

Optimal Option Portfolio Strategies_

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Abstract

Options should play an important role in asset allocation. They allow for kernel spanning and provide access to (priced) risk factors such as stochastic volatility and negative jumps. Unfortunately, the traditional methods of asset allocation (such as mean-variance optimization) are not adequate for option portfolios because the distribution of returns is non-normal and the short sample of option returns available makes it difficult to estimate their distribution with precision. We propose a method to optimize option portfolios that overcomes these limitations. In an out-of-sample exercise, incorporating transaction costs, the portfolio strategy delivers an annualized certainty equivalent of 13% and an annualized Sharpe ratio of 1:32 between January 1996 and January 2013 which contrasts to the stock market in the same period of -10% and 0:13, respectively.

This performance is obtained by loading on volatility risk factor.