



## Ruminations on Withdrawal Rates

Retirement spending rates are very important. Even for those not yet retired, this report should be useful because it indicates how to set an appropriate goal to enable comfortable retirement.

We generally try to use the phrase "achieve financial independence" rather than "retirement" since some folks don't plan to retire; but, for the purposes of this paper, we'll say retirement because we are talking about potentially spending down a portfolio which implies actual cessation of work.

When working with clients, we are actually trying to maximize happiness given an uncertain future. To compare retirement spending strategies, we use a mathematical technique known as Monte Carlo Simulation (MCS), which is used when attempting to model something with high levels of uncertainty (such as the future returns on financial instruments). A successful plan doesn't run out of money and yet allows the maximum spending possible. (As many people have observed, optimal financial planning would have your check to the undertaker bounce.) These two objectives are obviously opposed to each other, and, to complicate it further, few people know how long the funds need to last (i.e. they don't know their date of death in advance). MCS can help us analyze the probabilities of various outcomes. As the comedian Henny Youngman observed, "I have all the money I need provided I die by 4 o'clock this afternoon." How much do we need?

Let me give the general conclusion first and then mention some items that may influence the conclusion. Many studies have been done on what are called "sustainable withdrawal rates" from a portfolio given a number of parameters. We have replicated the research and are comfortable with the conclusions. First, there are assumptions about the future returns and volatility of the portfolio. Sometimes purely historical figures are used; sometimes expectations of the future are used. Second, there are assumptions about what the spending pattern will be. Generally, not only are people uncomfortable with their spending having to potentially decrease; they would actually like it to increase over time to keep up with inflation. Third, people would like a high probability (85-90% chance) of not running out of money.

Let me talk about that last point for a moment. The reason you don't seek a 100% success rate is that it leads to plans that are so conservative you could maintain your spending rate through two consecutive market crashes and great depressions, but wouldn't get to enjoy yourself much in all the other situations. Remember, the goal is to maximize happiness by steering a middle course between 1) not running out of money and 2) enjoying your accumulated wealth (by spending it rather than merely looking at it or counting it).

Using those assumptions, for a typical person entering retirement (typical age, life expectancy, reasonable investment portfolio, etc.), the sustainable withdrawal rate is approximately 4%. In other words, if you desire \$40,000 each year from your portfolio (in addition to Social Security and any pensions), you need a \$1,000,000 portfolio. If you want \$100,000 each year from your portfolio, you need \$2,500,000. A simple way to compute this figure is to multiply your desired spending from the portfolio by 25 to get the nest egg needed. Alternatively, as you approach retirement, you can divide your portfolio by 25 to see what your initial spending might be.

Caveats and other points:

- 1) The figures mentioned previously are *gross* of taxes. In other words, the figures should be reduced by the taxes. If you are in a 25% marginal tax bracket and the funds are coming out of a traditional IRA or 401k, you would only net 3% from a withdrawal of 4%. If the funds are coming out of a Roth IRA, no reduction is necessary since the proceeds are tax free.
- 2) Many people with relatively modest lifestyles needs may have much of their need covered by Social Security. On the other hand, for younger people, it may be wise to discount the possibility of Social Security. Also, Social Security is very regressive and will replace a much higher proportion of a lower income than it does a higher income.
- 3) Some retiree costs, particularly healthcare, generally increase at rates *higher* than the overall inflation rate. On the other hand, many retirees gradually reduce their consumption (of items other than healthcare) as they age. One wag has termed this the three stages of retirement: go-go, slow-go, and no-go. To the extent a retiree does not have good health coverage (for long-term care for example) they may want to reduce their withdrawal rate slightly to have more available for that contingency.
- 4) The figures above are for someone beginning retirement at normal retirement age. Obviously someone who is 90 years old could consume much more than 4% of his portfolio each year with relative safety.
- 5) In the 10-15% of cases where the projection indicates running out of funds, the retiree shouldn't literally run out. The problem should be evident early and lead the retiree to take action before actually depleting his resources. The cases where failure of the plan occurs are generally where very poor returns happen right at the beginning of retirement (someone retiring at the end of 1999 or 2006 for example). The options at that point would include 1) reducing spending (downsizing possibly), 2) generating more income (part-time job for example), or 3) a reverse mortgage (to tap home equity). This last option is why our retired clients generally have no debt. It leaves the home equity as an emergency back-up in extreme situations.
- 6) In many cases, spending can increase in later years by more than the initial plan indicated if portfolio returns have been good. This methodology in essence provides for all but the bottom 10-15% of cases working out. If, in fact, you are simply in the middle case (the 50th percentile), you are in very good shape.

One final note: While many people have "don't spend principal" as a rule of thumb, it isn't the best way to look at your portfolio for three reasons:

- 1) It ignores the effects of inflation over time. If inflation is 10% and interest rates are 12%, spending just the 12% "interest" will deplete the purchasing power by 10% per year.
- 2) It can lead to poor investment decisions as high yielding investments are selected over investments that might be safer or have a higher return but through growth rather than yield. Many individuals have bought bonds trading at a premium or extremely poor quality investments due to the high current yield. Buying exclusively high yielding investments will also increase exposure to interest rate risk.

- 3) For younger retirees, focusing on maintaining the real (inflation adjusted) value of the portfolio would make sense, but for someone older the portfolio can decline somewhat in value without serious risk. For example, imagine a 90-year-old with a \$1,000,000 portfolio. He or she could spend \$50,000 per year of the principle and it wouldn't run out until age 110.

In conclusion, most people should plan to spend 4% (gross) of their initial portfolio balance in retirement and increase that every year slightly to keep up with inflation. About 10-15% of the time, an adjustment of some sort will be necessary, but the other 85-90% of the time the plan should work out just fine.

**Notes:**

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