

Vatinee Chotinuchittrakul 2013: Optimal Hedge Ratio Estimations and Hedging Effectiveness: Case Study in Asia's Commodity Futures Exchanges. Master of Science (Agro-Industrial Technology Management), Major Field: Agro-Industrial Technology Management, Department of Agro-Industrial Technology. Thesis Advisor: Assistant Professor Tanachote Boonvorachote, D.B.A. 108 pages.

The objective of this research is to investigate the hedging efficiency of futures contracts in Agricultural futures exchange of Thailand (AFET) compare with the major rubber futures exchanges in Asia (TOCOM, SHFE and SICOM) and Thailand futures exchange (TFEX). The optimal hedge ratio are estimated through four econometric models, The Ordinary Least Square model (OLS), The Bivariate Vector Autoregressive model (VAR), The Vector Error Correction model (VECM) and The Generalized Autoregressive Conditional Heteroscedasticity model (GACRH). Then the hedging effectiveness is measured in terms of variance reduction between the hedged and unhedged portfolio. Findings of this research demonstrate that futures contracts are effective to be used as a hedging instrument. The performances of the hedge ratios in the in-sample and out-of-sample forecast have offered a similar picture. In most cases, the VECM model outperforms the other models while the efficiency of GARCH model does not seem able to get a very significant reduction in the portfolio variance as expected. The results also found that stock index futures contracts provide higher hedging effectiveness as compared to agricultural futures contracts. However, futures contract in developed market like TOCOM provide a high efficient hedging while the using of futures contract in emerging market should be cautious due to the low effective hedging.

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