AMERICAN ACADEMY OF ACTUARIES Lifetime Income Initiative ISSUE BRIEF

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Risky Business: Living Longer Without Income for Life Information for Current and Future Retirees

Workers retiring today generally face more individual responsibility and risk for their lifetime incomes than previous generations did. For most people, retirement is no longer a situation where one retires from a company with 30-40 years of service and receives a traditional pension (defined benefit plan) that pays out an income for the rest of one's life.

Today's retirees typically have sums of money from individual retirement accounts (IRAs), 401(k) accounts, tax-sheltered annuities, other personal savings, and options to take a single cash payment in lieu of monthly defined benefit payments for life. They must choose, and hope they choose accurately, what to do with that money so that it will last them the rest of their lives.

Uncertainty about how long we will live complicates the process of determining how much money is needed for retirement. Should retirees be successful in planning perfectly to have their money last to exactly their life expectancies,¹ about half of them will run out of money. In addition, retirees also run the risk of life expectancies improving over time, resulting in even more of them running out of money. This risk of outliving assets is called *longevity risk*.

The purpose of this brief is to explain how a retiree can use the concept of "risk sharing" to help manage longevity risk through lifetime payout options and individual annuities (known as annuitization), but the brief also describes other approaches to lessen the risk. This brief further outlines considerations in electing such options.

1 A life expectancy is the average number of years a person is expected to live.

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Methods of risk sharing

Risk sharing can be accomplished in various ways, for example:

- Taking a lifetime income from a defined benefit plan rather than taking a lump sum.
- Using assets from a defined contribution plan or personal savings to purchase an annuity that begins paying you a monthly lifetime income as soon as you retire (single premium immediate annuity, or SPIA). These defined contribution plans include 401(k) plans, 457 plans, 403(b) plans, and IRAs.
- Purchasing a deferred income annuity (DIA). A deferred income annuity is like the annuity described above, except that it doesn't begin until an age specified when an annuity is bought, such as age 85. These may be purchased using personal savings, but the Internal Revenue Service allows one type of deferred income annuity, called a Qualified Longevity Annuity Contract (QLAC), to be purchased with funds in a defined contribution plan. The IRS limits the amount of money in defined contribution plans that can be used in this way to the lesser of 25 percent of the amount of money you have in the defined contribution plans or \$125,000.
- Purchasing a Guaranteed Lifetime Withdrawal Benefit (GLWB) or a Guaranteed Lifetime Income Benefit (GLIB) on a deferred annuity or a Contingent Deferred Annuity (CDA) in conjunction with other investments.

How risk sharing works

To illustrate through a hypothetical example, assume a company employs among its workforce 1,000 people who are going to retire next year at age 65. Each of them miraculously has determined that he or she needs \$25,000 per year in income in addition to their Social Security benefits for the rest of their life. (This scenario has been simplified for the purpose of illustration.) The cost of providing this guaranteed income as an annuity option through their employer's 401(k) plan or a rollover IRA income annuity is about \$350,000, if interest is earned at 4 percent. Some people may say, "I don't know how long I'm going to live. I might die in the next 14 years, and then I'll be losing money. I'll just keep the \$350,000 in safe bonds earning 4 percent and take out \$25,000 a year. That's enough to last my life expectancy of 20 years."

What happens if someone does that?

If bonds continue to pay 4 percent and don't go up or down in market value, that approach will provide an income for a little less than 20 years. The life expectancy for this group is 20 years. But, this does not mean that all of these people will die in 20 years; it means that about half of the people will have died in 20 years and about half will still be alive.

Thus over half of this group of 1,000 people will run out of money, assuming that they did not reduce their spending. And many of them will be out of money for quite a while. At age 90, 35 percent of the group will still be alive. That's five years of no assets and no income other than Social Security. At age 95, 16 percent of them will still be alive and 5 percent of them will still be alive at age 100. In addition, historic trends indicate that life spans are continually increasing. Everyone should consider the implications of living 15 years or more of retirement with no remaining assets.

What happens in a different scenario? If all 1,000 in this hypothetical group elect the lifetime income option rather than the lump sum, how many of them "lose out" if they die before receiving a total payout of \$350,000 or more? About 25 percent of them will die before the full \$350,000 is returned. If we recognize the time value of the payouts, about 45 percent will die before receiving the full \$350,000 value.

With lifetime income, everyone shares the longevity risk and thus eliminates the risk of outliving their assets. Some "win" a little, some "lose" a little, very few "win" a lot, and very few "lose" a lot, just like other insurance. But very importantly, everyone has the peace of mind of knowing that they won't live their oldest years having to rely on Social Security as their only source of income.

Added advantage of longevity risk sharing

Assume that some of the people in this group of 1,000 have more than \$350,000 accumulated retirement savings/benefits. Also assume they know they need \$25,000 per year in retirement as a minimum, and they don't want to go the risk sharing route. They are willing to take the risk that they will not be in the 16 percent of the group who will live beyond age 95, so they need to fund retirement for only 30 years. The value needed for 30 years of income/withdrawals, again at 4 percent interest, is \$450,000. That's an extra \$100,000 tied up in providing a lengthy income during retirement, but it still doesn't give full protection (i.e., the retiree still has a 16 percent chance of running out of money).

In addition, it's important to note that this example assumes that 4 percent is earned each and every year. An average of 4 percent return that is lower in early years and higher in later years will cause the retiree to run out of money earlier.

If an annuity is used to provide lifetime income, that \$100,000 could alternately have been used in a variety of ways. For example, it could be:

- invested relatively more aggressively to provide extra money;
- saved to cover unforeseen expenses;
- used to purchase a single premium life insurance policy of about \$170,000² as an endowment for their heirs; or
- used for discretionary spending, such as travel in the healthier years of their retirement.

This example involved an annuity that begins right at retirement, but longevity risk sharing can also be accomplished with a deferred income annuity (DIA/QLAC). However, the approach is somewhat different. In the example above the annuity provides guaranteed lifetime income right away. The guaranteed lifetime payments from the deferred income annuity do not begin until the specified age under the product (e.g., 85), which could be as much as 20 years after purchase. Using a deferred income annuity divides retirement into two stages. The benefits in the initial stage come from investments and Social Security and last over the fixed period until the specified age. The later stage commences at the specified age, and the benefits are provided by the deferred income annuity, Social Security, and any assets left over from the first stage. The cost of the deferred income annuity is a fraction, perhaps 15 percent, of an annuity starting right away with a comparable monthly payment, thus participants have fewer assets that could be lost if they die earlier than expected.

Considerations before entering a longevity risk-sharing arrangement

Cost considerations

- The above example assumes that a lifetime annuity is available through the employer's 401(k) plan or upon leaving the plan. Most plans do not offer annuities. When they are available, employer plans are often more cost-effective than an individually purchased annuity, but not always. Annuities inside retirement plans are required to be calculated on a unisex basis,³ which may be unfavorable for male purchasers and favorable for female purchasers because the life expectancies of each vary from the average, while annuities outside plans generally use a gender-distinct basis. The prices of lifetime income options can vary considerably among 401(k) plans, defined benefit pension plans, and insurance companies. As with any important purchase in life it is worth shopping around for the best price.
- Almost the same longevity risk protection can be achieved with a deferred income annuity as with an annuity that starts right at retirement, but at a much lower cost for the risk pooling investment. Additionally, a DIA/QLAC provides investment and income management flexibility with the other assets during the deferral period.

2 This is the approximate face amount of a single premium whole life insurance policy that could be purchased at age 65. 3 A unisex basis assumes equal mortality for males and females, in contrast to a gender-distinct basis, which recognizes higher mortality

for males than females.

- Purchasing an annuity may not make sense for a retiree who is in poor health, facing a shortened expected life span. However, in this situation, a few insurance companies offer "impaired life" annuities, in which the monthly benefit is adjusted upward to account for the shortened life expectancy.
- Annuities are more expensive when interest rates are low; however, alternative investments may reflect similar interest rates. It may or may not be advantageous to wait for interest rates to return to levels closer to a long-term average before purchasing. Of course there is the risk that interest rates may fall lower.
- Delaying purchase of an annuity to an older age can be cost-effective. Lifetime annuities can yield a higher income the older the annuitant is at purchase. Delaying also gives retirees the chance to assess if they remain sufficiently healthy for an annuity to still be appropriate. However, delaying also creates risks that a retiree's investments could lose money or that the retiree will overspend the money because it is readily available.
- Most annuities do not change the monthly income payments to account for inflation. However some annuities do increase the monthly payments by either a fixed annual percentage (for example, 3 percent increase per year) or by the actual inflation rate as calculated through the consumer price index (CPI).

An annuity with inflation protection will cost significantly more than would an annuity without inflation protection for the same initial monthly income.

Purchase choices

• A retiree may want to provide a bequest for someone else upon his or her death or reduce the risk of loss if he or she dies early. Annuities can provide a higher income when they have no or minimal death benefits. However, for those who wish to provide benefits to beneficiaries, this desire can be addressed with annuities with lump sum death benefits or specified periods of time during which the annuity is paid even if the retiree has died. Annuities are most effective if, when combined with Social Security and any other guaranteed income, they provide enough income to cover basic needs. Of course, retirees should consider keeping some portion of their funds liquid for discretionary spending and as a fund for unpredicted expenses.

Differing needs

- Relatively wealthy retirees may decide they do not need the protection given by risk-sharing mechanisms, although they still could benefit from it by providing a predictable income for themselves and protecting assets they wish to pass to heirs.
- Retirees who have relatively little accrued retirement savings or few assets might not benefit much by receiving minimal periodic benefits and may be better served by living on Social Security while slowly drawing down savings, keeping their assets liquid for larger expenses.
- Retirees with moderate savings are in a position to potentially benefit the most from risk sharing.

Alternative income approach

- A simple structured withdrawal program can be an alternative for some as a partial solution to their lifetime income needs. A commonly cited example of this is a 4 percent withdrawal program, in which an individual withdraws 4 percent from his/her investments in the first year and then increase the amount withdrawn each year by the inflation rate over the past year. However, the withdrawals may need to be significantly less than 4 percent to provide income over a long time horizon, (e.g., past age 90), especially in the current low-interestrate investment environment. The income initially is less than from an annuity, and individuals who end up with a long life span still risk running out of money; however, this approach gives individuals access to all of their assets at any time.
- Under one variation of the above approach, the amount withdrawn each year can be adjusted to handle changing needs and investment circumstances. This approach still will

not guarantee lifetime adequacy, and of course determining each year the amount to be withdrawn is more complicated, but it should perform better than a simple structured withdrawal program.

- Combining risk sharing and a structured withdrawal program can manage the longevity risk while providing flexibility and access to the assets in the remainder of the program. This can be accomplished by using a structured withdrawal program combined with an annuity that begins immediately after retirement or a deferred income annuity that begins at a later date. If a deferred income annuity is used, the following benefits occur:
 - The individual has complete flexibility in the use of the other assets during the deferral period.
 - The uncertainty about the success of the withdrawal program is reduced because only the period prior to that date needs to be considered.
 - The withdrawal amount might be able to be increased because of the shorter period over which the non-annuity benefits are being withdrawn.
 - Individuals no longer need to worry about whether they will have an income or will be able to manage their investments in later life; e.g., after age 85.
- The tradeoff for reducing longevity risk is that investment gains associated with assets (for example, stocks) devoted to the annuity program might have provided a greater benefit. (Of course, poor returns or investment losses might have resulted in a smaller benefit.)

Other considerations

Social Security: Social Security retirement benefits provide a foundation for retirement income that includes an inflation-protection feature and surviving spouse protection as well. A key way to reduce longevity risk is to take full advantage of Social Security by choosing to delay commencement of benefits as long as possible and realize an increase for every year of deferral past age 62. This can be done up to age 70, if appropriate, given the retiree's financial and health circumstances. While delaying commencement provides greater longevity protection, particularly with regard to the spousal benefits payable in the event of the retiree's death, it does pose a risk that the retiree will die before receiving cumulative increased income equivalent to the cumulative benefits that would have been received after the earlier commencement date. Many make the mistake of commencing Social Security benefits too early; however, early commencement could be appropriate for retirees in poor health and for those with no financial alternative.

- Benefits from employer: A retiree who is fortunate enough to be covered by his or her employer's defined benefit retirement plan may already have an annuity available at a very advantageous cost when compared to the cost to provide the income through a lump sum cash out and purchase of a retail annuity. Retirees offered the choice of electing a lump sum in lieu of a pension plan annuity should carefully consider whether a lump sum is truly appropriate for their circumstances, particularly their exposure to longevity risk.
- Annuity Purchase: If an annuity is purchased to protect against longevity risk, it can provide either an income that starts immediately or one that starts at some future date. Each has its advantages, but both can provide the needed lifetime income risk protection.
- Medical Costs: Retirement can mean costly and unexpected medical expenses, and thought should be given to how much money will be needed to cover these future costs. Medicare, supplemental medical coverage, and long-term care insurance can help protect against unpredictable medical and extended care costs.
- Inflation: In determining an appropriate level of income, retirees should consider the degree to which inflation may drive up the cost to maintain their desired standard of living.
- Senescence: The longer one lives, even in relatively good health, the greater the chance of diminished ability to invest wisely.

- Other income sources: Retirees should bear in mind other assets and sources of income when doing retirement income planning:
 - Reverse mortgages,⁴ when used with a continuous periodic payment (tenure payout), can convert home equity to lifetime income.
 - By working during one's early retirement years, either full time or part time, a retiree can earn supplemental income. This practice can be very helpful, especially if it allows them to delay starting their Social Security benefits. However, retirees should be careful not to assume that they can continue to work until the day they die. Declining health and/or the market-place's changing needs for skills are likely to mean that this practice is unrealistic for an extended period of time.
 - Dynamically managed portfolios, which are adjusted to recognize changing income needs and changing investment circumstances, can be structured to generate income with a monthly withdrawal. Doing so creates the potential of gaining higher income as compared to an annuity if assets (for example, stocks) perform well, along with the risk of running out of money if assets do not perform well.

Conclusion

As a nation, we need to do more to encourage people to better prepare for the need for lifetime income. Future retirees can benefit significantly from considering all alternatives. Longevity risk-sharing programs, including Social Security, pensions, and annuities, are an important part of retirement planning. Properly utilized in retirement planning, they can provide an efficient means of meeting basic income needs for a lifetime in retirement.

4 A reverse mortgage is a type of home mortgage, available after age 62, in which a portion of the value of a home can be withdrawn and the loan is repaid solely by the value of the home at the time the borrower moves out or dies. The available loan is approximately 40-60 percent of the home value. Loan proceeds are accessed as a lump sum, a line of credit, or as payments over many years (tenor payout).

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