Trading volume and returns relationship in SET50 index futures market

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Abstract: This study investigates the relationship between trading volume and returns in SET50 index Futures market in the period from April 2006 to December 2008 using 653 observations. From previous studies, we include three methodologies namely the GARCH model, the Generalized Method of Moments (GMM) to estimate systems of equations and the Granger causality test to investigate the relationship more thoroughly. In addition, we introduce the lagged volume as a new explanatory variable in the GARCH model. Overall, the results show the significant contemporaneous and dynamic relationships between trading volume and returns volatility which support the sequential information arrival hypothesis and imply some degree of market inefficiency. The results from this study also show that past information of trading volume can be used to improve the prediction of price volatility. Therefore, regulators and traders could include past information of trading volume of SET50 index futures in tracking and monitoring the market volatility level and the investment risk in order to make a timely decision.

Key words: futures returns; futures trading volume; GARCH; GMM and sequential information arrival

1. Introduction

The relationship between trading volume and returns of financial assets has been studied in various financial markets for a long time, as trading volume was used to be a proxy of information flow to the financial markets. The early researches about this relationship can be grouped into 2 main categories which are the positive relationship between trading volume and returns (or price change) and the positive relationship between trading volume and price volatility (measured by the absolute returns or the absolute of price change). The positive relationship between trading volume and returns implies that trading volume is higher when the price increases than when the price decreases as stated in the "costly short sales hypothesis" (Karpoff, 1988). The hypothesis suggested that the positive correlation between trading volume and returns is a result of institutional rules that raise the cost of selling short. The costly short sales hypothesis was also supported by many previous empirical studies (Karpoff, 1987) in both stock and bond markets, where short position was more costly than long position. However, this relationship was absent in futures markets, which have no short sale constraint. This study will investigate the relationship between trading volume and returns in Thai stock index futures markets with the focus on the relationship between trading volume and price volatility (absolute returns) in futures market. The relationship between trading volume and price volatility was generally explained by two leading hypotheses, the mixture of distribution hypothesis (MDH) and the sequential information arrival hypothesis (SIA).

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