

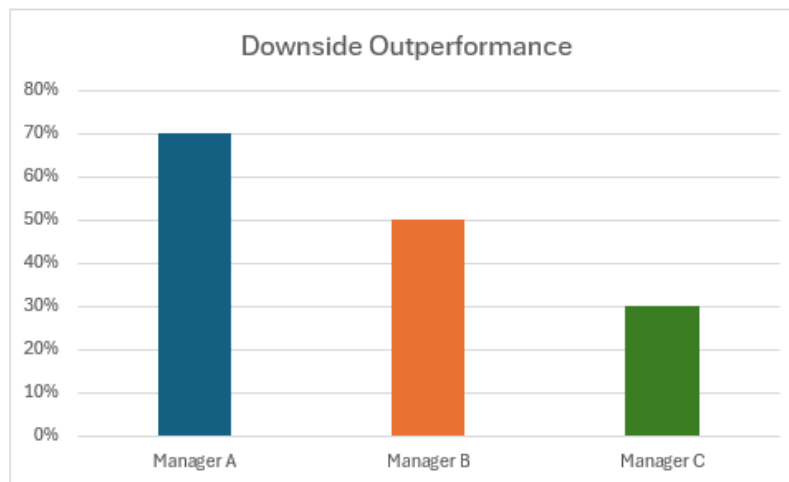
Enhancing Modern Portfolio Theory to Improve Client Experiences

When evaluating portfolio managers, most analysts rely on the familiar pillars of Modern Portfolio Theory (MPT): *downside capture, standard deviation of total returns, and risk-adjusted returns*. While these metrics sound impressive, most clients probably find them confusing, and they may put unnecessary distance between the client and advisor. We believe there is significant room for improvement, especially when it comes to consistently meeting client expectations. In this paper, we introduce three measures we believe complement and enhance some traditional MPT stats advisors use: the **Downside Outperformance Ratio** which captures how often a manager outperforms the benchmark during market declines; **Annual Standard Deviation of Excess Return** which measures the consistency of a manager's performance relative to the benchmark; and **Cumulative Excess Return** which reflects the total value added over the life of a strategy. Together, these tools can provide advisors with actionable insights—helping you deliver the results your clients deserve and reducing the likelihood of difficult conversations when expectations are not met. After all, satisfied clients are more likely to stay committed to their financial plans and achieve their goals, while dissatisfied clients often change plans at inopportune times, making long-term success more challenging. If you're interested in elevating your client's experience and aligning performance with expectations, we invite you to explore these new measures further.

1. Evaluating the Downside- Consider Downside Outperformance

Many analysts currently rely on the **Downside Capture Ratio** to evaluate how well a portfolio manager protects capital during market downturns. This statistic measures the percentage of benchmark losses that the portfolio "captures" when the benchmark declines—so a downside capture ratio below 100% means the portfolio lost less than the benchmark during those periods. However, this measure focuses on the magnitude of losses, not on the consistency of outperformance. **A complementary metric, which we call the Downside Outperformance Ratio, is the percentage of quarters in which a manager outperforms the benchmark when the benchmark is declining.** This approach directly addresses the client's real concern: how often does the manager deliver better results than the benchmark during tough times, regardless of the size of the loss. **By focusing on the frequency of outperformance, the Downside Outperformance Ratio highlights a manager's ability to consistently add value when it matters most, rather than just averaging out the size of losses.** This makes it an important measure for advisors and their clients who care about reliability and resilience in down markets, not just relative loss mitigation.

Consider three examples of managers that all have Downside Capture Ratios that are at or below 100%, but have Downside Outperformance Ratios that are very different, as noted in the following chart.

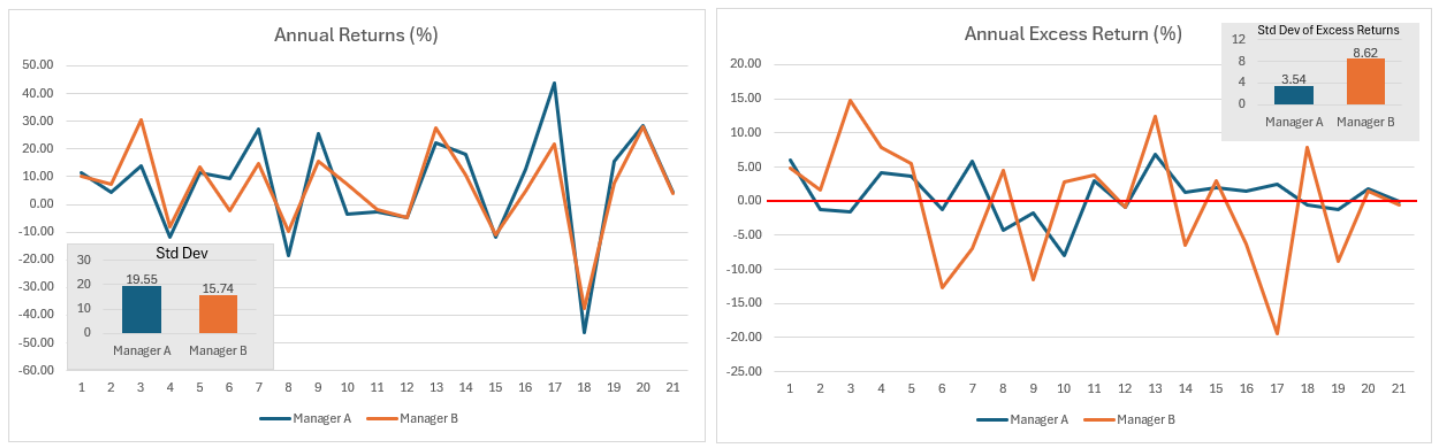


The manager with the highest percentage on this measure outperforms the index 70% of the time during down quarters while the second manager outperforms 50% of the time, and the last manager only outperforms 30% of the time. Clearly, you are likely to have fewer difficult client meetings with Manager A than Managers B and C. **Explaining an underperforming manager in a declining market can lead your clients to question the wisdom of their manager selection. Having fewer underperforming quarters during index declines lowers the chances of emotionally changing strategies at the bottom of relative performance for a manager.**

2. Evaluating Volatility- Consider Annual Volatility of Excess Return

Analysts worry about volatility, as more volatile managers can cause client concerns. Most of them assess a portfolio's volatility by looking at the standard deviation of its total returns, which measures how much the returns fluctuate around their average over time. However, this approach can be misleading because advisors and clients typically evaluate their portfolio's performance relative to a benchmark market index, rather than in isolation. **We believe a more meaningful measure of volatility is the Annual Standard Deviation of Excess Returns**, which calculates how much the portfolio's returns differ from the benchmark returns over time on a yearly basis. Tracking error is very similar, but measures volatility in shorter periods, while long term investors would be better served by looking at annual figures. By focusing on annual excess return volatility, advisors and their clients can better judge the consistency of value added (or lost) by the manager and distinguish skill from market movements. In contrast, simply measuring the volatility of total portfolio returns ignores the context of market conditions and may overstate or understate the true risk of not meeting investment objectives tied to the benchmark. ***This metric directly reflects the variability of the portfolio's outperformance or underperformance relative to the benchmark, providing a clearer picture of the risks that matter most when seeking to beat the market or a specific standard.***

Consider the following examples of two managers demonstrating the volatility of returns. Manager A (blue line) and Manager B (gold line) have annual total returns and standard deviations as presented in the chart on the left below, and annual excess returns over the index and standard deviation of excess return as presented in the chart on the right below. Most analysis centers on total return volatility. On that measure, Manager A is much more volatile than Manager B, with a standard deviation of 19.5% compared to 15.7% for Manager B.



In a vacuum, that analysis might be correct, but both managers are compared to a benchmark. We prefer examining the Annual Standard Deviation of Excess Return to evaluate manager volatility. When you review that, *Manager A only has a 3.5% standard deviation of excess return, compared to manager B, who has an 8.6% Standard Deviation of Excess Return.* Our sense is clients would enjoy results from Manager A more than Manager B. **We think this measure helps advisors, and their clients find steadier outperformance and avoid boom-bust managers.**

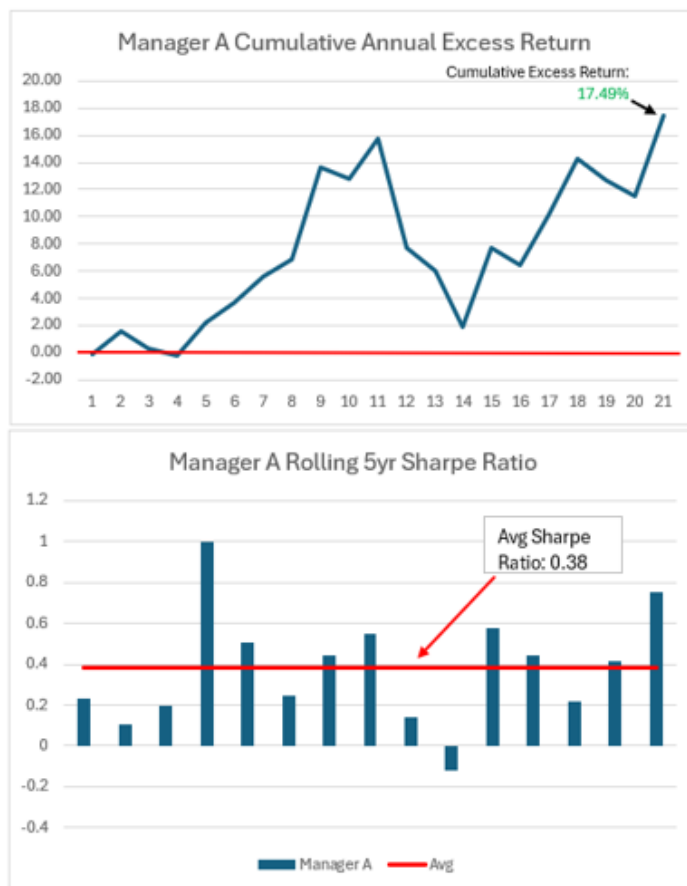
3. Evaluating Returns- Consider Cumulative Excess Return

Analysts often use risk-adjusted performance metrics, such as the Sharpe ratio, to help measure reward as compared to risk. While this is an excellent metric, clients are often more concerned about overall portfolio returns and how much market upside is captured versus the benchmark than risk adjusted returns. **We think a straightforward and client-focused approach to measuring upside capture is to look at the Cumulative Excess Return compared to a benchmark over the entire life of the strategy.** Cumulative excess return measures the total amount by which a portfolio outperforms its benchmark, providing a clear picture of the value added by active management over time. We believe this metric is particularly meaningful because it directly answers the question most advisors and their clients care about: "How much better off are we compared to simply investing in the benchmark?" **Unlike risk-adjusted ratios, which can sometimes obscure the actual dollar**

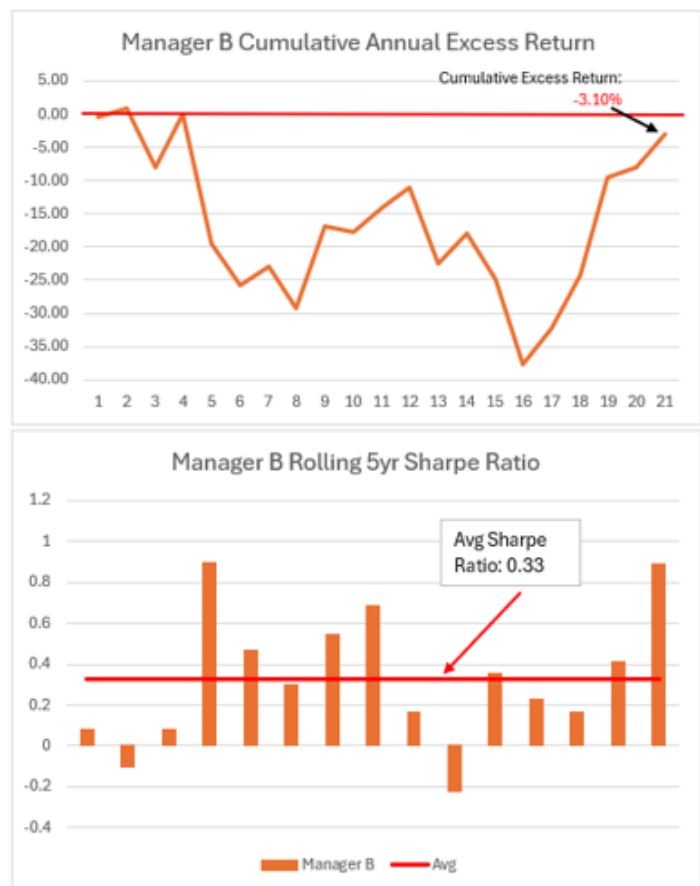
value of outperformance, cumulative excess return shows the tangible result of the investment strategy, reflecting both the manager's skill and the effectiveness of their approach over the long term. This makes it a more understandable measure for clients who prioritize real-world results and long-term wealth accumulation.

Consider the following examples of two managers excess returns and Sharpe Ratios. Managers are often compared based on Sharpe Ratios; a risk adjusted measure by dividing a strategies excess return above the risk-free rate by the standard deviation of the investments returns. We've already addressed what we feel are the advantages of measuring annual deviation of excess returns rather than overall returns, but MPT measures Sharpe Ratios this way. **Managers A and B (below) have roughly comparable rolling five-year Sharpe Ratios.**

Manager A



Manager B



In the charts above we present Manager A on the left and Manager B on the right and measure the cumulative excess return over time in the top panel and the rolling 5-year Sharpe Ratio in the bottom panel. Despite having a respectable Sharpe Ratio, Manager B returned LESS THAN the benchmark

over time, while Manager A produced results GREATER THAN the index. **Risk adjusted returns may not indicate whether a client outperformed the benchmark or not. We believe most clients prefer to make more money over time, and given the choice, would probably concentrate on Cumulative Excess Return measures.**

When you hire a manager, you want to know what to expect—not just in terms of numbers, but in terms of how your experience will feel over time. At Todd, we're all about making client meetings as smooth and predictable as possible—no surprises, no drama. That's why we look beyond the usual Modern Portfolio Theory (MPT) statistics and focus on what really matters for peace of mind. **We believe you'll get a much clearer sense of whether a manager is a good fit by adding three questions to your manager evaluation checklist:**

- ***How often do they outperform the market when it declines.***
- ***How steady is their excess return compared to the benchmark.***
- ***How much have they cumulatively outperformed their benchmark over the life of the strategy.***

These factors give you a real-world sense of consistency, resilience, and long-term value—qualities that can make your investment experience a lot more satisfying. If you'd like to talk more or have questions, we're always here to help.

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