Choosing a Sustainable Withdrawal Rate

To Help You Avoid Running Out of Money in Retirement

In retirement, your "measure for success" as an investor changes from beating the market to ensuring 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 every year. A simple way to estimate your withdrawal rate is to start with your total annual expenses (including taxes) and subtract your other sources of income (Social Security, pension, annuity, rental property, etc.) to determine how much income you'll need to withdraw from your portfolio to make up the difference. Then divide that difference by the total value of your portfolio to express that withdrawal in terms of an annual percentage rate.

Example

Annual Expenses		Income Sources	
$67,000	income need	$20,000	Social Security
+ $13,000	taxes	+ $20,000	pension
$80,000	total income need	**$40,000**	total income

$80,000 income need – $40,000 income = $40,000 withdrawal

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).

BUT IS THAT A SUSTAINABLE WITHDRAWAL RATE?

When planning your retirement income, calculating a withdrawal rate is just the start. What is really essential is to understand the impact of that withdrawal rate on your long-term financial security. You want to base your planning on a sustainable rate; the maximum amount you can withdraw annually from your portfolio — growing each year with inflation — and still have reasonable certainty you will not run out of money during your lifetime.

HOW MUCH CAN YOU SAFELY WITHDRAW EACH YEAR?

Finding the answer is like hitting a moving target. Because your income needs will change over time. For example, you may pay off your mortgage or spend more on health care as you age. Your income sources may also change over time. For instance, you may experience an inheritance or sell a home.

One thing is certain, however, your initial withdrawal rate (taken the first year of your retirement income plan) can have a dramatic impact on determining how long your portfolio may last.

Many studies have been done over time to determine what initial withdrawal rate is sustainable. These studies consider three important variables that affect the probability of your assets lasting you through retirement.

- Retirement Planning Horizon – years in retirement
- Portfolio Mix
- Withdrawal Rate

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"TRINITY STUDY" POINTS TO A 4% TO 5% SUSTAINABLE WITHDRAWAL RATE

An influential paper written in 1998 by professors at Trinity University* studied actual stock and bond returns from 1926 through 1995 to determine sustainable withdrawal rates. (It was recently updated with real market data through 2009**.)

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

Using actual market data beginning in 1926, outcomes for each hypothetical portfolio were calculated for 15, 20, 25 and 30-year time horizons. Then the professors repeated the process, creating "slices of market history" beginning each subsequent year, (1927, 1928, etc.) up until the four most recent time horizon slices (ending with 2009 market data). After running the calculations, hypothetical portfolios for each slice of market history were considered "successful" if they ended with a positive (non-negative, non-zero) value.

The charts on the following page display success rates from 1926 to 2009 for various time horizons, allocations and withdrawal rates. These charts show the percent of the time, historically, that each asset allocation and withdrawal rate did not run out of money.

WHAT CAN WE LEARN FROM THE DATA?

While past performance does not guarantee future results — and we do not know what the future may bring — you will notice a one or two percent change in withdrawal rates makes a significant difference in the frequency of success. Allocation and time horizon also play a key role in portfolio outcomes.

Based on this information you can determine the retirement horizon that meets your situation and then decide what level of success you are comfortable with. From there you can then select a withdrawal rate and asset mix that fits your chosen level of sustainability.

An important caveat: Don't forget to factor inflation into your withdrawal rate

For a withdrawal rate to be sustainable throughout your life, it must be able to keep up with inflation. One simple rule to keep in mind is that the withdrawal rate must be equal to or less than the expected portfolio return minus inflation rate to have any chance of success over a long period of time.

Withdrawal rate + inflation rate = Return needed

Example

If you anticipate inflation to be 3% and you are using a 4% withdrawal rate, then your portfolio needs to generate a return of at least 7% to be sustainable.

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(tan)	Ended retirement with money left over 90% to 100% of time
(gray)	Ended retirement with money left over 80% to 89% of time
(blue)	Ended retirement with money left over 70% to 79% of time

30-Year Retirement Success Rates: 1926-2009 ***

	Asset Allocation				
Withdrawal Rate	100% Bonds	75% Bonds 25% Stocks	50% Bonds 50% Stocks	25% Bonds 75% Stocks	100% Stocks
3%	85%	100%	100%	100%	100%
4%	35%	75%	96%	98%	96%
5%	22%	33%	69%	76%	78%
6%	11%	22%	49%	62%	62%
7%	2%	7%	20%	45%	55%
8%	0%	2%	11%	36%	42%
9%	0%	0%	2%	20%	33%
10%	0%	0%	0%	5%	29%
11%	0%	0%	0%	2%	20%
12%	0%	0%	0%	0%	11%

25-Year Retirement Success Rates: 1926-2009 ***

	Asset Allocation				
Withdrawal Rate	100% Bonds	75% Bonds 25% Stocks	50% Bonds 50% Stocks	25% Bonds 75% Stocks	100% Stocks
3%	100%	100%	100%	100%	100%
4%	58%	95%	100%	100%	100%
5%	32%	58%	82%	85%	87%
6%	23%	35%	62%	68%	73%
7%	18%	23%	45%	57%	63%
8%	12%	13%	27%	43%	52%
9%	8%	10%	15%	35%	42%
10%	5%	8%	8%	27%	37%
11%	2%	2%	7%	12%	28%
12%	2%	2%	2%	7%	20%

20-Year Retirement Success Rates: 1926-2009 ***

	Asset Allocation				
Withdrawal Rate	100% Bonds	75% Bonds 25% Stocks	50% Bonds 50% Stocks	25% Bonds 75% Stocks	100% Stocks
3%	100%	100%	100%	100%	100%
4%	92%	100%	100%	100%	100%
5%	58%	86%	92%	92%	91%
6%	35%	58%	80%	80%	80%
7%	29%	45%	63%	69%	71%
8%	26%	31%	46%	60%	63%
9%	20%	23%	35%	49%	54%
10%	9%	15%	22%	40%	46%
11%	5%	8%	9%	29%	40%
12%	2%	2%	6%	15%	31%

15-Year Retirement Success Rates: 1926-2009 ***

	Asset Allocation				
Withdrawal 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%	100%	100%	100%	100%	100%
6%	77%	91%	94%	96%	93%
7%	51%	76%	83%	86%	83%
8%	37%	60%	71%	74%	76%
9%	34%	46%	61%	71%	70%
10%	29%	34%	46%	57%	64%
11%	19%	29%	39%	49%	54%
12%	13%	14%	23%	41%	47%

GENERAL GUIDELINES TO CONSIDER

The studies show that a 4% withdrawal rate is sustainable for a 30-year retirement with a confidence level of over 96%. This includes the worst markets we have experienced from 1926, including the Great Depression and an even worse period for retirees starting in 1973, where the markets had two consecutive bad years and inflation from 1973 – 1981 averaged 9.3%.

The higher your withdrawal rate, the faster you may run out of money. The lower your rate, the less likely you are to outlive your money. Therefore, if you anticipate long payout periods you may want to consider lower withdrawal rates. Depending on your age, the number of years you wish to plan for, and your asset allocation, you can determine what withdrawal rate is most sustainable for your situation.

The best advice is to start as conservative as possible in retirement. Our retirement income planning process will help guide you through the decisions you need to make throughout your retirement. Planning to start with a 4%, or less, withdrawal rate (30+ year time horizon) will give you the highest chances for a successful retirement. Then by employing a withdrawal strategy for distributing income from your portfolio and spending and harvesting strategies for when you are ahead of or behind plan, we can help to increase your likelihood of maintaining sustainability over the course of your retirement.

That's not to say that a 5%, 6%, 7% or higher rate won't be sustainable — you just won't know until you are near the end of retirement. But, if you look at the results in the Trinity Study, over 55 historical 30-year rolling periods since 1926, a 12% withdrawal rate was sustainable 11% of the time. But are those the type of odds you are willing to take? *Do you feel lucky?*

The variation in sustainable withdrawal rates over the years basically comes down to how good or bad market returns and inflation were in the early years of retirement. Poor returns and/or high inflation early on resulted in lower rates, whereas higher returns and/or lower inflation exhibited higher sustainable withdrawal rates.

BE CONFIDENT ABOUT YOUR FUTURE FINANCIAL SECURITY

Part of determining a sustainable withdrawal rate is striking a balance between short-term and long-term needs. Drawing too heavily — especially in the early years, during periods of market volatility or when investments have lost value — could put you at risk of running out too soon. Take too little, and you run the risk of needlessly denying yourself the enjoyment of your money.

Your RBC Wealth Management® Financial Advisor can help you establish a withdrawal rate that is sustainable, flexible and appropriate for your long-term success. Talk with him or her today.

RBC Wealth Management is not a tax advisor. All decisions regarding the tax implications of your investments should be made in consultation with your independent tax advisor.

** 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).*

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**** 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 2009). Historical inflation based on Consumer Price Index.*

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