

# Research Review: Managing And Measuring Volatility

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## [Restoring Value to Minimum Variance](#)

**Lisa R. Goldberg (University of Calif., Aperio Group), et al. | Oct. 2013**

A long-only investable minimum variance strategy outperformed the S&P 500 over the four decades from January 1973 to December 2012. Through the lens of a factor model, we show this outperformance can be largely attributed to implicit style bets. Specifically, minimum variance has thrived by tilting away from size and volatility and toward value. As funds have poured into minimum variance in the wake of the financial crisis, and plausibly as a consequence of this trend, the value tilt has disappeared and a momentum tilt has emerged. This suggests that the cost of entry to minimum variance is at an historic high. We show how the value tilt can be restored to minimum variance by targeting specific exposures, and that there was a substantial long-term benefit to the restoration at most recent points of entry to the strategy.

## **Rethinking Risk**

**Javier Estrada (IESE Business School) | Aug. 2013**

Volatility is the most widely-used measure of risk but its relevance is questionable in many settings. For long-term investors, short-term volatility is something they just have to live with and disregard as much as possible. Tail risks, however, are critical because, although rare by definition, they have a large impact on terminal wealth. Using a comprehensive sample that spans over 19 countries and 110 years, this article argues that when 1%, 5%, or 10% tail risks materialize, stocks offer long-term investors better downside protection than bonds in the form of a higher terminal wealth. In fact, stocks have both a higher upside potential and a more limited downside potential than bonds, even when tail risks strike. Hence, their higher volatility essentially is higher upside risk; that is, uncertainty about how much better, not how much worse, long-term investors are expected to fare with stocks rather than with bonds.

## [The VIX, the Variance Premium and Stock Market Volatility](#)

**Geert Bekaert (Columbia Business School) and Marie Hoerova (ECB) | Oct. 2013**

We decompose the squared VIX index, derived from US S&P500 options prices, into the conditional variance of stock returns and the equity variance premium. We evaluate a plethora of state-of-the-art volatility forecasting models to produce an accurate measure of the conditional variance. We then examine the predictive power of the VIX and its two components for stock market returns, economic activity and financial instability. The variance premium predicts stock returns while the conditional stock market variance predicts economic activity and has a relatively higher predictive power for financial instability than does the variance premium.

## [Low-Volatility Cycles: The Influence of Valuation and Momentum on Low-Volatility Portfolios](#)

**Luis García-Feijóo (Florida Atlantic University), et al. | Aug. 2013**

Research showing that the lowest risk stocks tend to outperform the highest risk stocks over time has led to rapid growth in so-called low-risk equity investing in recent years. We provide evidence that both extends and contrasts with existing research on low-risk investing. First, we demonstrate that the low-risk anomaly might more accurately be referred to as the high-risk anomaly due to the fact that the anomalous returns are found primarily among those stocks in the highest risk quintile. Next, we demonstrate that the historical performance of low risk investing is strikingly cyclical and driven to a large degree by swings in the relative valuation levels of low risk versus high risk stocks and also by varying appetite for momentum driven investing. Furthermore, the current valuation cycle nears historically high levels, which, combined with high exposure to momentum, indicates greater uncertainty in low-risk investing future outcomes.

## [Head and Shoulders Above the Rest? The Performance of Institutional Portfolio Managers Who Use Technical Analysis](#)

**David M. Smith (State University of NY at Albany), et al. | Jan. 2013**

This study takes a novel approach to testing the efficacy of technical analysis. Rather than testing specific trading rules as is typically done in the literature, we rely on institutional portfolio managers' statements about whether and how intensely they use technical analysis, irrespective of the form in which they implement it. In our sample of more than 10,000 portfolios, about one-third of actively managed equity and balanced funds use technical analysis. We compare the investment performance of funds that use technical analysis versus those that do not using five metrics. Mean and median (3 and 4-factor) alpha values are generally slightly higher for a cross section of funds using technical analysis, but performance volatility is also higher. Benchmark-adjusted returns are also higher, particularly when market prices are declining. The most remarkable finding is that portfolios with greater reliance on technical analysis have elevated skewness and kurtosis levels relative to portfolios that do not use technical analysis. Funds using technical analysis appear to have provided a meaningful advantage to their investors, albeit in an unexpected way.

## [Volatility vs. Tail Risk: Which One is Compensated in Equity Funds?](#)

**James X. Xiong (Morningstar), et al. | May 2013**

Research that has led to what is known as the "low volatility anomaly" in cross-sectional stocks from a similar universe indicates that volatility is not compensated with a "volatility" premium. We find evidence of a risk premium, but it depends on the definition or measure of risk. "Tail risk" measures the probability of having significant losses and should be what investors care about the most. We investigated several risk measures, including volatility and tail risk, and found that volatility is not compensated but tail risk is compensated with higher expected return in both U.S. and non-U.S. equity funds.

**By Marlène Hassine and Thierry Roncalli (Lyxor Asset Mgt.) | Feb. 2013**

Fund selection is an important issue for investors. This topic has spawned abundant academic literature. Nonetheless, most of the time, these works concern only active management, whereas many investors, such as institutional investors, prefer to invest in index funds. The tools developed in the case of active management are also not suitable for evaluating the performance of these index funds. This explains why information ratios are usually used to compare the performance of passive funds. However, we show that this measure is not pertinent, especially when the tracking error volatility of the index fund is small. The objective of an exchange traded fund (ETF) is precisely to offer an investment vehicle that presents a very low tracking error compared to its benchmark. In this paper, we propose a performance measure based on the value-at-risk framework, which is perfectly adapted to passive management and ETFs. Depending on three parameters (performance difference, tracking error volatility and liquidity spread), this efficiency measure is easy to compute and may help investors in their fund selection process. We provide some examples, and show how liquidity is more of an issue for institutional investors than retail investors.

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