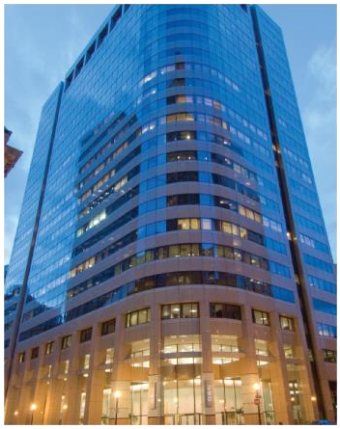
TFC FINANCIAL
The Financial Counselors

FINANCIAL PLANNING UPDATE
APRIL 24, 2017

OUR VIEW



Sustainable Withdrawal Rate During Retirement

A recurring question we address with clients during all phases of planning to ensure financial independence is "How much can I safely withdraw from my portfolio throughout retirement without depleting it?" The answer would not be as challenging to derive if each of us knew for sure how long we would live, our exact future income from all sources (including Social Security), how much we will spend to maintain our desired lifestyle, and how the market will perform.

Research in this area continues to evolve. The challenge is to identify the optimal spending level to allow one to fully live their desired lifestyle while providing flexibility and peace of mind that legacy goals are achievable and unpredictable future events such as a health crisis can be handled. In this paper, we will describe research advocating different strategies/guidelines to evaluate the safety of withdrawal strategies throughout retirement. One study results in a simple concept that has gained widespread acceptance and serves as a general rule of thumb; another advocates a system that calls for detailed planning that may support higher spending earlier in retirement while scaling back at a later time; and a third is a quantitative method.

No one approach works for all. A good understanding of withdrawal needs during retirement and ongoing monitoring is the foundation of identifying a workable strategy for one's individual circumstances.

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"The 4% Rule"

Let's start with the generally well-known concept of the "The 4% Rule" which has gained widespread popularity since it is simple to understand and easy to apply. In this theory, developed by William P. Bengen, the withdrawal dollar amount for the first year of retirement is calculated as:

= (withdrawal percentage) X (starting portfolio value)

The amount is increased by a cost of living adjustment equal to inflation every succeeding year. What is less well publicized is that Bill Bengen increased his safe initial withdrawal rate to 4.5% after expanding the asset classes used in portfolios in his research.

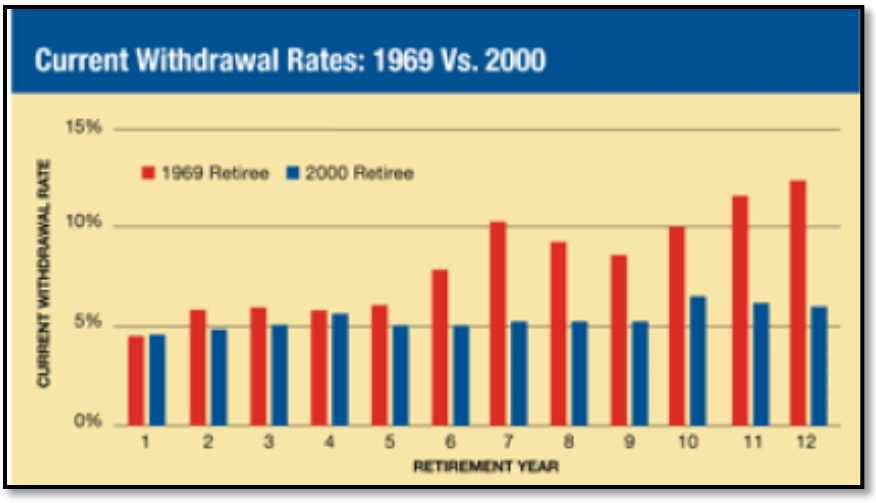
This concept has faced its fair share of criticism. In the late 1990s, the complaint was that a rate of 4.5% was too low, leaving retirees with excessive asset balances later in life, indicating they could have comfortably spent more during their lifetime. The opposite, a call for reduction from the 4.5% initial rate of withdrawal, was heard more recently given the challenging market conditions since 2000. To further understand the rule, it is instructive to review the data upon which it was tested.

When Bill Bengen developed the notion that a 4.5% initial withdrawal rate resulted in a sustainable portfolio for 30 years, he tested the theory using historical data from the "most significant financial cataclysms" of the time. The following is how he describes these periods:

- *The 1973-74 recession was the most devastating because it occurred during a period of high inflation. Not only did investors suffer large paper losses in their portfolios, but the purchasing power of what remained was reduced substantially.*
- *The period 1937-41 featured a stock decline almost as great as 1973-74, but it occurred during a period of moderate inflation and somewhat higher bond returns. Therefore, its impact on portfolios was not as severe, though it was still substantial, particularly as it followed the Great Depression by only half a decade.*
- *The early Depression years. This was a deflationary period, so the decline in stock values was cushioned by an advance in purchasing power for the dollar and by modestly positive bond returns.*

Bengen more recently revisited his theory by applying it to an individual who retired in 2000 - a likely candidate to face portfolio sustainability challenges. In doing so, he built a composite of the "worse than worst case" by using actual return and inflation data for the first twelve years, then assumed the next 18 years for the 2000 retiree mirrored the first 18 years of the 1969 retiree, the "worst case scenario" of his initial research. The rationale for doing so is the likely lower return and slower growth world faced by the 2000 retiree which may cause the second decade of his/her retirement to be more challenging than the first.

The "worst case scenario" in the initial study--the only portfolio that was exhausted at the end of 30 years--was for the individual who retired on January 1, 1969. The challenge to this retiree was the sequence of inflation. Inflation rates from 1969 to 1980 averaged almost 8% per year. The significant cost of living increases required early in retirement added pressure to portfolio sustainability. Even the double-digit stock market returns of the 1980s and 1990s "couldn't rescue this retiree to extend the portfolio beyond 30 years". See below for a comparison of the current withdrawal rates for the first twelve years for the 1969 retiree vs. the 2000 retiree.



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The portfolio for the composite retiree depicting the 2000/1969 combination was depleted after 28 years. Bengen viewed this as a "rather hopeful result" since the portfolio almost succeeded for the full 30-year period, despite the excessive pressures put on it--historical data from 2000-2011 and 1969-1986 imposing a never-before-experienced combination of lower investment returns and higher inflation. It is interesting to note that for this "worse than worst case," a 4.3% initial withdrawal rate would have resulted in 30-year portfolio longevity.

Sustainability Problems: 1969 Vs. 2000

	PORTFOLIO RETURN		CONSUMER PRICE INDEX	
YEAR	1969 RETIREE	2000 RETIREE	1969 RETIREE	2000 RETIREE
1	-7.8%	2.1%	6.1%	3.4%
2	6.2%	3.5%	5.5%	1.6%
3	12.1%	-4.0%	3.4%	2.4%
4	9.9%	22.1%	3.4%	1.9%
5	-8.5%	8.2%	8.8%	3.3%
6	-10.2%	3.4%	12.2%	3.4%
7	26.2%	9.9%	7.0%	2.5%
8	24.7%	5.7%	4.8%	4.1%
9	2.7%	-13.4%	6.8%	0.1%
10	8.2%	13.2%	9.0%	2.7%
11	16.2%	14.2%	13.3%	1.5%
12	20.4%	4.6%	12.4%	3.0%
12-Yr. Avg.	***7.6%***	***5.4%***	***7.8%***	***2.5%***

Portfolio: 35% U.S. large-cap stocks, 18% U.S. small-cap stocks, and 47% intermediate-term government bon
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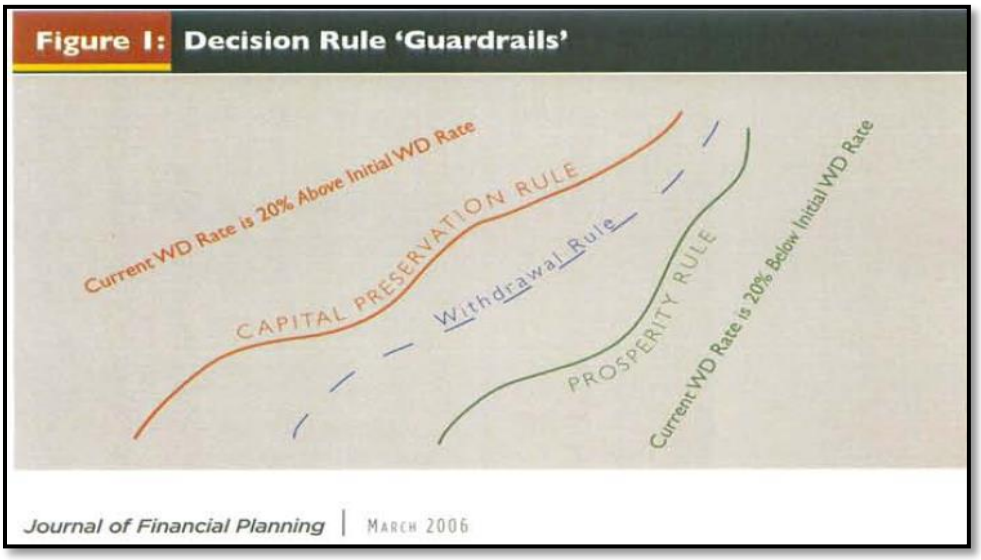
Bengen continues to see merit in the 4.5% rule, but indicates that monitoring portfolio withdrawals must be an ongoing exercise throughout retirement. The original intent of his research was to identify a rate of withdrawal resulting in a comfortable level of spending to maintain the desired lifestyle throughout retirement. He now points out there may be conditions under which spending should be reduced, even temporarily, such as if the current withdrawal rate approaches double digits, particularly if this occurs early in retirement.

Dynamic Approach

As research expands on portfolio drawdown, studies have shown that for a retiree who is willing to monitor their spending and withdrawals closely, a more dynamic approach can be utilized that may result in higher sustainable rates of portfolio draw. We'll now look at one such study by Jonathan Guyton and William Klinger. They set out to identify a system to manage withdrawals that would:

- Maximize withdrawals (and withdrawal rates), especially early in retirement
- Eliminate the possibility of running out of money
- Avoid undesired changes (reductions or freezes) to their retirement incomes
- Maintain purchasing power

Their approach developed decision rules to manage an investment portfolio during retirement: *Withdrawal Rule*, *Capital Preservation Rule*, and *Prosperity Rule*. They evaluated retirement periods of both 30 and 40 years.



Similar to other studies, the *Withdrawal Rule* calls for an increase to the prior year withdrawal amount by inflation. In this study, however, the withdrawal amount would freeze in years when the total return for the portfolio is negative AND that year's withdrawal rate would be greater than the initial withdrawal rate. There is no makeup for a capped inflation adjustment.

The *Capital Preservation Rule* and *Prosperity Rule* are essentially guardrails that trigger an adjustment to withdrawals. If the current year withdrawal rate rises more than 20% above the initial withdrawal rate, the *Capital Preservation Rule* kicks in and calls for the amount to be reduced by 10%. This rule expires fifteen years before the maximum age to which the retiree wishes to plan.

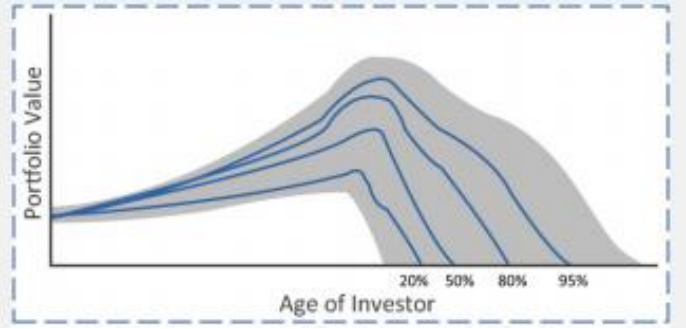
The *Prosperity Rule* manages the other end of the range--if the current withdrawal rate is more than 20% below the initial withdrawal rate, the retiree can increase withdrawals by 10%.

For those willing to monitor and adjust spending year by year based on market conditions, this may be a preferable approach to managing portfolio withdrawals. The initial withdrawal rate could be as high as 5.5% under this methodology. For a retiree anticipating a 30-year retirement, a 65% equities (stocks)/25% fixed income (bonds)/10% cash portfolio could sustain an initial withdrawal rate between 5.2% and 5.5%. The study shows this retiree could experience, on average, 2-3 cuts, 5-7 freezes and 4-7 raises.

Monte Carlo

Monte Carlo simulation is another method to evaluate portfolio sustainability and one that is used regularly by TFC when preparing retirement projections. It is a mathematical technique used to

model the probability of different outcomes and informs decision making by helping to understand the impact of uncertainty, ambiguity and variability involved when attempting to forecast future events. Results provide a sense of not only what could happen, but how likely each outcome is. An overall probability of success can be considered as well as a range of possible outcomes and the probabilities they will occur. Results presented in graphical form, such as included below, show the timeline of when annual withdrawals may eventually deplete savings depending upon certain variables.



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Research to determine a safe rate of withdrawal from a portfolio continues to evolve. Today we have the added challenge of doing so while navigating a lower return and slower growth world. These conditions give added importance to the work we do with clients.

A periodic review of long-term retirement projections must be an ongoing exercise to evaluate the ability of portfolios to meet the withdrawal needs and legacy goals for individuals and families. Planning is not a one-time occurrence. Ongoing monitoring can be useful to identify potential issues while there is time to address them and ensure that long-term financial independence is not in jeopardy.

Other Approaches

Additional research by those seeking to identify conditions to maximize portfolio withdrawals throughout retirement have been published.

Analysis by Michael Kitces, Director of Wealth Management and Partner at Pinnacle Advisory Group, shows that changes in market valuation can result in increased sustainable withdrawal rates. He indicates that clients who retire after a bear market should be eligible for a higher withdrawal rate (on the resulting lower portfolio value) than those who retire before a market decline because of changes in valuation. He sets parameters to "increase safe withdrawal rate by 0.5% in moderate/average valuation environments and 1% in favorable valuation environments" and cautions that "in extreme combinations of high valuation and low interest rate environments a reduction to withdrawals should be considered."

David M. Blanchett, now head of retirement research at Morningstar Investment Management, evaluated conservative and aggressive portfolios and various approaches to reducing equity exposure over time and set out to factor in the underlying risk to a portfolio when evaluating its success or sustainability throughout retirement. He identified a portfolio allocation of 60% equity/ 40% fixed income as a "good anchor" during retirement.

There is no single method that is best to address the question of how much can be withdrawn from a portfolio without depleting it. Each technique described can be useful in certain situations and a combination of approaches can validate whether or not withdrawal patterns are on a safe or sustainable path. It remains prudent to periodically review portfolio withdrawals, evaluate them based on individual circumstances and identify when a change to spending patterns, even temporarily, may be necessary. A few general observations as to whether a lower or higher rate of withdrawal is advisable can be made:

A more conservative withdrawal rate should be considered in situations in which a retiree anticipates:

- Time horizon is greater than 30 years
- Few discretionary expenses that can be cut if market returns are less than anticipated
- No other assets are available to be tapped in the future (i.e. sale of second home)
- Strong desire to leave an estate for heirs
- Low risk tolerance

A more generous withdrawal rate may be appropriate in situations in which a retiree anticipates:

- Time horizon fewer than 30 years
- Fixed expenses are mostly covered by a guaranteed income stream such as a pension or Social Security benefits
- Long-Term Care insurance is in place
- Other liquid assets are anticipated in the future such as an inheritance or sale of second home
- Willing to adjust spending in years of negative returns and/or substantial decline in portfolio value
- High risk tolerance

As always, we welcome your comments. Should you have any questions, please contact your TFC Financial Advisor.

Sincerely,

Mary

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