LESSON · RETIREMENT RISK

Sequence-of-Returns Risk: Why Order Beats Average

Two retirees can earn the exact same average return over 20 years and end up in completely different places — because early losses while withdrawing do far more damage than average math suggests.

Read time: 8 minutes **Level:** Intermediate **Includes:** Knowledge check

Two retirees can earn the exact same average return over a 20-year retirement and end up in completely different places — one comfortably funded, one out of money years early. The difference isn't the average return at all. It's the *order* those returns happened in, relative to when withdrawals were being taken. That's sequence-of-returns risk, and it's arguably the single biggest reason a portfolio-only retirement plan can fail even when its long-run average return assumption turns out to be correct.

Why order matters more than average, once you're withdrawing

While you're still working and contributing, the order of returns barely matters — you're buying at every price along the way, good years and bad years both, and it mostly washes out. The moment you start *withdrawing* instead of contributing, that symmetry breaks. A market decline early in retirement forces you to sell more shares to generate the same dollar amount of income, permanently shrinking the number of shares left to participate in the eventual recovery. A market decline late in retirement, after decades of growth, does much less damage to a much larger balance.

Worked example

Picture two retirees, each starting with $1,000,000 and withdrawing $40,000 a year (adjusted for inflation), each averaging the same 7% return over 20 years — but in reverse order. Retiree A gets strong returns in years 1–10 and weaker returns in years 11–20. Retiree B gets the identical set of returns, just flipped: weak years first, strong years later. Despite an identical 20-year average, Retiree A can end up with a substantial balance left over, while Retiree B can run out of money entirely before year 20 — because B was forced to sell a large share of the portfolio at depressed prices early on, leaving too little principal to benefit when the strong years finally arrived.

The "retirement red zone"

The five years before retirement and the five to ten years after are the highest-stakes window for this risk — sometimes called the retirement red zone. That's when the portfolio is at or near its largest dollar size (no more years of contributions ahead to offset a loss) and withdrawals have just begun or are about to. A downturn that lands squarely in this window does more permanent damage than the same downturn hitting five years earlier or fifteen years later, purely because of timing.

Where the 4% rule actually came from

It was never about average returns

The widely-cited "4% rule" wasn't derived from an average historical return — it was derived by testing a withdrawal rate against the *worst* historical sequences in U.S. market data, including retirements that started right before major downturns. That's precisely a sequence-risk stress test, not an average-return calculation. It's also why Monte Carlo analysis (see that lesson) exists as a tool: it's an attempt to generate thousands of possible sequences, rather than relying on the handful of sequences that happened to occur historically.

How to actually defend against it

The core defense isn't picking better investments — it's structuring the plan so you're never forced to sell depressed growth assets to fund near-term spending. That generally means:

- **A liquidity buffer.** Holding a meaningful amount in cash or cash-equivalents — often framed as a year or more of planned spending — means a market decline doesn't force an immediate sale of anything. You spend from the buffer while growth assets recover, then refill the buffer later, in a better year.
- **An income-generating layer sized to reduce reliance on selling shares at all.** Bonds, dividends and other cash-flow-producing holdings can fund a meaningful share of ongoing spending without ever requiring a sale, which matters most exactly when prices are down.
- **Spending flexibility in bad years.** Retirees who can skip an inflation increase, or trim discretionary spending, after a down market meaningfully reduce how much they're forced to withdraw at depressed prices — a "guardrails" approach that adjusts spending to what the portfolio can actually support that year, rather than a fixed inflation-adjusted number no matter what markets did.

This is the reasoning behind Blueprint's three-engine structure — a Liquidity Engine holding cash, an Income Engine generating cash flow without asset sales, and a Growth Engine that's allowed to just keep growing, undisturbed, specifically because the other two engines are covering near-term spending. The goal is that a bad sequence early in retirement never forces a sale of the Growth Engine at its worst possible moment.

A less obvious lever: timing discretionary withdrawals

Big one-time withdrawals you have some control over — a large purchase, a Roth conversion, a gift — do the same kind of damage as a forced sale if they happen to land right after a market decline. Where there's real flexibility in timing, delaying a large discretionary withdrawal until after a partial recovery, rather than right after a downturn, avoids compounding the sequence-risk problem with a self-inflicted one.

Sequence-risk defenses worth having in place before you retire:

- [ ] A liquid buffer sized to cover a meaningful stretch of spending without selling anything
- [ ] An income-generating layer that funds spending without requiring asset sales
- [ ] A concrete plan for what you'd trim in spending after a down year, decided in advance rather than in the moment
- [ ] Clarity on exactly which asset you'd sell first in a downturn — confirm it's not the depressed growth assets
- [ ] Flexibility to delay large discretionary withdrawals until after a partial recovery, where possible

KNOWLEDGE CHECK

Test what you just learned

Answer four quick questions to test what you just learned.

1. Why does the order of returns matter more than the average return, once you're withdrawing money?

> A. It doesn't — average return is all that matters
>
> B. A decline early in retirement forces selling more shares at depressed prices, permanently shrinking what's left to recover
>
> C. Markets always recover within a year, so order never matters

2. What is the "retirement red zone"?

> A. A type of high-risk investment
>
> B. The years just before and after retirement, when the portfolio is largest and withdrawals have just begun
>
> C. A tax filing deadline

3. What was the historical 4% withdrawal rule actually based on?

> A. The average historical market return
>
> B. The worst historical sequences of returns, not the average
>
> C. A guess with no historical testing behind it

4. Which of these is a core defense against sequence-of-returns risk?

> A. Investing 100% in growth assets to maximize average return
>
> B. Holding a liquidity buffer and income-generating assets so you're never forced to sell depressed growth assets
>
> C. Withdrawing a fixed amount no matter what the market did that year

Blueprint Tomorrow provides educational planning tools, not individualized investment, tax or legal advice. Nothing in this lesson is a recommendation to take any specific action with your accounts. Rules referenced here can change — confirm current-year figures and thresholds with a qualified tax professional before acting.