Volatility: why it’s still useful for measuring the risk of losses

Institutional investors continue to rely on this metric, despite its theoretical limitations. What does the data say?

June 10, 2026

In investment committees, few terms generate as much consensus as “volatility.” It is the standard indicator in reporting, board presentations and asset allocation documents. And yet, many executives wonder whether it truly measures the risk that matters.

An article by IESE Prof. Javier Estrada, published in *Finance Research Open*, offers a counterintuitive answer: Volatility dominates not because it is perfect but because it acts as a reliable gauge of downside risk, which is what really concerns institutional investors. Not surprisingly, it classifies risk in almost identical terms to metrics designed specifically to capture losses.

The Oracle case: limits of volatility as a measure of risk

The classic criticism of volatility is well known. By measuring the dispersion of returns from the mean, it penalizes positive and negative deviations equally. In practice, it treats an extraordinary rise as if it were as risky as an equivalent fall — a paradox that is particularly problematic for pension funds, endowment funds and family offices, whose investment logic revolves around avoiding losses, not reducing fluctuations.

Estrada illustrates the limitations of volatility with a revealing case study: Oracle between 1995 and 2004. During that period, the company recorded extraordinarily high annual

volatility of 91.7%. However, that figure was not driven primarily by large declines, but by a 289.8% revaluation in 1999. Exceptional returns raised the “risk” indicator to alarming levels, although this can hardly be considered bad news for investors.

The second limitation is communicative. Estrada emphasizes that volatility has little intuitive meaning: Saying that an asset has a volatility of 15% does not clearly convey what this implies in terms of potential losses.

With these limitations on the table, we might expect metrics such as semi-deviation, expected loss or maximum drawdown to have replaced volatility as the standard for measuring risk. However, practice is moving in the opposite direction.

Estrada identifies two complementary reasons that explain why volatility remains so dominant. The first is sociological: Volatility is a metric known to virtually all market participants. In corporate governance and institutional fund environments, this common language reduces friction and improves the quality of strategic debate.

The second reason is empirical: When comparing asset rankings ordered by volatility with those ordered by specific downside risk metrics (probability of loss, expected loss or maximum drawdown), the result is virtually the same.

Empirical evidence on risk measurement

Based on a sample that aggregates indices from 47 countries and 65 industries, Estrada finds the average correlation between the volatility ranking and the rankings by downside risk metrics is 0.86.

This means that assets that appear to be riskier based on volatility are also usually the ones that lead the ranking when the risk of loss is measured directly.

In other words, although volatility is not designed exclusively to capture declines, in practice it ranks assets almost the same as metrics that are. Put simply, it works.

Implications for funds and corporate governance

For CIOs, institutional fund managers and board members, the study offers several strategic

lessons.

- **Simplicity may be sufficient in measuring risk.** If a widely understood metric discriminates risk in a similar way to more sophisticated tools, its use in strategic reporting and asset allocation may be justified.
- **Common language reduces organizational risk.** In corporate governance settings, using shared metrics makes things easier and reduces the risk of ill-informed decisions due to technical differences among participants.
- **Sophistication does not always alter the decision.** Estrada doesn't argue that volatility is the best possible metric, but it combines three attributes that are difficult to find together — familiarity, low operating cost and high risk classification capability — with results that are comparable to more complex tools.

The lesson underlying the study transcends risk measurement: In business management, the tools that survive are those that are good enough, widely accepted and easy to communicate.

About the research

The analysis is based on monthly data from the MSCI (Morgan Stanley Capital International) database covering 47 countries and 65 industries, with historical series up to December 2024. The risk metrics calculated include volatility (standard deviation), semi-deviation, probability of loss, average loss, expected loss, worst loss, drawdown, maximum decline and value at risk (VaR). Asset rankings were then constructed for each metric, and the correlation between the volatility ranking and the rankings for each downside risk indicator was estimated. The objective was to assess whether, in terms of relative risk classification, volatility offers a similar result to metrics specifically designed to capture losses.

ALSO OF INTEREST:

Bankable advice: 6 timeless money tips for volatile times like now

Stocks vs. bonds: where the risk lies

IESE Uncertainty Index, a decision tool to track daily economic uncertainty

Javier Estrada

Professor of Financial Management at IESE. He is an expert on portfolio management, investment strategies and risk, and an investment strategy adviser for Alpha Investments, a publicly traded active investment fund.

www.iese.edu/insight