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Risk and Volatility:
Q&A with Professor Korok Ray

Professor Korok Ray won the 2014 Brandes Institute Prize, awarded to an academic for compelling research in the fields of value investing and/or behavioral finance. Ray's winning entry will be published in The Journal of Investing. Here, Ray shares his insights in an exclusive discussion with the Brandes Institute Advisory Board.

Professor Korok Ray

For decades, active investors—including many of the value stripe—have taken issue with the idea that the stock market can't be beaten. Thanks to Korok Ray, a professor at Texas A&M's Mays Business School, these investors will soon have a new arrow in their quiver.

In his forthcoming paper "Risk and Volatility: A Differential View," Ray describes how academic analyses of investing theories such as Modern Portfolio Theory (MPT) and the Efficient Markets Hypothesis (EMH) take separate paths to the same conclusion: that the only way to earn higher returns is to take higher risk.

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But what exactly is risk? Can it be quantified as easily as returns? Ray notes that academia has tended to equate risk with historical share price volatility, a shortcut that raises alarms.

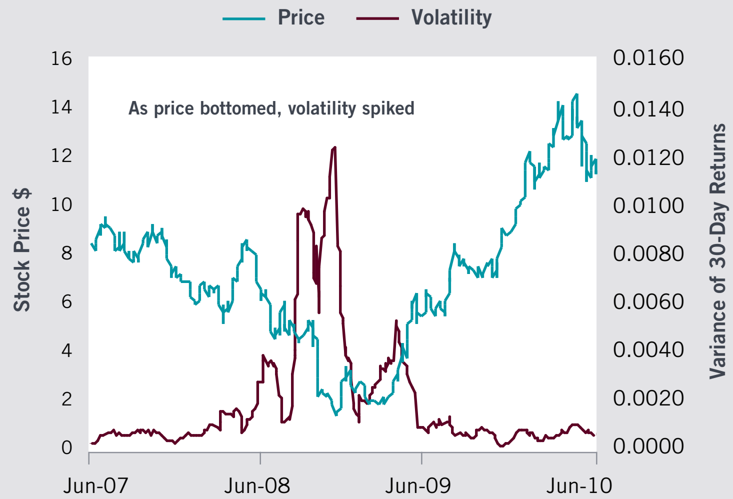
For example, most people intuitively understand that investing successfully in the stock market tends to revolve around buying low and then selling high. Accordingly, it is hard to imagine an investor who, all else equal, would prefer to buy a stock at a higher price than a lower price. Ray's paper, however, shows how such a bizarre preference comes to life in MPT, EMH, and other concepts that link risk to volatility.

These theories assume that a typical investor seeks to maximize returns while minimizing volatility, an approach that Ray represents in the form of an equation. Ray then applies calculus to the equation to reveal that this hypothetical investor would, in certain circumstances, rather buy high than buy low.

"This is a little bit strange," Ray said in a discussion with the Brandes Institute Advisory Board. "I think it's an illustration of why the standard model of minimizing volatility may need improvement."

Ray's paper also offers a simple example of how equating volatility with risk might not work in the real world. He charts the stock price of Ford Motor Company over several years, showing how its 30-day volatility maxed out on November 12, 2008—just a week shy of what would prove to be its 10-year low at $1.26.

Exhibit 1: Price and Volatility of Ford Motor Co.



Source: Professor Korok Ray, as of 6/30/2010. Past performance is not a guarantee of future results.

In other words, Ford's stock got increasingly "risky" on a volatility basis as its market price became more and more of a bargain as shown in Exhibit 1.

"This is precisely where I think the value investor and the efficient markets man are in complete disagreement," Ray told the Institute's Board members. "The efficient markets man would not buy this because of its high volatility, but the value investor *would* because of its low risk."

Board Member Philip Read (former Chairman of the British Coal Staff Superannuation Scheme Trustee Board) asked Ray if the Ford example could be construed as cherry-picking, given Ford was one of many stocks that rallied sharply in the years after 2008. Ray said he included Ford as "an extreme example where volatility and risk were as different as possible," noting his paper is "more theoretical than empirical."

Another Board Member, Peter Branner (CEO of SEB Investment Management), wondered if the paper's analysis could be applied to not just single stocks but at the portfolio level. Ray said he would like to "operationalize this further" in a future paper, which would require estimates of variables such as intrinsic values and growth rates of the holdings in the portfolio. "Turning the model into a decision guide—when to buy, when to sell—will take more work," Ray said.

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Board Member Bruce Grantier (former Managing Director, Scotiabank) asked if Ray had discussed his paper with Harry Markowitz, William Sharpe, or any other academics associated with concepts such as MPT and EMH. Ray said he plans to reach out in the months ahead to EMH pioneer Eugene Fama, whom Ray got to know while at the University of Chicago.

Going forward, Ray suggests that studies of investing could benefit from de-linking risk from the more-easily quantifiable volatility. When it comes to risk, "it is not volatility per se that a long-term investor cares for," Ray said. Instead, he added the goal is "to preserve capital. Optimizing for volatility may or may not achieve that."

Shane Finneran contributed to this article.

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