OPINION

Does the ‘4-per-cent’ rule for retirement savings work in difficult times?

[[](https://www.theglobeandmail.com/authors/norman-rothery/)](https://www.theglobeandmail.com/authors/norman-rothery/)

[NORMAN ROTHERY](https://www.theglobeandmail.com/authors/norman-rothery/)

SPECIAL TO THE GLOBE AND MAIL

PUBLISHED JUNE 16, 2024

Retirement planning is looming large because my 55th birthday is around the corner. Unfortunately, planning is notoriously difficult because much of life, and death, is unexpected and impossible to forecast with any useful accuracy.

Thankfully, it is possible to glean some wisdom by examining history to get a sense of the market’s downside risk. It’s [why I’ve been following](https://www.theglobeandmail.com/investing/markets/inside-the-market/article-catching-up-with-the-retirement-class-of-2000/) a small cohort of investors who had the misfortune of retiring at the top of the market when the internet bubble burst in 2000. (The effort was inspired by [Norbert Schlenker](https://www.libra-investments.com/index.html), the president of Libra Investment Management, who’s been tracking them – using slightly different metrics – at the [Financial Wisdom Forum](https://www.financialwisdomforum.org/forum/viewtopic.php?f=30&t=108990).)

If you cast your mind back to the late 1990s, you’ll remember the stock market was booming thanks to new-fangled [technology](https://www.theglobeandmail.com/topics/technology/)stocks that shot skyward. Big future gains seemed assured until the market hit a wall and collapsed in the summer of 2000. (The period is reminiscent of prior bubbles and, perhaps, today’s [AI](https://www.theglobeandmail.com/topics/artificial-intelligence/)mania.)

The internet bubble provides an out-of-sample test of William Bengen’s 1994 paper Determining Withdrawal Rates Using Historical Data. He figured that a retiree’s balanced portfolio of U.S. stocks and bonds would last for at least 30 years while paying a 4-per-cent initial annual withdrawal rate that was subsequently adjusted for inflation.

I applied Bergen’s “4-per-cent rule” to the Canadian market where an unlucky investor started their [retirement](https://www.theglobeandmail.com/topics/retirement-and-pension/) at the end of August, 2000. They began with a $1-million portfolio, which happens to be a handy figure that can be easily scaled to fit other situations. Half the portfolio is invested in the S&P/TSX Composite Index (Canadian stocks) and the other half invested in the S&P Canada Aggregate Bond Index (Canadian bonds). The investor takes $3,333.33 out of the portfolio to live on at the end of each month (a 4-per-cent initial annual withdrawal rate) with the payments being adjusted each month to account for [inflation](https://www.theglobeandmail.com/topics/inflation/). (The figures herein are based on inflation-adjusted monthly data with reinvested dividends and distributions. They do not include fund fees, taxes, or other trading costs. The portfolios were rebalanced monthly.)

The simple portfolio held up well despite the market crashes and corrections along the way. It ended April, 2024, near $525,000 and seems set to survive through to August, 2030. However, investors who used a more aggressive 6-per-cent initial withdrawal rate have already gone bust. Those who opted for a 5-per-cent rate will likely go bust in four years, or so, because they are currently consuming about 25 per cent of their portfolios each year.

In addition to the simple portfolio, I wondered how a more diversified 60/40 portfolio would have fared instead. Here the retiree starts at the same time and with the same amount of money but they put 40 per cent in the Canadian bond index, 20 per cent in the Canadian stock index, 20 per cent in the S&P 500 Index (U.S. stocks), and 20 per cent in the MSCI EAFE Index (international stocks).

The accompanying graph shows how the 60/40 portfolio fared using the initial 4-per-cent withdrawal rate, subsequently adjusted for inflation, along with similar portfolios using initial withdrawal rates ranging from a more conservative 3 per cent to the overly optimistic 6 per cent.

Once again, the 4-per-cent rule held up reasonably well despite the market storms over the years. It still had about $389,000 by the end of April, 2024, in inflation-adjusted terms and it should make it through to the end of August, 2030 – barring disaster.

Alas, 60/40 investors who opted for a 6-per-cent initial withdrawal-rate went bust in 2018. Those who started with a 5-per-cent rate ran out of money in May, 2024. They had about $2,000 left at the start of the month and the portfolio only gained 2.9 per cent in nominal terms in May, which was insufficient to cover the monthly withdrawal of $4,166.

The risk of running out of money in retirement can be mitigated by opting for a modest withdrawal rate and having the ability to make changes along the way. That might mean a little belt tightening, or taking up a part-time job, in hard times.

More optimistically, adjustments can also be made by those who encounter unusually good times, which would allow for more spending than originally anticipated.

For my part, retirement isn’t attractive at this point and I’ll continue to moil for gold while taking the occasional break to enjoy the midnight sun.

Norman Rothery, PhD, CFA, is the founder of [StingyInvestor.com](http://www.ndir.com/).