

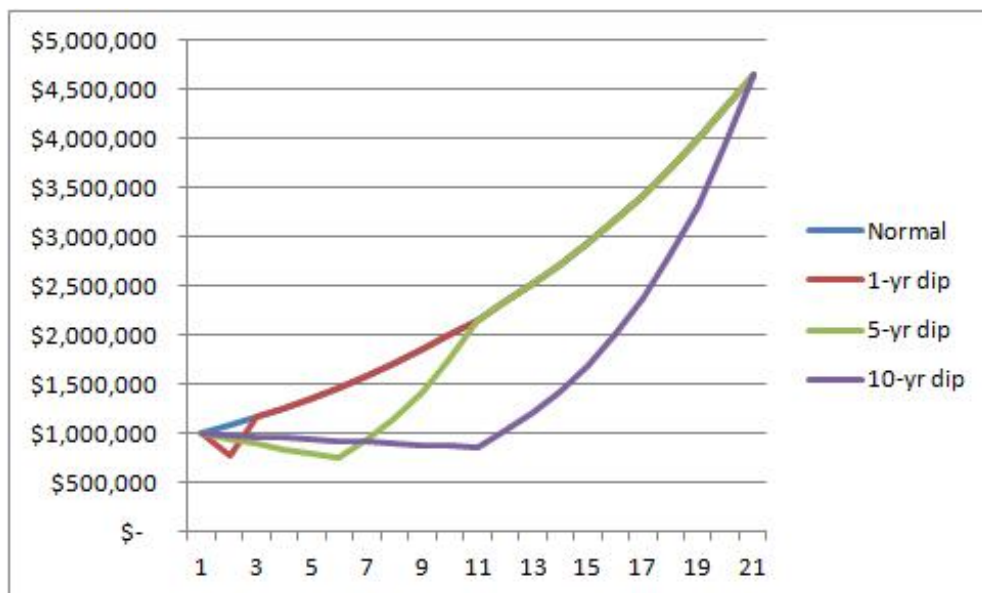
Why Merely Mediocre Returns Can Be Worse Than A Market Crash

With two market "crashes" in the past decade, prospective baby boomer retirees have grown increasingly afraid of the risk that the next market crash could topple their retirement if it comes at the wrong time. This fear has been exacerbated by the recent stream of research on safe withdrawal rates, that highlights how an unfavorable sequence of returns in the early years of retirement can derail a retirement plan. Yet the reality is that failure is dictated not simply by the magnitude of the market decline, but the speed at which it recovers. As a result, while clients are increasingly obsessed about the risk of a sharp decline in the markets (or a so-called "black swan event"), the true danger is actually an extended period of "merely mediocre" results that are uncommon but not rare, not a black swan market crash!

The inspiration for today's blog post comes from some research I am working on for the February issue of The Kitces Report, looking at how we as planners use Monte Carlo analysis to evaluate the risks to a retirement plan and the implications of bad markets. In discussing some of this work with a colleague, I realized how much of a misconception has embedded in the mind of financial planners about what really does, and does not, cause a retirement plan to run out of money.

For instance, assume the client has a balanced portfolio, with a long-term expected return of 8%, and a standard deviation of 15%. Accordingly, we look at three potential "problem" scenarios:

1. In a market crash, the portfolio drops 22% in a single year, and then experiences a sharp recovery and rallies almost 50% the following year (albeit from a lower base) to get back to the original growth rate.
2. In an extended bear market, the portfolio declines by 5.4% per year for 5 years. At the end of the decline, the portfolio rallies a whopping 23.3%/year for the next 5 years to get back to the original growth trend.
3. In a protracted difficult market environment, the portfolio declines by only 1.5% per year but the declines last 10 years. As the markets eventually hit a valuation bottom, the market rallies forth at 18.4%/year for the next 10 years, finally recovering back to the original growth pace after 20 years.

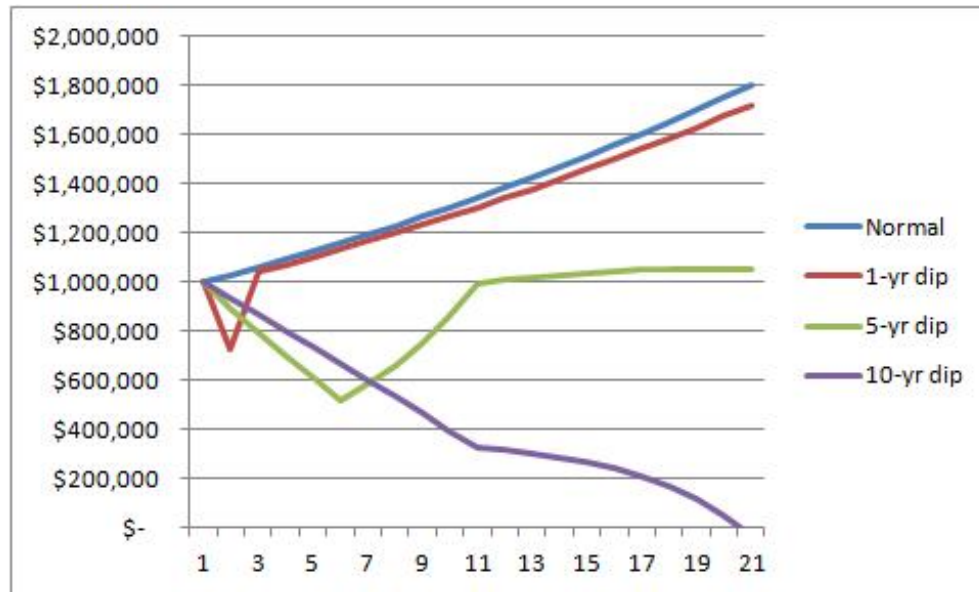


All three of these results represent -2 standard deviation events over a 1-, 5-, and 10-year time horizon, respectively.

Thus, these would actually be results that are uncommon but entirely probable in a typical Monte Carlo analysis, although notably clients tend to focus much more on the first scenario (the sharp market decline) than the third scenario (the protracted slightly-declining market).

If we look at how these portfolios grow over time, we would get the graph to the right, which shows the results of the 1-year, 5-year, and 10-year dips. Ultimately, the recovery rallies get all of the portfolios back on the same track, whether it's a fast decline with a fast recovery or a slower decline with a slower recovery.

But these results simply assume that the client stays invested, with no cash flows in and out of the portfolio. Of course, if the client has no need to take any distributions from the portfolio, there is time to wait. But what happens if these various bear markets strike while the client is taking ongoing withdrawals from the portfolio? How do the results change?



The graph to the right shows the same portfolios modeled above, except this time there is an annual withdrawal at the end of the year of \$50,000, which is increased annually assuming 3% inflation. With the client taking ongoing withdrawals, the results are substantially altered. The sharp decline followed by a sharp recovery trails only slightly in the long run, compared to the steady return portfolio. On the other hand, the portfolio that loses 5%/year for 5 years and then recovers ends out dipping far lower, and even after the recovery, finishes with less than 2/3rds the 1-year dip scenario. Conversely, the 10-year dip portfolio - with its tiny decline of only -1.5%/year in returns - is actually the catastrophe, as the portfolio draws down so low with ongoing withdrawals, that by the time the good returns arrive, the portfolio can't recover. It actually runs out of money completely in the final year.

So what does all of this mean? While we tend to focus on sharp market crashes, sudden declines that recover quickly within just a year or few are not necessarily problematic, whether it's the crash of 1987 (which recovered all of its losses within about a year) or the financial crisis of 2008 (which recovered nearly all of its losses in just over 2 years). Instead of those "black swan" events, that ultimately are just a short-term distraction, what's far more destructive to client portfolios are the extended periods of merely mediocre returns, such as the entire decade from 2000 to 2010, or from 1966 to 1976. And notably, these results are *not* black swans; the examples here are all simply -2 standard deviation events, such as having a balanced portfolio that loses 1.5%/year and is down 14% after a decade. These are scenarios that Monte Carlo analysis already models; we just don't tend to focus on them very much.

The bottom line is that when we talk about the impact of adverse markets and return sequencing on retired client portfolios, the point is not the risk of short-term volatility. It's the risk of extended periods of time that generate merely mediocre below-average returns. And as history - and even normal distributions - show, these events may be

uncommon, but they are not *extremely* rare, and they're certainly not black swans. They are risks that can be, and should be, planned for.

So what do you think? Which do your retire clients fear more: a 20%+ drop in their balanced portfolio in a single year, or a mere 1.5% decline every year for a decade? Do your clients understand which scenario is worse? Would this impact how you design retired client portfolios?