Jump-Dependent Model for Optimal Index Futures Hedging in Five Major Asian Stock Markets

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ABSTRACT
This article develops a jump-dependent model to capture the dependences between spot and futures returns and their jumps simultaneously, named JD model. We examine hedging performance of the presenting JD model for the futures contracts of Hong Kong, Japan, Korea, Singapore, and Taiwan. The results have shown that the JD model has better out-of-sample performance than the OLS for Korea, Singapore, and Taiwan. Since these three markets have higher jump dependence between spot and futures, we consider that jump dependence plays an important role in hedging performance. The higher jump dependence means spot and futures markets move more closely when unusual news reveals itself and thus futures could hedge the spot more effectively when extreme unusual news arrives.

Keywords: copula, dependence structure, hedge ratio, jump, stock futures

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