



## THE 4% RULE PRODUCES UNACCEPTABLE RISK FOR AMERICA'S RETIREES

Americans entering retirement face a considerable level of risk from the triple threat of longevity, market volatility, and long-term care.

By Colin Devine and Ken Mungan

For decades, some financial advisors have counseled clients that they should be able to safely withdraw four percent of their assets each year as a means of providing retirement income, while maintaining an account balance large enough to keep income flowing through the years.

However, while some of the underlying thinking behind the so-called four percent rule was prudent, it was hatched in an era in which interest rates were much higher, capital markets less volatile, and most importantly, Americans had shorter lifespans.

Given today's market volatility and changed retirement landscape, it's safe to assume

that the four percent rule may be obsolete. To validate this assumption, we set out to determine whether this rule was sufficient to compensate for the many financial risks that retiring Baby Boomers and subsequent generations will carry with them into later life.

The answer came back: a resounding **no**.

New research and modeling developed in partnership by our respective firms, reveals that this longstanding rule of thumb puts retirees at significant risk of running out of income should they achieve even an average lifespan—a national dilemma given that a record 4.5 million Americans will turn age 65 in 2024.<sup>1</sup>

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The analysis centered on the variables that most affect people's income in retirement: how long they are expected to live, how healthy they are going to be, equity market volatility and the rate of inflation. Here's what we found based on today's numbers:

**Longer life spans make for longer retirements.** The average life expectancy for a 65-year-old male is an additional 19 years and an additional 22 years for a female of the same age. Combined, there is:

- A 50% probability that one member of a male-female couple age 65 will survive 27 years or until around age 92
- A 25% chance of one person reaching age 97
- About a 5% chance of one of them living to age 100

In addition, a third of all 65-year-olds today will live past age 90, with about one in seven living beyond age 95. Making this even more

challenging is an average standard deviation of around 10 years for both male and female life expectancy. Given these figures, coupled with the tendency of most individuals to believe they can "beat the average", a reasonable retirement planning horizon might be in the 30-35-year range, or to age 95-100.

**One in two retirees can expect a remainder-of-life health impairment.** There is a roughly 50% chance of a 65-year old adult having some level of physical or cognitive impairment over the remainder of their life.<sup>2</sup> The fact that many insurers no longer sell traditional morbidity-based, long-term care policies is evidence that older-age health needs are viewed as a largely uninsurable risk.

**Even modest inflation rates can significantly affect a retiree's purchasing power.** A 2% annual inflation rate necessitates doubling of an individual's retirement income over 35 years to maintain purchasing power. By comparison, a 3% inflation rate would shrink this to 23.5 years and require income



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to nearly triple during a 35-year retirement – or by age 100 for a person that retired at age 65. Even a 1% rate would necessitate a 41% increase in retirement income over 35 years.

**Volatile equity markets can sap a retirement portfolio of its long-term ability to produce income.** While equity markets have generally risen, there have been multiple periods of volatility. A significant equity market correction – defined as a decline of 20% – within the first ten years of retirement increases the risk of running out of income during their remaining lifetime, something economists call sequence risk. The key question is whether that increased risk is acceptable for a typical American retiree.

The analysis determines that even for an individual utilizing both a conservative 60:40 equity to fixed income investment mix, along with a moderate 4% withdrawal rate indexed for inflation, there is a significant risk of running out of income should they endure an equity market correction during their first

decade in retirement while achieving even an average life expectancy.

Those that experience a 20% equity market decline sometime within the first 10 years of retirement – a plausible outcome given the crash coinciding with the financial crisis of 2008-2009, as well as the December 2018 and current COVID-19 selloffs – are particularly vulnerable to running out of income. Our analysis found that the risk of running out of income under this reasonable scenario was:

- 11.0% during the first 19 years (average life expectancy for a male aged 65);
- 20.0% over the first 22 years (average life expectancy for a female aged 65); and
- 34.6% within the first 27 years (combined average life expectancy for one member of a male/female couple both age 65).

What this means is that many Americans entering retirement face a considerable – some would say unacceptable – level of



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financial risk from the trifecta of longevity, equity market volatility and the uncertainty of older age health costs and long-term care.

Given that pensions have virtually disappeared, leaving millions without a source of protected lifetime income, the good news is that other financial products that can fill the gap already exists. While many of today's investment products – such as target date funds, mutual funds, and ETFs – are often used to generate retirement income, the fact is that annuities are the only financial prod-

uct that was designed for and specifically provide protected lifetime income.

This study clearly demonstrates that the four percent rule is no longer a safe or effective way for retirees to plan for retirement income, not remotely. The variables that most affect people's retirement income have each changed significantly. For many Americans looking for a new strategy that accounts for these changes, protected lifetime income from annuities is a compelling choice.

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<sup>1</sup> For analysis used throughout this paper, we randomly projected 10,000 future equity market and interest rate scenarios over a period of fifty years, utilizing Milliman's proprietary economic scenario generator. We then tested this against a mix of three different withdrawal rates of 4%, 5% and 6% and three different equity:bond allocation mixes of 60:40, 70:30 and 80:20. Withdrawals were indexed assuming a 2% deterministic inflation rate from the initial withdrawal in the first year of retirement. Additionally, an assumption that an equity market correction/drop of 20% randomly occurred within the first 10 years assuming equal likelihood of this drop occurring in any particular year. U.S. Large Cap equity fund modeled represents a broad domestic equity market index for large-sized companies, such as the S&P 500 Index. U.S. Bonds and Cash fund modeled represents a combination of cash and cash equivalents, as well as a high quality corporate bond index with a duration of approximately 5 such as the Bloomberg Barclays US Aggregate Bond Index. In aggregate, the fund is modeled as an index with a duration of approximately 3 and a 0% spread. Returns presented are gross of any assumed fees.

<sup>2</sup> Source: Society of Actuaries Annuity 2000 Basic Mortality Table