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How Well Do You Really Know Your Portfolio?

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As a manager, you are probably aware that your portfolio may be exposed to risks that fall outside your mandate, but how well you understand and communicate those risks could impact your relationship with investors.

For example, a bottom-up fundamental equity portfolio constructed to maximize exposure to the most attractive names may have unintended top-down exposures to risks like higher inflation or a widening of credit spreads. While many risks can be hedged, even those that can't should be understood by the asset manager, as they can help explain returns that otherwise might seem unusual. Stress-testing techniques can help a manager identify some of those risks, and guide decisions about hedging.

Regular stress-testing is a critical component of every investment process, and the recent turmoil in the market has underscored the importance of understanding a portfolio's vulnerabilities to market and economic events. Stress tests can help managers identify portfolios' fault lines by showing what might happen if a certain event, say a big market downturn, a flattening of the yield curve or a reversal in momentum should occur.

These tests can be run at different points in time or under varying assumptions, such as whether to rely on today's relationships, or use a particular period in the past to determine the impact of a stressor. The awareness of potential problems may be particularly critical to investors in smart beta or single-factor portfolios, as those funds may be less diversified than other types of portfolios. In addition, it is not enough to know the bottom line of how your portfolio might fare; managers need to understand what will drive the performance.

In many cases, a move in one kind of factor, say value, may have an impact on a portfolio – perhaps one with a growth tilt – that does not even consider value as part of its investment process. This is because value and growth are typically negatively correlated, so when one does well, the other falls short. Some of those relationships may be obvious – many investors expect value portfolios to move in the opposite direction of growth-oriented ones, or to fare poorly when credit spreads widen, for example. But other relationships may be less apparent or even counterintuitive. Investors may view momentum-based strategies as being up-market winners, but our research has shown that a “pure” momentum strategy may outperform in a down market.

Portfolios may also contain incidental, unintended bets that end up hurting the most. In many cases, a shock in one factor directly causes a move in another. For example, a big drop in stock prices may mean that lower-volatility and lower-beta stocks fare better than their opposites, as investors flee go-go stocks seeking safety. A portfolio with even a small tilt toward higher volatility stocks will therefore get slammed.

In one of our momentum portfolio stress tests, which tested what would happen if the market were to fall 20%, the portfolio was expected to underperform – not because of its focus on momentum (which as we just mentioned would have helped the portfolio), but in part because it tilted toward more volatile stocks, which are expected to sharply underperform as the market falls. That is important to know, as the small bet toward higher volatility stocks could easily be hedged or even eliminated by rebalancing the portfolio.

Unless a manager has a particular reason for certain exposures, hedging could potentially save a lot of heartache. Of course, a manager does not need stress tests to tell her the portfolio’s exposures, a good risk model will suffice for that, but stress tests can quantify the magnitude of the potential shortfall, to help her determine if hedging is worth the cost. Payoffs may not be linear, especially in times when the jump in volatility is decidedly non-linear. A good stress-testing system should be able to account for these non-linearities as it determines potential outcomes.

Communicating potentially actionable results can give a manager the opportunity to show clients they are thinking about the issues and will be ready to discuss the impact on their portfolios. It is important to note, however, that the results of stress tests are not “the answer,” or at least not the only answer, and managers should be careful to convey that message along with the output.

Stress tests can reveal how a portfolio may be vulnerable to market, economic and factor events, and can guide a manager toward or away from an appropriate hedging strategy. Even if no hedge is warranted or possible, good stress tests can help a manager better understand her portfolio’s performance and explain it to investors. As markets gyrate, the potential impact of a move in any given variable will change as well, and managers may want to add or remove test variables. The bottom line is that stress testing is an important arrow in a manager’s quiver to help get the best performance possible out of any investment process.