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Information, hedging demand, and institutional investors: Evidence from the Taiwan Futures Exchange

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ABSTRACT

This paper examines the effect of hedging demand by various types of institutional investor on subsequent returns and volatility. Using data from the Taiwan Futures Exchange, empirical results indicate that the hedging demand of foreign investors has a significant negative impact on subsequent returns and volatility. In addition, trading strategies based on the extreme hedging demand of foreigners are positively correlated with trading performance. Furthermore, there is evidence to show that returns (volatility) also affect the subsequent hedging demand of foreign investors, suggesting a feedback relation. Finally, the hedging demand of foreign investors has a greater impact on subsequent returns and volatility after global financial turmoil. Accordingly, this paper concludes that foreign investors are informed hedgers in the Taiwan futures market, especially after global financial turmoil.

1. Introduction

This paper examines the effect of hedging demand by various types of institutional investor on subsequent returns and volatility. A growing body of literature investigates investor flows of institutional investors in stock markets (e.g., Brennan and Cao, 1997; Bae et al., 2008; Boyer and Zheng,

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2009; Bailey et al., 2009). Furthermore, previous research examines the impact of trading demand of speculators and hedgers on returns (e.g., Wang, 2003) and volatility (e.g., Wang, 2002). In particular, de Roon et al. (2000) provide evidence that hedging demand affects subsequent futures and spot returns. Despite this evidence, the existing literature does not consider how hedging demand by various types of institutional investor affects subsequent returns and volatility for futures and spot markets. Hence, this paper seeks to address this gap in the literature.

The relationship between institutional investment flows and stock returns receives much attention. For stock markets, Grinblatt and Keloharju (2000) and Froot et al. (2001) find that the relationship between foreign investment flows and host-country stock returns is positive, thereby implying that foreign investors possess more information on local stocks than domestic investors. Boyer and Zheng (2009) report that the investor flows of foreigners and mutual funds have a significant impact on stock returns at the quarterly frequency. For the option market, Chang et al. (2009) find that foreign investment flows have a greater predictive power with regard to near-the-money and middle-horizon options than other institutional investment flows.[1] While previous literature investigates the impact of institutional investment flows regarding stock and option markets on stock returns, no work examines the impact of institutional investor flows of futures markets on returns and volatility. Since April 7, 2008, the Taiwan Futures Exchange (TAIFEX) has published the trading volume and open interest for foreigners, proprietary traders and mutual funds. These unique data provide an opportunity to examine this issue.

This paper uses hedging demand as a proxy of investor flows and examines the effect of institutional investor hedging demand on subsequent returns and volatility. Institutional investors can be regarded as informed hedgers if their hedging demand is significantly negative correlated with subsequent returns (Working, 1953) as well as volatility (Hellwig, 1980; Wang, 1993). Empirical results show that the hedging demand of foreigners is significantly negatively related to subsequent futures and spot returns. In contrast, the hedging demands of proprietary traders and mutual funds are insignificantly negatively correlated with subsequent futures and spot returns. Furthermore, the hedging demand of foreigners is significantly negatively correlated with subsequent futures and spot volatility. On the contrary, the hedging demands of proprietary traders and mutual funds are significantly positively correlated with subsequent futures and spot volatility. In addition, the total cumulative futures and spot returns based on the extreme hedging demand of foreigners are positive and largest over the holding period. Furthermore, there is evidence that returns (volatility) also affect the subsequent hedging demand of foreign investors, suggesting a feedback relation. Finally, the hedging demand of foreign investors has more impact on subsequent returns and volatility after global financial turmoil. Overall, this paper concludes that foreign investors are informed hedgers in the Taiwan futures market, especially after global financial turmoil. The results are consistent with Chou and Wang (2009), in that foreign investors are better informed than other institutional investors.[2]

Our contribution to the existing literature is two-fold. First, to our knowledge, this is the first study of the effect of institutional investment flows with regards to hedging demand on subsequent returns and volatility in futures markets. This paper complements the existing literature regarding the investor flows of institutional investors in the derivatives markets. Second, this paper relates to the investment community that the extreme hedging demand of foreign investors is positively correlated with trading performance. Intraday data with trader types is not available for practitioners in the TAIFEX. Nevertheless, the TAIFEX publishes the daily trading activity for various types of institutional traders. As the data used in this study are daily data and are available for practitioners, strategic traders can develop a trading strategy according to the extreme hedging demand of foreign investors.

[1] Chang et al. (2009) examine the predictive power of the put and call positions of different types of traders in the Taiwan option market.

[2] Chou and Wang (2009) explore the strategic order-splitting behavior and order aggressiveness of different types of traders using a dataset of the Taiwan Futures Exchange. This paper differs from Chou and Wang (2009), in that whereas Chou and Wang (2009) investigated the strategic order-splitting behavior using a unique intraday data, this study uses daily data to investigate the effect of hedging demand by various types of institutional investors on subsequent returns and volatility.