Sustainable withdrawal rates in retirement

Utilize as a guideline to help avoid running out of money

RBC Wealth Management

In retirement, your "measure for success" as an investor changes from beating the market to helping secure income for life. Indeed, when retirees think about risk, many say outliving their money is their number one fear. Choosing a withdrawal rate that is sustainable over the course of your retirement will play an essential role in your retirement income plan.

What is a withdrawal rate?

A withdrawal rate is a number that provides context for the amount you take out of your portfolio in a given year, expressed as a percentage of your overall assets. A simple way to determine that number is:

(Outflows – Inflows) ÷ Assets

The withdrawal rate is affected not just by the income you need (including taxes), but also by your income sources, like Social Security or pension, that help offset those outflows.

Example

In this hypothetical example, if you have a $1 million portfolio, and you withdraw $40,000, your withdrawal rate for that year is 4% ($40,000 divided by $1 million).

What is a sustainable withdrawal rate?

When planning your retirement income, calculating a withdrawal rate is just the start. Understanding the impact of that withdrawal rate and how it changes over time is essential to your financial security. You want to base your planning on a sustainable rate and monitor this rate throughout retirement to make sure it remains sustainable.

Simply put, you want to choose an amount you can withdraw annually from your portfolio and still be reasonably certain you will not run out of money during your lifetime.

Sustainable withdrawal rates typically point to the initial rate you start with at retirement. Many studies have been done over time going back to the original study in 1994 by William Bengen. He found that a 4% initial withdrawal rate was 100% successful over 30-year rolling periods dating back to 1926. So a retiree could have withdrawn $40,000 from a $1 million portfolio and increased that $40,000 every year by inflation and never run out of money over any 30-year period. But your individual sustainable withdrawal rate will differ from someone else's depending on:

- Retirement planning horizon—years in retirement
- Portfolio mix (stocks and bonds)
- Probability of success you are comfortable with (i.e., 85%, 95%, 100%)

Whether you are either planning your retirement or currently retired, you should consider these three variables to help determine if your withdrawal rate (either now or in the future) feels sustainable to you. While it's important to start with a sustainable rate, we know your situation will change and the markets will not perform as expected. Even though the initial withdrawal rate studies attempt to take this into consideration, monitoring your withdrawal rate as you move through retirement is still important and can help you to understand when adjustments are needed to maintain the level of success you are comfortable with.

Annual expenses		Income sources	
$75,000	Income need	$30,000	Social Security
+ $15,000	Taxes	+ $20,000	Pension
$90,000	Total income need	**$50,000**	Total income
$90,000 income need – $50,000 income = $40,000 withdrawal			

Utilizing the Trinity Study

The Trinity Study (page 3) can assist in determining your sustainable withdrawal rate and can be used as a guideline along the way. The Trinity Study illustrates historical success rates using:

- Six different time horizons (15 to 40 years)
- Five asset mixes (100% bonds to 100% stocks)
- Ten withdrawal rates (3% to 12%)

The Trinity Study confirms the work done by William Bengen, showing that a 4% withdrawal rate, over a 30-year retirement horizon, with a 50/50 mix of stocks and bonds was 100% successful. But what if you were more comfortable with a success rate closer to 85% for 30 years? The Trinity Study would indicate a 4.5% withdrawal rate would provide an 84% success rate with a 50/50 mix or about an 87% success rate using a 75% stock and 25% bond mix. Or maybe you only want to plan for a 25-year retirement horizon, then a 5% withdrawal rate with a 50/50 mix indicates an historical success rate of 85%.

Based on your time horizon, tolerance for risk and the probability of success you're comfortable with can make a big difference in determining your sustainable withdrawal rate.

More recent withdrawal rate studies

Recent studies suggest that with our current low interest rates and high stock valuations, the sustainable withdrawal rate for someone retiring today may be closer to 3%. However, it's important to understand the assumptions used to determine the results for this new study and the Trinity Study both of which suggest a set-it and forget-it approach to retirement income planning.

The table below compares the assumptions used to determine a 4% withdrawal rate, the "4% Rule," to the strategies we employ in our dynamic approach, where adjustments are used throughout retirement. Our dynamic approach has been shown to help increase the withdrawal rate, while maintaining a similar level of success.

Be confident about your financial security

The key is understanding that your situation will change over time as will the markets, so it's important to continually review and monitor your plan. Our retirement income planning process will help guide you through the decisions you need to make throughout your retirement by employing a "dynamic approach." Your RBC Wealth Management® financial advisor can help you establish and monitor a withdrawal rate that is sustainable, flexible and appropriate for your long-term success. Talk with him or her today.

4% Rule: set-it and forget-it	Dynamic approach
100% historical success rate	Target 85% to 95% knowing changes will be made along the way
30-year time horizon	Your current age and life expectancy will have an impact on your current sustainable withdrawal and will change throughout your retirement
Income is increased each and every year by inflation	Spending is adjusted each year depending on how the portfolio performed
Only two investments are used—S&P 500 and a Government bond index	More diversified portfolio with several asset classes and investments, including dividend paying stocks
Remain invested in the same asset mix during the entire retirement	Adjusting your asset mix and investments over time based on your situation and market environment
Use a "systematic" withdrawal strategy to sell assets for income	Use a withdrawal strategy that may provide more assurances and help protect in down markets, like an "Income only" or "bucket" approach
Taxes are not considered	Utilize strategies to help minimize taxes through asset allocation, investment selection, asset location and managing distributions

Trinity Study

Returns and inflation 1926–2014

Additional information on the Trinity Study can be found in the "Choosing a sustainable withdrawal rate" fact sheet and white paper.

40-year retirement horizon[1]

W/D rate	100% bonds	75% bonds 25% stocks	50% bonds 50% stocks	25% bonds 75% stocks	100% stocks
3%	60%	98%	100%	100%	100%
4%	6%	42%	86%	92%	88%
5%	0%	6%	42%	64%	68%
6%	0%	0%	16%	42%	52%
7%	0%	0%	0%	30%	36%
8%	0%	0%	0%	6%	30%
9%	0%	0%	0%	2%	22%
10%	0%	0%	0%	0%	10%
11%	0%	0%	0%	0%	2%
12%	0%	0%	0%	0%	0%

30-year retirement horizon[1]

W/D rate	100% bonds	75% bonds 25% stocks	50% bonds 50% stocks	25% bonds 75% stocks	100% stocks
3%	82%	100%	100%	100%	100%
4%	41%	87%	100%	98%	93%
5%	18%	42%	68%	77%	77%
6%	10%	17%	43%	57%	65%
7%	3%	10%	22%	45%	53%
8%	0%	3%	10%	33%	40%
9%	0%	0%	2%	13%	35%
10%	0%	0%	0%	3%	22%
11%	0%	0%	0%	0%	8%
12%	0%	0%	0%	0%	5%

20-year retirement horizon[1]

W/D rate	100% bonds	75% bonds 25% stocks	50% bonds 50% stocks	25% bonds 75% stocks	100% stocks
3%	100%	100%	100%	100%	100%
4%	94%	100%	100%	100%	100%
5%	76%	94%	99%	94%	91%
6%	39%	63%	79%	80%	81%
7%	27%	46%	61%	69%	71%
8%	11%	23%	41%	54%	63%
9%	3%	9%	29%	47%	50%
10%	0%	1%	6%	27%	41%
11%	0%	0%	1%	14%	29%
12%	0%	0%	0%	4%	16%

35-year retirement horizon[1]

W/D rate	100% bonds	75% bonds 25% stocks	50% bonds 50% stocks	25% bonds 75% stocks	100% stocks
3%	71%	100%	100%	100%	100%
4%	24%	69%	96%	93%	91%
5%	4%	18%	56%	67%	75%
6%	2%	4%	31%	53%	56%
7%	0%	2%	4%	35%	49%
8%	0%	0%	0%	22%	33%
9%	0%	0%	0%	2%	24%
10%	0%	0%	0%	0%	11%
11%	0%	0%	0%	0%	5%
12%	0%	0%	0%	0%	2%

25-year retirement horizon[1]

W/D rate	100% bonds	75% bonds 25% stocks	50% bonds 50% stocks	25% bonds 75% stocks	100% stocks
3%	97%	100%	100%	100%	100%
4%	78%	100%	100%	100%	98%
5%	35%	65%	85%	83%	82%
6%	25%	43%	58%	68%	71%
7%	9%	22%	42%	57%	62%
8%	3%	9%	22%	45%	52%
9%	0%	2%	8%	28%	40%
10%	0%	0%	2%	12%	29%
11%	0%	0%	0%	3%	18%
12%	0%	0%	0%	0%	8%

15-year retirement horizon[1]

W/D rate	100% bonds	75% bonds 25% stocks	50% bonds 50% stocks	25% bonds 75% stocks	100% stocks
3%	100%	100%	100%	100%	100%
4%	100%	100%	100%	100%	100%
5%	99%	100%	100%	100%	100%
6%	89%	99%	100%	97%	89%
7%	63%	76%	84%	83%	80%
8%	39%	60%	72%	73%	71%
9%	24%	40%	52%	61%	68%
10%	13%	20%	37%	49%	56%
11%	3%	8%	23%	40%	44%
12%	0%	1%	3%	21%	35%

■ 90% to 100% success rate ■ 80% to 89% success rate ■ 70% to 79% success rate

An influential paper written in 1998 by professors at Trinity University[2] studied actual stock (S&P 500) and bond (20-year U.S. Government Bond) returns from 1926 through 1995, which were compiled by Ibbotson Associates, to determine sustainable withdrawal rates. (It was updated by Wade D. Pfau, Ph.D., CFA, Professor of Retirement Income, The American College, Director of Retirement Research, McLean Asset Management and inStream Solutions, Founder, Retirement Researcher, to include 35- and 40-year retirement horizons and real market data through 2014.)

The professors looked at five possible asset allocations—from 100% bonds to 100% stocks—to evaluate the impact of inflation adjusted initial withdrawals ranging from 3% to 12%. This created 50 hypothetical portfolios for each retirement horizon used throughout the study. (Five asset allocations times ten withdrawal percentages.)

[1] Returns of stocks (S&P 500) and 20-year U.S. government bonds compiled by Ibbotson Associates, covering period from 1926 to 1995 (subsequently updated through 2014). Historical inflation based on Consumer Price Index.

[2] Source: Philip L. Cooley, Carl M. Hubbard and Daniel T. Walz, Retirement Savings: Choosing a Withdrawal Rate That Is Sustainable. (AAII Journal February 1998, Volume XX, No. 2).

Past performance does not guarantee future results.

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