The 4% Rule Revisited
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The 4% Rule Explained
The concept of the 4% rule dates back to an article published in the Journal of Financial Planning by Bill Bengen in 1994. The original study analyzed a 50% stock / 50% bond portfolio over a time horizon of 30 years. The goal was to look at what kinds of withdrawal strategies would have worked through various historical scenarios, and pick the withdrawal rate that would have succeeded in the one worst scenario in history. A first year withdrawal of 4%, followed by inflation-adjusted withdrawals in subsequent years was found to be safe in every period...albeit with major principal deterioration in the worst of periods. These periods included the 30 years beginning in 1907, 1929 at the onset of the Great Depression, 1937, and 1966 through the Stagflation years of the 70's and early 80's.

How “Safe” is the 4% Rule?
Safe withdrawal rates are not based on average returns but worst case scenario returns (at least based on real life historical returns). If an investor simply follows the 4% Rule, there is a 96% probability of leaving more than the original principal and a 67% probability the investor will end up with double the amount of original principal. In fact, the median wealth at the end of a 30 year time horizon is likely to be almost 2.8X the starting principal. It is much more likely that retirees will be able to increase their spending higher than a 4% rule, than ever need to spend that conservatively in the first place. However, let's get back to that handful of “Bad Periods”. An interesting thing to note is the worst periods of time didn't have particularly bad 30 year returns. The average annual stock return of the “Bad Periods” was 9.08% and the bond return was 3.99%. In addition, inflation averaged a benign 2.88%. The 30 year returns had very little relationship with the safe withdrawal rates. So what caused these periods to be so bad? The most important determination for what constitutes a safe withdrawal rate is how the portfolio does in the first half of retirement. This is called “sequence of returns”. If you experience poor returns in the first 10-15 years of retirement, it is much more damaging than experiencing them in the second half of retirement. More importantly, it isn’t just returns that matter but the “real returns” (Return minus inflation). Let's look back at the 15 year real returns for the “Bad Periods” starting in 1907, 1929, 1937 and 1966. The average annual real return for stocks was -.73% and the real return for bonds was -.15%. The worst case for a retiree was beginning withdrawals in 1966 at 15 years into retirement; a retiree was pulling out over 10% of their portfolio. However, even this wasn’t enough to break the 4% Rule, as 1982 was the beginning of one of the biggest bull markets in history.

The 4% Rule Today
Given the conservative nature of the 4% Rule, why is it under so much scrutiny today? As we just discussed, the bad periods for retirees began with a 10-15 year period of poor inflation adjusted returns, not necessarily by run of the mill bear markets, which can bounce back quickly, early in retirement. The current debate surrounds the 2000 retiree who has experienced two 50% market drops in 2000-2002 and 2008-2009 and whether the 4% Rule still applies to them. A good way to see how the 2000 retiree is doing is to analyze how they have fared in comparison to retirees during the other bad periods of 1929, 1937 and 1966. More specifically, let’s compare the withdrawal rates of each retiree at the halfway point,
15 years into a 30 year retirement. Following the 4% Rule, these retirees started pulling out 4% of the original portfolio balance and adjusted withdrawals for inflation. Halfway through retirement, the 2000 retiree was pulling out 6.2% of their portfolio. This is about in line with the 1929 retiree, below the 1937 retiree rate of about 8.5% and the 1966 retiree rate of about 11%. So, the 2000 retiree is simply in line with the 1929 retiree and much better off than the 1937 and 1966 retiree. If all of these other bad periods survived the 4% Rule, then why all of the hullabaloo? One of the answers is valuation. First, the market valuation in 2000 was so far above anything that had occurred historically, that it would no doubt negatively impact returns well into the future. Second, market valuations are currently well above where they were 15 years into retirement for those who started in 1929, 1937 and 1966. So, even though the current withdrawal rate of 6.2% is more favorable than these other bad periods, the valuation means these portfolios may be more stressed going forward from here. It should be noted that high market valuations in themselves don’t necessarily portend short term market doom and gloom. However, there is strong analytical support for high market valuations predicting lower than average 10 year forward returns. In addition, since the 4% Rule is based off of a stock and bond portfolio, we can’t forget about bond yields. Real bond yields are currently negative and that will also act as a headwind for balanced portfolios going forward. As you can see, there is some basis for speculation as to whether the 4% Rule really is THE safe withdrawal rate. We’ll have to see what happens in the next 14 years.

Other Considerations
The 4% Rule utilizes index returns and doesn’t take into consideration the impact of investment expenses. Luckily there has been research into the impact of investment costs on the 4% Rule. Generally, it has been found that the safe withdrawal rate should be reduced by 40% of the gross costs. If the cost is 1% per year, the safe withdrawal rate should be reduced by .40% to 3.60%. If the cost is 2%, the rate should be reduced by .80% to 3.20%.

We’ve been discussing the 4% Rule over a time horizon of 30 years. However, the research can also be utilized for time horizons of any length. Generally, the shorter the time horizon, the higher the safe withdrawal rate and the longer the time horizon, the lower the safe withdrawal rate. Studies show a 20 year time horizon supports a safe withdrawal rate of 5.5% while a 40 year time horizon supports a withdrawal rate of about 3.50%.

It should be noted that altering the time horizon also affects the optimal asset allocation associated with the safe withdrawal rate. For instance, while the optimal equity exposure for a 30 year retirement time horizon is close to 60%, a 40 year time horizon merits a slightly more aggressive 65% equity exposure. On the other hand, a 20 year time horizon, where there is less time for an investor to recover from a severe bear market, may suggest a 50% exposure to equities.

Conclusions
The 4% Rule is not meant to be a fixed, set it and forget it strategy. The vast majority of those retirees who begin implementing a 4% withdrawal strategy will find that they will end up with significantly more wealth than they began with. Unless the early years of one’s retirement is fraught with severe adverse market performance, raising the withdrawal rate up to 5% or much higher may be feasible. In fact, average returns would allow a nearly 6.5% safe withdrawal rate! However, one should take caution if retiring during a period of excessive market valuations. During these times, it may be prudent to start with a lower withdrawal rate and/or reduce equity exposure in order to protect yourself against sequence of return risk. From there, one can make adjustments as necessary depending on actual market performance.
If you are unsure where to start, we at The Wise Investor Group would be happy to help. To learn more about The Wise Investor Group and how we can help you – email us or call 571-203-1600 to get started.

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