Morgan Stanley

WEALTH MANAGEMENT

SPECIAL REPORT

Global Investment Committee | September 04, 2025

Persistence Pays Off: How Investors Can Manage Risk and Capitalize on Time

Investors' perceptions of risk and time heavily influence their decision-making. While individuals tend to process short-term volatility and intermediate-term drawdowns viscerally, these realities can distract investors. Here, we observe how elevated volatility can lead to "short-termism" and inconsistent market timing, while intermediate-term drawdowns can prompt inefficient and lagging investor behavior. In contrast, we believe that investors boost their likelihood of long-term success through cash-flow-based planning and thoughtfully weighing their risk capacity and tolerance.

We aim to tackle investors' intermingled processing of risk and time—and how investors can address potential shortcomings through financial planning and thoughtful portfolio construction. A well-crafted financial plan serves as your road map, guiding you toward your unique vision of long-term success. Meanwhile, a carefully constructed portfolio works to "smooth" the ride, helping investors to navigate their portfolios' inevitable run-ups and drawdowns with confidence and resilience. In short, we seek to contextualize risk management and explore principles for investing for the long haul.

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In this report, we concentrate on the "accumulation" phase of life-cycle investing. Securing investor goals and the "decumulation" phase often involve different investment strategies. Our colleagues have written more on the decumulation phase in the May 2024 report, "Retirement Income in Volatile Markets" and the November 2024 report, "Preparing for the Next Tax Regime: Six Steps to a More Tax-Efficient Portfolio."

Key Takeaways

- Long-term investing requires patience, discipline and a well-constructed financial plan to define success and manage portfolio volatility, in much the same way that airline pilots rely on their instrumentation, air-traffic control and applied wisdom to reach their destinations despite turbulence. Investors, akin to pilots, may benefit from the guidance of Financial Advisors and quantitative analysis to navigate short-term volatility and intermediate-term drawdowns and align their portfolios with realistic expectations and long-term goals. Effective financial planning integrates cash-flow-based objectives and constraints, allowing for a mix of short-, intermediate- and long-term goals, ultimately providing holistic advice that maximizes client understanding and satisfaction.
- We consider three time horizons for risks in long-term investing—the short, intermediate and long term. In the short term, market volatility reflects investors' uncertainty, on a macro and micro level. In the intermediate term, the reality of drawdowns can challenge investors' discipline. For the long-term horizon, taking either too much or too little risk may also dampen the probabilities of reaching long-term goals.
- Investors' short-to-intermediate-term perceptions of risk can influence longer-term outcomes, as short-term thinking can overwhelm long-term strategic alignment. Amid market volatility, overreacting can derail investors' pursuit of their long-term goals. Moreover, we review several behavioral factors that can overwhelm rational decision-making and hinder long-term success.
- We believe certain principles like discipline can build "muscle" and confidence for long-term investors. Investors will benefit from staying invested and keeping sight of their long-term investment horizon to ride market volatility. When starting out or considering a significant windfall, investors must commit to a plan to deploy cash to keep tracking with long-term financial goals. Leveraging dollar-cost averaging in these situations may help to improve overall outcomes and mitigate stress compared with timing-based guesswork.
- Recognizing and accepting volatility and drawdowns as "entry passes," long-term investors can dampen the impact of behavioral challenges by building action plans, such as dollar-cost averaging, rebalancing over time and taking advantage of periodic drawdowns.
- Investors may take proactive approaches to manage constructed investment portfolios and limit the inevitable frictions of risk, fees and taxes. Our extensive research shows that investors may find incremental value by introducing modest complexity through tactical asset allocation, well-placed active management and tax-focused implementation strategies. We recommend coordinating with a Financial Advisor to determine which forms of complexity to introduce and how to leverage Morgan Stanley's resources to navigate any such complexity.

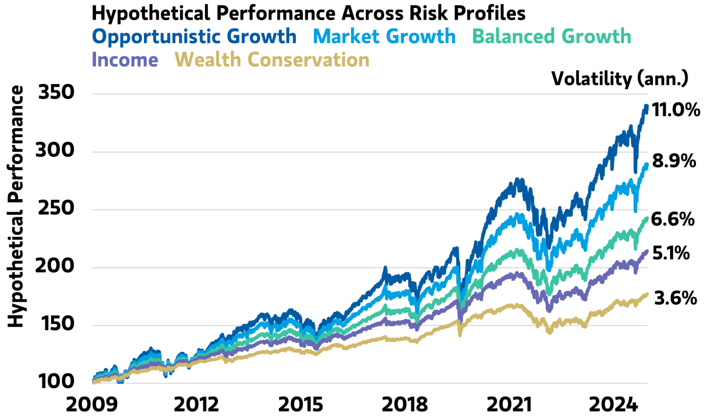
Long-Term Investing Requires Setting an Appropriate Trajectory

Long-term investing requires patience and discipline, supported by thoughtful financial planning and portfolio construction. A properly constructed financial plan helps each investor to define long-term success, including overcoming the very real drags of taxes and inflation, while portfolio construction, or actual investment implementation, focuses on risk management, or "smoothing" the ride.

In many ways, long-term investors are like airline pilots. Without a clear plan, pilots travel less than purposefully. With clear flight instructions, however, they can achieve their objective of bringing their passengers to their intended destination. While turbulence will come, and intense winds could threaten to push them off track, experienced pilots trust their instrumentation, equipment, air traffic control and applied wisdom to press forward toward their goal.

For long-term investors, short-term volatility (turbulence) and intermediate-term drawdowns (intense winds) may cause them to reconsider their long-term trajectory (flight plan). As with airline pilots, investors may benefit from their Financial Advisor's counsel (air traffic control and applied wisdom) and quantitative analysis (instrumentation) to maximize efficiency over time. Investors may further benefit from becoming grounded in realistic expectations and coordinating with their Financial Advisor on effective portfolio construction, which can allow them to travel more smoothly and efficiently.

Exhibit 1: Risk-Return Tradeoff: Historical Hypothetical Return Increased With an Increase in Risk



Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Committee (GIC) as of Aug. 31, 2025

A well-formed financial plan sets an investor's trajectory for long-term success. Operating without one could reinforce suboptimal patterns, including the following:

1. *Behaviorally driven swings in positioning, ranging from euphoria in a bull market to extreme risk aversion in a bear market*. As we will discover, behavioral factors impede individual investors' asset allocation decision-making, weighing on their long-term absolute and risk-adjusted returns.
2. *Setting too low of a course, prompted by too little risk tolerance*. In pursuit of predictability, some investors may "under-risk" their portfolios and threaten not to grow sufficiently, impeding their long-term goals.
3. *Setting too high of a course, prompted by too much risk tolerance*. On the other hand, some investors may flippantly consider the long-term horizon as overly forgiving. While time may facilitate healing for a wounded portfolio, investors must recognize the path-dependent reality of investing, where steep drawdowns may imperil investors' recoveries.

Financial planning acknowledges the path- and time-dependent nature of investment outcomes, enabling investors to make necessary adjustments. For instance, following a period of exceptional portfolio performance or significant contributions from earnings or inheritances, investors might benefit from revisiting their financial plan to pursue more ambitious goals or potentially reduce risk-taking. Conversely, investors who start later toward their retirement goals or experience investment setbacks may find value in assessing whether higher contributions, extended timeframes or a more growth-focused portfolio could enhance their chances of achieving their objectives.

Importantly, the size and timing of investors' contributions and distributions can significantly influence investors' likelihood of reaching their goals, independent of investment decisions. Financial planning takes a comprehensive approach by considering multiple relevant variables, including investments, contributions and distributions, goals, constraints, life expectancies and taxes. As a result, investor behavior represents a critical element to monitor and influence as part of a wealth management mandate.

While financial planning often focuses on the long term, it also accommodates short- and intermediate-term goals. Effective goals-based planning can integrate a mix of short-, intermediate- and long-term objectives. In some cases, investors may choose to mitigate the risks associated with meeting shorter-term obligations by allocating to investment vehicles with lower price volatility and greater liquidity, such as ultrashort or short-term fixed income.

At Morgan Stanley, we believe that investors benefit most when financial planning feeds naturally into portfolio construction. As explained in our June 2024 Special Report, "What's Your Investment Benchmark?" financial planning accounts for cash-flow-based objectives and constraints. For individual investors, achieving long-term goals represents a more effective benchmark than, for example, the S&P 500 Index, which bears little resemblance to the diversified portfolios more likely to achieve client goals. Once captured, practitioners can link these planning assumptions and attendant probabilities of success directly to returns. This process, therefore, delivers more holistic advice and maximizes client understanding, satisfaction and outcomes.

For Long-Term Investors, Investment Risk Ultimately Hinges on Missing Their Goals

In this section, we consider these three horizons for long-term investors and how investors may respond most effectively, given the time- and path-dependent nature of investing. Understanding visceral reactions can support more effective, well-grounded decision-making and allow investors to build discipline and confidence for the long term. Importantly, appropriate diversification can help to dampen volatility and drawdowns, building a positive feedback loop for investor persistence. While anchored in a long-term plan, investors may deploy some tactical allocation to take advantage of short- and intermediate-term dislocations. Furthermore, thoughtful portfolio construction can help investors to pursue risk, cost and tax efficiency.

Short Term: Volatility Reflects Investors' Uncertainty, on a Macro and Micro Level

Financial variables, including interest rates, credit spreads, equity prices and exchange rates, fluctuate throughout each trading day. Over a short window of 10 minutes, those movements could appear random and uncorrelated, but patterns become clearer over longer windows. Around major news releases, including macroeconomic data updates, earnings reports and election outcomes, financial markets typically show greater and sometimes dizzying fluctuations. Understandably, these fluctuations tend to increase in magnitude with greater levels of uncertainty.

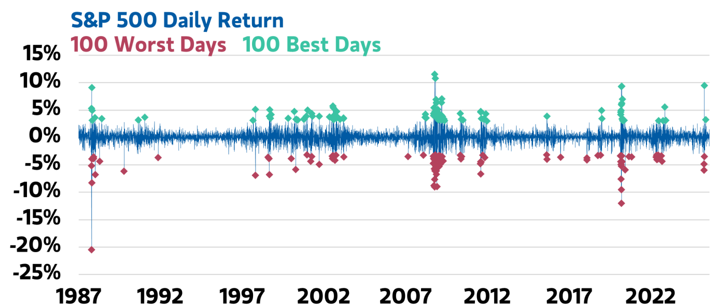
Investors usually measure these fluctuations, typically described as volatility, on a daily or monthly basis. In most cases, we measure volatility as the annualized standard deviation of daily or monthly price movements. Helpfully, volatility affords a linear comparison of two investments' fluctuations, but its directionless nature tends to compress our understanding of potential upside and downside outcomes. Tracking error, a cousin of volatility, measures the standard deviation of the relative performance between an investment strategy and its relevant benchmark.

For risky assets, volatility tends to increase when investors become nervous about future growth, either of the macroeconomy or of individual companies, or about unexpected changes in interest rates and inflation. Should growth decelerate, potentially suddenly, investors naturally worry that corporate earnings could fall short of expectations, which may also spill over to the ability of companies to service their debt. Typically, equity and credit valuations decline in such an environment, broadly reflecting investors' lowered confidence. Meanwhile, should investor expectations regarding interest rates or inflation shift, risky asset prices will adjust to account for updated discounting rates.

Times of greater volatility in risky assets can attract investors to perceived safe havens like ultrashort or high-quality fixed income, gold or certain currencies. Over intense episodes, financial markets can experience sharp rotations, driven by the flip from "risk-on" to "risk-off" sentiment, which can exacerbate realized volatility.

Over short time horizons, volatility can cloud perceptions about the true impact of small changes. When incoming data offers a mixed picture of the future, volatility may increase, but asset prices may merely trade in a wide range. When data points corroborate one another, volatility and directionality tend to increase. Empirical evidence suggests that large moves in both directions can cluster together during particularly volatile episodes, as indicated in Exhibit 2.

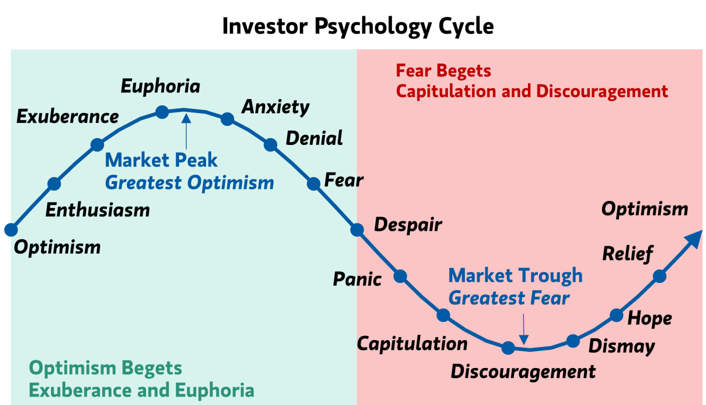
Exhibit 2: The Clustering of Large Directional Moves Accentuates Investors' Perceptions and Wariness of Volatility



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

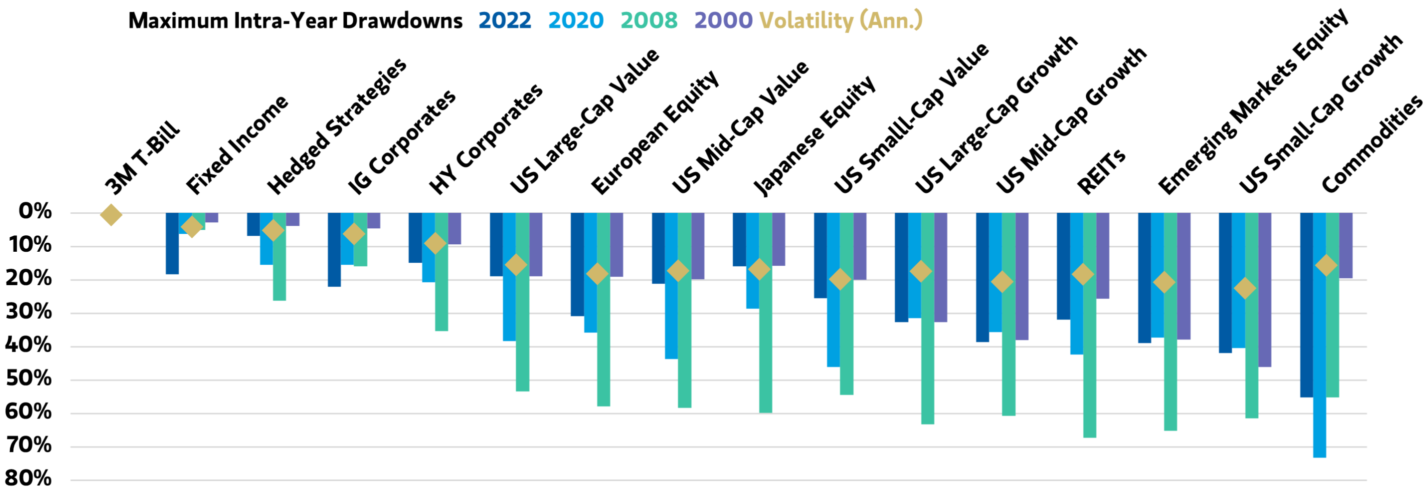
While markets incorporate information over time, investors' real-time processing can lead to occasional dislocations. Given the challenge of valuing unknown future outcomes, investors can overreact to news, which can lead to overextended asset prices, both to the upside and downside. Investor sentiment tends to follow reflexive patterns (displayed figuratively in Exhibit 3 below), which creates a circular feedback loop between sentiment and prices. For example, gains in an equity index may encourage investors to become more bullish on equities, which may push prices even higher. Of course, the feedback loop may also proceed in a bearish direction. While short-term volatility typically normalizes over time, investors may react to stomach-churning market action by either enthusiastically chasing its excitement (heightened risk tolerance) or selling aggressively to limit volatility (increased risk aversion). This investor predisposition underscores the potential advantages of tactical allocation, particularly in contrarian moves, when asset prices appear to have become temporarily divorced from fundamentals.

Exhibit 3: Illustration of the Investor Psychology Cycle



Source: Morgan Stanley Wealth Management GIC, adapted from Baker, H. Kent, and Victor Ricciardi. *Investor Behavior: The Psychology of Financial Planning and Investing*. New York: Wiley, 2014

Exhibit 4: Maximum Intra-Year Drawdowns for Asset Classes with High and Low Volatility Levels



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

Exhibit 4 shows the collective impact of downside volatility, in the form of intrayear drawdowns. We now turn to considering how intermediate-term drawdowns influence investors' perceptions of risk.

Intermediate Term: The Reality of Drawdowns Can Challenge Investors' Discipline

While volatility measures short-term price movements, drawdowns capture an investment's or portfolio's cumulative decline from its recent high-water mark. Based on conversations with investors, drawdowns represent a more effective pure measure of investment risk. Investors experience drawdowns intensely, and they can upend long-term planning and rational intermediate-term decision-making.

As we will review below, behavioral psychology influences investor risk perceptions. Based on historical evidence, individual investors have tended to de-risk after portfolio drawdowns and to increase their risk exposures in bullish environments. This paradoxical behavior has caused investors to experience less favorable outcomes than a disciplined approach featuring periodic rebalancing.

First, investors may benefit from considering why drawdowns exist in the first place. These pullbacks are a natural outgrowth of volatility, arising from investors' processing of incoming data. They represent the occasional disruption of long-term portfolio growth, and their lasting effects may be more limited than initially perceived.

Our April 2024 Special Report, "Plan Not to Panic," showed that COVID-era drawdowns did not materially impact investors' probabilities of success when their allocations had been on track to achieve their goals before the drawdown. In contrast, those investors with off-track portfolios experienced much greater negative impact from their individual COVID-era drawdowns. Indeed, long-term planning supports investors' development of a realistic view toward drawdowns beforehand—and sets investors' appropriate trajectory in recognition of their reality. Investors therefore become forewarned and forearmed—and more confident as a result.

Second, thoughtful portfolio construction can smooth the journey over time. Most importantly, a well-diversified asset allocation may support portfolio growth toward long-term goals, while mitigating interim volatility and the severity of drawdowns. We will explore some practical "rules of the road" in our concluding section in support of these objectives.

Behavioral factors threaten investors' long-term focus, pulling one's attention toward the short term. In 1982, Kahneman and Tversky published "The Psychology of Preferences," in which they fleshed out the descriptions of heuristics that guide risky choices. This theoretical and experimental work explored how human decision-makers exhibit not only risk aversion but, more specifically, "loss aversion" and "regret aversion." Loss aversion encapsulates the differentiated experience between gains and losses—and tends to vary across individuals and time, causing risk tolerance to fluctuate. In Exhibit 5, we have highlighted five behavioral factors, which exemplify the headwinds for long-term investors' persistence.

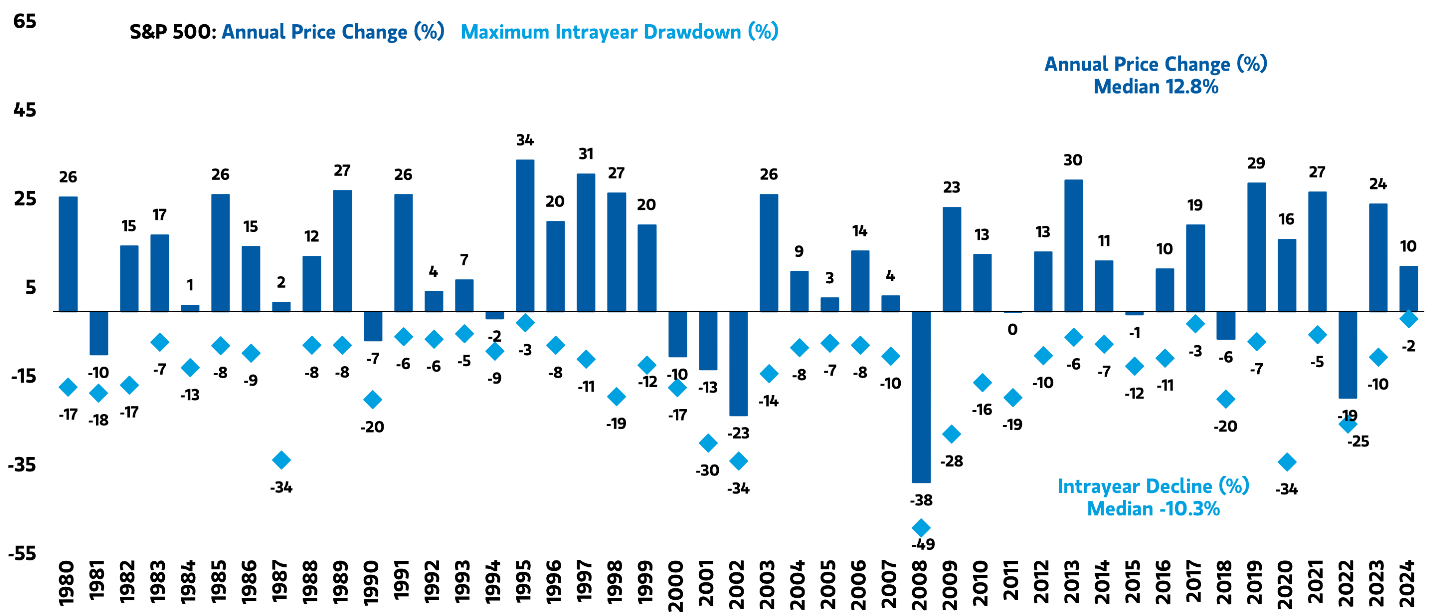
Equity market drawdowns, frequent and sometimes quite deep, test investors' mettle. Here, these behavioral factors intermingle and trigger strong emotions and potentially rash actions like panic-selling. Of course, sharp rallies can bring the opposite: panic-buying. As shown in Exhibit 6, US equities have experienced double-digit intrayear drawdowns in 25 of the 46 years since 1980.

Exhibit 5: Behavioral Factors May Challenge Investors' Long-Term Persistence

Factor	Implication
Anchoring	Given a substantial sum of deployable cash, investors may "anchor" on that dollar amount, considering their financial wellness based on short-term changes rather than their total wealth or long-term prospects.
Loss Aversion	According to "Prospect Theory," investors experience losses with twice as much pain as the pleasure they derive from experiencing gains, leading them to overvalue potential losses and potentially take too little risk.
Regret Aversion	Investors naturally wish to avoid regret over their decisions; this regret grows in proportion to their perceived responsibility and the scale of any potential negative consequences.
Extrapolation	Investors tend to project recent market action as more likely to occur in the future, potentially becoming risk-averse after periods of downside volatility or overly confident after periods of upside volatility.
Herd Mentality	Investors tend to follow and/or copy what other investors are doing–for instance, by buying or selling a particular asset purely because it is the popular course of action.

Source: Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

Exhibit 6: The S&P 500 Has Experienced Double-Digit Intrayear Drawdowns in 25 of the Past 46 Years, Based on Daily Closing Prices

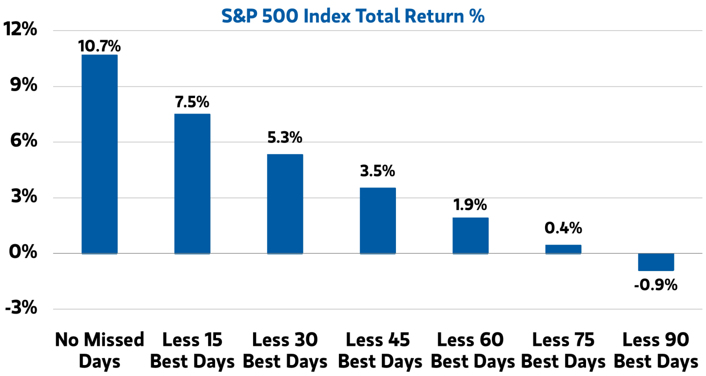


Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

We observe that volatility and drawdowns can trigger shortsightedness, or myopia, in investors, potentially leading them to try their hands at market-timing. Market-timing involves seeking to enter or exit investments or portfolios based on short-term market trends, often resulting in impulsive or speculative decision-making. In these moments, individuals effectively abandon their longer-term investing strategy to pursue shorter-term trading.

Empirical evidence indicates the damaging effects of market-timing, particularly related to drawdowns. Equity market drawdowns typically introduce heavy volatility, including the clustering of large price gains and losses. Typically, investors will consider trimming back their equity holdings during moments of great volatility, which can cause a concretization of realized losses. As shown in Exhibit 7, missing even a limited number of the largest single-day equity gains introduces a significant opportunity cost: greatly diminished compounding of returns. From January 1990 to June 2025, missing just the 15 largest equity gains has reduced total returns by a third, while missing the 30 biggest days has caused outcomes to decline by more than half. Moreover, for taxable investors, market-timing may result in a greater degree of capital gains (or losses)—as well as a skew toward short-term treatment, with potentially less favorable tax consequences.

Exhibit 7: Market-Timing, Particularly in Volatile Environments, May Cause Investors to Miss Out on the Power of Long-Term Compounding



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

Investors must take care to avoid the "permanent" losses that would result from liquidating their portfolios after a sizable drawdown. Investors may believe that they can sense when to become fully invested again, after the threat of further drawdowns and elevated volatility has passed. This decision represents a form of market-timing and can introduce impairment risk, lengthen the time to recover after a drawdown and diminish a portfolio's potential longevity. In Exhibit 8 below, we show the impact of liquidating after drawdowns of a given level (and moving to fixed income) and then reinvesting after certain periods of time. In each case, the portfolio's total returns fell short of the fully invested portfolio. While not captured here, an increased tax drag from the frequent liquidations would dampen post-tax returns.

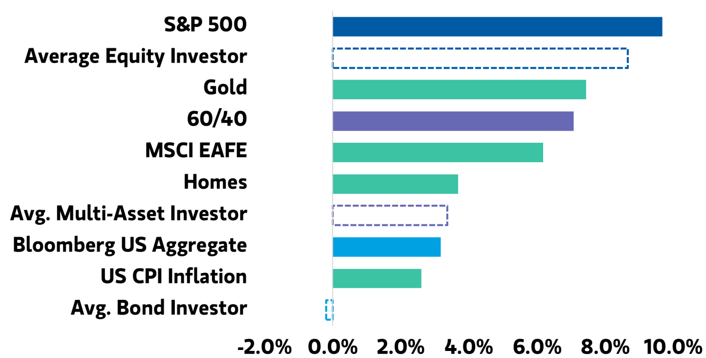
Exhibit 8: Relative Annualized Returns: Holding the Traditional 60/40 Portfolio Versus Liquidating Equities After Drawdowns of a Given Level and Then Reinvesting After a Given Number of Months

Comparison with 60/40 Portfolio		Buy Back Equities After How Many Months				
		3M	6M	9M	12M	24M
Sell Equities at Levels of Drawdowns	-5%	-1.49%	-1.75%	-1.78%	-1.52%	-3.93%
	-10%	-1.12%	-0.50%	-1.59%	-1.45%	-1.53%
	-20%	-0.28%	-0.31%	-0.27%	-0.31%	-0.69%
	-40%	-0.08%	-0.28%	-0.64%	-0.60%	-0.90%
	-50%	-0.24%	-0.34%	-0.39%	-0.41%	-0.60%

Note: We represent the 60/40 Portfolio as the blend of 60% S&P 500 Index and 40% Bloomberg US Aggregate Index, rebalanced monthly.
Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

Studies of individual investors' outcomes highlight the true impact of market-timing. As displayed in Exhibit 9 below, the average individual investor's returns have fallen well short of those of reference indexes, across equity-only, fixed income-only and balanced 60/40 mandates. According to market-research firm DALBAR, which compiles these results from investors' realized returns in mutual fund strategies, individual investors' untimely shifts in allocation serve as the principal driver of the significant shortfall.

Exhibit 9: The Average Investor Has Historically Underperformed Major Asset Classes



Note: We represent the average investor by DALBAR's methodology, which tracks mutual fund sales, redemptions and exchanges to capture investor behavior. We display returns for the Average Asset Allocation Investor, the Average Equity Investor and Average Bond Investor, annualized for the 20 years ending Dec. 31, 2023.
Source: DALBAR, Morgan Stanley Global Investment Office (GIO) as of Dec. 31, 2023.

Long Term: Given the Right Trajectory and Discipline, Perseverance Can Bear Fruit

While volatility and drawdowns characterize investors' perceptions of short- and intermediate-term risk, the probability of missing their goals captures investors' long-term risk. As we have highlighted, long-term planning increases the likelihood of achieving investors' goals, which serve as the appropriate measure of success, by encouraging the discipline of remaining invested—at the appropriate risk trajectory.

As we will explore, investors will likely benefit from suppressing the urge to course-correct in moments of elevated volatility or after meaningful drawdowns. Long-term planning aids in this behavioral retraining by discounting the temporary effects of volatility and drawdowns. In fact, unless investors' time horizons contract meaningfully, volatility and drawdowns may offer more "noise" than "signal," as detailed in April 2024's "Plan Not to Panic." Even a correction as sharp as the February–March 2020 episode, which was prompted by widespread growth in COVID-19 cases, would not have made a material impact on most clients' probabilities of success—or investment trajectories.

Regrettably, investors' course corrections can threaten their long-term goals. Reacting to sharp drawdowns or heightened volatility, investors may de-risk their portfolios as an antidote to the perceived stress—thereby exhibiting a behavioral effect called "snakebite." Alternatively, some investors could hike their risk tolerance after experiencing gains (as evidence of overconfidence) or drawdowns (exhibiting the gambler's, or sunk-cost, fallacy).

Through these behaviorally driven tendencies, investors embrace restlessness over discipline, and historical positioning data demonstrates these swings in spades. As a result, investors' allocations typically track equities' performance higher or lower, maximizing and minimizing their exposure at unfavorable times. This restlessness has resulted in a material performance drag, even before considering the potential tax consequences of reactive positioning.

In contrast, a disciplined, planning-supported approach entails periodic rebalancing and changing of investment trajectory upon major shifts in financial situation, such as a major liquidity event or inheritance, or in goals, such as a greater desire to pursue philanthropy. Otherwise, as with an airplane's autopilot, investors may experience more efficiency by remaining invested—and consistently—through the air pockets and turbulence experienced along the journey.

For Long-Term Investors, Investment Risk Belies a Single Metric, But Investors' Short- to Intermediate-Term Perceptions of Risk Can Influence Longer-Term Outcomes

Regrettably, long-term risk lacks the quantifiable metrics that define short- and intermediate-term risk, such as volatility or value-at-risk and drawdowns, respectively. While volatility offers a measurable quantity, it offers more limited insights for long-term investors, as reviewed in the Appendix. Investors must wrestle with an uncomfortable dichotomy: While they can sense short-to-intermediate-term risk quite palpably, the true long-term risk (falling short of their goals) only becomes evident over many years. For long-term investors, probabilistic outcomes, potential cash flows and progress toward goals represent more meaningful snapshots of true risk.

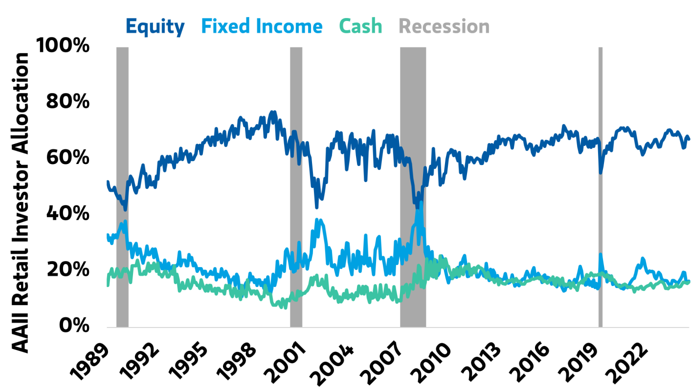
In our June 2024 primer, "What's Your Benchmark?" we observed that financial planning results in a portfolio-based recommendation that links the difference between risk tolerance and risk capacity, leading to a more appropriate benchmark than a standard market benchmark like the S&P 500. Given that framing, clients can consider their short- and intermediate-term return and risk characteristics both in absolute terms and relative to that portfolio-driven benchmark. Moreover, that framing inherently and accurately encourages a client to stay invested, tracking that portfolio through time. While tactical adjustments, active-passive decisions and manager selection may add value over time, using a portfolio-driven benchmark reinforces the criticality of remaining close to long-term asset allocation targets through time.

Historical Evidence Suggests That Investors Have Struggled With Long-Term Focus

The American Association of Individual Investors (AAII) has captured individual investors' asset allocations since 1989, as displayed in Exhibit 10 below. The analysis captures individual investor respondents' allocations to three asset classes—equities, fixed income and cash—reweighted to achieve 100% weights in each month. This dataset represents individual investors' self-reported allocations and likely reflects a rough aggregate of the behavior of self-directed individual investors.

This historical evidence suggests that investors have struggled with long-term focus. Instead of stable allocations through time, investors have typically allowed their equity allocations to grow during major rallies and shrink during major selloffs. This real-world behavior captures the potential shortcomings of investor behavior, with short-term volatility and intermediate-term drawdowns clouding investors' long-term thinking. Rallies, with their elevated returns and muted volatility levels, have tended to breed investor complacency, as seen in March 2000, September 2007, January 2020 and November 2021. Moreover, investors have compounded their own pain amid equity selloffs by taking losses and limiting their exposure to potential subsequent recoveries, as evidenced in October 2002, March 2009, March 2020 and October 2022.

Exhibit 10: Individual Investors' Equity Allocations Have Followed Predictable Patterns, Tracking Higher in Major Rallies and Falling Materially in Major Selloffs



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

As a result of these decisions, investors have inhibited their long-term risk-adjusted returns. In Exhibit 11 below, we compare the resulting portfolio returns for the AAII asset allocation to that of a quarterly rebalanced 60/40 equity/fixed income portfolio. The analysis highlights the stark differences in one-year-forward risk-adjusted returns around these four major pivots.

Exhibit 11: The AAII Portfolio Struggled Around Market Troughs and Peaks

One Year Since Market Trough:

		Oct '02	Mar '09	Mar '20	Oct '22
Return	60/40 Portfolio	14.5%	31.6%	31.7%	6.2%
	Retail Investor Allocation	11.0%	22.3%	28.9%	7.1%
	Differential	**3.5%**	**9.3%**	**2.8%**	**-0.9%**
Volatility	60/40 Portfolio	8.2%	8.1%	11.2%	11.2%
	Retail Investor Allocation	5.9%	5.6%	10.1%	10.5%
	Differential	**2.3%**	**2.5%**	**1.1%**	**0.7%**

One Year Since Market Peak:

		Mar '00	Oct '07	Feb '20	Jan '22
Return	60/40 Portfolio	-9.1%	-22.9%	19.1%	-7.9%
	Retail Investor Allocation	-15.0%	-24.1%	20.8%	-6.5%
	Differential	**5.9%**	**1.2%**	**-1.7%**	**-1.5%**
Volatility	60/40 Portfolio	10.2%	13.0%	15.1%	17.1%
	Retail Investor Allocation	12.7%	13.5%	16.0%	17.7%
	Differential	**-2.5%**	**-0.5%**	**-0.9%**	**-0.6%**

Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

Some "Rules of the Road" for Long-Term Investors

In this section, we present some "rules of the road" for long-term investors. We believe the following principles can build "muscle" and confidence for long-term investors, helping to overcome well-known behavioral shortcomings.

1. Start with, update and stick to a long-term investment plan.

As we covered in our opening section ("Long-Term Investing Requires Setting an Appropriate Trajectory"), financial planning allows investors to set an appropriate trajectory, considering the multiperiod impacts of saving, compounding and spending. Investors will benefit from periodic updates to the plan, reflecting any changes in saving or spending patterns. Along with the passage of time, these updates may identify potential recalibrations for an investor's long-term trajectory.

Importantly, financial planning helps to contextualize investing as akin to a long-term farming operation versus a series of short-term hunting expeditions. As with agriculture, long-term investors may benefit from discipline and compounding, like a farm becoming more fruitful with thoughtful cultivation and improved technique. Instead of the hunter's darting, start-and-stop approach, long-term investors will benefit from staying the course versus erratically resetting it, based simply on short-term shifts in conditions.

As a potential "solve" for the tendency toward short-termism, some long-term investors may set aside a small, sub-10%, "short-term trading bucket" within their portfolios. This pool allows investors to pursue more active trading or potential speculative trades without disrupting the long-term commitment of the remaining assets. It can also help investors to mitigate some behavioral challenges by creating a "fenced in" space for experimentation.

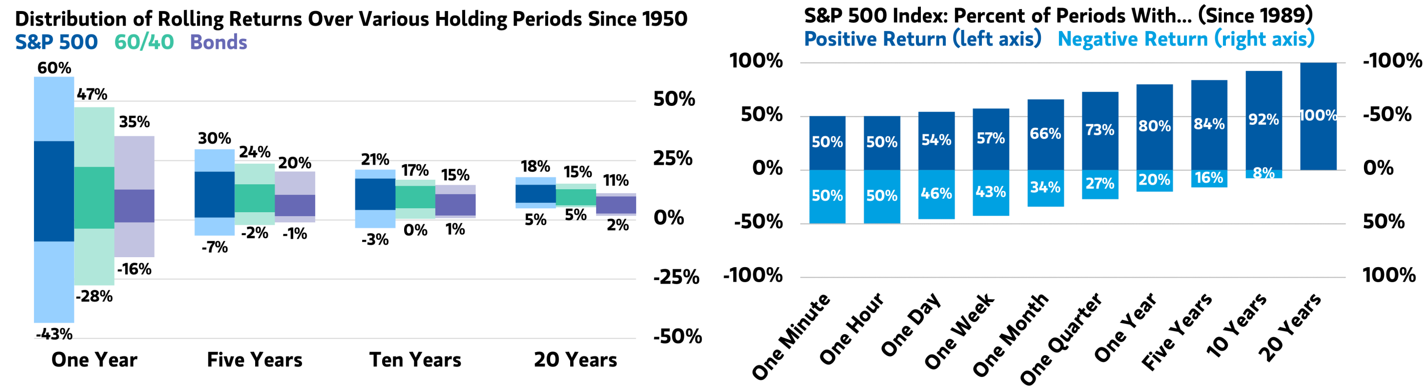
2. Recognize and accept volatility and drawdowns as "entry passes" for long-term investors.

Individual investors have historically impaired their long-term success through untimely shifts in their asset allocations. Building "muscle" for long-term persistence and discipline can offset the tendency to overreact to volatility and drawdowns. Investors can significantly impede their long-term success by de-risking their portfolios following significant drawdowns, thereby limiting their capacity to participate in any subsequent recoveries.

Investors will benefit from "steeling" themselves for the long term, which may require practice and coaching. Experienced travelers do not panic when encountering traffic, while marathon runners have built the capacity to maintain pace over multiple miles. With the help of Financial Advisors, investors may train and improve their mindset, with the goal of staying invested. While statistics and inductive methods can help, our "endurance" for investing will occasionally face challenges; timely coaching from a trusted Advisor can help us to persevere with the race amid its ups and downs. This coaching benefits from regular touchpoints like quarterly reviews and disciplined, periodic rebalancing.

As discussed earlier, financial markets exhibit highly noisy outcomes in the short term. Over longer-term horizons, however, historical evidence suggests that these sources of shorter-term noise may cancel out. Exhibit 12 points to the narrowing of return outcomes (and increasing probabilities of success) over extended investment horizons. That is, returns become more persistent and stable with lower degrees of variation. Empirical evidence highlights that asset classes' valuations and relative performance mean-revert over multiyear horizons.

Exhibit 12: Returns Volatility and Apparent Randomness Has Historically Diminished Over Longer-Term Investment Horizons



Source: Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

3. Temper behavioral challenges by using dollar-cost averaging, rebalancing over time and, where possible, taking advantage of periodic drawdowns.

Investors can temper their behavioral challenges by building action plans to diminish their effects, including the following:

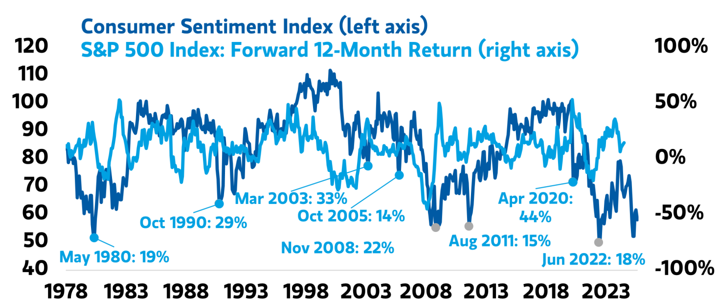
Dollar-cost averaging. Particularly after a significant liquidity event, investors may struggle to determine appropriate entry points. We reviewed these dynamics in our July 29 primer, "Dollar-Cost Averaging Versus Lump-Sum Investing: Behavioral Considerations and Potential Outcomes." While lump-sum investing has historically delivered higher total returns, dollar-cost averaging can help investors overcome the paralysis of regret aversion. In that report, we observed that dollar-cost averaging can help in certain circumstances: 1) inaction, caused by overthinking the entry point; 2) short-term realized volatility, potentially causing investors to take inappropriately low risk over the long term; or 3) extreme valuations, particularly for equities.

The Morgan Stanley Wealth Management Global Investment Committee (GIC) discussed this approach in its foundational primer, "Your Global Investment Committee: A User's Guide." Practically speaking, we recommend that investors consider a time-limited dollar-cost-averaging period of 12 or fewer months. As investors add capital to their portfolios, we recommend balanced allocations across multiple asset classes, which may afford appropriate diversification.

Rebalancing over time. As reviewed in "Historical Evidence Suggests That Investors Have Struggled With Long-Term Focus," individual investors have typically allowed market movements to influence their asset allocations. Periodic rebalancing helps to mitigate investors' tendencies to chase on the upside and de-risk on the downside, limiting behavioral challenges. Moreover, its application maintains fidelity to investors' financial plans, mediated through the resulting asset allocation. Practically speaking, Morgan Stanley's investment platforms allow clients to take advantage of rebalancing bands and tax management for taxable accounts, properly balancing tax and risk sensitivity in the process.

Taking advantage of periodic drawdowns. Counterintuitively, long-term investors can benefit from stepping into volatility by adding capital to their portfolios after material drawdowns. This contrarian approach takes advance planning and discipline, as investor sentiment would most likely appear quite negative at these moments. Yet, "darker" days have often preceded "brighter" returns, as indicated in Exhibit 13.

Exhibit 13: Depressed Consumer Sentiment Has Historically Offered a Contrarian Signal for 12-Month Forward S&P 500 Returns



Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

4. Limit the impact of common headwinds of risk, costs and taxes.

To achieve their long-term goals, investors will benefit from reducing the impact of common headwinds (risk, costs and taxes) through diversification and thoughtful portfolio construction:

Risk. As we have explored in previous sections, short-term volatility and intermediate-term drawdowns weigh on investors' capacity for staying invested through time, potentially encouraging them to pursue market-timing. As such, building diversified, risk-efficient portfolios helps to increase investors' persistence and boost the probability of achieving long-term goals. As noted above, periodic rebalancing typically reduces portfolio risk and increases risk-adjusted return. Interperiod volatility remains a significant risk factor, even for long-term investors seeking to ride out periods of market turbulence. Investment portfolios face a mathematical concept called volatility drag, which represents the amount by which an investment's average return exceeds its corresponding geometric return.[1] As the volatility of an investment or portfolio increases, the gap between the arithmetic and geometric return widens. This factor helps to underline the significant impact that compounding and the sequence of returns can have on long-term performance. The volatility drag concept is magnified in practice when an investor makes periodic withdrawals. Higher volatility amplifies timing risk: That is, when these periodic withdrawals coincide with a drawdown, the investor may permanently "lock in" the decline within the withdrawn portion.

Costs and taxes. Both fees and taxes diminish investors' after-tax returns and their basis for compounding. We find that investors will benefit from a transparent accounting of these drags. All else equal, investors should seek the lowest-cost and most tax-efficient delivery for the same investment strategy. We discuss some practical means of approaching these frictions in our concluding section.

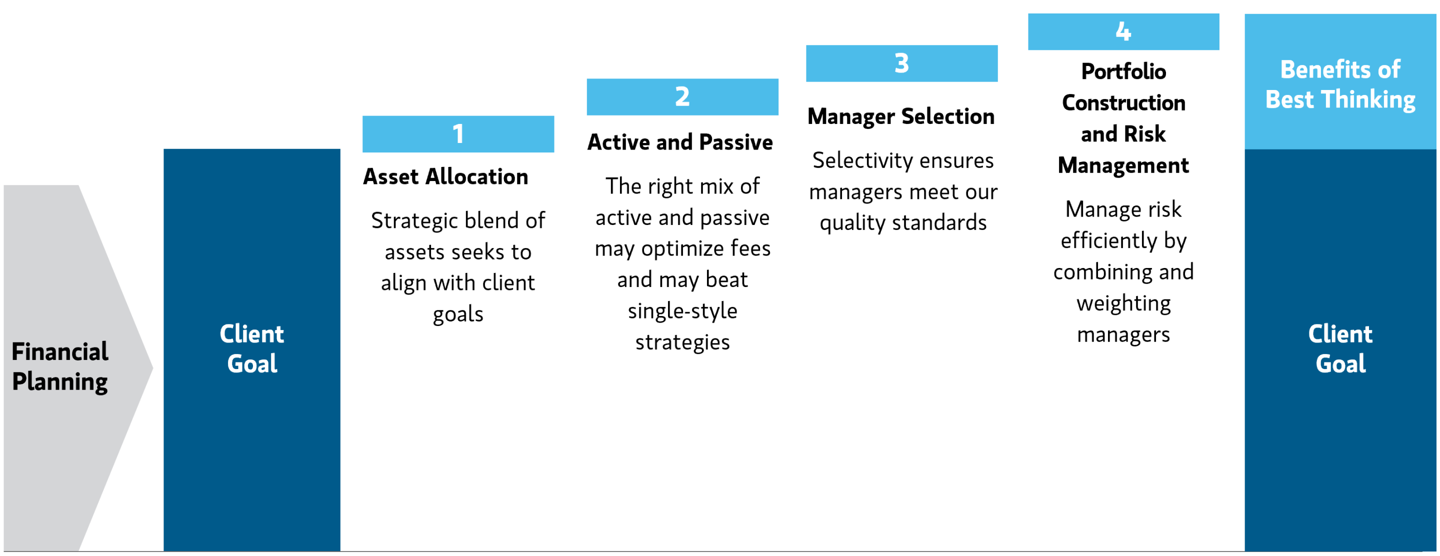
5. Take advantage of portfolio construction techniques as "grace notes."

As noted in Exhibit 14, the GIC has introduced a holistic portfolio construction process, starting with financial planning and including asset allocation, active-passive decisions, manager selection and risk management. We consider these steps to offer potential "grace notes," combining to build clients' long-term goals.

We reviewed these concepts briefly in our "Understanding the GIC Allocation Models" and intend to expand on the GIC's preferred approach to portfolio construction in a forthcoming primer. Here, we would like to highlight three techniques that complement an appropriate focus on achieving long-term goals.

While simplicity often provides a straightforward path, investors may benefit from accepting modest complexity in their portfolio implementation. We believe that investors may benefit from welcoming complexity that helps to counteract other headwinds like cost, risk or tax. For example, while ETF strategies provide a simple means of tracking an index's performance, direct indexing strategies may enhance investors' after-tax returns, as discussed in "Direct Indexing: Opportunities for Customization and Potential Tax Alpha." We recommend coordinating with a Financial Advisor in determining which forms of complexity to introduce and how to leverage Morgan Stanley's resources to navigate any such complexity.

Exhibit 14: The GIC Recommends a Holistic Portfolio Construction Process, Starting With Financial Planning That Defines Client-Specific Goals



Source: Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

Tactical allocation. We believe that investors may find some advantage in assuming tactical positions that deviate modestly from their policy starting points. Critically, tactical allocation does not equate to market-timing. Rather, it involves staying invested but taking overweight or underweight positions in asset classes. Raising or lowering asset class weights centers on macro-level tactical opportunities, while actively managed strategies allow investors to take advantage of micro-level tactical opportunities.

In the latter context, we recommend contained maneuvering around long-term asset allocation targets. Returning to our pilot analogy, we recommend consulting with a Financial Advisor (acting like air traffic control) on tactical allocation decisions. When executed effectively, tactical allocation may help to avoid potential turbulence or to capitalize on more favorable conditions.

Fundamental momentum, valuations and technicals represent three broad categories of indicators that the GIC monitors in assessing tactical allocation opportunities. Typically, overextended expectations or declining fundamental momentum, elevated or falling valuations and downtrends, or overbought conditions suggest lower allocations for a given asset class. Meanwhile, improving fundamental momentum, low or rising valuations, and uptrends or oversold conditions can point to tactical opportunities to add to a given asset class.

As one lens into fundamental momentum, we may study the interplay between growth and inflation momentum. By doing that, we can identify four macro regimes, listed in Exhibit 15: Inflationary Boom (positive growth and inflation momentum); Moderation (positive growth but negative inflation momentum); Stagflation (negative growth but positive inflation momentum); and Stagnation (negative growth and inflation momentum).

Exhibit 15: Growth-Inflation Combinations Define Four Macro Regimes, Over Which Asset Classes' Performance Has Varied Widely

Asset Class	Inflationary Boom	Moderation	Stagflation	Stagnation
US Large-Cap Equity	15.1%	20.2%	8.4%	-7.3%
US Small-Cap Equity	16.3%	18.3%	3.4%	-4.9%
International Equity	10.4%	10.4%	2.8%	-10.9%
7 - 10 Year US Treasury	0.8%	5.8%	2.7%	8.9%
Inv. Grade Fixed Income	1.4%	6.5%	3.4%	7.8%
High Yield Fixed Income	5.1%	11.1%	5.1%	3.1%
Commodities	14.5%	2.7%	2.9%	-1.9%
Gold	6.8%	1.0%	13.7%	13.6%

Data includes monthly returns from Aug. 31, 1996 to Aug. 31, 2025.
Source: Morgan Stanley Wealth Management GIC

In the table, we have sorted asset classes by equities, fixed income and real assets. Notably, the Stagflation environment has corresponded to below-average returns for both equities and fixed income. Equities have tended to thrive in the Inflationary Boom and Moderation environments but have slumped during Stagnation.

We intend to expand on the GIC's preferred approach to tactical allocation in a forthcoming primer.

Active-passive decisions and manager selection. We prefer an integrated approach to portfolio implementation, particularly in terms of active-passive decisions and manager selection. The GIC's frameworks seek to boost clients' realized performance, net of fees and taxes.

With active-passive decisions, investors typically weigh the potential value of active managers against low-cost passive strategies. For taxable investors, passive strategies, potentially implemented through a direct indexing approach, may represent more effective choices in those asset classes with scarce alpha opportunities. As such, our Active-Passive Framework considers the potential effectiveness of active managers across 27 major asset classes, focusing on the top half of strategies after sorting by four quantitative characteristics. We found that investors may benefit from leaning into active management in less efficient asset classes with more fertile opportunities. We highlighted the value of core-satellite investing for taxable investors in a more detailed investigation.

Once investors have decided to allocate to active managers for a given asset class, they must select the managers. Along with our Global Investment Manager Analysis team (GIMA), the GIC's Manager Scoring frameworks aim to boost the probability of success. Listing just the performance-focused tools, we rank active managers' effectiveness on alpha generation (Adverse Active Alpha and AIME); risk management (Risk Score); value proposition relative to fees (Value Score); and tax efficiency (Tax Score). These frameworks follow fundamental intuition, looking to benefit from consistent, disciplined, results-driven investment processes.

Conclusion

We recommend that investors approach the long term as a disciplined journey, requiring a well-constructed financial plan. With this focus, investors may appropriately contextualize short- and intermediate-term risks—as outgrowths of the appropriate trajectory to achieve long-term goals—and build realistic expectations. Short-term market volatility and behavioral biases can challenge investors, but maintaining a long-term perspective and staying committed to a plan can mitigate these risks. Principles like staying invested, employing dollar-cost averaging and recognizing volatility as a potential opportunity can build investors' resilience and confidence. Proactively managing investment portfolios, including the strategic introduction of complexity, can further enhance outcomes. We believe that collaborating with Morgan Stanley Financial Advisors and leveraging the Firm's planning and investing resources can boost investors' likelihood of success and their ability to evaluate and manage risk across multiple time horizons.

Appendix

Financial professionals often cite volatility (and its variant, value-at-risk) to capture the risk associated with a specific investment or a total portfolio. Modern Portfolio Theory and the Capital Asset Pricing Model, two staples of financial theory, suggest that investors seek to maximize their reward per unit of risk. In both cases, volatility conveniently captures the "unit of risk."

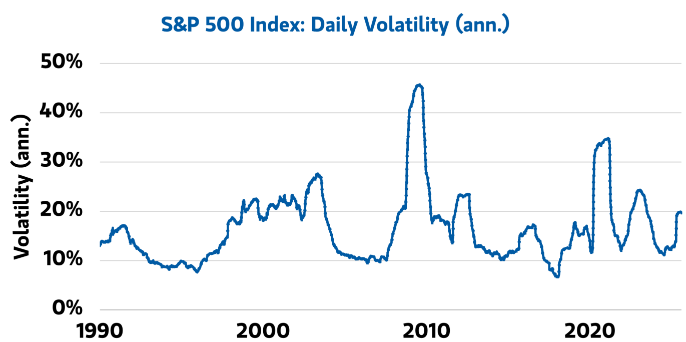
Volatility, typically calculated as the annualized standard deviation of monthly or daily price or total returns, offers some benefits to investors. It quantifies investment risk in a single number. For two investments, a higher volatility does indeed translate into greater variability of outcomes. Investors can also apply the concept to measure the variability of an investment manager's relative performance versus its benchmark, called "tracking error."

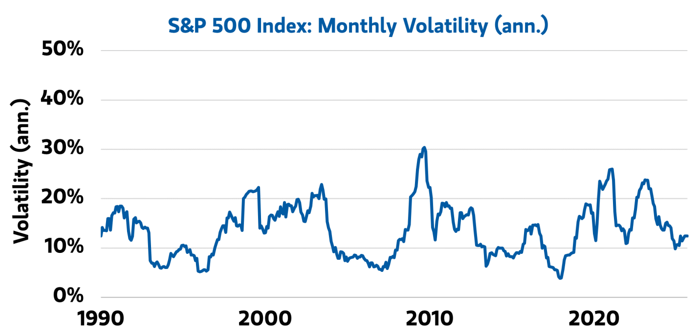
Still, volatility falls short as a "complete" metric for investors. Its measurement requires reference to a specific, typically historical, time period. Given its inherent variability, its level fluctuates, potentially widely, over time. Moreover, it can minimize or obscure intraperiod movements, particularly when measured with less granular periods. For example, in Exhibit 16 below, the volatility of the S&P 500's daily total returns exhibits a wider range than the volatility of the index's monthly total returns. This smoothing feature may have caused investors to underestimate the potential risk associated with certain alternative investments, which we covered in our "Innovations in Capital Market Assumptions" primer.

In addition, volatility's calculation considers up and down movements in asset prices as symmetrical, yet investors experience these market movements in quite asymmetric ways. Over short periods, risky assets tend to decline in price with greater velocity and magnitude than they rise. As a result of this observation and their natural risk aversion, investors tend to perceive downside volatility as more potent than upside volatility.

Moreover, volatility's single number can mask hidden nuances of risk. Risky assets' returns typically do not follow normal distributions; rather, they typically show a negative skewness and positive excess kurtosis ("fat tails"), indicating a propensity for below-average values and greater likelihood of extreme values. As one example, some "short-volatility" strategies like put-writing may offer consistently small gains, followed by larger episodic losses. In such cases, the volatility metric dampens the perceived impact of the outlier outcomes, blending them with the "normal" middle.

Exhibit 16: The Rolling Annualized Volatility of S&P 500's Daily and Monthly Total Returns Exhibit Quite Different Ranges and Patterns

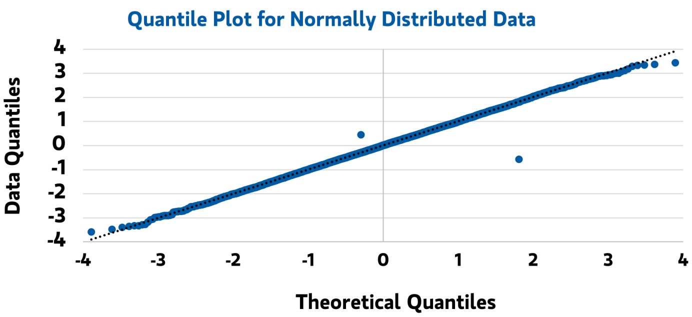


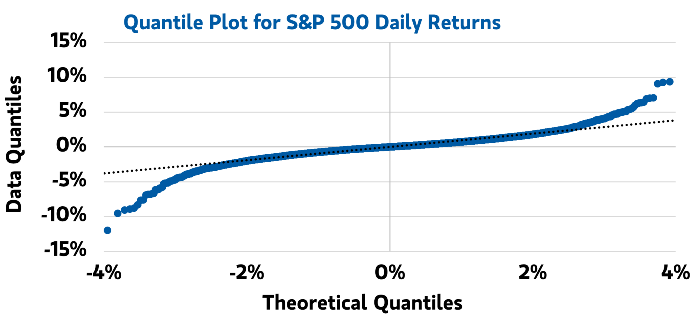


Source: Bloomberg, Morgan Stanley Wealth Management GIC as of Aug. 31, 2025

In Exhibit 17, we offer a side-by-side comparison of normally distributed data (human heights) and the S&P 500 Index's daily total returns. The height data lies incredibly closely on the "expected line," suggesting minimal evidence of outliers at the extremes of the distribution. Meanwhile, the S&P 500's returns show significant deviation from the "expected line," suggesting the multiplicity of extreme moves.

Exhibit 17: Quantile Plots Demonstrate the Limitations of Normal Distribution-Driven Analytics for Risky Assets





Source: Bloomberg, Morgan Stanley Wealth Management GIC as of July 31, 2025

As such, we believe that empirical evidence underscores the importance of considering additional risk metrics, including drawdowns and shortfall probabilities, particularly in tumultuous market conditions. The maximum drawdown captures the greatest peak-to-trough percent decline of a security, either within a given time range or over a full period. Meanwhile, the average drawdown computes the mean level of drawdowns over a stated period, which provides insights on an asset or portfolio's relative smoothness. Investors inherently wish to limit their experience of maximum and average drawdowns, while maximizing returns. Shortfall probabilities calculate the likelihood that an asset or portfolio will fall short of its target return. This metric also provides valuable insights into long-term planning, guiding investors to develop an appropriate risk tolerance and receive commensurate return compensation for assuming that risk.

Endnote

[1]Chambers, David; Dimson, Elroy; Ilmanen, Antti S.; and Rintamäki, Paul. "Long-Run Asset Returns", Annual Review of Financial Economics, Vol. 16, No. 1 (October 2024). Available at https://ssrn.com/abstract=5022480.

Disclosure Section

The **Global Investment Committee (GIC)** is a group of seasoned investment professionals from Morgan Stanley & Co. LLC, Morgan Stanley Investment Management, and Morgan Stanley Wealth Management who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend asset allocation model weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

Lisha Ge, Spencer Cavallo and Jason Traum are not members of the Global Investment Committee and any implementation strategies suggested have not been reviewed or approved by the Global Investment Committee.

Glossary

Drawdown: The peak-to-trough decline during a specific period.

Mean reversion: The theory suggesting that prices and returns eventually move back toward the mean or average. This mean or average can be the historical average of the price or return, or another relevant average such as the growth in the economy or the average return of an industry.

Standard deviation: This statistic quantifies the volatility associated with a portfolio's returns by measuring the variation in returns around the mean return. Unlike beta, which measures volatility relative to the aggregate market, standard deviation measures the absolute volatility of a portfolio's return.

Tracking error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark.

Volatility: A statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions.

Hypothetical Performance

Charts and graphs are provided for illustrative purposes. The charts and graphs may contain hypothetical performance displays. As such, Morgan Stanley is providing information below regarding the risks and limitations related to such hypothetical performance displays. The inclusion of these displays in this material is in no way a solicitation of advisory services.

IMPORTANT: The projections or other information provided in the Report regarding the likelihood of various investment outcomes (including any assumed rates of return and income) are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Hypothetical investment results have inherent limitations. There are frequently large differences between hypothetical and actual results.

Hypothetical results do not represent actual results and are generally designed with the benefit of hindsight. They cannot account for all factors associated with risk, including the impact of financial risk in actual trading or the ability to withstand losses or to adhere to a particular trading strategy in the face of trading losses. There are numerous other factors related to the markets in general or to the implementation of any specific strategy that cannot be fully accounted for in the preparation of hypothetical risk results and all of which can adversely affect actual performance. Any recommendations regarding external accounts/holdings are asset allocation only and do not include security recommendations.

Hypothetical performance should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Hypothetical performance results have inherent limitations. The performance shown here is simulated performance not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results.

Despite the limitations of hypothetical performance, these hypothetical performance results may allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs.

Asset Class and Other Risk Considerations

Investing in the market entails the risk of market volatility. The value of all types of securities may increase or decrease over varying time periods.

This analysis does not purport to recommend or implement an investment strategy. Financial forecasts, rates of return, risk, inflation, and other assumptions may be used as the basis for illustrations in this analysis. They should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. No analysis has the ability to accurately predict the future, eliminate risk or guarantee investment results. As investment returns, inflation, taxes, and other economic conditions vary from the assumptions used in this analysis, your actual results will vary (perhaps significantly) from those presented in this analysis.

The assumed return rates in this analysis are not reflective of any specific investment and do not include any fees or expenses that may be incurred by investing in specific products. The actual returns of a specific investment may be more or less than the returns used in this analysis. The return assumptions are based on hypothetical rates of return of securities indices, which serve as proxies for the asset classes. Moreover, different forecasts may choose different indices as a proxy for the same asset class, thus influencing the return of the asset class.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Investing in small- to medium-sized companies entails special risks, such as limited product lines, markets and financial resources, and greater volatility than securities of larger, more established companies.

Investing in foreign markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. **Investing in currency** involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with **emerging markets and frontier markets**, since these countries may have relatively unstable governments and less established markets and economies.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long-term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation ("SIPC") provides certain protection for customers' cash and securities in the event of a brokerage firm's bankruptcy, other financial difficulties, or if customers' assets are missing. SIPC insurance does not apply to precious metals or other commodities.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies. **Technology stocks** may be especially volatile. Risks applicable to companies in the **energy and natural resources** sectors include commodity pricing risk, supply and demand risk, depletion risk and exploration risk. **Health care sector stocks** are subject to government regulation, as well as government approval of products and services, which can significantly impact price and availability, and which can also be significantly affected by rapid obsolescence and patent expirations.

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. Portfolios that invest a large percentage of assets in only one industry sector (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

Environmental, social, and governance-aware investments (ESG) in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. Certain issuers of investments may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results.

Before engaging in the purchase or sale of **options**, clients should understand the nature and extent of their rights and obligations and be aware of the risks involved, including, without limitation, the risks pertaining to the business and financial condition of the issuer of the underlying security/instrument. Options investing, like other forms of investing, involves tax considerations, transaction costs and margin requirements that can significantly affect clients' potential profits and losses. The transaction costs of options investing consist primarily of commissions (which are imposed in opening, closing, exercise and assignment transactions) but may also include margin and interest costs in particular transactions. Transaction costs are especially significant in options strategies calling for multiple purchases and sales of options, such as multiple leg strategies, including spreads, straddles and collars. If a client is considering engaging in options trading, the Financial Advisor and Private Wealth Advisor are required to provide the client with the "Characteristics and Risks of Standardized Options" (ODD) booklet from the Options Clearing Corporation. Clients should not enter into options transactions until they have read and understood the Disclosure Document and discussed transaction costs with the Financial Advisor or Private Wealth Advisor. A copy of the ODD is also available online at: http://www.theocc.com/about/publications/publication-listing.jsp.

Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.

Direct indexing may only be appropriate for people who have a considerable amount to invest in a taxable account and want a level of customization they couldn't otherwise obtain through a portfolio of funds or individual securities. If you invest in a tax-deferred account, such as a 401(k) or IRA, the tax-harvesting benefits of direct indexing may provide no additional benefit to you. There is no guarantee that you will maximize value by tax-loss selling; holding onto slumping stock may have resulted in value greater than that obtained through tax-loss harvesting via direct indexing. In addition, you will incur asset-based fees and expenses in a direct indexing account that may be higher than those for other investments, as well as transaction costs arising from customization and frequent rebalancing.

Artificial intelligence (AI) is subject to limitations, and you should be aware that any output from an IA-supported tool or service made available by the Firm for your use is subject to such limitations, including but not limited to inaccuracy, incompleteness, or embedded bias. You should always verify the results of any AI-generated output.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. The indices are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Comparing an investment to a particular index may be of limited use.

The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time.

As a diversified global financial services firm, Morgan Stanley engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley therefore engages in activities where Morgan Stanley's interests may conflict with the interests of its clients. Morgan Stanley can give no assurance that conflicts of interest will be resolved in favor of its clients.

Global Investment Manager Analysis (GIMA) provides comprehensive manager analysis for Morgan Stanley's investment advisory platforms on a wide range of investment products, including separately managed accounts, mutual funds and exchange-traded funds in the equity, fixed income and alternative investment categories.

GIMA defines the Adverse Active Alpha℠ (AAA) ranking model as follows:

Adverse Active Alpha℠ (AAA)

Adverse refers to the demonstrated ability to outperform in a variety of market environments and when conditions were difficult for active manager relative performance. "Difficult" periods were times when active management did not perform well relative to the index, as opposed to down market periods. At various times, active management has experienced difficult relative performance periods in up, down, and flat markets. We developed a set of factors to help discern which periods were more difficult for active managers that we utilize to identify managers that were able to overcome these headwinds and outperformed in the face of adversity.

Active refers to managers with portfolios that looked different from the index and had moderate to low tracking error. For all products, r2 is used to measure the degree of differentiation from the benchmark in conjunction with tracking error. The ranking seeks to find managers that were active, but not taking outsized bets, and that had some degree of style consistency. The combination of r2 and low tracking error is fairly uncommon among active managers, but we believe these traits may point toward managers with strong stock picking skills.

Alpha refers to the demonstrated ability to add value relative to an index and/or peers. Back tests indicate that highly ranked managers as a group outperformed the index and style peer group over subsequent periods and relative to active share alone. By combining the "adverse" component with the "active" component, we believe we increase the odds of finding some of the most proficient stock pickers.

Risk Score, Value Score and Tax Score

Morgan Stanley Wealth Management's proprietary Risk Score methodology gauges managers' effectiveness in risk management. Based on extensive historical analysis, we evaluate over 18,000 strategies across 54 categories by ranking them according to several quantitative markers. We take a weighted average of these individual rankings to compute each manager's Risk Score, having found that managers with higher Risk Scores have historically produced more attractive subsequent risk adjusted returns, particularly under adverse conditions. For more information on Risk Score, please see the Risk Score whitepaper.

Morgan Stanley Wealth Management's proprietary Value Score methodology considers active investment strategies' value proposition relative to their costs. We measure perceived benefit from several quantitative markers and compute (1) "fair value" expense ratios for over 10,000 managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expenses ratios to actual expense ratios. We then rank managers within each category by their excess value to assign a Value Score, having found that greater levels of excess value have historically corresponded to attractive subsequent performance. For more information on Value Score, please see the Value Score whitepaper.

Morgan Stanley Wealth Management's proprietary Tax Score methodology evaluates investment strategies' quality and tax efficiency. The Tax Score reviews the quality of investment strategies' after-tax returns by measuring upside opportunity, downside mitigation and consistency, which have tended to correlate with strategies' subsequent risk-adjusted returns in after-tax terms. For more information on Tax Score, please see the Tax Score whitepaper.

Important Considerations Regarding the Adverse Active Alpha, Risk Score, Tax Score and Value Score ranking models:

Adverse Active Alpha (AAA) is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor.

In our view, the Adverse Active Alpha, Risk Score, Tax Score and Value Score manager rankings are an important part of evaluating managers for consideration. However, we do recognize that these ranking models cannot, in and of themselves, tell us which managers' strategies to invest in or when to buy or sell the strategies. While highly ranked managers historically performed well as a group in our analysis, past performance is not a guarantee of future results for any manager or strategy. Index returns assume reinvestment of dividends and, unlike fund or strategy returns, do not reflect any fees or expenses.

Indices are unmanaged and not available for direct investment.

GIMA strives to evaluate other material and forward looking factors as part of the overall manager evaluation process. Factors such as but not limited to manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha or Value Score ranking. Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on the ranking models, please see Adverse Active Alpha 2.0: Scoring Active Managers According to Potential Alpha. This Special Report is available by request from your Financial Advisor or Private Wealth Advisor.

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***High Adverse Active Alpha is generally defined as falling into the top two quintiles (40%) within the ranking model.** Separately Managed Account and mutual fund rankings could differ. In some cases where the separately managed account product and mutual fund are substantially similar, the separately managed account rating may be applied to the mutual fund and vice versa.

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RSI1757001806676 09/2025