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The Introduction of Derivatives on the Dow Jones Industrial Average and Their Impact on the Volatility of Component Stocks

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Abstract

This article examines the impact of trading in the Dow Jones Industrial Average (DJIA) index futures and futures options on the conditional volatility of component stocks. It investigates the contention that the introduction of futures and futures options on the DJIA could increase volatility in the 30 stocks comprising the DJIA. The conditional volatility of intraday returns for each stock before and after the introduction of derivatives is estimated with the Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model. Estimated parameters of conditional volatility in prefutures and postfutures periods are then compared to determine if the estimated parameters have changed significantly after the introduction of the various derivatives. The results suggest that the introduction of index futures and futures options on the DJIA has produced no structural changes in the conditional volatility of component stocks. © 2001 John Wiley & Sons, Inc. Jrl Fut Mark 21: 633–653, 2001

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