

Sequence of Returns Risk: Is Your Retirement Nest Egg Prepared?

Authors



Joseph C. Flaherty, Jr.
Chief Investment Risk Officer



Natalie I. Shapiro, Ph.D.
Director, Quantitative Asset
Allocation Research



Derek Beane, CFA
Multi-Asset Institutional
Portfolio Manager

Global markets — equity and fixed income — have recently been buffeted by crosscurrents, including rising inflation, tighter financial conditions, the continued spread of the coronavirus (particularly in Asia), and evolving geopolitical tensions in the wake of Russia’s invasion of Ukraine. Global growth faces multiple headwinds, and central banks face the challenging task of reining in rising prices without tipping economies into recession. Richly valued, interest rate-sensitive growth equities have been hit particularly hard by higher interest rates, and volatility in credit markets has picked up too. Sequence of returns risk, or sequence risk, is the risk associated with the poor timing of negative investment returns materially impacting an investor’s ability to realize their investment objectives. The year-to-date performance of global markets highlights the importance of understanding the impact of sequence risk and how to manage it.

This risk is commonly discussed within the context of retirement savings and target date funds, as large drawdowns close to or early in retirement can have a significant negative impact on retirement outcomes. Why is sequencing risk most pronounced in the later stages of the retirement journey? Because as a member nears retirement, balances are typically at their largest level after years of saving and positive investment returns. At this point, large negative returns can result in large losses, and there is little time to recover. Once a member enters retirement, the issue is complicated further by the end of contributions, which makes it harder to replenish savings, and the start of distributions, which may mean there are fewer assets that can benefit from a potential market rebound.

Sequence of returns and glide paths

While there is general agreement that sequence risk is greatest close to or early in retirement, the degree and nature of the risk is not the same for all target date fund lineups. Glide paths can vary quite a bit across target date providers. Many plan sponsors express concern regarding the aggressiveness of the asset mix close to retirement. History shows that this concern is warranted as different asset mixes can lead to meaningfully different drawdown experiences for members. All else being equal, a portfolio with 50% to 60% equity at retirement (*i.e.*, a typical “through” glide path) is likely to experience more damage than a portfolio with 20% to 40% equity at retirement (*i.e.*, a typical “to” glidepath) in a significant equity market downturn.

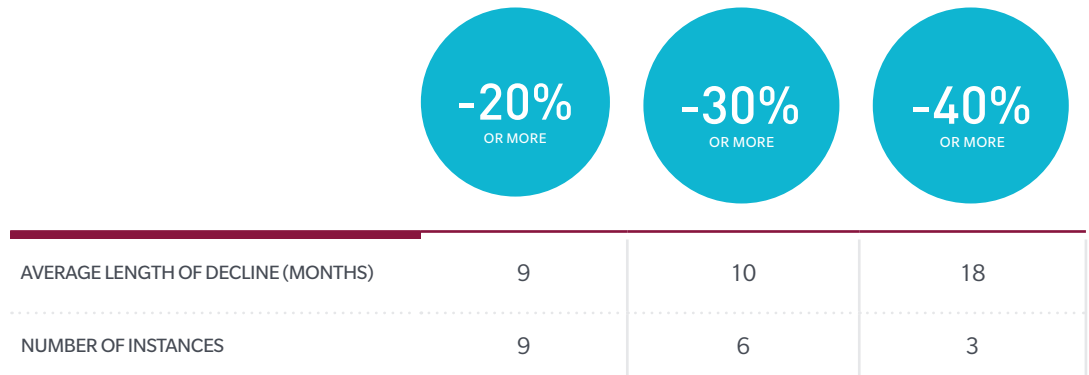
A secondary, more subtle concern is sometimes expressed around the slope of the glidepath. The idea being that steeper glidepaths de-risk at a faster rate resulting in lower exposure to equities when equity markets subsequently rebound. History in this case suggests that this concern is perhaps misunderstood or misplaced as equity drawdowns are often quick and violent and not a lot of glidepath rolldown occurs during the actual market downturn. What can be more impactful is the shift in asset allocation due to the large divergence in performance across asset classes. During an equity market downturn, equity weight can drift meaningfully below the intended allocation. Rather than focusing on the steepness of the glidepath, plan sponsors and members may be better served by focusing on their target date provider’s rebalancing philosophy and practices. Disciplined rebalancing can help ensure that equity levels are closer to their intended target when markets do rebound.

Equity market selloffs

Over the past 40+ years, the S&P/TSX Composite Total Return Index has experienced nine major selloffs (defined as a selloff of 20% or more), with six of those selloffs exceeding 30% and three exceeding 40%. The average length of a major equity selloff can vary quite a bit, ranging from short, violent selloffs, such as the October 1987 and March 2020 declines, which lasted less than three months, to more prolonged selloffs, like the bursting of the tech bubble in 2000, which took well over a year to fully play out.

Exhibit 1: Substantial equity selloffs happen

S&P/TSX Composite Total Return Index declines 1977-2021



Source: Bloomberg. Daily data from Bloomberg starting on January 3, 1977 and ending on December 31, 2021. The length of a market downturn is defined as the period from a peak to trough of at least a 20% decline in the S&P/TSX Composite Total Return Index. The daily total returns were calculated by capturing the change in daily cumulative total return (gross dividends) from the S&P/TSX Composite Total Return Index in Bloomberg.

Portfolio drawdowns

Because all glidepaths have some equity exposure near and into retirement, target date portfolios are not immune to equity market selloffs. However, the differing levels of equity across the range of target date portfolios can lead to meaningfully different member experiences. In addition, how fixed income markets perform during an equity market selloff can further contribute to different member experiences. Fixed income is intended to provide ballast to a portfolio, stabilizing the portfolio under the impact of equity market selloffs. This is particularly beneficial during equity market selloffs when there is a flight to quality leading to positive performance within fixed income markets. However, even during equity market drawdowns prompted by, or in conjunction with, rising interest rates, where fixed income markets sell off alongside equity markets and the fixed income diversification benefit is reduced, the magnitude of a fixed income selloff is often lower than that of the equity markets, providing some dampening effect.

The table below highlights four equity market selloffs. While selloffs are defined by drawdowns in the Canadian stock market, we are trying to reflect the global diversification that exists across most Canadian target date portfolios and thus better represent the member experience. Equity drawdown events that were more global in nature were selected for highlighting and the performance of the equity market is represented by a series made up of 75% daily MSCI World total returns in CAD and 25% daily S&P/TSX Composite total returns. The performance of the fixed income market is represented by the Canadian Benchmark 10 Year Datastream Government Index. The performance of three portfolios that span the range of typical target date portfolio equity/fixed income asset allocations (30%/70%, 50%/50%, and 70%/30%) approaching the target date is shown, as well as the impact on a \$500,000 portfolio.

Exhibit 2: Portfolio drawdown and asset allocation drift

Summer and Fall 1987

8/13/87 - 10/28/87

Global Equity Return: **-20.73%** Portfolio Equity Return: **-23.40%**
 CAD Equity Return: **-31.00%** Fixed Income Return: **3.14%**

STARTING MIX			ENDING MIX		\$500,000 CAD
EQUITY	BOND	PORT. RETURN	EQUITY	BOND	DOLLAR IMPACT
30%	70%	-5%	24%	76%	-\$24,116
50%	50%	-10%	43%	57%	-\$50,661
70%	30%	-15%	64%	36%	-\$77,205

Bursting of the Technology Bubble

9/1/00 - 10/9/02

Global Equity Return: **-43.35%** Portfolio Equity Return: **-44.37%**
 CAD Equity Return: **-48.32%** Fixed Income Return: **18.63%**

STARTING MIX			ENDING MIX		\$500,000 CAD
EQUITY	BOND	PORT. RETURN	EQUITY	BOND	DOLLAR IMPACT
30%	70%	0%	17%	83%	-\$1,362
50%	50%	-13%	32%	68%	-\$64,359
70%	30%	-25%	52%	48%	-\$127,356

Global Financial Crisis

6/18/08 - 3/9/09

Global Equity Return: **-38.35%** Portfolio Equity Return: **-40.64%**
 CAD Equity Return: **-48.49%** Fixed Income Return: **11.95%**

STARTING MIX			ENDING MIX		\$500,000 CAD
EQUITY	BOND	PORT. RETURN	EQUITY	BOND	DOLLAR IMPACT
30%	70%	-4%	19%	81%	-\$19,131
50%	50%	-14%	35%	65%	-\$71,717
70%	30%	-25%	55%	45%	-\$124,303

COVID Pandemic

2/20/20 - 3/23/20

Global Equity Return: **-27.46%** Portfolio Equity Return: **-29.95%**
 CAD Equity Return: **-37.20%** Fixed Income Return: **4.50%**

STARTING MIX			ENDING MIX		\$500,000 CAD
EQUITY	BOND	PORT. RETURN	EQUITY	BOND	DOLLAR IMPACT
30%	70%	-6%	22%	78%	-\$29,179
50%	50%	-13%	40%	60%	-\$63,624
70%	30%	-20%	61%	39%	-\$98,067

Source: Datastream, MFS Research.

Note: Equity Return is represented by a series made up of 75% daily MSCI World total returns in CAD and 25% of the daily S&P/TSX Composite total returns. Fixed income market is represented by the Canadian Benchmark 10 Year Datastream Government Index.

Not surprisingly, as seen in the table above, the portfolios with the more aggressive equity allocations experienced greater portfolio drawdowns. When fixed income markets sell off in conjunction with equity markets, like we have been experiencing recently, the diversification benefits are reduced but more conservative portfolios can still experience smaller drawdowns than more aggressive portfolios as long as fixed income markets do not sell off to the same degree as equity markets. When fixed income markets are flat or up slightly, like during the Summer and Fall of 1987 and during the COVID pandemic, the benefits of fixed

income diversification are greater, the portfolio drawdowns are lower relative to the equity market selloff and the conservative portfolio holds up even better relative to the more aggressive portfolio. When fixed income markets are meaningfully positive, like during the bursting of the technology bubble, the larger fixed income allocation in the more conservative portfolios become even more beneficial. The difference between a portfolio drawdown of 20% to 30% and a portfolio that is flat or delivers positive returns as a member nears or enters retirement can have a significant impact on retirement outcome. This is the essence of sequence risk.

Portfolio rolldown and drift

Beyond the obvious negative impact on balances resulting from a large equity market selloff, a secondary impact is asset allocation drift which can be an issue if not properly managed. A large divergence between asset class performance can lead to a meaningful shift in portfolio asset allocation. Focusing on the middle portfolio allocation (50%/50%) in exhibit 2, following the equity market selloff in 1987, where the spread between equity and fixed income returns was less than the other three scenarios, the equity weight drifted from 50% down to 43%. During equity market selloffs with greater difference between equity and fixed income market returns, asset allocation drift can be even more extreme. Following the bursting of the technology bubble and GFC, the equity weight drifted from 50% to less than 35%! A shift in asset allocation greater than 15% over a one- to two-year period far exceeds the rolldown associated with even the steepest glidepaths. Exhibit three below shows the impact through these events and assumes a 50% equity weighting five years before a planned retirement.

Exhibit 3: Drift exceeds rolldown



Source: Datastream.

Plan sponsors and members concerned about the steepness of the glidepath and the ability to participate in any subsequent equity market rebound may want to shift their focus toward ensuring that their target date provider has a rebalancing discipline in place to counteract asset allocation drift. A rebalancing discipline during a market downturn, when both volatility and uncertainty tend to be elevated, may help to ensure that asset allocations are aligned with glidepath intent so that portfolios participate as expected during subsequent market rebounds.

Managing sequence risk

Portfolios that are broadly diversified may reduce the likelihood of a single market or market segment disproportionately impacting portfolio performance.

Glidepaths that invest more aggressively early in the savings journey when time horizons are longest and focus on protection late in the journey help manage sequence risk. The obvious benefit to this approach is that it may help reduce the impact of market corrections on portfolio drawdowns late in the retirement journey when time horizons are short and there is less ability to recover. But there is also a benefit to being more aggressive early in the retirement journey when time horizons are longer and the ability to recover is greater. It can lead to a larger portfolio balance later in the journey, potentially helping a member weather a larger drawdown, all else being equal.

Lastly, a disciplined approach to rebalancing, particularly during bouts of market volatility, may help manage sequence risk by removing emotion from the equation, maintaining the intended risk profiles and allowing for greater participation during any subsequent market rebound.

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