THE NRRI AND ANNUITIES

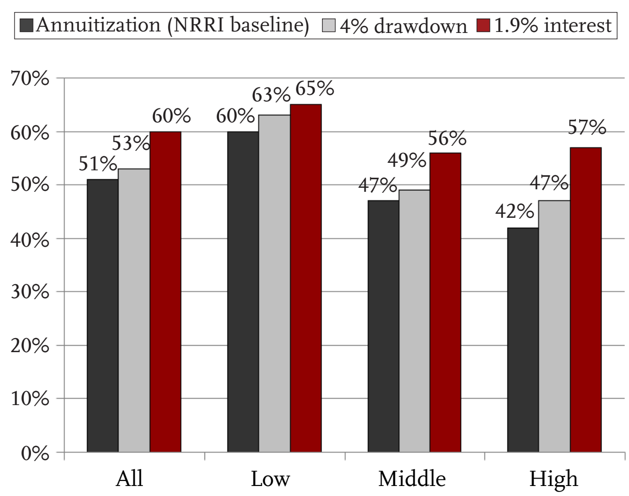
The National Retirement Risk Index (NRRI) measures the share of American households 'at risk' of being unable to maintain their pre-retirement standard of living in retirement. The Index is calculated by comparing households' projected replacement rates – retirement income as a percent of pre-retirement income – with target rates that would allow them to maintain their living standard. To make the estimates as conservative as possible, the calculation assumes that households derive the maximum possible income from the assets they hold at retirement. A crucial component of that exercise is the assumption that they access their home equity through a reverse mortgage, and then combine the proceeds of the reverse mortgage with their other financial assets to purchase an inflation-indexed annuity. The annuity purchase ensures that households will not outlive their assets. In fact, very few households buy annuities and therefore either draw down their assets on their own or live off the interest that their assets generate.[1]

This fact sheet examines the impact on the NRRI of not annuitizing financial wealth. The exercise explores two alternatives: 1) households draw down their assets at a rate of 4 percent per year, as suggested by financial planners,[2] and 2) households live off the interest on their accumulated wealth (including the proceeds of a reverse mortgage).[3] The results are displayed in Figure 1. As one would expect, the impact of non-annuitization strategies increases with income, because high-income households are more dependent on accumulated wealth to finance retirement consumption.

Of the two alternatives, drawing down assets under the 4-percent rule has the smaller impact compared to the NRRI baseline.[4] The overall percent 'at risk' increases from 51 to 53 percent. The relatively small magnitude of the change can be explained by the fact that annuities in the NRRI (which vary by marital status, gender, and age) have an average annual payout that is only modestly higher – 5 percent of the households' annuitized assets. That said, the overall percentage of households 'at risk' in the top tercile increases from 42 percent to 47 percent.

Now consider the second scenario in which households merely live off the interest generated by their financial assets. The interest rate applicable varies with the age of the household: older households experience the current rate, younger households experience the historical rate, and households in the middle experience a blended rate.[5] The average interest rate – after inflation – is 1.9 percent. Not surprisingly, reducing households' annual draw on their assets from 5 percent in a world of annuitization to 1.9 percent has a much larger impact on the NRRI; the overall percent 'at risk' jumps from 51 percent to 60 percent.

Figure 1. Percent 'At Risk' by Income Tercile and Scenario, 2009

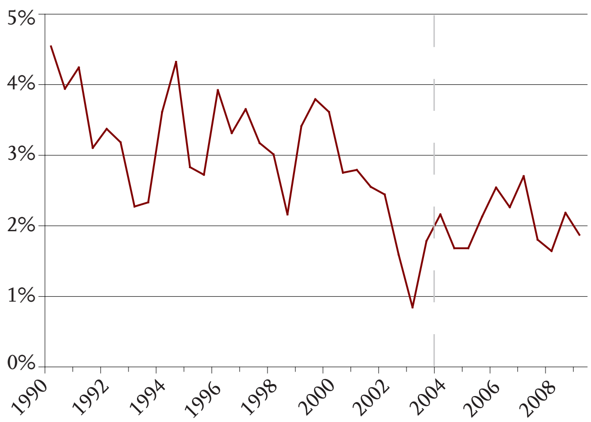


Source: CRR calculations.

When looking at households by income tercile, the group most affected by not annuitizing is the top third of the income distribution. This result is to be expected given that higher income households depend on the return on assets to a much greater extent than their lower income counterparts, who instead rely on Social Security for most of their retirement income. Thus, more high-income households fall below their target replacement rates and into the 'at risk' zone.

Since annuity rates fluctuate with interest rates, households will realize different payouts depending on current interest rates (see Figure 2 on the next page). While securing a high annuity rate is obviously optimal, it is important to remember that when annuity payout rates are lower, alternative drawdown strategies that rely on interest rates also provide less.

Figure 2. Real 10-Year Interest Rate, 1990-2009



Note: Real interest rates equal the 10-year Treasury bond interest rate minus anticipated inflation for 1990-2004 and, thereafter, the 10-year rate for Treasury Inflation-Protected Securities (TIPS).
Sources: CRR calculations based on U.S. Board of Governors of the Federal Reserve System (2009); and Federal Reserve Bank of Philadelphia (2009).[6]

Conclusion

Ensuring retirement security for an aging population is one of the most compelling challenges facing the nation. The main focus these days is ensuring that retirees have a large enough nest egg. However, to achieve real security in retirement, households need to get as much as possible out of their nest eggs in the drawdown period. Annuities guarantee that households do not outlive their money. In addition, an inflation-indexed annuity protects a household's purchasing power against inflation. Finally, annuities provide more monthly income than other approaches, such as the "4-percent rule" or living off the interest on assets.

Endnotes

1 Many researchers have explored why few people buy annuities. For an overview, see Jeffrey R. Brown. 2007. "Rational and Behavioral Perspectives on the Role of Annuities in Retirement Planning." Working Paper 13537. Cambridge, MA: National Bureau of Economic Research.

2 The choice of 4 percent is based on an assumption that it provides an acceptably low risk that a household will run out of money. The household is assumed to draw out 4 percent of its initial balance and continue withdrawing the identical inflation-indexed dollar amount in each subsequent year. Assuming historic asset returns and a 50/50 stock-bond portfolio, the chance that a household will exhaust its wealth under this approach is estimated to be less than 10 percent.

3 The interest rate used is 1.9 percent – the 10-year Treasury Inflation-Protected Securities (TIPS) rate for mid-2009.

4 For the purposes of this analysis, the 4-percent strategy was applied by taking households at the beginning of retirement and including 4 percent of their assets in their projected replacement rate.

5 The real interest rate equals the 10-year rate for TIPS.

6 U.S. Board of Governors of the Federal Reserve System. 2009. "Selected Interest Rates: Historical Data." Washington, DC; and Federal Reserve Bank of Philadelphia. 2009. *Short-Term and Long-Term Inflation Forecasts: Survey of Professional Forecasters*. Philadelphia, PA.

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