA and pension payouts in their earlier retirement years (pre-age 80) when they have less need for such payouts.

Opponents of such legislative change might argue that repealing Code Section 401(a)(9) would permit deferral of taxes by the wealthy to subsequent generations

[16]U.S. Department of Labor, Bureau of Labor Statistics, "Employee Benefits in Medium and Large Private Establishments, 1995" (1998), p. 142.

through clever estate planning techniques. This result could be avoided by collecting extra taxes upon the retiree's death. Amounts remaining in the IRA or the employer-sponsored plan would be subject to higher income tax rates at death, prior to distribution to heirs, to compensate for the delayed taxable event. Special rules to protect surviving spouses could be considered, if deemed appropriate.

As an alternative to repealing the minimum distribution rules, a practical compromise would be to move the triggering age from 70 $\frac{1}{2}$ to a later age, say, 15 years after the individual's Social Security Retirement Age (SSRA). As the SSRA increases from 65 to 67, for individuals born between 1938 and 1960, the triggering age would move from 80 to 82. Future adjustments in the SSRA would likewise affect the minimum distribution age. Under this alternative both IRA and pension funds could be preserved during the early years of retirement and payouts would begin around the time that health care and long-term care needs are increasing.

By modifying the minimum distribution rules, retirees would have more flexibility to deal with living longer than the IRS tables assume. They also would have greater ability to conserve funds for their later retirement years.

Mandated Flexible Annuities

A second legislative change that would help retirees manage the risk of living longer is to mandate that plan sponsors offer participants a choice between fixed or increasing annuities. While many private annuities provide payment amounts that are tied to the performance of an equity investment fund, only a small percentage of annuities under employer-sponsored plans do so. Generally, pension plan annuities are fixed in the monthly payment amount, with the exception of the Social Security adjustment option described earlier.

An increasing annuity could be designed to increase each year, or at five-year intervals, based on inflation assumptions made prior to the first payment. Such an annuity would protect the retiree from the risk of price inflation, provided that actual inflation rates are not significantly higher than the assumed rates.

A different type of increasing annuity could be designed with payment increases triggered by the occurrence of specified events. For example, payments could increase by 20% or 30% if the retiree or spouse requires long-term care. Probability assumptions for the timing and duration of long-term care needs would be made by the plan's actuary in determining the actuarially equivalent initial annuity payment amount.

Both features described above could be combined in an annuity form that offers both inflation protection and protection for special needs triggered by a future event. If Congress mandated that these annuity forms be offered by both defined benefit and defined contribution plans, including 401(k) plans, insurance companies would respond by developing annuity products that meet the new requirements. Flexible annuity products already exist for private annuities purchased by individuals and by some employer-sponsored retirement plans. Insurance companies could expand upon these designs to satisfy the needs of the broader retirement plan market.

Mandating flexible annuity options within employer-sponsored retirement plans would increase the administrative burden for plan administrators. However, the trend among larger defined benefit plans, and among defined contribution plans of all sizes, is to outsource plan administration functions. The outsourcing firm would be responsible for generating the required notice letters and collecting election forms from retiring participants. To ease this burden, Congress could permit more flexibility in the timing and form of the required notices (for example, via the Internet or other electronic applications).

Inflation-Indexed Benefits

A third area of legislative change that could enable retirees to better manage longevity and inflation risk is to encourage defined benefit plan sponsors to provide inflation-indexed benefits. More than 60% of U.S. defined benefit plans provide a benefit based on final earnings or final average earnings.[17] This type of formula essentially indexes the benefit for pre-retirement inflation by basing the benefit on earnings just before retirement. However, unlike Social Security and many public employer pension plans, most private pension plans do not index benefits to increase with post-retirement inflation.[18] As discussed earlier,

[17]HayGroup, note 14 above, Vol. I, p. VI-7; U.S. Department of Labor, note 16 above, p. 106; KPMG, "Retirement Benefits in the 1990s: 1997 Survey Data" (Newark, N.J., 1997), p. 18.

[18]HayGroup, note 14 above, Executive Summary, p. VI-14; U.S. Department of Labor, note 16 above, p. 117; KPMG, note 17 above, p. 22; Watson Wyatt Worldwide, note 15 above, p. 59.

ad hoc increases in retiree benefits are neither legally required nor guaranteed by the employer.

To reduce employer cost, the amount of annual benefit increases could be capped at 3% or 5%, for example. Even with such a limit, inflation indexing can be very costly. For example, if annual increases for retiree benefits occur at the compounded rate of 3%, the long-run funding cost to the employer increases by 25%–30%.[19] Presumably, a plan sponsor offering inflation-indexed benefits would design a plan with lower initial benefits than it would in designing a nonindexed plan. Such a design would disfavor retirees who die early, because their overall benefits would be lower. But retirees who receive benefits for 15, 20, or 30 years would benefit from the maintenance of purchasing power in their later retirement years.

It is unlikely that plan sponsors would migrate from the ad hoc adjustment approach to even a partially inflation-indexed formula, without some type of government mandate or incentive. Given that U.S. pensions are the most heavily regulated in the world, another government mandate is unwelcome. Tax incentives, however, often accomplish more than mandates in effecting behavioral change among taxpayers. A carefully constructed tax incentive, such as extra deductions, more flexibility in funding limits, or relief from certain testing or nondiscrimination requirements, might induce plan sponsors to index their benefit formulas for postretirement inflation. One trade-off that Congress could offer is a higher limit on includible compensation under Code Section 401(a)(17) for plans that are inflation-indexed with a 3% or higher annual cap. Another is higher benefit limits under Code Section 415 for inflation-indexed plans.

Medical IRAs

Of all expenditures incurred by retirees, those related to health care and long-term care appear to be the most directly responsible for poverty among the elderly. Generally, a decline in health status causes an increase in the consumption of the older individual's financial resources. Poverty rates increase with age, especially for older women: Women's poverty rates in 1997 ranged from 9.1% at ages 65 to 69 to 22.7% at ages 85 and older. One reason for this increase is that high out-of-pocket costs for health care reduce the assets that individuals bring to their retirement years.[20]

Medical IRAs are a fourth area of legislation that could help retirees to manage the risk of health care cost inflation and health deterioration in older age. Existing legislation permitting working Americans to save for retirement on a tax-deferred basis through IRAs could be expanded to permit saving for medical needs. Such accounts should be separate from retirement IRAs, with separate annual contribution limits, so that leakage for nonmedical expenditures could not occur. Withdrawals could be limited to pay for health needs after age 59 $\frac{1}{2}$, or they could be allowed at any age to broaden their appeal and popularity.

Medical savings accounts (MSAs), enacted by SBJPA, are a step in this direction. Funds deposited in an MSA generate tax-free investment earnings. Distributions used for qualified medical expenses generally are not subject to tax. If not used for current medical expenses, the funds can continue to build within the account for future medical expenses. However, MSAs are not universally available. They can be established only by workers who are self-employed or employed by a small employer (50 or fewer employees). Additionally, they are available only in combination with a high-deductible health plan. The IRS projects that only 50,172 MSA returns will be filed for 1998.[21] The MSA pilot project will expire at the end of the year 2000.

By making medical IRAs universally available to all Americans, Congress would encourage individuals to plan and save for their future health care needs. Although current tax law allows penalty-free withdrawals from retirement IRAs to pay for unreimbursed medical care, the primary purpose of existing IRAs is to supplement retirement income after age 59 $\frac{1}{2}$. There is no guarantee that retirement IRA funds will be available, say at age 85, to pay for a severe illness or a disabling condition requiring nursing home care. Creating a special IRA devoted strictly for medical needs would offer greater assurance that funds would be available for that purpose. Tax-deductible contributions, at least for lower-income individuals and couples, would promote greater use of the special medical IRAs, and a separate annual contribution limit would be justified, given that

[19]Dan M. McGill, Kyle N. Brown, John J. Haley, and Sylvester J. Schieber, *Fundamentals of Private Pensions*, 7th ed. (Philadelphia: University of Pennsylvania Press, 1996), p. 493.

[20]Beth J. Soldo, Michael D. Hurd, Willard L. Rodgers, and Robert B. Wallace, "Asset and Health Dynamics among the Oldest Old: An Overview of the AHEAD Study," *The Journals of Gerontology* 52B (1997):1–2.

[21]IRS Announcement 98-88, Internal Revenue Bulletin 1998-41.

no increase in the $2,000 retirement IRA limit has occurred since 1981.

Education Initiatives

Long-Term Care Planning

The recently enacted Savings Are Vital to Everyone's Retirement Act (SAVER Act) mandated ongoing study of Americans' retirement needs and promotion of education to focus Americans on planning and saving for retirement. There is concern among some experts that too little attention, however, is directed at the costs of long-term care, particularly as these costs affect Social Security and Medicare funding. Personal long-term care costs average $41,000 per year. Medicaid currently pays some of these costs, but these expenses will fall increasingly on the individual after the Baby Boom generation begins to retire.[22]

Some employers have added long-term care (LTC) benefits to their employee benefit programs. In 1998, 11% of surveyed employers reported offering this benefit versus 7% in 1994.[23] Prior to 1997 these benefits were not eligible for any federal tax advantages. Since enactment of the Health Insurance Portability and Accountability Act (HIPAA) in 1996, premiums for LTC coverage are, under certain conditions, partially deductible from federal income tax. In practice, though, the availability of the tax deduction is rather limited. LTC premiums are deductible only if the payor itemizes deductions, and only to the extent that LTC premiums (along with other deductible medical expenses) exceed 7.5% of adjusted gross income. Moreover, LTC coverage cannot be offered through an employer-sponsored Code Section 125 cafeteria plan. Consequently, employers may have less motivation to offer these benefits, compared to benefits with better tax advantages, and workers may have less motivation to utilize them. We should explore whether expanded tax advantages would promote the purchase of LTC insurance by active workers.

Additionally, Congress should focus educational efforts on the need to save for LTC needs. The medical IRA concept discussed earlier would allow withdrawals for LTC expenses. But more effort may be needed to inform active workers that increasing longevity may mean longer periods of disablement and greater need for assistance with daily tasks. Baby Boomers intent on having enough money to retire early are thinking primarily of having the freedom to increase their leisure time activities, which is appropriate for the "young" old. They may not be thinking about paying for home health workers, adult daycare, or nursing home expenses, unless they have personal experience through their parents or grandparents.

Congressional action toward this end has already begun. More than a dozen bills dealing with LTC insurance or LTC services are under consideration by the 106th Congress. Additionally, Senators Charles Grassley (R-Iowa), chairman of the Special Committee on Aging, and Christopher Dodd (D-Connecticut) introduced Senate Concurrent Resolution 22 on March 23, 1999. Its purpose is to raise public awareness of the need for Americans to plan ahead for their LTC needs. Increased awareness, in turn, will lead to increased demand by both workers and their employers for LTC insurance products. Already there are vastly more products available than there were 20, or even 10, years ago. An industry survey indicates an average annual growth rate of 23% in the LTC insurance market since 1987. In 1997 there were 120 insurance carriers offering LTC coverage in the U.S. versus only 17 in 1987.[24] The combination of improved tax advantages and public education would spur further development and competition among insurance carriers.

Asset Allocation Software

Although the SAVER Act has the laudable goal of increasing public awareness of the need to save for retirement, the need to save for a longer retirement period deserves more emphasis. Longer retirement periods mean greater exposure to inflation risk and more erosion of retirement income.

Historically, financial planners recommended that workers approaching their intended retirement age gradually shift their assets from equities into bonds and other fixed-income securities. As the expected number of years in retirement increases, however, financial planners are changing their advice and recommending greater exposure to equities well into the early retirement years. This advice is entirely appropriate, since equities offer the

[22]"Pension & Benefits Reporter," Bureau of National Affairs, vol. 25, no. 24 (1998):1409.

[23]HayGroup, note 14 above, vol. I, p. X-3.

[24]Chuck Jones, and Kim Perikles, "Long-Term Care Contracts Are Now Tax Qualified," *Life Association News* (November 1997):74, 78. See also Chuck Jones, "LAN's 3rd Annual Long-Term Care Survey," *Life Association News* (May 1989):76.

best inflation protection of all financial assets. It is not clear that workers and retirees are getting this message.

Unfortunately, the investment education programs of some employers merely compound the problem. They encourage workers first to determine the level of risk that they are comfortable with, then suggest asset allocation strategies in line with that level of risk. Instead, the focus should be on developing an asset allocation strategy that maximizes the probability of having sufficient funds in later retirement years.

Both employers and retirement plan outsourcing firms now provide employees with software tools that help employees with allocating their 401(k) plan assets. Many of these tools are widely available via the providers' Internet sites. Most, however, use deterministic modeling methods in which the employee must enter an assumed rate of future inflation, an assumed rate of investment return, and an assumed life expectancy. The employee can vary the assumptions to create multiple scenarios but cannot realistically assess the probability of "ruin," that is, of outliving their retirement funds.

Stochastic asset allocation software would enable workers and retirees to better measure the risk of outliving their funds. Stochastic modeling software would use probability functions based on historical rates of inflation and investment return by asset category, and their standard deviations. Estimates of future improvements in longevity, and measures of uncertainty in achieving those improvements, would also be needed. For various asset allocation strategies, the model would show the probabilities of "ruin," of having "just enough," or of leaving a legacy to one's heirs.

Such software is being developed now, but it is not yet widely available. Plan sponsors, as they compare investment managers for their 401(k) plans, should demand that stochastic modeling software become the benchmark norm. But that will not occur unless the actuarial profession first educates the sponsors.

Conclusions

Current and future retirees in the United States are expected to live longer than previous generations and to spend a greater number of years in retirement. Accordingly, retirees face two challenges: the need for a longer retirement income stream and the need for more income in later retirement years due to price inflation and higher medical and long-term care costs.

Current U.S. pension legislation, through inflexible minimum distribution rules, prevents retirees from conserving their retirement funds for later years. The lack of inflation-indexed pension formulas and of flexible annuity options further compounds the problems of increased longevity.

Major changes in the minimum distribution rules, mandated flexible annuity options, and tax incentives for employers to provide inflation-indexed benefits would give retirees more protection from the risk of poverty near the end of retirement.

Enactment of medical IRAs, expanded tax advantages for long-term care insurance, and education of workers about the need to save or insure for long-term care needs would also improve the future financial security of American retirees.

Finally, it is important to educate both active workers and retirees about the need to invest in equities well into retirement to protect against inflation and longevity risks. The development of stochastic asset allocation software will help workers and retirees assess their risk of outliving their retirement funds.

Because women far outnumber men among the U.S. population aged 85 and older, women pension beneficiaries may benefit the most from these suggested changes. Conceivably, adopting these recommendations could help to reduce the very high poverty rate among this demographic group. Additionally, elderly Blacks, who experience disproportionately higher disability rates than elderly Whites, could benefit from medical IRAs, expanded LTC tax incentives, and flexible annuity options that are need-responsive. However, because of their higher mortality rates at all ages, Blacks would tend not to benefit from inflation-indexed benefit formulas or changes in the minimum distribution rules.[25]

[25]Hobbs and Damon, note 8, pp. 3-1–3-2.