Rethinking Risk Management and the Myth Of "Missing the Best Days"

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EXECUTIVE SUMMARY

One of the most persistent myths in investing is that staying fully invested at all times is essential to avoid missing the market's best days. This conventional wisdom not only oversimplifies market behavior but also exposes investors to significant, avoidable risk. This white paper identifies and addresses three critical flaws in that argument:

1. **Extreme returns cluster during periods of market stress.**

   Historical analysis shows that 18 of the 20 largest daily gains and 19 of the 20 worst losses occurred when the S&P 500 was trading below its 200-day moving average, times marked by heightened volatility and economic uncertainty, not healthy market conditions. ***See table 1 on page 3 and figure 1 on page 4*

2. **The "best days" argument ignores sequence-of-return risk.**

   The order and timing of returns matter as much as their magnitude. Early losses can permanently impair wealth accumulation, while early gains allow capital to grow from a larger base. Buy-and-hold strategies ignore this crucial dynamic.

3. **Volatility erodes wealth through mathematical asymmetry.**

   A 50% loss requires a 100% gain to recover, making drawdown mitigation essential for compounding over time. High volatility isn't just uncomfortable—it's mathematically destructive.

This white paper will show that a disciplined, systematic approach to managing risk does not rely on the best days to improve risk-adjusted returns. By systematically adjusting equity exposure based on market health or trend indicators, investors can improve returns, minimize drawdowns, and reduce recovery times compared to passive index investing. We demonstrate that effective risk management doesn't hinder long-term growth- it enhances it.

INTRODUCTION AND ROADMAP

Many studies suggest that missing just a handful of the market's best days can drastically reduce long-term returns. These findings are often cited to promote buy-and-hold investing, especially during times of volatility. But this narrative ignores key realities that shape investment outcomes.

This paper takes a systematic approach to dismantling the myth and offers a more resilient path forward:

- **Deconstructing the Myth**
  We examine how "best days" studies are constructed and reveal the flawed assumptions behind their conclusions.
- **Understanding Market Reality**
  We analyze how extreme returns tend to cluster in periods of market stress, undermining the idea that staying fully invested is always safe.
- **The Mathematics of Risk**
  We explain why volatility drag, loss asymmetry, and sequence-of-return risk matter more than most investors realize.
- **Practical Application**
  We show how dynamically adapting exposure in a rules-based and systematic way improves buy and hold without reliance on the best or worst day returns.
- **A New Framework**
  We propose a modern approach to equity investing that prioritizes capital preservation while capturing long-term growth.

UNDERSTANDING THE "BEST AND WORST DAYS" STUDIES

These studies typically analyze historical stock market data and quantify the impact of missing the most extreme daily price movements. The standard methodology follows these steps:

1. Establish a Baseline: A reference index, such as the S&P 500, calculates a long-term return assuming continuous investment.

2. Identify the Best and Worst Days: The days are rank-sorted by return, then the highest and lowest returns are deleted from the analysis.

3. Recalculate Performance: The impact of missing these days is analyzed by removing them from the return series and comparing the results to the baseline.

4. Draw a Conclusion: The study asserts that missing the best days significantly reduces returns, while missing the worst days greatly enhances them. A combined approach (missing both) often shows moderate effects.

This methodology leads to a powerful conclusion: since the best days are often clustered near the worst days, attempting to avoid volatility may lead to missing substantial gains. This argument strengthens the buy-and-hold philosophy and discourages market timing strategies.

The Flaws in the "Best and Worst Days" Argument

While these studies provide interesting data points, they suffer from critical shortcomings:

1. Price Movements Are Path-Dependent

- The studies assume that price fluctuations occur in isolation, ignoring the sequence in which they unfold. In reality, only three things truly matter: the price at which a security is purchased, the price at which it is sold, and any income received. Daily returns between those two points are essentially noise.

Historical data for SPY (S&P 500 ETF) from 1994 to 2024 reveals that 18 of the 20 biggest single-day gains and 19 of the 20 worst single-day losses occurred when the market was below its 200-day moving average (see Table 1). This indicates that extreme returns cluster during bearish, high-volatility periods rather than healthy uptrends. For example, during the 2008 Financial Crisis, 6 of the 20 largest daily gains and 10 of the 20 worst losses occurred between September and November, all while trading below the 200-day average. Similarly, in March 2020, 4 of the 20 worst days and 6 of the 20 best days coincided with the COVID-19 crash, again below the 200-day moving average.

- Missing the worst days alone is a flawed scenario because worst days frequently cluster in downtrends, which risk management strategies aim to avoid.

Table 1 – Occurrence of Top 20 Best/Worst Days vs. 200-Day MA (1994–2024)

Category	Below 200-Day MA	Above 200-Day MA
Top 20 single-day gains	18 days	2 days
Bottom 20 single-day losses	19 days	1 day

Bloomberg and Norgate data, 1994–2024. Nearly all extreme daily returns occurred in downtrend conditions (price below 200-day SMA).

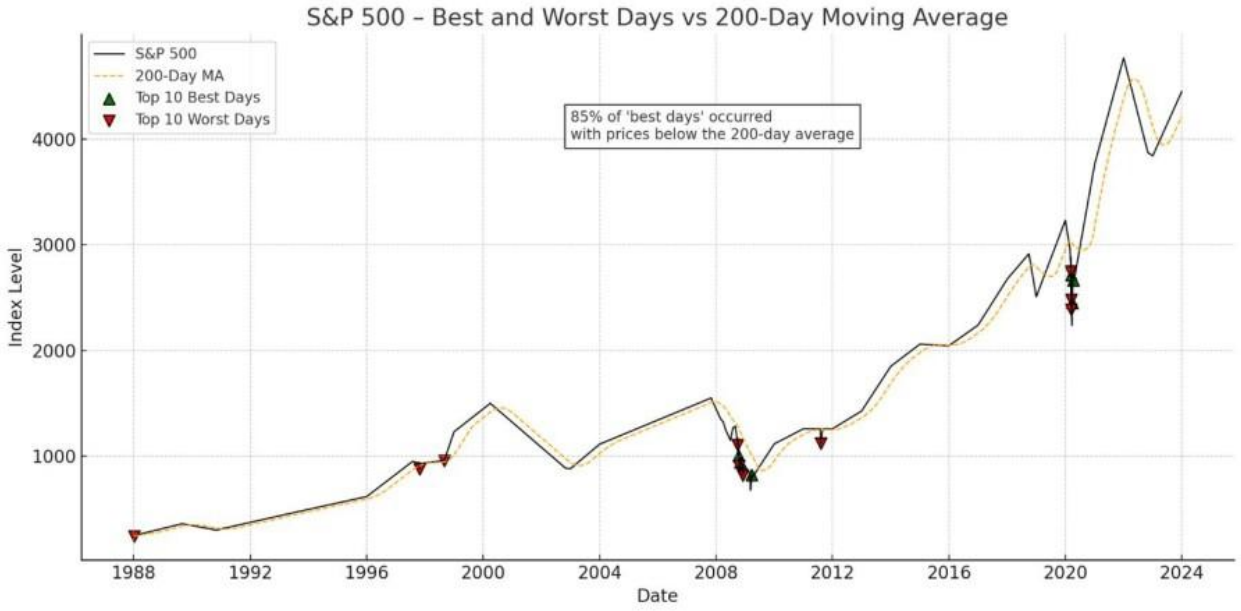
2. Ex-Post Data Bias

- Another problem is that the analysis is conducted with perfect hindsight. No investor can selectively remove the best or worst days from their trading experience. Many risk management forms do not rely on missing those specific days to succeed.
- The notion that investors would only miss the best days assumes poor market timing. In reality, systematic trend-following or risk management approaches aim to avoid prolonged drawdowns and high-probability periods of elevated volatility, not just individual down days.

3. Ignoring the Context of Market Structure

- The best days often occur in the middle of a bear market when investors are unlikely to be fully invested due to risk control. Approximately **85% of the top daily gains since 1988 occurred during market stress**, often immediately following or adjacent to major down days (see Figure 1: S&P 500 daily price vs. 200-day moving average, highlighting the top 10 best and worst days).

Figure 1: S&P 500 Daily Price vs. 200-Day MA, Highlighting Top 10 Best/Worst Days



Source: Bloomberg and Norgate data.

- Many best days are reflexive rallies within broader declines (e.g., the 2008 financial crisis and COVID-19 crash). Exposure to these best days does not necessarily equate to long-term gains if they occur in a secular downtrend.

4. Neglecting Risk-Adjusted Returns

- The studies focus on absolute return impact without considering volatility and drawdowns.
- A risk-managed approach that sidesteps major downtrends may sacrifice some upside but can provide better risk-adjusted returns.
- Volatility clusters, meaning missing high-volatility days (up and down) may reduce risk and improve overall portfolio efficiency.

THE REALITY OF MARKET RETURNS: WHY RISK MANAGEMENT MATTERS

Investors often assume that markets deliver a steady return over time, but history tells a different story. Market returns are highly volatile, and the sequence in which they occur can profoundly impact wealth accumulation and sustainability. For investors—especially those approaching or in retirement—managing risk effectively is crucial for preserving capital and achieving long-term financial goals.

Market Returns Are Volatile and Unpredictable

While the long-term average return of the S&P 500 hovers around 9%* *see appendix*, annual returns fluctuate dramatically, swinging between substantial gains and severe losses. These fluctuations not only shape long-term outcomes but also impact investor behavior. Historical market data highlights this variability:

- 1995: **+37.6%**
- 2000: **-9.1%**
- 2008: **-37.0%**
- 2013: **+32.4%**
- 2020: **-33.9%** (COVID Crash, March 2020)
- 2022: **-18.1%**

Source: Bloomberg and Norgate data.

Large drawdowns can take years to recover from, eroding the power of compounding and testing investor resolve. Behavioral biases, such as **loss aversion**, often lead investors to sell in downturns and hesitate to reinvest, ultimately reducing long-term returns. Periods of severe market stress demonstrate that **avoiding the worst days can be as critical as capturing the best.** Tactical risk management helps limit deep drawdowns and positions investors to re-enter the market when conditions turn favorable.

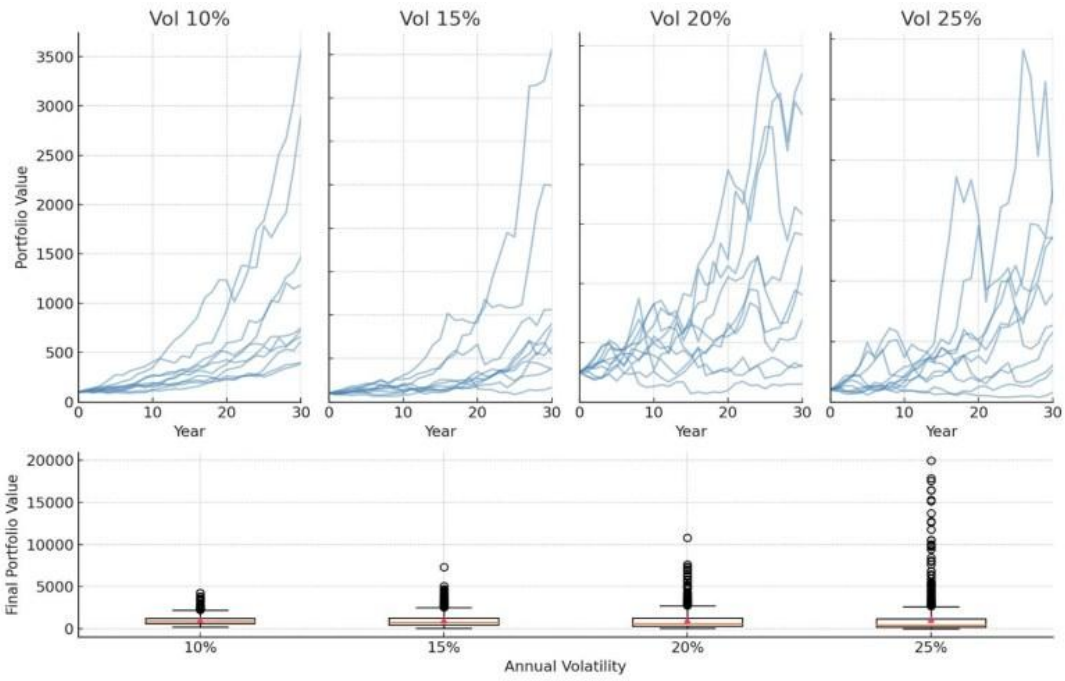
The Impact of Sequence-of-Return Risk

Sequence-of-return risk refers to the impact of the timing of returns on an investor's long-term portfolio performance, particularly for retirees making withdrawals. Two investors may achieve the same **average** return but experience dramatically different financial outcomes depending on when those returns occur. For example:

- **Investor A:** Retires in 1995, benefiting from strong early returns (+30% in the early years). Their portfolio grows significantly, providing a larger base for compounding and withdrawals.
- **Investor B:** Retires in 2008 and suffers an initial **37% loss**. Their portfolio shrinks immediately, forcing withdrawals from a depleted capital base. Even as the market recovers, their remaining capital is insufficient to benefit from the rebound fully.

This risk is particularly acute when the market trades below its 200-day moving average, characterized by heightened volatility and economic distress. A Monte Carlo simulation (see Figure 2) illustrates how higher volatility widens the range of potential 30-year portfolio outcomes, even with identical average returns. At 25% annualized volatility, ending portfolio values scatter widely, reflecting the destructive impact of large fluctuations on compounding. A retiree experiencing early losses in such a regime risks irreversible portfolio impairment, as withdrawals exacerbate capital depletion.

Figure 2: Monte Carlo Simulation of Portfolio Outcomes



Caption: Simulation of 30-year portfolio values with 9% average return, varying volatility (10%, 25%). X-axis: years; Y-axis: portfolio value ($). Parameters: 1,000 trials, lognormal returns, $100 initial investment.

Source: Bloomberg and Norgate data.

MATHEMATICAL FOUNDATION: THE ASYMMETRY OF LOSSES

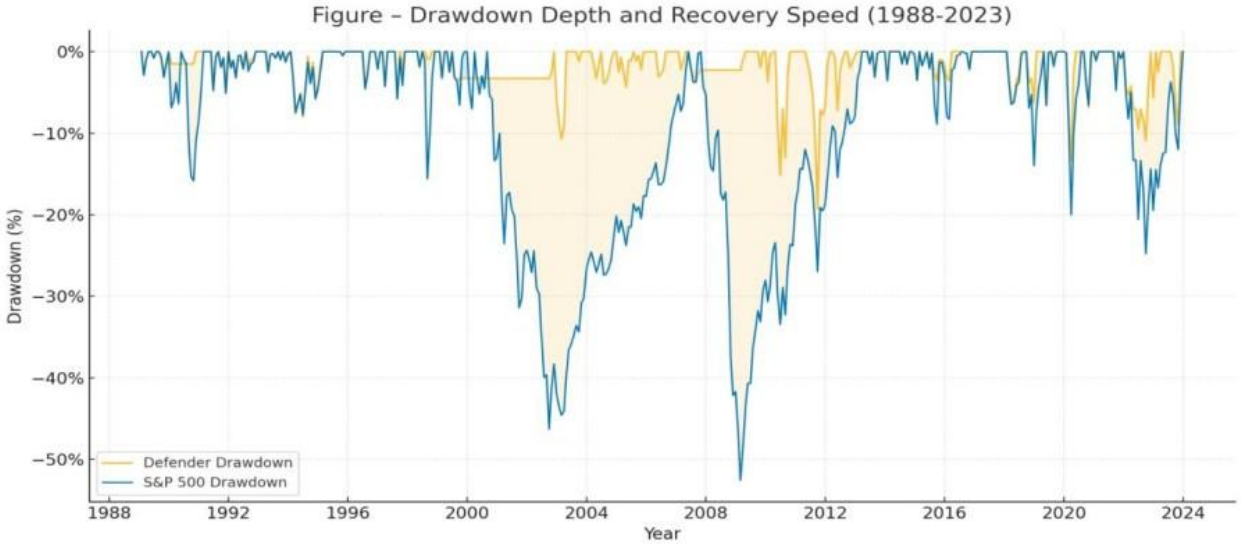
Further, even long-term investors can be punished by significant drawdowns. The mathematical asymmetry of losses and subsequent required gains represents one of investing's most consequential realities. When a portfolio experiences a decline, the percentage gain needed to recover to the original value increases non-linearly with the size of the loss. This relationship is expressed by the formula: Required gain (%) = [1/(1-Loss)] - 1, where Loss is expressed as a decimal. For example, a modest 10% decline necessitates an 11.1% subsequent gain to break even, while a 50% drawdown demands a 100% return to recover. This mathematical imbalance becomes increasingly punitive as losses deepen—a 75% decline requires a 300% gain to return to the original position. Such asymmetry fundamentally challenges the compound growth process, as larger drawdowns dramatically extend recovery periods and reduce the capital base available for future compounding. By limiting the magnitude of drawdowns, investors preserve more capital to participate in future growth opportunities, maintain the power of compounding, and significantly improve the probability of achieving long-term financial objectives.

BRIDGING THEORY AND PRACTICE: THE DEFENDER PROGRAM IN ACTION

While theoretical models and historical simulations illustrate the impact of volatility, drawdowns, and sequence of return risk, actual value emerges in the practical application of these principles. The Defender Program was built to navigate the conditions challenging long-term investors systematically: volatility clusters, deep market selloffs, and prolonged recoveries.

The chart in Figure 3 below compares the drawdowns in the Defender Program to a traditional buy-and-hold approach. The difference is not just academic: by mitigating the depth and duration of losses, the Defender preserves capital when it matters most, enabling investors to stay invested, recover faster, and compound more effectively over time.

Figure 3: Drawdowns in Defender vs. Buy & Hold



Source: data from Bloomberg and Norgate, 1988–2023, backtested results of Defender from ViewRight Advisors.

The Impact of Black Swan Events on Portfolio Planning

Black Swan events—rare but severe market declines—can upend financial plans based on steady return assumptions. Historical examples include:

- **1987 Black Monday:** -22.6% in one day.
- **2000-2002 Dot-Com Crash:** -49.1% over 2.5 years.
- **2008 Financial Crisis:** -56.8% decline, requiring over four years to recover.
- **2020 COVID Crash:** -33.9% in one month.

Source: S&P 500 Index data via Bloomberg and Norgate.
Footnote: Past performance is not indicative of future results. Historical drawdowns are shown for illustrative purposes and do not reflect the performance of any specific investment.

Investors who need to withdraw assets during these downturns risk **permanently impairing their wealth**. A **risk-aware investment approach** reduces exposure to extreme declines, preserving capital and allowing portfolios to recover more quickly.

A SMARTER APPROACH TO MARKET CYCLES

Traditional **diversification strategies** often fail to prevent substantial losses during deep bear markets, and **market timing** is prone to emotional decision-making. A more effective solution lies in **systematic, data-driven risk management**, which dynamically adjusts equity exposure based on objective indicators of market health, such as moving averages or market breadth metrics. This is the foundation of the **Defender Program**.

Defender Program vs. Buy & Hold: Risk-Adjusted Performance

The **Defender Program** is an adaptive, subscription-based risk management service built for financial professionals seeking to minimize severe drawdowns while capturing market uptrends. Unlike passive buy-and-hold strategies, Defender dynamically adjusts exposure based on market health indicators, reducing volatility while enhancing long-term, absolute and risk-adjusted returns. Its **breadth-driven approach** anticipates shifts in market conditions by analyzing internal strength, enabling proactive adjustments ahead of major tops and bottoms.

Performance Comparison

From 1988 to 2023, empirical analysis demonstrates Defender's advantages over S&P 500 buy-and-hold (see Figure 4: Cumulative growth of $100 for Defender vs. Buy & Hold). Key metrics include:

Metric	S&P 500 Defender Program	S&P 500 Buy & Hold
Avg. Annual Return	15.4%	10.0%
Avg. Annual Volatility	2.92%	3.87%
Avg. Rolling 12-Month Return	15.05%	9.53%
Avg. Rolling 12-Month Volatility	2.94%	3.94%
Max Drawdown (1988-2023)	-22.5% (4/11 – 10/11)	-56.8% (10/07 – 3/09)
COVID Drawdown (Max)	-19.7%	-33.9%

Footnote: Volatility annualized from daily returns, $\sigma\_annual = \sigma\_daily \times \sqrt{252}$.

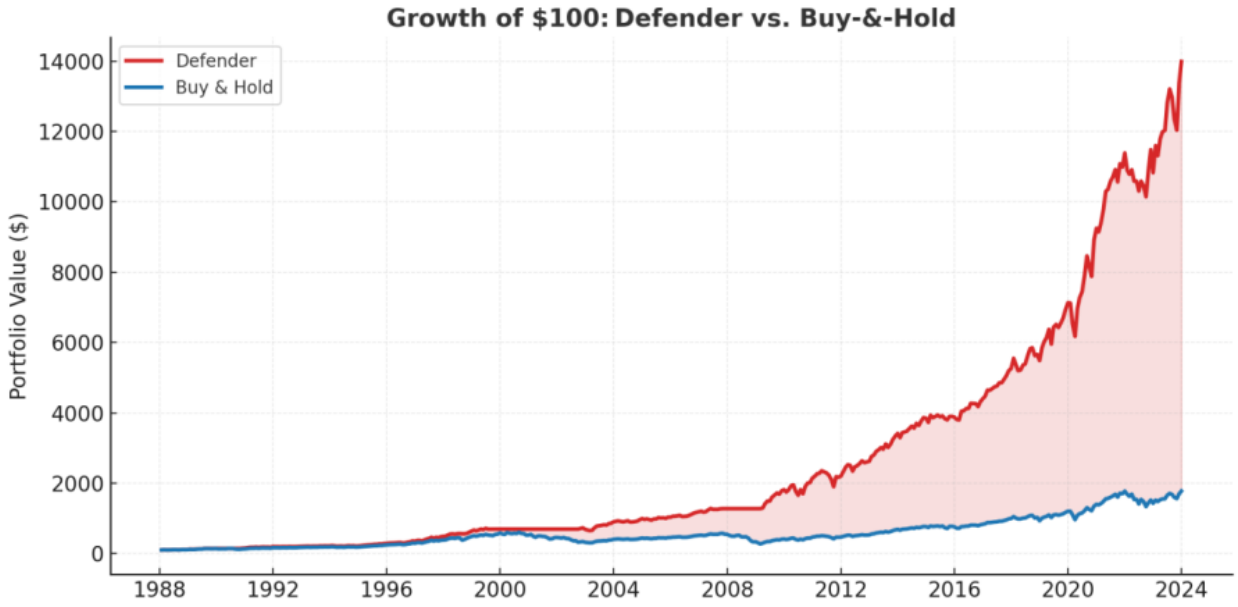
The Defender Program's performance metrics are based on proprietary analysis conducted by Vincent Randazzo covering the period from 1988 to 2023.

The results reflect a backtested model strategy and are not based on actual client accounts.

The performance results shown are hypothetical and were achieved through backtesting. Backtested performance does not reflect actual trading and has inherent limitations, including the benefit of hindsight and the absence of real-world market conditions such as liquidity constraints or investor behavior.

The S&P 500 performance is based on historical index data and provided only for comparison purposes. The Defender Program is not an index and may not be directly comparable. No guarantee is provided that the Defender Program will achieve similar results. All investments involve risk, including the potential loss of principal. Investors should not rely solely on hypothetical or backtested performance data when making investment decisions.

Figure 4: Cumulative Growth of $100, Defender vs. Buy & Hold



Source: data from Bloomberg and Norgate, 1988–2023, backtested results of the Defender Program from ViewRight Advisors.

Defender's rules-based approach achieved a **higher compounded annual return** (15.4% vs. 10.0%) with **25% lower volatility**, resulting in a smoother equity curve (see Figure 4: Portfolio value growth under different volatility regimes). During the 2008–09 crisis, Defender moved to cash and avoided the market's 56.8% drawdown. The 2020 COVID crash limited losses to -19.7% compared to -33.9% for buy-and-hold. By avoiding prolonged downtrends, Defender preserves capital, enabling faster recovery and stronger compounding. For example, $100 invested in 1988 grew to over **$17,000** under Defender, versus about **$3,100** under buy-and-hold by 2023.

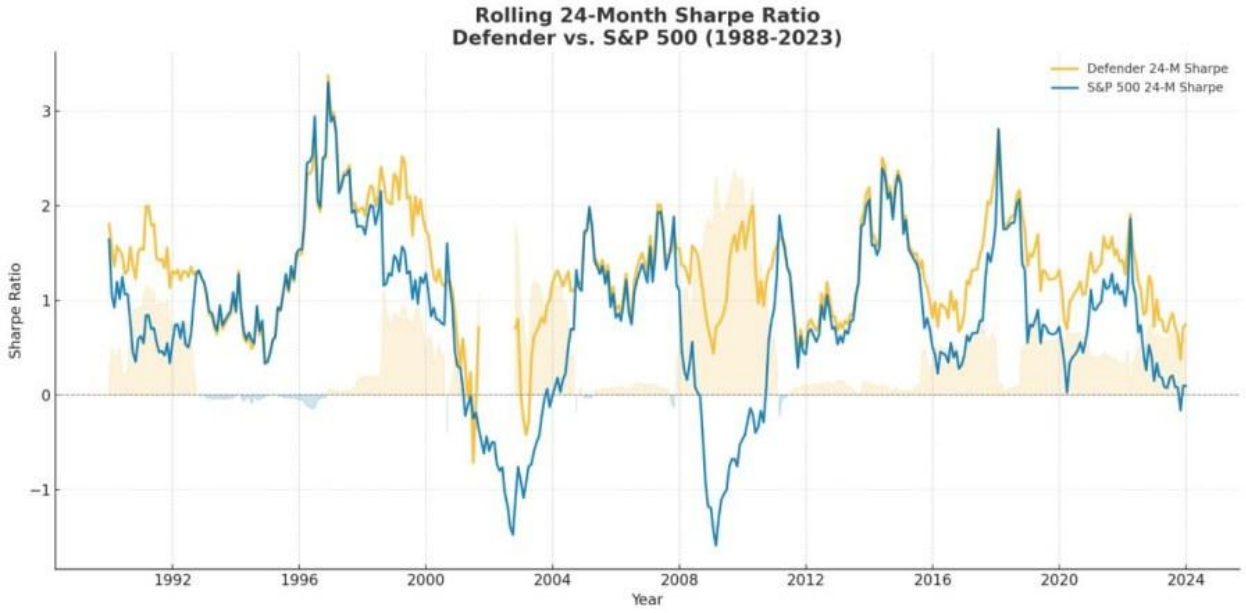
Better Risk-Adjusted Returns

In the institutional world, returns are not assessed in isolation. A successful strategy must seek to enhance returns intelligently while carefully moderating any additional risk. The Sharpe ratio translates each strategy's excess return into "return per unit of volatility," providing a rigorous, scale-free measure of reward for the risk taken. A 24-month look-back approximates a full business cycle, long enough to smooth out seasonal noise while capturing cyclical regime shifts.

In Figure 5, the Defender line remains predominantly above the S&P 500 line and spends less time in negative territory. This confirms that Defender's higher absolute return profile (shown in

earlier exhibits) is not achieved by simply taking more risk; instead, it consistently generates superior risk-adjusted returns. Periods such as 2000-02, 2008-09, and 2022—when the S&P 500's Sharpe ratio plunges—highlight Defender's ability to preserve capital and keep the ratio positive, underscoring the strategy's resilience during market stress.

Figure 5: 24-Month Sharpe Ratio, Defender vs. S&P 500



Source: Performance and risk metrics are based on backtested data for the Defender Program from 1988 to 2023. Backtested results are hypothetical and were generated by Shawn Keel using proprietary analysis from Bloomberg and Norgate Data, 1988-2023. Actual results may differ.

Rethinking Risk: A More Efficient Path to Long-Term Growth

Instead of assuming markets follow a steady upward trajectory, investors need a **resilient** strategy that accounts for market cycles, sequence-of-return risk, and Black Swan events. The **Defender Program** provides a **systematic, adaptive risk management strategy** that **limits downside exposure** while ensuring participation in market uptrends. By proactively mitigating extreme drawdowns, investors can:

- **Preserve capital**
- **Sustain long-term growth**
- **Reduce emotional stress**
- **Maintain flexibility to seize future opportunities.**

This approach fosters **exceptional compounding, lower volatility, and greater resilience**, allowing advisors and investors to focus on long-term success.

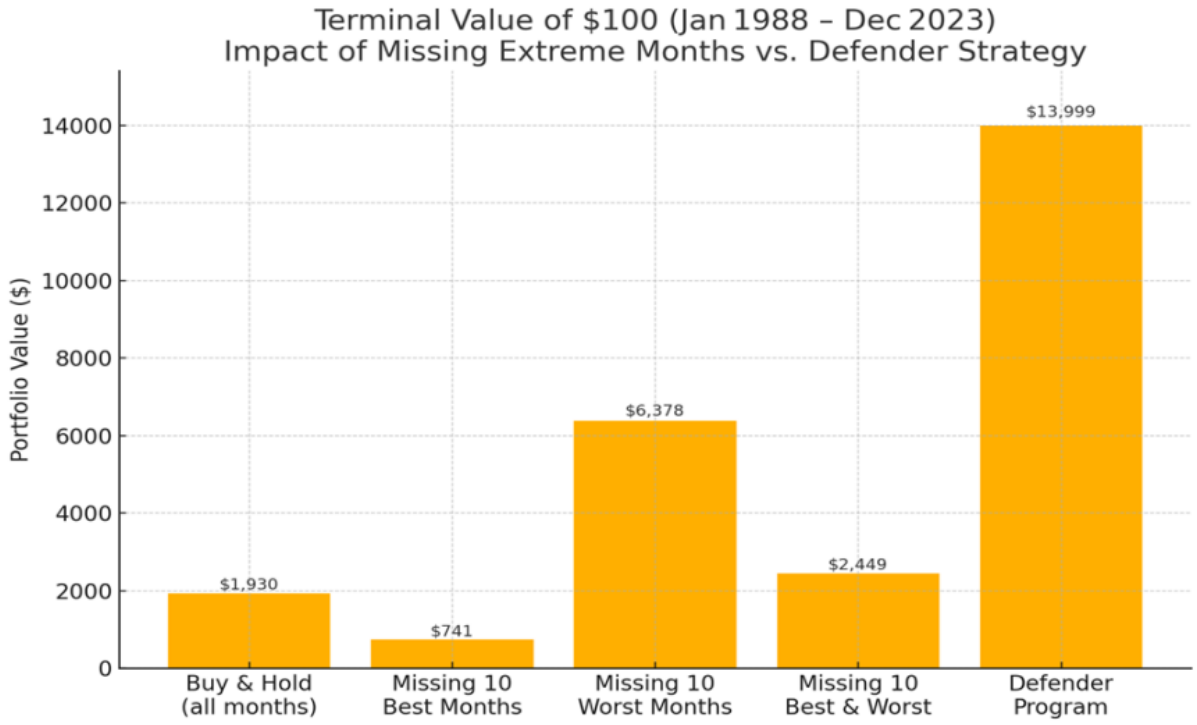
CONCLUSION: A SMARTER WAY FORWARD

The oft-cited warning about “missing the best days” is misleading- it’s dangerous when used to justify perpetual exposure to market risk. Most of these best days occur amid bear markets when risk and volatility are at their highest. Relying on averages and absolutes obscures the real-world complexity of investor behavior, portfolio fragility, and the very nature of compounding.

The path investors take matters. Sequence-of-return risk, volatility drag, and the asymmetry of losses all argue for a more thoughtful approach that actively manages the downside without relying on prediction. Systematic strategies like the Defender Program demonstrate that staying invested without staying exposed is possible, preserving capital during stress and participating when conditions improve.

Investing shouldn’t be about fear of missing out- it should be about maximizing the probability of achieving long-term goals confidently. Risk management isn’t market timing. It’s portfolio stewardship. It may be the most critical decision for investors and advisors alike.

Figure 6



Source: data from Bloomberg and Norgate, 1988–2023, backtested results of Defender from ViewRight Advisors.

The Defender Program demonstrates that systematic, data-driven risk management can enhance long-term returns while significantly reducing portfolio volatility and drawdowns. Investors can achieve a more efficient path to long-term wealth accumulation and financial security by preserving capital during market downturns and participating in sustained uptrends.

In an investment landscape characterized by unpredictable volatility and Black Swan events, strategic navigation of market cycles through disciplined risk management is essential for success.

Key Takeaways:

- Risk management outperforms buy-and-hold.
- Defender preserves capital and enhances compounding.
- Systematic strategies navigate volatility.

Vincent Randazzo is the founder of ViewRight Advisors, where he develops systematic, technically driven investment processes focused on minimizing drawdowns and capturing early uptrends. He previously served as Head of Technical Research at CFRA and Lowry Research, where he collaborated with industry leaders Sam Stovall and Paul Desmond. His work helped identify key market inflection points, including the early stages of the 2018 and 2020 bull markets. Vincent earned a B.A. in Economics from Drew University and has held the Chartered Market Technician (CMT) designation since 2008. Vincent's analysis has been featured in Bloomberg, Nasdaq, and the CMT Association, among others.

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Shawn R. Keel is a Portfolio Manager and principal quantitative strategist at Quoin Capital Analytics (QCA) / Worldsource Securities Inc. (WSI). At QCA/WSI, he oversees all research, design, and portfolio construction for systematic equity, options, and volatility models. Shawn's three-decade career encompasses the secular bull market of the 1990s, the dot-com boom and bust, and the Global Financial Crisis—formative episodes that shaped his belief that disciplined, data-driven risk management is essential for long-term compounding. Shawn is a Chartered Financial Analyst (CFA) and Chartered Market Technician (CMT) charter holder and an active CFA Institute and CMT Association member.

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APPENDIX: METRIC CALCULATIONS

- **Volatility:** Annualized standard deviation of daily returns, σ_annual = σ_daily × √252.
- **Sharpe Ratio:** (Portfolio Return – Risk-Free Rate) / Portfolio Volatility, using 24-month rolling data, 3% risk-free rate.
- **Monte Carlo Simulation:** 1,000 trials, lognormal returns, 9% mean return, volatility at 10% or 25%, 30-year horizon.

Symbol	Date	Price	Ex. date	Ex. Price	% chg	Profit	% Profit	Cum. Profit	# bars
$SPX	1988-01-04	247.08	2023-12-29	4769.83	1830.48%	180910	1830.48%	180910	9071

This represents an 8.46% return from 1988 to 2023.

Symbol	Date	Price	Ex. date	Ex. Price	% chg	Profit
$SPXTR	1988-01-04	256.02	2023-12-29	10327.83	3933.99%	392800.59

This represents a 10.81% return from 1988 to 2023.