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Author Ching Yi Lin
Author's Email Address No Public.
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Abstract
This study investigates the information transmission process between the four Taiwanese index futures, namely Taiex Futures (TX), Electronic Sector Index Futures (TE), Finance Sector Index Futures (TF), and Mini-Taiex Futures (MTX). First of all, this study analyzes the lead-lag relationships between returns and between rates of volume changes for the four index futures, respectively. Secondly, this study probes the volatility spillover and asymmetric effects among the four index futures. The study covers the period from January 2, 2002 to December 21, 2005. Daily price data of the nearby month contracts of futures are used. Therefore, each index futures have 750 observations.
This study utilizes the error correction model, impulse response functions, variance decomposition, and bivariate EGARCH to analyze the above three purposes. The empirical results show that: (1) No matter whether returns or rates of volume changes of the index futures, the TX and MTX all provide a mechanism of multi-directional information feedbacks in the information transmission process; however, the mechanism of multi-directional information feedbacks for the TE and TF are only shown in return series or rates of volume changes. (2) For the lead-lag relationships, no matter whether returns or rates of volume changes, the TX and MTX all show the same order; however, for the TE and TF, the order of lead-lag relationship between the returns series is different from that of the rates of volume changes. Therefore, no specific price-volume hypothesize dominates the others in the Taiwan futures market. (3) The analysis of volatility spillover effects reveals that “TX vs. TE” and “TE vs. MTX” show a two-way information transmission relationship. However, the analysis of asymmetric effects of volatility spillover reveals that “TX vs. TE” and “TF vs. MTX” show a two-way asymmetric effect.
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