Managing Longevity Risk in U.S. Retirement Plans through Mandatory Annuitization

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Abstract

Over the past 20 years, the United States has experienced a profound shift in the way that employment-based retirement benefits are delivered to workers. The traditional life annuity from a defined benefit (DB) plan has been largely replaced by lump sums from defined contribution (DC) plans.[1,2] Along with investment risk, American workers are bearing a larger share of the longevity risk that is inherent in all retirement systems.

As Americans benefit from longer lives, they are facing a harsh reality: Will their retirement assets last long enough? Workers have embraced the flexibility offered by the widely available, and very popular, 401(k) plan. Often described as a do-it-yourself retirement program, these plans have allowed workers to accumulate significant levels of retirement savings. Employers like them, too, because they are less costly and easier to administer than traditional DB plans. Will this enthusiasm wane as baby boomers retire and face the daunting task of managing this pool of assets over retirements that can span 30 or 40 years or longer?

Retirees have been reluctant to annuitize their assets for many reasons, and the annuity market in the United States is relatively small. The shift from DB to DC plans has left a majority of workers with only one form of annuitized benefit: Social Security. Yet life annuities offer the best method of managing longevity risk, both for the individual and for society.

This paper suggests a possible framework for the mandatory annuitization of U.S. retirement savings, considers the experience of other countries and analyzes the advantages and disadvantages of mandatory annuitization. If properly structured, it is possible that the benefits of an annuity mandate would outweigh the drawbacks.

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[1] Sixty-four percent of men's retirement wealth and 55 percent of women's will come from DC plans and IRAs for those born in 1946; 74 percent is forecast for men and 63 percent for women for those born in 1964. John Ameriks and Paul Yakoboski, "Reducing Retirement Income Risks: The Role of Annuitization," *Benefits Quarterly*, Fourth Quarter 2003, p. 23.

[2] Among workers with pension coverage, the portion covered by only a DC plan increased from 20 percent in 1981 to almost 60 percent in 2001. Alicia H. Munnell, Kevin E. Cahill, and Natalia A. Jivan, "How Has the Shift to 401(k)s Affected the Retirement Age?" *An Issue in Brief*, Center for Retirement Research at Boston College, September 2003, Number 13, p. 2.

1. Introduction

Currently, only certain types of private U.S. retirement plans must pay benefits in the form of a life annuity—either a joint and survivor (J&S) annuity (if married) or a single life annuity (if unmarried). Only DB plans and one type of DC plan—the money-purchase pension plan—are subject to these rules. The life annuity form, however, can be waived by the participant with the spouse's written consent. Plans maintained by governmental or church employers are exempt from the annuity requirement.

The type of J&S annuity required as a minimum under U.S. law provides for a continuation of 50 percent of the participant's monthly benefit to the spouse upon the participant's death. There is no reduction in the benefit upon the spouse's death. This distinction creates a lopsided form of protection: the primary longevity protection is for the participant, with only secondary protection for the spouse.

No annuity options are required for DC plans that are not money-purchase plans, including the 401(k) plan. However, as recently as 20 years ago, it was common to find annuity options in profit-sharing and thrift plans. As 401(k) plans replaced these older forms of DC plans, however, U.S. employers have been eliminating annuity payout options from their DC plans.

Recent legislative and regulatory changes have contributed to this trend. The new deductibility rules for qualified plan contributions have encouraged employers to replace money-purchase plans with profit-sharing plans, which have no annuity requirements.[3] And the Internal Revenue Service (IRS) had previously liberalized its rules for eliminating optional distribution forms from DC programs.[4]

Employers are using the liberalized rules to eliminate not just annuity options, but other options as well, leaving only lump sums. There are many reasons that explain this trend. Lump-sum payments have lower administrative costs. There is no need for ongoing maintenance of the participant's account; no need to issue monthly or quarterly checks; and no need to bear the expense and fiduciary risk of selecting an annuity provider for each new annuity contract purchase. Even in DB plans, lump-sum options are becoming more common. This is particularly true in the newer hybrid plans that put some features of DC plans into the legal framework of a DB plan.

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[3] Economic Growth and Tax Relief Reconciliation Act of 2001, Sec. 616.

[4] Treasury Decision 8900, August 31, 2000.

Part of the rationale for eliminating annuity options is that employees can roll over lump sums to individual retirement accounts (IRAs), from which they can purchase annuity products of their choice. However, very small percentages of IRA assets are ever annuitized. IRA assets exceeded $2.5 trillion in 2003, but the annuitization rates are less than 1 percent.[5]

2. Risks under the Current U.S. Environment

Retirees in the United States face a number of risks with respect to managing their retirement assets. The fortunate minority of workers who will receive pensions from DB plans have the fewest risks. If their pension is not indexed, they will experience inflation risk, as the purchasing power of their future benefits declines over time. They also have some risk that they will not receive their promised benefits due to their employer's bankruptcy or severe investment losses experienced by their plan. To some extent, this risk is mitigated by government insurance protection provided by the Pension Benefit Guaranty Corporation (PBGC).

Workers who will be relying primarily on DC plan benefits and IRA assets have additional risks. They bear all of the investment risk associated with their DC and IRA assets. They also bear timing risk in that their preferred retirement date may coincide with a downturn in the financial markets. Arguably, the greatest risk they face is longevity risk, i.e., the risk that they will outlive their retirement assets.

Much of the risk due to longevity is hidden. Older generations relied primarily on traditional DB pensions and Social Security, both of which protect the individual from longevity risk. Most people who are still working have not witnessed their parents or grandparents running out of money, so they cannot appreciate how significant this risk is.

Individuals, or at least those who are not in the actuarial and insurance industries, have a fuzzy perception of life expectancy. They may know that the life expectancy of a 65-year-old woman is 20 years, yet not realize she has roughly a 30 percent probability of surviving beyond age 90. Many life events that we experience are within our control, such as getting married, having children, changing jobs or careers and retiring. The life event that will have the most impact on our postretirement financial health is the one with the most uncertainty: death. While family and personal

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[5] Jeff Mohrenweiser, "The Evolving U.S. Retirement System: Insurers View Expansion of Income Annuities," *The Actuary*, March 2003, pp. 1, 3.

histories provide some general indication of our future longevity, we do not have enough information to know whether we have to plan for 20 years of retirement or 40. It is this uncertainty that makes planning for consumption of retirement assets so difficult.

Retirees who underestimate their longevity face running out of assets too early. If that occurs, they are forced to substantially reduce their rate of consumption, to accept governmental assistance after spending down their assets or to rely on assistance from family members. Women face a greater risk of outliving their assets, for two reasons: first, because their life expectancy at all ages is several years longer than men's. And, second, because they typically start with a smaller pool of retirement assets.

Some retirees handle the longevity risk problem by being too conservative in their asset spend-down. As a result, they spend much less than they could have if they had annuitized their assets. Even with a reduced consumption pattern, they still face the risk of running out of assets.

3. Barriers to Annuitization

Given the uncertainty regarding their life expectancy, we would expect retirees to purchase life annuities to hedge—at least partially—the longevity risk. The market for individual life annuities in the United States, however, is very small. While a sizeable market for variable annuities (VAs) exists, it functions primarily as a vehicle for asset accumulation. One study reports that fewer than 14 percent of retirees who own a VA contract expect to use it to generate an income stream.[6] In fact, less than 1 percent of VA assets are annuitized in the withdrawal phase.[7] Another study indicates that roughly 30 out of every 10,000 VA contracts are ultimately annuitized.[8]

Why have retirees been reluctant to purchase life annuities? There are many reasons, but perhaps the most compelling one is the fear of losing control over their assets. Annuitization is usually a one-way process, in that it is difficult (though not

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[6] James H. Smalhout, "Benefit Design Choices for Personal Social Security Accounts," *Benefits Quarterly*, Second Quarter 2002, p. 45.

[7] Matthew Drinkwater and Eric T. Sondergeld, "Perceptions of Mortality Risk: Implications for Annuities," Pension Research Council Working Paper (PRC WP 2003-20), The Wharton School, University of Pennsylvania, 2003, p. 8.

[8] Art MacPherson and Lisa Plotnick, "VA Crossed Signals: Built for Income, Sold for Accumulation," *National Underwriter*, January 7, 2002, p. 23.

impossible) to convert an annuity back into a lump sum. This one-way nature of annuitization can frustrate the retiree's bequest motive. If most assets have been annuitized, there may be little or nothing left to bequeath at death.

Another barrier is lack of knowledge. Retirees lack understanding of how annuities work and the value they provide. Because they underestimate longevity risk, they undervalue the protection that annuities offer. In addition, the costs of purchasing an annuity are opaque, making it hard to compare competing products. Other information needed to make an informed purchase is hard to obtain or difficult to interpret, such as credit ratings, premium structures and underwriting requirements.

Another strong reason for avoiding annuitization is that retirees fear dying before receiving their "money's worth" from the annuity. For this reason, only the healthiest individuals purchase annuities. This adverse selection, of course, causes insurance companies to charge higher prices for annuities, which increases the public's perception of annuities as a poor value.

Finally, the vast majority of annuities sold in the United States are fixed annuities, which pay a constant amount every year.[9] Such annuities do not protect the retiree from inflation risk. Annuities that are indexed to increase with inflation are largely not available to U.S. consumers.[10] Furthermore, they are costly to purchase, resulting in lower initial annual payments, which can be unattractive to retirees trying to maintain their preretirement standard of living.

4. A Proposal for Mandatory Annuitization

Because retirees have been slow to recognize the merits of annuitization, should we consider mandating annuitization through our pension laws? Government does have a legitimate interest in ensuring that individuals have adequate income throughout their retirement years. It also has an interest in reducing public reliance on government assistance. These governmental interests are, arguably, sufficient to justify some type of mandate. Furthermore, because taxpayers receive various tax benefits related to their retirement assets, government has the political power to govern how and when the tax-favored assets are consumed.

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[9] Ameriks and Yakoboski, p. 20.

[10] Jeffrey R. Brown, "How Should We Insure Longevity Risk in Pensions and Social Security?" *An Issue in Brief*, Center for Retirement Research at Boston College, August 2000, Number 4, p. 12.

If legislated, how would mandatory annuitization work? The goal would be to insure individuals against longevity risk by providing an income guarantee until the end of life. In most cases, income adequacy could be achieved by annuitizing less than all retirement assets. In particular, because Social Security benefits are paid as an annuity, retirees with sufficient retirement plan accumulations would not need to annuitize all of their other retirement assets.

Should mandatory annuitization apply both to tax-favored retirement savings and to other forms of savings? Currently, we have rules that require minimum distributions after age 70½ from most forms of tax-favored retirement savings. The exceptions are Roth IRAs, nonqualified plans and certain deferred compensation plans for executives of nonprofit and governmental employers, governed by Internal Revenue Code (IRC) Section 457(f). The purpose of the minimum distribution rules is to ensure that such savings are actually used for retirement income purposes and to generate tax revenue through the forced distribution of such savings. Without the distribution mandate, the savings could be passed tax-free from one generation to succeeding generations, thereby postponing taxation indefinitely. Savings held in taxable accounts have no such distribution requirements because taxation is not deferred and distribution does not trigger taxation.

While mandatory annuitization could be applied to all forms of savings, it would be more acceptable, politically, to extend it only to tax-favored savings. Taxpayers are willing to accept limitations on tax-favored assets in exchange for the tax benefits. Furthermore, administrative systems are already in place to handle the minimum required distribution (MRD) rules. Financial institutions monitor the age requirements, notify the account owners, calculate the necessary minimum distributions, issue payments and make the required reports to the IRS. They routinely perform a variety of other functions to comply with the numerous regulatory rules affecting tax-favored savings. Modifying or replacing existing requirements relating to tax-favored accounts would be relatively straightforward to implement.

In particular, a possible approach would be to coordinate new mandatory annuitization rules with the MRD rules. The date for beginning annuitization could be age 70½, the same as the date for MRD commencement. However, Congress should consider moving the date to a later age, say 75 or 80. Age 70½ was established for the MRD rules more than 25 years ago. Although longevity has increased over that period, the required beginning date for minimum distributions has never been adjusted.

If the annuitization mandate covers a sufficient amount of retirement assets, the MRD rules would be unnecessary. Life annuities automatically meet the MRD requirements, provided that they are nondecreasing. Replacing the MRD rules with new annuitization rules would be a sensible approach that taxpayers and financial institutions could accept without substantial modification of existing administrative systems and procedures.

Should the mandate apply to all tax-favored assets, regardless of amount? Retirees could be required to annuitize a minimum percentage or dollar amount of savings. Amounts exceeding these minimums would be exempt. For example, under a suggested approach, combined DC plan and IRA savings under $50,000, or 30 percent of retirement assets, if greater, would be annuitized by age 75. Annuitization of a $50,000 account would generate a monthly annuity of about $500 for a 75-year-old.

Under this proposal, accrued benefits in a DB plan exceeding a present value of $15,000 would be annuitized, permitting plans to avoid administering small benefits. The interest rate and mortality table used to determine the involuntary cashout threshold would be those currently required under IRC Section 417(e) for determining lump-sum distributions. The current involuntary cashout amount of $5,000, though increased from $3,500 in 1996, is still too low from an administrative perspective. Even $15,000 would generate monthly payments of less than $150 to someone under age 75. The dollar thresholds for both DC and IRA savings and for DB cashouts ($50,000 and $15,000, respectively) would be indexed for future cost-of-living increases.

Other approaches might be preferable from an adequacy perspective. For example, the mandate could require that total annuitized income from Social Security, retirement plans and private annuities exceeds a minimum replacement ratio or minimum annual income. This type of approach would provide a better guarantee that retirees would have an adequate level of income, especially as it would include Social Security benefits in the calculation. However, such an approach would be difficult to administer. Either retirees or financial institutions would have to gather and coordinate asset and benefit information from unrelated sources to determine whether the minimum income level is satisfied.

Special rules would be needed to address the needs of married couples. Following our current rules for qualified DB and money-purchase pension plans, the annuitization mandate would require a J&S annuity for married couples, based on the couple's combined retirement savings. This requirement would help protect the very elderly, who are mostly divorced or widowed women, against poverty. The age of the older spouse would be used to determine the latest date for annuitization. The continuation percentage should be roughly 75 percent of the initial payment. The current J&S requirements for pension plans provide for only a 50 percent continuation.

However, studies show that the survivor's living expenses are between 60 and 80 percent, not 50 percent, of the couple's expenses before the first death.[11,12] The reduction from 100 percent to 75 percent would occur at the death of either spouse, so the protection would be symmetrical. Theoretically, J&S annuities should be structured in this manner. The J&S annuities mandated under U.S. pension law are actually "contingent annuities," and not true J&S annuities.

Rules would be needed to address how the J&S annuity would be "split" upon divorce. If fully negotiable between the parties, one spouse could be left with inadequate income following a divorce. On the other hand, an even split might not be necessary if one spouse has a higher amount of nonannuitized assets or other income following the divorce.

To make the annuitization mandate more palatable, the rules could allow life annuities with a period certain as an option. This option would address one psychological barrier against annuitization: "What if we die early?" While single life annuities with a period certain are a fairly common option in qualified pension plans, J&S annuities with a period certain are not currently seen in U.S. plans. Such an option would be a good choice for married couples who are concerned about dying before receiving their "money's worth" from their annuity purchase. Another good choice would be the cash refund annuity, which is becoming less and less common in U.S. plans. This type of annuity provides a death benefit equal to the excess of the initial investment over the sum of the annuity payments received.

What types of retirement savings should be covered by an annuitization mandate? All forms of savings that provide a federal tax benefit to the individual should be covered. Thus, all Section 401(a) qualified plans, all Section 403(b) tax-sheltered annuities and all Section 457(b) and 457(f) deferred compensation plans would be subject to the mandate. Additionally, all types of nonqualified deferred compensation programs should be included, with a possible exception for very short deferral periods (e.g., less than two years). All IRAs, including Roth IRAs and the so-called "deemed" IRAs, which are part of an employer-sponsored plan, would be

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[11] Richard W. Johnson, Cori E. Uccello, and Joshua H. Goldwyn, "Single Life vs. Joint and Survivor Pension Payout Options: How Do Married Retirees Choose?" *Final Report to the Society of Actuaries and the Actuarial Foundation*, The Urban Institute, September 2003, p. 3.

[12] James P. Smith, "Trends and Projections in Income Replacement during Retirement," *Journal of Labor Economics*, October 2003, p. 775.

covered. SEP-IRAs and SIMPLE plans would be covered as well. If the rules are directed at the individual, rather than the employer, then plans that are not subject to the Employee Retirement Income Security Act of 1974 (ERISA) (i.e., governmental and church plans) could be included in the mandate.

Should there be exceptions to the annuitization mandate for hardships? If included, hardship exceptions should be very limited to reduce adverse selection. It would be administratively easier to grant an exception before annuitization commences. For example, retirees who reach the required annuitization age but who have a terminal illness with a life expectancy of less than 12 months could be exempted. Required documentation could be a doctor's certification filed with the individual's tax return.

Another exception could provide a limited opportunity to convert not more than 20 percent of the present value of remaining annuity payments to a lump sum in the event of a serious emergency. The types of emergencies that would qualify would be very limited. For example, the list could be restricted to uninsured medical expenses or the need to prevent foreclosure on or eviction from the individual's primary residence.

To protect against adverse selection, the conversion factors for the lump-sum hardship exception would necessarily be unfavorable to the individual. Insurers would be required to update these factors frequently and make them readily available to the annuity owners.

5. Annuitization Mandates outside the United States

Various annuitization mandates already exist in other countries. As with our Social Security program, most social security systems around the world pay annuities only. Most European countries also require annuitization for private occupational plans. A few of the new "privatized" social security systems offer nonannuity forms of payout, including those of Argentina, Chile and Peru.

Even when lump sums are prohibited, some systems effectively permit a lump sum cashout through the "back door." For example, the Chilean system uses market pricing for its mandated annuities. With pricing and commissions set entirely by the insurer, the insurer can pay a lump sum as an extra commission to the insurance agent, who, in turn, passes it on to the worker. The worker accepts a corresponding reduction in the annuity payment amount.[13]

The United Kingdom established "personal pension accounts" in 1988 for individuals who opt out of the state earnings-related pension scheme (SERPS). The law requires annuitization, between the ages of 60 and 75, of 100 percent of the funds that would have financed the state pension. Funds resulting from additional contributions must be 75 percent annuitized, between the ages of 50 and 75.[14] If the annuity purchase is delayed to age 75, the individual must draw a monthly amount that does not exceed a specified formula. This process is called "pension fund drawdown."[15] The permitted delay contributes to adverse selection and causes annuities to be more expensive.[16]

Interestingly, evidence suggests that the costs due to adverse selection in the United Kingdom increase with age. In a study by Mamta Murthi, J. Michael Orszag and Peter R. Orszag, the authors attribute this result to two factors. First, most individuals annuitize their personal pension accounts when they reach the statutory retirement age of 65. Accordingly, the level of competition for age-65 annuities is high, driving down the cost. Second, the authors believe that late annuitization is preferred by wealthy individuals, who tend to live longer than the general population. Insurers need to charge a higher premium to counter this adverse selection.[17] Thus, providing flexibility in the annuitization mandate by permitting a delay may introduce a form of adverse selection that would not otherwise exist. However, the individuals who desire such flexibility may find the associated costs to be acceptable.

Despite the flexibility of the U.K. approach, public perception is that annuities are inflexible and are a poor value.[18] Murthi, Orszag, and Orszag attribute this

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[13] Salvador Valdes-Prieto, "Risks in Pensions and Annuities: Efficient Designs," The World Bank, February 1998, p. 35.

[14] G. A. (Sandy) Mackenzie, "The Role of Private Sector Annuities Markets in an Individual Accounts Reform of a Public Pension Plan," International Monetary Fund, September 2002, p. 10.

[15] Valdes-Prieto, p. 39.

[16] Smalhout, p. 51.

[17] Mamta Murthi, J. Michael Orszag, and Peter R. Orszag, "Annuity Margins in the UK," http://www.sbgo.com/Papers/annuities.pdf, July 2000, pp. 12–13.

[18] Smalhout, p. 51.

perception not to high insurer costs or loads, but because financially unsophisticated investors with small amounts to annuitize generally do not shop for the most competitive pricing.[19]

Israel takes a different approach, requiring workers to purchase a deferred annuity each year. Adverse selection is reduced because knowledge of one's personal life expectancy is gained over time. However, the aggregate demographic risk for insurers is increased. Changes in life expectancy over the entire population will affect insurers more under the annual purchase approach.[20]

Singapore's experience suggests that adverse selection is reduced when there are strong incentives for retirees to annuitize their retirement assets. Singapore has a mandatory DC pension system, the CPF, in which employers and employees contribute monthly to the employee's account. Because most CPF savings are used to purchase housing, leaving retirees with little retirement savings, legislation enacted in 1995 requires employees to set aside a minimum amount of CPF savings at age 55. This "minimum sum," as it is called, can be withdrawn only after attaining age 62, the official retirement age in Singapore. The options for investing the minimum sum include leaving the funds in the CPF system, depositing them in a bank, or purchasing a deferred annuity. About one-sixth of the public chooses the annuity purchase option, probably because the CPF and bank deposit options offer low returns. This percentage is much higher than the 3 percent of the U.S. public that purchases voluntary annuities. Wai Mun Fong's study of Singapore's annuity market concludes that Singapore annuities provide a higher value ("money's worth") than annuities purchased in the United States and the United Kingdom. The author attributes this difference to the minimum sum deferral mandate, which essentially creates a mandated annuity pool.[21]

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[19] Murthi et al., p. 20.

[20] Smalhout, p. 60.

[21] Wai Mun Fong, "On the Cost of Adverse Selection in Individual Annuity Markets: Evidence from Singapore," *The Journal of Risk and Insurance*, 2002, Vol. 69, No. 2, pp. 193–207.

Many countries regulate the interest rates used to convert individual accounts in mandatory DC plans to life annuities. John Turner's survey of international practices provides the following list:[22]

- Argentina requires insurers to use a 4 percent nominal interest rate and a mandated mortality table.
- Australia does not regulate conversion rates.
- Hungary, Poland, Latvia and Kazakhstan do not regulate conversion rates.
- Fiji subsidizes the factors used to convert individual account balances to annuities.
- Italy and Sweden guarantee conversion rates that do not depend on current market interest rates.
- Latin American countries, other than Argentina, do not require annuitization and do not guarantee conversion rates, though some guarantee the accumulation interest rate.
- Singapore guarantees published conversion interest rates for six months.
- Switzerland guarantees both the mortality and interest rates and mandates sex-neutral conversion.
- The United Kingdom does not mandate or guarantee conversion rates. However, the rates used to convert the portion funded by the state rebates must be sex-neutral and must be underwritten on a joint-life basis, even for unmarried individuals.[23]

As noted above, some countries require the use of a stipulated mortality table for the annuity conversion. Argentina and Switzerland specify both the interest rate and the mortality table. Chile, Colombia, and Peru mandate only the mortality table, with mortality rates that are substantially lower than the prevailing population rates.[24] The result is that insurance company reserves are higher than they need to be. Regulators

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[22] John Turner, "Reducing Risk: Annuity Conversion Rate Guarantees," Public Policy Institute, AARP, June 2003, pp. 6–9.

[23] Murthi et al., p. 30.

[24] Mackenzie, p. 21.

seem to be more concerned about insurer solvency than about guaranteeing fair prices to annuity purchasers.

Government does have a legitimate interest in regulating mortality tables, as they have a very significant effect on solvency. But manipulation of the mandated mortality tables also allows the government to redistribute wealth. For example, the regulators can create an artificial table to benefit a particular group, using mortality rates for that group that are more pessimistic than true rates. This artificial manipulation reduces annuity prices for the selected group, at the expense of other demographic subgroups.[25]

Another form of mortality table manipulation occurs when regulators require certain forms of price equality. Both Switzerland and the United Kingdom require the use of sex-neutral tables, which means artificially merging tables for groups with distinct mortality characteristics. This merging of tables results in both redistribution of wealth between the two population subgroups as well as market distortion.[26] While wealth redistribution may be socially desirable, the market distortion may lead to increased incentives to sell to the profitable subgroups and to avoid sales to the less profitable subgroups. Although the less profitable subgroup (e.g., women) may enjoy an artificial pricing advantage, they may also experience lower service quality from insurers and their sales forces.

6. Advantages of Mandatory Annuitization

6.1 Protection against Longevity Risk

The primary benefit offered by annuitization, whether mandatory or voluntary, is protection against longevity risk. Life annuity payments continue until the death of the annuitant, guaranteeing that he or she will not run out of assets. A life annuity is the only financial product that offers this form of protection.

Although life expectancy can be calculated, it is valid only for the overall population or for very large groups. A single individual may live to an age far below or far above the calculated expectancy. This uncertainty over how long retirement income

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[25] Valdes-Prieto, p. 46.

[26] Ibid.

will be needed makes planning for the consumption of savings difficult. Annuitization eliminates the uncertainty, though not without cost.

6.2 Income Protection for Dependents

Annuities can provide income protection for a surviving spouse or dependents. A J&S annuity works well for individuals of similar ages, including most married couples. However, if the joint annuitant is substantially younger than the primary annuitant, the annuity payments will be significantly reduced due to the much longer joint life expectancy. Accordingly, a J&S annuity generally is not a good vehicle to provide income protection for young children or grandchildren.

6.3 Shifting of Investment Risk

Annuitization shifts investment risk away from the annuitant. For any annuity that is not based on the investment performance of the underlying assets, the insurer bears all of the risk that such assets may fail to support the promised annuity payments. The purchaser is guaranteed a fixed, or contractually increasing, payment stream regardless of the future economic environment. However, the purchaser does bear the risk of potential insurer insolvency, as discussed further below.

6.4 Support of Higher Consumption Pattern

Annuities provide a higher sustainable level of consumption. If assets are not annuitized, the retiree must be conservative in the drawdown of assets because of uncertainty over how long assets must last. Annuitization reduces the need for conservatism and permits a higher consumption pattern. It also solves the problem of not knowing how much wealth to allocate to a particular year or period of retirement.

6.5 Postponement of Income Taxes

Compared to a lump-sum payout, annuities postpone the payment of income taxes. If the annuity is purchased directly by the qualified retirement plan or IRA, taxes are due in the year of receipt of the annuity payments. Installment payouts, which are common in DC plans, also postpone taxes, but offer no protection against longevity risk. The annuitant, however, does bear the risk that income tax rates will be higher in future years, thereby reducing some of the benefit of tax postponement.

In addition, annuity payments are taxed as ordinary income and are not eligible for the lower federal tax rates that apply to dividends and capital gains. Legislation proposed in 2003 would exclude certain types of annuity income from federal tax which, if enacted, would help to equalize this disparity.[27]

6.6 Maintaining Flexibility through Annuitizing in Layers

Annuitizing in layers can provide increased flexibility. By annuitizing portions of the required amount over a period of months or years, the individual can benefit from averaging over different interest rate environments. This process is similar to "dollar cost averaging" in purchasing stocks or mutual funds. For example, with $250,000 in retirement assets, and $75,000 (30 percent) that must be annuitized by age 75, the individual could purchase $25,000 at ages 70, 72, and 74 to meet the annuitization mandate, and another $50,000 at ages 78, 82, and 86. During the extended purchase period, the individual retains the flexibility of having funds available for unforeseen events or for bequests. This layering method also gives the individual a stronger feeling of control, although investment risk is higher than with a single annuity purchase.

6.7 Satisfaction of the MRD Rules

Another advantage of mandatory annuitization is that the MRD rules would be satisfied. In most cases, annuitizing meets the current MRD rules for qualified plans, 403(b) plans and IRAs. The exceptions would be decreasing annuities or VAs, although the IRS is reconsidering its position on VAs.

6.8 Reduced Adverse Selection

An annuitization mandate would increase the annuity pool and reduce adverse selection. Currently, the market in the United States for private annuities is tiny. Only those individuals who expect to live longer than average purchase annuities, so adverse selection is a problem for annuity providers. Introducing mandatory annuitization would increase the pool of annuity purchasers immensely. Because all individuals with tax-favored retirement savings would have to buy annuities, adverse selection would be reduced, and the average life expectancy of the pool would be lower. Calculations of potential premium reductions range from 2 or 3 percent to as much as 10 percent.[28,29]

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[27] H.R. 2458, the Secure Annuity Income for Life Act of 2003; H.R. 1776, the Pension Preservation and Savings Expansion Act of 2003.

[28] Mackenzie, p. 30.

A related benefit is that a mandatory system provides more information to insurers. The size of account balances is a good indication of an individual's lifetime income, allowing insurers to classify risk by income levels. As with the increase in the annuitization pool, adverse selection is reduced. Additionally, insurers can use separate mortality tables for low-income and high-income individuals, resulting in less wealth redistribution, a problem with mandatory annuitization, as discussed further below.

6.9 Increased Competition

With an annuity mandate, more insurers would enter the annuities market. By competing for market share, insurers would offer more competitive pricing, increasing value to purchasers. Also, by marketing both life insurance and life annuities, insurers could benefit from the natural hedging effect between the two products. State reserving requirements, however, may need adjustments to permit financial recognition of this effect.

6.10 Development of New Products

Finally, competition among insurers may also lead to the development of new annuity products with more flexibility than those currently available. In particular, inflation-adjusted annuities could become more popular. Inflation-adjusted government bonds were introduced in 1997, allowing the development of indexed annuities. Although not currently popular due to the present low inflation environment, indexed annuities provide valuable protection against inflation risk and merit consideration, especially by purchasers with longer life expectancies.

To counter the argument that fully indexed annuities are expensive, insurers may develop products with different types of partial indexation. Instead of adjusting annually for the full increase in the Consumer Price Index (CPI), the payout amount may be adjusted for a percentage (say 50 percent or 70 percent) of the CPI increase. Or the adjustment may occur at less frequent intervals, such as every five years. Or, only CPI increases exceeding a specified percentage (say 4 percent per year) will be reflected, or the indexation could be capped at a specified percentage (say 3 percent). Partial indexation reduces the annuity cost, allowing a higher initial payout amount, at the expense of the annuitant bearing some of the inflation risk.

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[29] Brown, p. 10.

A possible innovation in the annuities market would be a product that combines long-term care insurance with a life annuity.[30] Such a product would address several of the problems faced by annuity purchasers. First, adverse selection would be reduced because individuals with shorter life expectancies may be more willing to purchase a combination product. Second, it would alleviate the hesitancy among purchasers who fear dying before receiving their "money's worth" from their annuity contract. And, third, it responds to one source of potential hardship when assets are annuitized, that is, the need to pay for nursing home expenses.

7. Disadvantages of Mandatory Annuitization

7.1 Too Costly at Lower Ages

Despite the protection against longevity risk offered by annuitization, there are some population groups for whom annuitization is not optimal. At lower ages, the cost of annuitization exceeds the benefits, because of adverse selection and insurers' expense loads. According to one study, retirees should "self-annuitize," that is, take scheduled withdrawals from their invested assets, up to age 80, then purchase a life annuity with remaining assets.[31] If mandatory annuitization were introduced, however, pricing may improve due to less adverse selection, and the age at which self-annuitization is more favorable may be reduced.

7.2 Risk of Overannuitization

At all ages, overannuitization is possible. If most of the retiree's assets are annuitized, he or she will lack resources to respond to unforeseen events or a change in circumstances. Accidents or illnesses can create an urgent need for medical care that may be inadequately insured. Long-term care is very expensive and not covered by Medicare. Death of a spouse, especially when it occurs early in retirement, can cause unplanned reductions in income.

The proposed mandate, however, would apply only to tax-favored retirement assets, leaving other assets available for such emergencies. Even for retirement assets, only a portion would be subject to the annuitization requirement, except for individuals

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[30] Drinkwater and Sondergeld, p. 12.

[31] Moshe Arye Milevsky, "Optimal Annuitization Policies: Analysis of the Options," For the Society of Actuaries Retirement 2000 Conference, February 2000, p. 13.

with modest levels of retirement assets. Incorporating limited hardship exceptions to permit a partial cashout would address the most severe emergency needs.

Individuals with large DB plan benefits might also be forced to overannuitize. Some or all of their DC and IRA assets would be subject to annuitization that would be unnecessary for these individuals.

Retirees with strong bequest motives may also be subject to overannuitization. Such individuals may be left with inadequate remaining assets to satisfy their bequest desires. They might prefer a lower consumption level in order to leave a larger estate to their heirs. Mandatory annuitization essentially would force some individuals to overannuitize compared to the level that would be financially or psychologically optimal for them.

People with strong bequest desires could still find ways to accumulate assets for bequests, although not without costs. They could consume the lower amount that they desire for current consumption and save the difference from their periodic annuity payments. The cost is that such payments will be subject to income taxes, which reduce their accumulated savings. In addition, short-lived individuals would lack sufficient time to build up enough savings to meet their bequest desires. An alternative is to use a portion of their annuity income to buy life insurance, using the proceeds at death to fund their bequests. Again, there are costs associated with this approach: it is quite inefficient financially to purchase a life annuity and then use the annuity payments to purchase life insurance.

Another group that would be forced to overannuitize is people who are in poor health. Because of their reduced life expectancy, individuals in poor health would not find it advantageous to annuitize voluntarily. The limited exception for individuals with a terminal illness would alleviate this disadvantage for the most severe cases. For most people in poor health, however, this exception would not apply and annuitization would be financially disadvantageous.

7.3 Redistribution of Wealth

Mandatory annuitization would cause redistribution of wealth across population subgroups. The redistribution occurs because of the pooling of longevity risks. The premiums paid by short-lived individuals are used, in part, to support the annuity income paid to the long-lived individuals. Redistribution, therefore, would be from low-income to high-income groups; from less educated to more educated individuals; from men to women; and from Hispanics and African-Americans to Caucasians and

Asian-Americans. Generally, these forms of wealth redistribution would be undesirable from a social policy viewpoint.

However, there are several techniques that could be used to offset or mitigate the redistribution effect. As described above, separate mortality tables could be used for low-income and high-income individuals. A more radical approach would be to manipulate mortality tables artificially to benefit certain population subgroups and offset wealth redistribution, although resulting market distortions may outweigh any benefits. A better approach would be to provide the benefits directly to the affected subgroups. For example, some form of subsidy or income-tax credit could be directed to low-income annuitants. Those with very low incomes generally would have only limited retirement assets to annuitize, so the credit should be based on both the amount of assets annuitized and the annuitant's income.

Because of the differing life expectancies between men and women, married couples may be tempted to engage in a form of annuity "arbitrage." The couple would buy a larger annuity for the wife and a smaller annuity for the husband. Such arbitrage could be prevented by allowing only a J&S annuity to satisfy the annuity requirement for married couples, as outlined earlier.

7.4 Inadequate Protection for Dependents

One of the advantages of mandatory annuitization discussed above was the income protection it provides for a surviving spouse or dependents. The other side of the argument is that many individuals do not need such protection and that, for others, life insurance may be a better vehicle. The premium cost for term life may be lower than the cost of the survivor protection under the annuity. Additionally, a lump-sum life insurance settlement may be a better match than a life annuity for certain survivor needs, such as funeral expenses, college expenses, housing purchase or mortgage payoff.

7.5 Risk of Insurer Insolvency

One of the risks that annuitants cannot avoid is the risk of potential insurer insolvency. In effect, they have exchanged longevity and investment risk for default risk. Several approaches are available, though, to reduce this risk. State guaranty funds already exist to protect consumers from losses due to insurer insolvency. Or the guarantee could be shifted to a federal guaranty fund, which could be established in tandem with the annuity mandate. Whether state or federal, more taxes would be needed to support an expanded guaranty fund. The higher taxes could be progressive, thereby helping to offset the wealth redistribution effect.

The existence of a guaranty fund, however, introduces a "moral hazard." Retirees may select insurers based on price alone, ignoring credit quality, knowing that the guaranty fund will protect their annuities in the event of insurer insolvency. A better approach, perhaps, would be for the federal government, rather than private insurers, to provide the annuities. The risk of insolvency and the potential moral hazard would both be eliminated.

7.6 Increased Administration

Mandatory annuitization would have a number of administrative difficulties. For example, coordinating the annuitization rules described above across an individual's multiple retirement plans and IRAs could be challenging and time-consuming. However, a similar difficulty already exists with respect to meeting the MRD rules. More plans, though, would be subject to mandatory annuitization (e.g., nonqualified plans, 457(f) plans and Roth IRAs).

To apply the dollar or percentage of retirement assets limitation on DC and IRA assets would require coordination by the individual on his or her federal income tax return. The DB plan requirement would be applied by plan administrators. Multiple unrelated plans, though, would be uncoordinated, which could mean overannuitization for some individuals. The number of people with multiple DB plan benefits exceeding present values of $15,000 would be very small, however. More likely is that an individual might receive a number of smaller DB lump sums of less than $15,000 each from different plans. Coordination across unrelated plans may be possible, but the administrative costs probably outweigh the benefits.

Alternatively, DB lump sums could be included in the calculation of "max[$50,000; 30 percent]" with the DB lump sum treated as a DC asset. This approach, however, imposes additional administrative burdens on DB plan administrators, who could not automatically cash out small benefits.

7.7 Increased Governmental Costs

Higher governmental costs could be expected, as well. New tax-reporting forms would be needed so that individuals could calculate and report the amounts subject to annuitization. The IRS would need to create and staff an enforcement division to audit the new forms. New IRS publications would be needed to educate employers, plan administrators, financial institutions, workers and retirees about the new requirements. And, finally, the financial regulation and supervision of insurers would require modification. Enforcement of reserve adequacy would be necessary, plus more reporting, auditing and monitoring of insurers would be needed.

7.8 Increased Burdens on Employers

Employers, too, would face additional regulatory burdens. DB plan sponsors would have a direct role in meeting the new requirements. However, if lump sums larger than $15,000 are prohibited, that aspect of DB plan administration would be simplified. If the annuitization requirements for DC assets are applied to the individual, there would be no new burdens on DC plan sponsors.

Employers, however, could play an important role in communicating rules to employees and in facilitating the annuity purchase from DC plan assets. In particular, DC plan sponsors could arrange for employees to purchase annuities using more favorable group pricing. If the annuity mandate replaces the complicated MRD rules, it's possible that employers' administrative burden might actually be reduced.

7.9 Potential for Indirect Lump Sums

Despite an annuitization mandate, retirees would still be able to obtain indirect lump sums. For example, they could use the contracted annuity payment stream to obtain and repay a consumer loan in the desired lump-sum amount. The Chilean experience with "back door" lump sums demonstrates that a prohibition on indirect lump sums would be difficult to enforce.

7.10 Reduced Retirement Savings

Implementation of an annuity mandate could have the perverse effect of reducing overall retirement savings. Workers may be reluctant to make 401(k) salary deferrals or IRA contributions, knowing that future lump sums would not be available for all of their retirement savings. In turn, reduced deferrals by lower income workers could cause more nondiscrimination test failures in 401(k) plans, thereby triggering deferral refunds to highly compensated employees. The result would be reduced retirement savings at all levels. Thus, mandatory annuitization could result in improving longevity risk protection, but with a reduction in retirement assets.

A related problem is that retirees may move assets out of tax-deferred accounts before age 75 to avoid the annuitization requirement. To counter this problem, the dollar or percentage of assets calculations should be determined at an earlier age, such as the time of commencement of Social Security benefits. Actual annuitization could be delayed to age 75, but asset transfers between the two dates would not affect the amount of savings that must be annuitized.

Strategies would be needed to prevent or reverse reduced savings levels. Education programs through the government and through employers could reinforce the importance of saving for retirement. And targeted tax credits could motivate lower income individuals to continue their 401(k) and IRA contributions. Taxpayers below certain income thresholds could be granted a federal tax credit to offset part or all of their contributions to a retirement plan or IRA. Congress has already enacted a similar credit for tax years 2002 through 2006.[32]

7.11 Adverse Effects on Insurance and Annuity Markets

Implementing a new annuity mandate would have a significant impact on insurers. Currently, there are few insurers in the United States who write annuity contracts. One study shows only 100 companies marketing immediate annuity products in 1997, out of some 1,620 life insurers doing business in the United States in that year.[33,34] It may take a while for additional insurers to enter the market, so prices could rise in the short term. As more companies enter the market, however, prices should go down as a result of competition.

Annuity purchasers, too, would be affected. The public would have an immediate need for information to evaluate competing products and providers, including tools for comparing prices and guidance on how to assess an insurer's creditworthiness.

To promote the transparency of annuity products and markets, state and federal regulators should have a role in providing this type of information. In particular, tools for determining implied rates of return would be useful. At a minimum, regulators should require full disclosure of fees and expenses related to the annuity purchase.

Time would be needed for insurers to establish marketing and administrative staff and procedures to meet the annuitization requirements. The costs to create these procedures and systems could be high.

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[32] Economic Growth and Tax Relief Reconciliation Act of 2001, Sec. 618; Internal Revenue Code Sec. 25B.

[33] Smalhout, p. 46.

[34] *Life Insurers Fact Book 2003*, American Council of Life Insurers, Washington, DC, 2003, p. 9.

The first years under the new requirements can be expected to be confusing for workers and retirees until the rules become established and the procedures become routine. To ease the transition, retirees over age 70 on the date of enactment could be exempted, but voluntary compliance among this group should be encouraged.

8. Conclusions

The continuing shift from DB plan annuities to DC plan lump sums will increase the amount of longevity risk borne by future U.S. retirees. Increasing life expectancies will exacerbate this risk. There are many reasons that prevent retirees from voluntarily annuitizing their assets. Without strong incentives or a government mandate to annuitize, it is unlikely that future retirees would purchase more annuities than at present.

Government has an interest in ensuring adequate income levels in old age and in reducing reliance on government assistance. In exchange for the tax benefits provided for various types of retirement savings, Congress could impose an annuity mandate.

This paper outlines a proposal for mandatory annuitization, directed at the individual for DC plan and IRA assets, and at plan administrators for DB plan assets. Looking in part at the experience of other countries, the proposal attempts to balance longevity-risk protection with flexibility and administrative practicality. By focusing on assets that are generally already subject to MRD rules, and by not requiring coordination between unrelated employers, the administrative burden should not be severe.

To address concerns about overannuitization that would affect some population groups, the proposal allows limited hardship exemptions. Potential wealth redistribution effects could be countered with tax credits or subsidies. Allowing individuals to delay annuitization until age 75 or 80 would provide flexibility, although possibly at the expense of higher annuity prices at the older ages, as suggested by the U.K. experience.

In comparing the advantages and disadvantages of mandatory annuitization, the reader may observe that the list of disadvantages was slightly longer. However, suggestions were offered to mitigate many of the disadvantages. The remaining disadvantages, such as increased administrative burdens and high transition costs, may be an acceptable tradeoff for the very valuable benefits that an annuity mandate would provide. Granted, such a mandate would not be popular and a new industry dedicated to annuitization avoidance might arise. Similar objections accompanied the expansion of the MRD rules in 1986, however, and the financial industry has adjusted. Arguably, longevity-risk protection is a much bigger benefit to society than the additional tax revenue generated by the MRD mandate.

References

Ameriks, J., and Yakoboski, P. 2003. Reducing retirement income risks: The role of annuitization. *Benefits Quarterly* 19 (4): 23.

Brown, J.R. 2000. How should we insure longevity risk in pensions and social security? *An Issue in Brief*, Center for Retirement Research at Boston College, August 2000 (4): 12.

Drinkwater, M., and Sondergeld, E.T. 2003. Perceptions of mortality risk: Implications for annuities. Pension Research Council Working Paper 2003: 8.

Fong, W.M. 2002. On the cost of adverse selection in individual annuity markets: Evidence from Singapore. *The Journal of Risk and Insurance* 69 (2): 193-207.

Johnson, R.W., Uccello, C.E., and Goldwyn, J.H. 2003. Single life vs. joint and survivor pension payout options: How do married retirees choose? Final Report to the Society of Actuaries and the Actuarial Foundation, The Urban Institute, September 2003, p. 3.

Life Insurers Fact Book 2003, American Council of Life Insurers, Washington, DC, 2003, p. 9.

Mackenzie, G.A. 2002. The role of private sector annuities markets in an individual accounts reform of a public pension plan. International Monetary Fund, September 2002, p. 10.

MacPherson, A., and Plotnick, L. 2002. A crossed signals: Built for income, sold for accumulation. *National Underwriter*, January 7, 2002, p. 23.

Milevsky, M.A. 2000. Optimal annuitization policies: Analysis of the options. North American Actuarial Journal, January 2001, Vol. 5, No. 1, p. 66.

Mohrenweiser, J. 2003. The evolving U.S. retirement system: Insurers view expansion of income annuities. *The Actuary* 37 (3): 1, 3.

Munnell, A.H., Cahill, K.E., and Jivan, N.A. 2003. How has the shift to 401(k)s affected the retirement age? *An Issue in Brief*, Center for Retirement Research at Boston College 13: 2.

Murthi, M., Orszag, J.M., and Orszag, P.R. 2000. Annuity margins in the UK. http://www.sbgo.com/Papers/annuities.pdf, July 2000, pp. 12-13.

Smalhout, J.H. 2002. Benefit design choices for personal social security accounts. *Benefits Quarterly* 18 (2): 45.

Smith, J.P. 2003. Trends and projections in income replacement during retirement. *Journal of Labor Economics* 21 (4): 775.

Turner, J. 2003. Reducing risk: Annuity conversion rate guarantees. Public Policy Institute, AARP, June 2003, pp. 6-9.

Valdes-Prieto, S. 1998. Risks in pensions and annuities: Efficient designs. The World Bank, February 1998, p. 35.