How Your Advisor Mismeasures Risk

And What the NFL Can Teach Us About Risk

By James Hickey, MBA, CFA | Managing Director, Crimson Wealth Management | November 2026

EXECUTIVE SUMMARY: THE REAL RISK IN WEALTH MANAGEMENT

Ask your financial advisor how risk is measured and managed, and the answer will likely begin with volatility and the solution for the risk is diversification. The problem is the real risk for the client is the failure of the portfolio to achieve the client's goals. Compounding this, diversification, while a useful tool, may not protect the portfolio when the client needs it most, during periods of financial crisis.

1. Volatility Is Not the Real Risk

The most important long-term question is whether the portfolio can support spending and the goals it was built to serve—not simply how smoothly its value changes from quarter to quarter. Standard deviation records large upside surprises as well as losses. It does not, by itself, measure the probability of failing a financial plan.

2. Playing Not to Lose

Football offers the first analogy. A team protecting a fourth-quarter lead can repeatedly choose the conventional, cautious call. The problem, as many fans who have watched their team squander a lead can attest, is that the safest play is not actually the optimal strategy to win.

An investor faces the same trade-off. Avoiding short-term losses may feel prudent, yet an overly conservative portfolio can sacrifice the growth needed for a long retirement. The relevant question is not which decision feels safe today; it is which combination of risks gives the plan its best chance of succeeding.

3. Retirement Is Still a Long Game

Retirement is the fourth quarter, not the final whistle. For a man and woman both age 65, the simple probability that at least one reaches 90 is about 51%. A retirement portfolio may need to fund spending for 25 to 30 years.

That horizon changes what safety means. Consider a hypothetical $1 million portfolio at age 67, withdrawing $50,000 at the start of the first year and raising subsequent withdrawals with inflation. Using annual S&P; 500 and 10-year U.S. Treasury total returns from 1928 through 2025, a 100% Treasury portfolio depleted before age 90 in 42 of 76 complete historical windows (55%). A 100% stock portfolio depleted in 13 of 76 (17%). Before age 95, the respective rates were 47 of 71 (66%) and 15 of 71 (21%). These are historical outcomes under one withdrawal rule—not probabilities for a future retiree, and not an endorsement of a 100% stock allocation.

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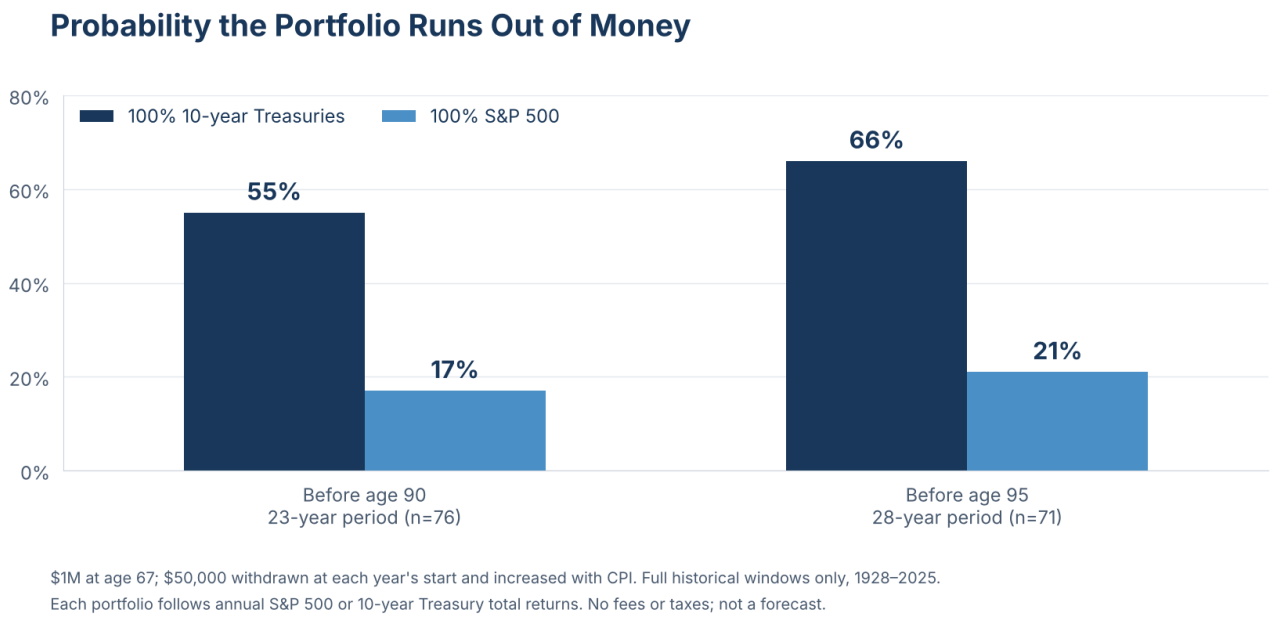

Figure 1: Historical backtest: full 23- and 28-year windows, 1928–2025. The portfolio runs out when a scheduled withdrawal cannot be met. Withdrawals increase with annual CPI. No fees, taxes, other income or adaptive spending. Recalculated from historical annual data; not a forecast.

The result does not establish a universal allocation rule, but it does validate the reality that playing not to lose can often be a losing strategy.

4. Time Changes the Shape of Risk

Time horizon changes the interpretation of investment risk. In Damodaran's nominal U.S. stock-return series for 1928–2025, stocks lost money in 26 of 98 calendar years but in none of the 79 complete rolling 20-year periods.

Compounding illustrates the opportunity cost of being too conservative. In a purely hypothetical illustration, $1 million earning 4% annually grows to about $2.19 million after 20 years; at 8%, it grows to about $4.66 million. Those are not forecasts for bonds or stocks. The comparison simply shows how apparently modest annual differences become meaningful over the time horizon that matters to a client.

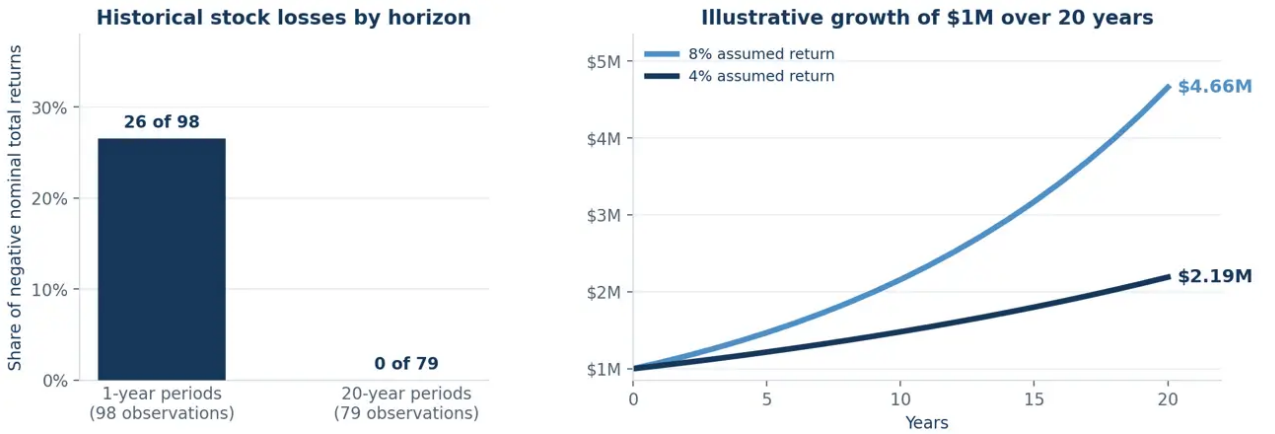

Figure 2: Left: Damodaran S&P; 500 nominal total returns, 1928–2025. Right: illustrative constant annual growth of 4% and 8%, no withdrawals, inflation, taxes or fees. Past performance does not predict future returns.

5. Taxes and Inflation Change the Outcome

Taxes and inflation raise the hurdle further. Suppose, for illustration only, an investment earns a constant nominal 4% or 8% annually, that annual gains are taxed at a uniform 30%, and inflation is 2%. This deliberately simplified treatment does not reflect the actual tax differences between bond income, dividends and deferred capital gains. With an initial $1 million, the resulting real values after 20 years are approximately $1.17 million and $2.00 million, respectively.

Measure	Conservative (4.0% Nominal)	Growth Oriented (8.0% Nominal)
Starting Portfolio	$1,000,000	$1,000,000
Nominal Annual Return	4.0%	8.0%
After 30% Tax on Gains	2.8%	5.6%
After 2% Inflation	0.8%	3.5%
Real Value of $1M After 20 Years	**About $1.17 million**	**About $2.00 million**

Table 1: Illustrative only: annual taxation of all gains and exact inflation adjustment, not investment projections or personalized advice.

6. Volatility Becomes Real When You Sell

Price fluctuations become consequential when they force action. A temporary drawdown can lead to a lasting loss if an investor must sell assets to meet spending, taxes or a capital call. The practical defense is to maintain enough readily available resources that foreseeable obligations do not depend on selling long-term holdings at an unfavorable time.

7. Give Each Dollar a Job

One way to make the time horizon visible is to separate the portfolio into sleeves. Protection covers emergencies. Income funds known spending. Growth compounds toward long-term goals. Aspiration holds high-upside opportunities that may be illiquid and should not be needed for the core plan.

Consider Steve, a hypothetical 50-year-old attorney with $1 million who plans to retire in 15 years. He wants $50,000 available for emergencies, a reserve for planned spending, and $100,000 for optional, potentially illiquid investments. A four-sleeve allocation can match those different jobs to different levels of risk.

The point is not a prescribed allocation. It is that a decline in long-term growth assets should not dictate whether Steve can meet an emergency expense or fund planned spending. The growth sleeve can be judged against its 15-year purpose rather than next quarter's statement.



Figure 3: Illustrative Allocation for Steve: Matching portfolio sleeves to specific time horizons and risk capacities.

8. Traditional Risk Measures Miss the Real Risks

Traditional risk measures are useful descriptors, not a complete risk system. Standard deviation, Sharpe ratios, and correlation help summarize behavior. However, they are backward-looking measures. The real portfolio risks are the structural risks, whether the financial collapse of 2008 or COVID financial crisis of 2020. These risks are just not captured by traditional risk metrics.



Figure 4: Traditional Risk Measures vs. Real Risk Questions: Useful metrics describe behavior; better questions reveal fragility.

9. What NFL Turnovers Teach Us About Risk

NFL turnovers illustrate the difference between routine variation and consequential events. Across 6,964 regular-season games from 1999 through 2025, teams with a +1 turnover differential won 67.8% of the time; at +2, 83.6%; and at +3 or more, 92.4%. These are associations, not pregame win probabilities or evidence that one turnover alone causes victory.

Turnovers are also difficult to forecast. The Harvard Sports Analysis Collective estimated that luck accounted for roughly 54.7% of the variation in season-level turnover differentials; the year-to-year correlation was only 0.086. Talent still matters, but deflections, collisions, and loose-ball bounces add substantial unpredictability.

The investment parallel is that a portfolio can look stable until an adverse event exposes a vulnerability. An advisor may not predict exactly when a lender withdraws financing or a major counterparty fails, but can identify dependence on that lender or counterparty in advance. The goal is not to forecast every turnover; it is to limit the damage when one occurs.



Figure 5: Win rates: Vertize Sports analysis of nflverse game data (1999–2025); luck-versus-talent estimate: Harvard Sports Analysis Collective (2014). Results are associations and an estimate, not predictive guarantees.

10. Standard Deviation Treats Upside and Downside the Same

Standard deviation measures how widely returns vary around their average. A large positive surprise increases the number just as a large negative surprise does. The Sharpe ratio then divides excess return by that total variability. This can help compare portfolios, but it does not measure the chance of missing a goal, the depth of a loss, the time required to recover or the risk of a forced sale.

Consider two hypothetical $100,000 investments over five years. The Steady Fund earns +7%, +7%, +7%, +7% and -5%, while the Outperformer earns +25%, 0%, +25%, 0% and -15%. The Steady Fund has lower measured volatility and a higher Sharpe ratio, yet the Outperformer finishes with the greater terminal value.

Portfolio Metric / Trajectory	The Steady Fund	The Outperformer
5-Year Annual Returns	+7%, +7%, +7%, +7%, -5%	+25%, 0%, +25%, 0%, -15%
Terminal Portfolio Value	$124,526	**$132,813 (+$8,287)**
Sample Standard Deviation	5.4% (Lower)	17.5% (Higher)
Sharpe Ratio (2.0% Risk-Free Rate)	**0.48 (Ranked Higher)**	0.29 (Ranked Lower)

Table 2: Hypothetical examples, not actual investments: Sharpe assumes a 2% risk-free rate; no fees or taxes.

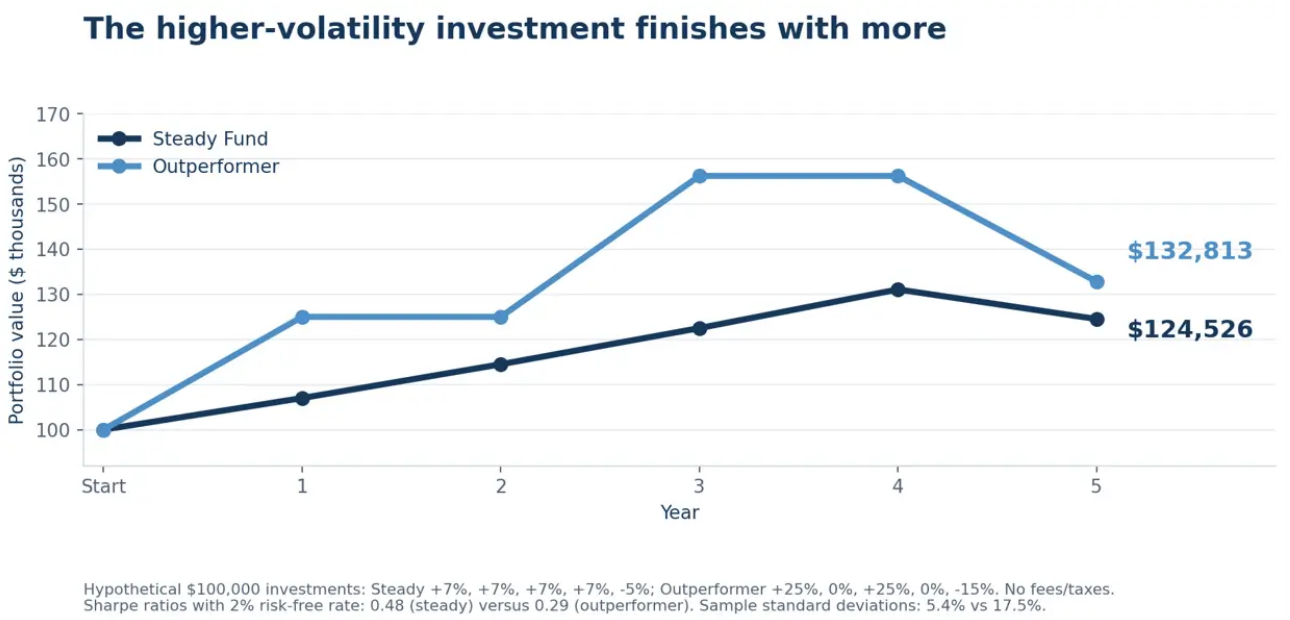

Figure 6: The higher-volatility investment finishes with more: Steady Fund vs. Outperformer 5-year portfolio trajectory.

11. Diversification is Not Static

Investment firms build complex risk management tool built around correlation assumptions, with the idea that you can diversify away the risk. The problem is that diversification is not static, and unfortunately there is normally a high correlation between assets during system shocks as the graph for 2008 and COVID returns show.

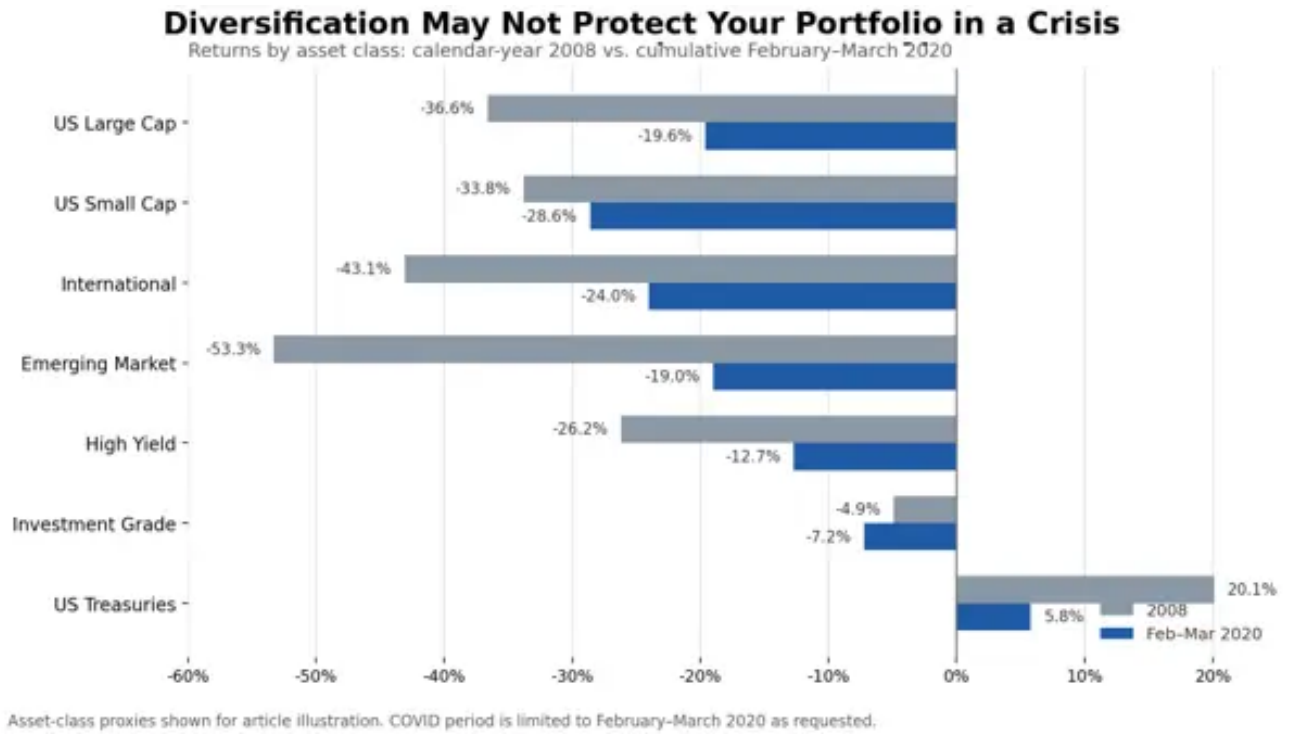

Figure 7: Diversification May Not Protect Your Portfolio in a Crisis: Returns by asset class, 2008 vs. Feb–Mar 2020.

12. The Iceberg: A Better Way to Think About Portfolio Risk

An iceberg is a better metaphor for structural risk. Above the waterline are familiar numbers—volatility, holdings, historical correlation, and average returns. Below it are the dependencies that can decide whether a portfolio holding survives stress: leverage, refinancing, concentration, counterparty exposure, the ability to sell assets and the household's own liquidity needs.

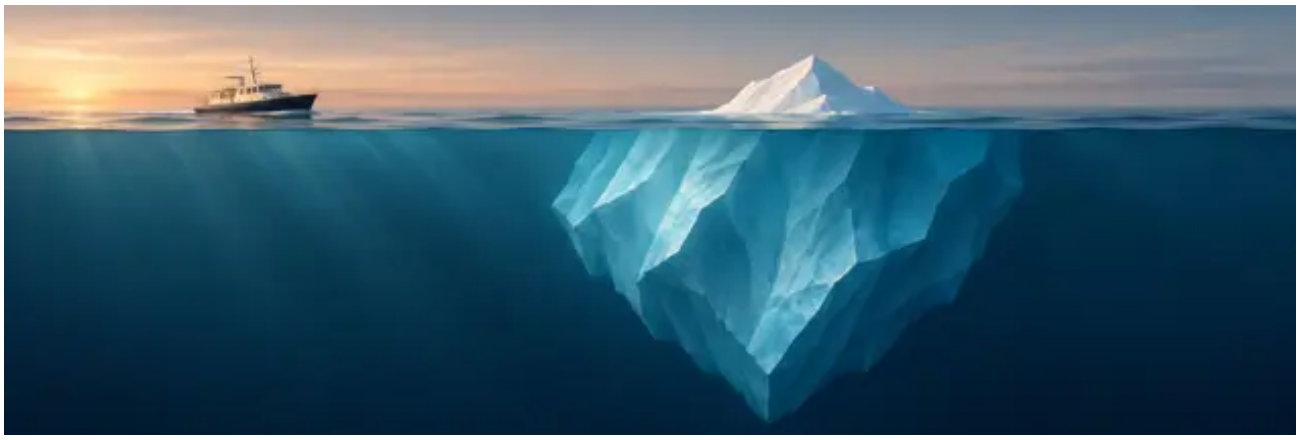

Figure 8: The Structural Risk Iceberg: Above the waterline are surface statistics; below are structural vulnerabilities.

In 2008, losses spread through mortgage securitizations, leveraged institutions and short-term funding markets. In March 2020, forced selling strained even the Treasury and agency mortgage markets. The mechanisms differed, but both crises exposed connections that conventional portfolio labels and normal-period volatility could miss. The important question is not only how many holdings an investor owns, but how many different ways those holdings can fail.

13. What Better Risk Management Looks Like

No advisor can identify every future shock. A disciplined process can still improve a portfolio's capacity to withstand one.

- Measure Plan Shortfall Directly: Test the chance that assets fail to support spending, taxes, inflation, and major goals under a range of return paths.
- Maintain a Liquidity Runway: Hold enough cash and high-quality short-term assets that a market decline does not dictate when long-term investments must be sold.
- Map Economic Concentration: Look through funds and account labels to the companies, industries, counterparties, and financing chains that drive results.
- Stress the Portfolio as a System: Model simultaneous stock and bond declines, wider credit spreads, delayed private valuations, lost income, and higher spending instead of changing one assumption at a time.
- Define Action Rules Before the Shock: Decide when to rebalance, when to refill the spending reserve, and what conditions would justify changing the plan.

14. Questions Worth Asking Before the Next Shock

1. Spending Runway: How many years of planned spending can we fund without selling long-term investments?

2. Hidden Concentrations: Where are we exposed to the same companies or financing cycle through different funds and accounts?

3. Refinancing & Liquidity: What would force us—or a business we own—to refinance or sell assets under stress?

4. Dual Stock/Bond Drawdown: What does the financial plan look like if stocks and bonds fall together, or if liquid markets seize up temporarily?

15. The Bottom Line

Long-term risk is failing to fund the plan. Near-term danger arises when a shock meets an urgent cash need or a fragile financial structure. An NFL coach cannot predict every tipped pass or fumble, and an advisor cannot forecast every market disruption. Both can improve their odds by preparing for the consequences. Give near-term money stability, give long-term money room to grow, and look beneath conventional statistics for the exposures that could turn a setback into lasting damage.

SOURCES & DISCLOSURES

Sources & Methodology: Retirement backtests use annual S&P; 500, 10-year Treasury and CPI observations, 1928–2025, with complete 23- and 28-year windows. Withdrawals start at $50,000 at the beginning of each year and rise with CPI for the following year; there are no fees, taxes, other income or adaptive spending. Results are historical examples, not forecasts. Data sources: Aswath Damodaran (NYU Stern), Social Security Actuarial Life Tables, Vertize Sports (nflverse), Harvard Sports Analysis Collective.

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