
The 4% RULE

Safe Withdrawal Rates In Retirement



TODD TRESIDDER

The 4% Rule and Safe Withdrawal Rates In Retirement

Uncover the Little-Known Risks Hiding Behind The 4% Rule So That You Can Retire With Financial Security And Peace Of Mind

Todd R. Tresidder

Copyright 2012 Todd R. Tresidder

All rights are reserved.

With the exception of brief quotations in a review, no part of this report may be reproduced or transmitted, in any form, or by any means, including electronic, mechanical or photocopying, recording, faxing, emailing, posting online, or by any information storage and retrieval system, without written permission from the publisher.

Published by FinancialMentor.com

ISBN: 978-1-936539-89-5

Disclaimer

This publication represents the opinion of the author regarding the subject matter covered. It is for educational purposes only. The publisher and author neither imply nor intend any guarantee of accuracy. It is offered with the understanding that neither the publisher nor the author is engaged in rendering legal, tax, accounting, investment planning, or other professional services, nor is this information intended to be a substitute for such services. Should specific advice be necessary or appropriate, the reader should seek that information from a competent professional. The author and publisher particularly disclaim any liability, loss, or risk taken by individuals who directly or indirectly act on the information contained herein. The author and publisher believe the education presented herein is sound, but readers cannot hold either party responsible for either the actions they take or the results of those actions. While every effort has been made to make this book as complete and accurate as possible, there may be mistakes, both typographical and in content. The education contained in this book may not be suitable for everyone; use at your own risk.

Table of Contents

- Foreword
 - A Brief Note About Reader Level And Defining Terms
 - Introduction
 - Why Safe Withdrawal Rates Are Critically Important
 - A Quick History Of Safe Withdrawal Rate Research
 - Generation 1
 - Generation 2
 - Generation 3
 - Backcasting – Data Sampling Problem
 - The Dramatic Impact of Sequencing of Returns on Safe Withdrawal Rates
 - Market Valuations and Safe Withdrawal Rates
 - The Understated Problem With Inflation
 - How A Long and Healthy Life Is A Financial Problem
 - The Zero Fees And Expenses Assumption
 - Humans Are Rational—Sort Of
 - Putting It All Together
 - Conclusion
 - Afterword
 - About the Author
 - Books by Todd Tresidder
- Endnotes

Introduction

What do retirees in 1921, 1966, and 2010 have in common?

Very little—and that’s the problem.

Each faced a different life expectancy and invested in a different economic climate with varying inflation expectations, interest rates, and market valuations¹.

The truth is that these dates weren’t chosen at random: One had the highest safe withdrawal rate in recorded history, the other the lowest, and the third barely survived the ravages of inflation.

Each of these three retirees lived through dramatically different economic times, yet according to conventional wisdom they all share the same safe withdrawal rate² in retirement—roughly 4%.

It makes no sense.

How can a static, one-size-fits-all solution to a problem as varied and complex as knowing how much money you need to retire be correct? How could retirees in 1921, 1966, and 2010 share the same safe withdrawal rate when market valuations, interest rates, inflation expectations, and expected lifespans were completely different.

It’s impossible. It’s wrong.

Yet, that is the conventional wisdom in the financial planning profession. It is known as the 4% Rule³, and it is widely considered to be “the truth” in safe withdrawal rates for retirement.

The problem is it’s not the truth and every day people risk a lifetime of retirement savings on it. There are better solutions.

In this book I reveal the problems hiding behind the 4% Rule and provide you with practical solutions you can implement for your retirement security.

Why Safe Withdrawal Rates Are Critically Important

Every new retiree needs an answer to the same critical question: What is the maximum retirement income I can withdraw from my savings without running out of money before I run out of life?

It is the single most important question I get from retirees and near retirees.

The reason is because safe withdrawal rates impact every aspect of retirement planning—from the lifestyle you can afford to the amount of savings needed to fund it. Small errors in safe withdrawal rates multiply over many years causing huge financial impacts.

1. Lifestyle You Can Afford: Few people realize that a mere 1% change in safe withdrawal rate makes a big difference in spending during retirement. It seems counter-intuitive because the number is so small. However, a 1% variation from the industry standard 4% assumption will increase (or decrease) your income in retirement by 25%. That can make the difference between a world traveler lifestyle or living at home on hot dogs. In other words, it pays to calculate your safe withdrawal rate as accurately as possible because small changes equal huge changes in the lifestyle you can afford.

2. Savings Required: The amount you can spend each month from savings and the amount of savings you must build to support your retirement are flip-sides of the same coin. One implicates the other mathematically. For example, the 4% safe withdrawal rate is mathematically equal to the Rule of 25 (you need 25 times your first year spending in savings). Similarly, a 3% safe withdrawal rate equals roughly 33 times your first year retirement spending in savings. Using the two examples above, a mere 1% change in safe withdrawal rate when spending \$100,000 per year in retirement is the difference between building a nest equal to \$2.5 million vs. \$3.3 million—obviously a big deal. Conversely, knowing you can safely spend 6% would knock the savings requirement down to \$1.7 million. That's why it is so important to figure an accurate safe withdrawal rate. It can change the amount you need to save for retirement, thus shortening the time it takes for

you to reach your financial goals.

3. Risk To Financial Security: If you withdraw just 1% more than your actual safe withdrawal rate, you will go broke before you die. It's a mathematical truth built into the definition of a safe withdrawal rate. A mere 1% less would have allowed your nest egg to last a lifetime. That's why accuracy is critical—because the razor thin margin between 1% too much and getting it right is literally the difference between poverty and financial security.

Like Goldilocks, there is a sweet spot in retirement spending somewhere between “too much” and “too little” that is “just right”. In an ideal world you would exhaust your last penny from retirement savings as you exhaled your last breath. That is the theoretical objective of safe withdrawal rates.

It's a high-stakes game where the quality of your life during retirement depends on getting the answer right. For that reason, there is probably no question more important in retirement planning.

Unfortunately, the conventional wisdom can be dangerously misleading.

Lesson Learned:

Withdrawing the right amount of money from savings is one of the most important retirement planning questions you will confront. Take too much and you break your piggy bank. Take too little and you leave lifestyle on the table. You need to get as close to the right amount as possible. It's worth the effort. In fact, it is critically important to your financial security.



The Dramatic Impact of Sequencing of Returns on Safe Withdrawal Rates

In the last section you learned the critical role that data assumptions play in safe withdrawal rates by seeing how international data indicated a potentially lower return expectation than U.S. data.

In this section you will discover how safe withdrawal rates are actually dynamic, not static as commonly taught. You will learn how the sequencing of investment returns and inflation during your early retirement years will make or break your financial security.

The sequencing of returns problem is best illustrated in this example from William Bernstein. Assume you have a \$1,000,000 portfolio with an average return of 10% where 15 years produced +30% gains and 15 years lost -10% to create the average 10% over the total 30 years. This would give you a compound return of 8.17% (compound is less than average due to volatility effects). More importantly, when you vary the returns sequences you get something truly shocking.

- If you are unlucky and start your retirement with 15 straight losing years, you can only withdraw 1.86%. Same annual returns, same average return, different sequence of returns—different result. This is absolutely critical to understand.
- Conversely, if you are lucky enough to start your retirement with 15 straight winning years, you can safely withdraw 24.86%.

These are astounding results!

Sequencing risk causes your safe withdrawal rates to vary from an average of 8.17% to as low as 1.86% (in this example) or as high as 24.86%. This variation is solely caused by the exact same returns occurring in a different order. Nothing else changed.

As shocking as these numbers are, it is really just common sense when you think about it. Imagine 15 years of no net investment gain (not hard to do

with the stock market's performance from 1998 - 2012) while still withdrawing 4% per year for spending. Even without inflation adjustments you would wipe out 60% of your account just in spending alone. When you add inflation and investment losses to the equation, the overall destruction to equity would be the retirement equivalent of death by strangulation.

By the way, this is not some strange, statistical mumbo-jumbo that has no bearing on your retirement. This is real-world stuff that is critical to your understanding. It can make-or-break your financial security. Real people retired in 2000 applying the conventional 4% wisdom and destroyed their nest eggs in the process because of this exact problem.

Sequencing of returns risk is a huge factor in explaining why actual safe withdrawal rates in U.S. historical data vary from the 3% range at the low end to over 10% at the high end (depending on assumptions and the date chosen to begin retirement).

Sequence of returns is determined by the date you retire, cannot be known in advance, and will be one of the most significant factors affecting your financial security in retirement.

It's a big deal.

The truth is that safe withdrawal rates are all over the map depending on what date you retire and what happens to your investment returns in the early years of your retirement. Pfau (2010) concludes that retirement success is highly dependent upon early investment returns showing that wealth remaining after 10 years of retirement combined with cumulative inflation during those 10 years explains 80% of the variation in safe withdrawal rates. This is very similar to Bernstein above.

The importance of this issue cannot be overstated.

The problem is your next 10 years investment returns are unknowable; you don't get to know the sequence of returns until after the fact. The future can't be predicted with any accuracy and it certainly isn't dependent on the last 100+ years of U.S. average historical data.

Lesson Learned:

Your real safe withdrawal rate for 30 years is highly dependent on the first 10 year's sequence of returns and inflation rate. One size does not fit all. The 4% conventional wisdom is a static, least-common-denominator approximation, but actual safe withdrawal rates are highly variable. It is one reason why retirees in 1921, 1966, and 2010 face such dramatically different safe withdrawal rates.

What's a near-retiree to do?

As it turns out, all is not lost. There are answers provided in the next section below, but they are not the same as conventional wisdom would lead you to believe.



Humans Are Rational—Sort Of

The final 2nd Generation research assumption built into the 4% Rule that makes no sense is the idea that you withdraw a fixed percentage of your savings adjusted for inflation (but nothing else) each and every year.

This is nonsense. Nobody lives this way.

In real life we adjust our spending based on the success or failure of our careers and the income they produce. Why should retirement be any different?

If your assets got hammered by inflation and bad investment performance during the first 10 years of retirement causing the percent withdrawal to rise above 10%, are you going to march like a lemming to the cliff of financial destruction? Of course not; that would be foolish.

You would reduce your spending based on adverse circumstances in your early years of retirement. It is the prudent, common-sense thing to do, but it is not included in the research because it is difficult to model.

Similarly, do retirees consistently spend more each year as they get older? No. In fact, quite the opposite occurs. Retirees reduce spending as they age. Why, then, do safe withdrawal models plan for ever increasing spending? It is not how real retirees manage their money.

The point is that a 4% withdrawal rate on the first year of retirement that is adjusted every year for inflation has no real world applicability. It is a fiction of academic research.

Real world retirees increase spending when their assets have a good run and cut back spending when assets get clobbered. They spend more in the early years of their retirement when their health is strong and world travel beckons, and they reduce spending as their energy and health decline with age.

Flexible spending opens up many possibilities not modeled in the 2nd Generation research.

- You could spend more in your early years and then reduce spending (or

forego inflation increases) in later years when you don't need as much money.

- You could spend more in the early years and ratchet your spending down if you are unfortunate enough to endure an adverse returns sequence in the first 10 years.
- You could start at 4% and increase spending if your first 10 years enjoy high investment returns and/or low inflation.

These are just three of many possible variations on how to approach withdrawing money. The bottom line is you don't have to be a lemming and mindlessly follow the 4% Rule into a financial abyss. Such blind obedience could leave a fortune on the table or risk unnecessary financial ruin. Instead, be smart and adjust your spending based on the actual results you experience. It's just common sense.

Lesson Learned:

There are many possible spending alternatives that offer real-world practical solutions to the fixed academic model of blindly increasing withdrawals based on inflation each and every year. You can't determine the risk of ruin for rational retirees from a model based on irrational behavior.

The truth is risk of ruin is just as dependent on retiree behavior as it is on market dynamics—something not considered by the research and certainly ignored by the 4% Rule. You must remain flexible during retirement and use your brain. Correct and adjust your spending based on the growth or decline of your portfolio. Be rational and your risk of running out of money will be reduced.

