

Is Volatility Risk Priced in the Securities Market? Evidence from S&P 500 Index Options

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Abstract

This article examines whether volatility risk is a priced risk factor in securities returns. Zero-beta at-the-money straddle returns of the S&P 500 index are used to measure volatility risk. It is demonstrated that volatility risk captures time variation in the stochastic discount factor, suggesting that straddle returns are important conditioning variables in asset pricing. The conditional model proposed here performs far better than its unconditional counterparts including the Fama-French three-factor model. Thus, we argue that investors use straddle returns when forming their expectations about securities returns. One interesting finding is that, different classes of firms react differently to volatility risk. For example, small firms and value firms have negative and significant volatility coefficients whereas big and growth firms have positive and significant volatility coefficients during high volatility periods, indicating that investors see these latter firms as hedges against volatile states of the economy. Overall, these findings have important implications for portfolio formation, risk management, and hedging strategies.

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