PLANNING FOR RETIREMENT:
THE IMPACT OF INTEREST RATES ON RETIREMENT INCOME

The National Retirement Risk Index (NRRI) is published by the Center for Retirement Research (CRR) at Boston College, and measures the percentage of households at risk of being unable to maintain their pre-retirement standard of living during retirement. The most recent update to the NRRI, published in October 2012, indicated that 53% of households are at risk. These results represented a spike of nine percentage points over a three-year period, signaling an increasing retirement security problem in the U.S. A number of factors drove the increase, including a sharp decline in equity values, a decrease in housing wealth, a decline in interest rates, and an increase in Social Security's Full Retirement Age.

In new research, the CRR takes a closer look at the impact of interest rates and concludes that interest rate levels alone have only a modest effect on the NRRI. (See page 3.) A key reason for this is that Social Security and defined benefit pension income, which are not impacted by interest rate changes, make up the majority of total wealth for most Americans. Further, the NRRI assumes households annuitize their financial and housing wealth at retirement, thereby protecting the income generated from those assets against interest rate risk as well as equity market and longevity risks. For those who do not protect their retirement income, however, these risks can have a significant impact on their retirement prospects.

Insuring Retirement Income

A recent Prudential white paper, "Should Americans Be Insuring Their Retirement Income?," examined the impact of market volatility, longevity risk, and interest rate risk on a retirement portfolio.

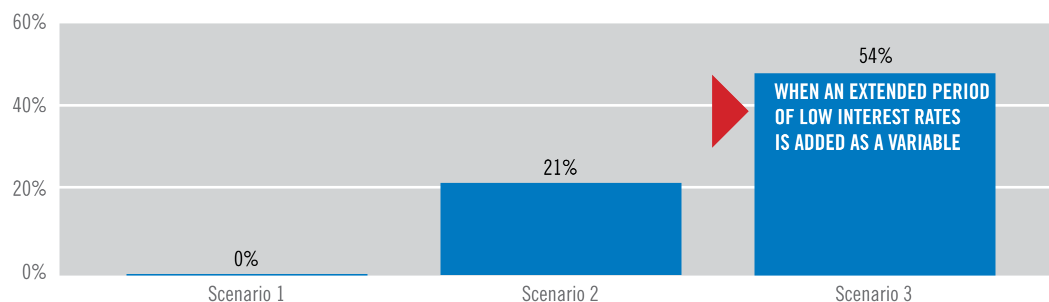
The paper included a case study, based on a hypothetical 65-year-old female retiree, that was generated using Ernst & Young's Retirement Analytics model.[1]

In the absence of protecting retirement income against these risks, the likelihood of an individual exhausting her retirement assets increases from 21% to 54% when exposed to an extended period of low interest rates. (See Exhibit 1.)

In a low interest rate environment, more conservative investments may not provide adequate investment growth; as a result, assets are at risk of being exhausted earlier than expected.

Lifetime Income Failure Rate Exhibit 1

The results were based on three specific scenarios:
Scenario 1: an environment with no market volatility or longevity risk
Scenario 2: an environment with both market volatility and longevity risk
Scenario 3: an environment with market volatility, longevity risk, and an extended period of low interest rates



PERCENTAGE OF SIMULATIONS IN WHICH RETIREE RUNS OUT OF INCOME

Implications

For Individuals

- Individuals are understandably concerned about the impact of interest rates on their retirement prospects. Recent research indicates that 65% of retirement-age consumers are concerned that continued low interest rates will hurt their finances during retirement.[2]
- It is important for individuals to protect their retirement income against market, longevity, and interest rate risks. Guaranteed lifetime income benefits available in today's variable annuities are one strategy that may help protect against these risks, providing a retirement income stream you cannot outlive, along with a measure of control over, and access to, the underlying assets.
- Social Security is a stable source of retirement income that is not impacted by investment and longevity risks. Prudential's recent white paper, "Innovative Strategies to Help Maximize Social Security Benefits," offers strategies to help individuals optimize Social Security claiming decisions to help attain greater retirement security.
- Ultimately, it is imperative that individuals save more in their retirement plans and personal investment accounts, while meeting regularly with a financial professional to help measure their progress in terms of an actual retirement income goal.

For Plan Sponsors

- Employers can help employees do a better job of saving for retirement by enhancing defined contribution (DC) plans to help employees achieve more certain outcomes. This can be accomplished by adding features such as automatic enrollment, automatic escalation of contributions, and in-plan guaranteed lifetime income solutions.
- According to the recent CFO Research study conducted in collaboration with Prudential, 61% of finance executives agreed that participants in DC plans will make better behavioral decisions (e.g., maintaining their asset allocations during periods of market volatility) if they are invested in an option that includes a guaranteed income feature.[3]

For Financial Advisors

- The importance of helping clients determine an appropriate target retirement age, track retirement savings in terms of an income goal, and understand the role of guaranteed lifetime income products as well as Social Security claiming options is becoming increasingly important.
- For future generations of retirees, who will be able to rely even less on defined benefit income in retirement, the need for financial advice and retirement income protection will become even more critical.
- Clients need help understanding the impact of interest rates on different types of retirement income products. For example, the amount of monthly payout from an immediate annuity is dependent on the interest rates at the time of the annuity purchase; the higher the interest rate, the higher the payout. On the other hand, the level of payouts from a variable annuity with guaranteed lifetime income benefits is not dependent on interest rates at the time income payments commence.
- Financial advisors will need to help their clients understand that, without a customized financial plan and proactive steps to insure their income, improvements in the economic climate alone—such as increasing interest rates—will not be enough to guarantee a dignified retirement.

About the NRRI and the CRR's Latest Research

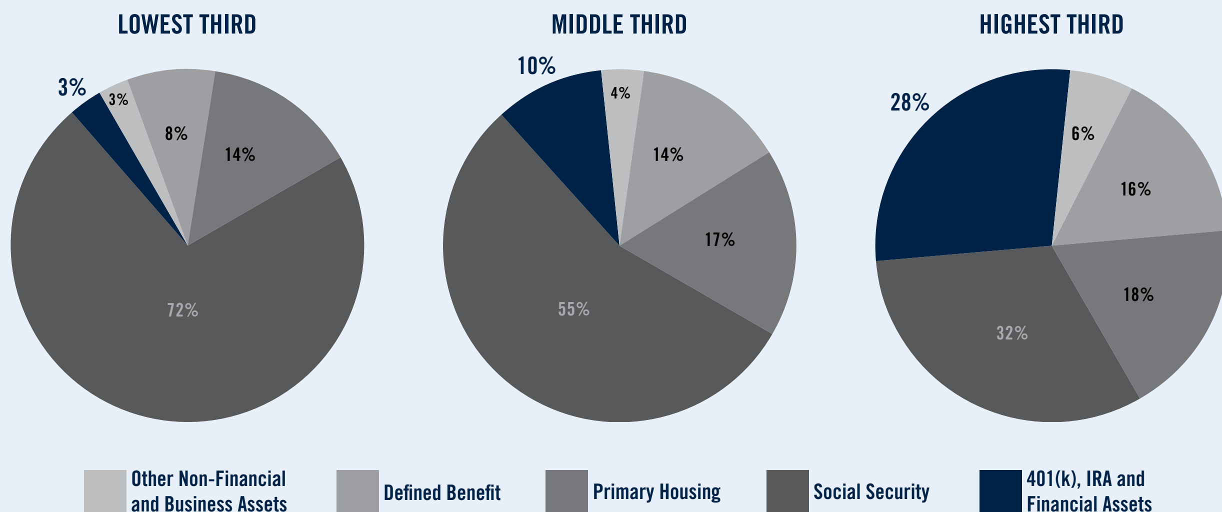
The NRRI is constructed using data from the Federal Reserve's "Survey of Consumer Finances," and compares households' projected replacement rates—retirement income as a percentage of pre-retirement income—with target rates that would allow them to maintain their living standard during retirement. The NRRI assumes that households purchase inflation-indexed annuities with their financial wealth, as well as with the proceeds from a reverse mortgage.

The most recent CRR research examines the percentage of households at risk under two alternative interest rate scenarios: real interest rates remain at zero, and real interest rates revert to 4% over time. The results are then compared to the baseline NRRI results, across three different income groups.

The CRR's research shows that changes in interest rates have only a modest effect on the NRRI for a number of reasons, including the fact that most households have relatively little financial wealth to annuitize.

- The financial assets that the NRRI assumes are annuitized are a relatively small portion of total wealth for all but the highest income households. For most, Social Security and defined benefit payments account for the bulk of total wealth. (See Exhibit 2.)

Composition of Total Wealth by Income Group, Households 55-64, 2010 Exhibit 2



Note: The values reflect the mean of the middle 10% of each income group.

The income groups reflect the CRR's classification based on the Federal Reserve's "Survey of Consumer Finances." For Exhibit 2, these are lowest third (less than $40,000), middle third ($40,000-$89,000), and highest third (more than $89,000).

Source: CRR calculations based on the 2010 "Survey of Consumer Finances."

- While interest rate levels have little impact on the NRRI overall, middle and high income groups benefit more from rising interest rates than does the low income group. This is because, for higher income groups, financial wealth represents higher portions of total wealth. (See Exhibit 3, on page 4.)

Percentage of Households “At Risk” at Age 65 by Income Group and Interest Rate Exhibit 3

	REAL INTEREST RATE		
Income Group	**0%**	**Baseline***	**4%****
All	54%	53%	51%
Lowest Third	61%	61%	61%
Middle Third	56%	54%	51%
Highest Third	46%	44%	40%

Source: CRR calculations.
* In the baseline scenario, rates climb from 0.9% to 2.2% over the period 2015-2038.
** 4% rate is fully phased in by 2021.
Households are divided into thirds by income level, categorized as low, middle, and high. The income groups reflect the CRR’s classification based on the Federal Reserve’s “Survey of Consumer Finances” and vary by age group (e.g., for ages 48-50, lowest third is less than $45,500, middle third is $45,500-$98,500, and highest third is more than $98,500).

More detailed results can be found in the CRR Issue Brief “The Impact of Interest Rates on the National Retirement Risk Index,” by Alicia H. Munnell, Anthony Webb, and Rebecca Cannon Fraenkel.

Prudential is the exclusive sponsor of the National Retirement Risk Index.

[1] Ernst & Young Insurance and Actuarial Advisory Services, October 2012. The projections or other information generated using Ernst & Young’s Retirement Analytics model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. The results of the Monte Carlo simulations referenced in this article may vary with each simulation and over time. A Monte Carlo analysis solving for the probability of success given a defined amount of starting assets and a specified income amount for life was performed for each scenario. The investments assumed a risk premium of 5% for equities and standard deviation of returns of 15.91%. The risk premium for bonds is assumed to be 1% and the standard deviation of returns is 8%. The bond returns assume beginning yields reflecting the current interest rate environment and a reversion over time to long-term historical averages. The mortality table used in the analysis is the Annuity 2000 mortality table with Scale G2 mortality improvements. In Scenario 1, the participant is assumed to live to life expectancy (age 90) and earn a standard net rate of return of 7%. In Scenario 2, the participant is assumed to have life expectancy and investment returns vary via Monte Carlo simulation. In Scenario 3, the participant is assumed to have life expectancy and investment returns vary via Monte Carlo simulation, while interest rates are assumed to remain at December 31, 2011 levels throughout retirement.

[2] Matthew Greenwald & Associates, Inc./Diversified Services Group, Inc., “Retiree Insights Key Findings and Implications,” March 2013.

[3] CFO Research, in collaboration with Prudential, March 2013.

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