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The trading behavior of foreign, domestic institutional, and domestic individual investors: Evidence from the Taiwan stock market ☆

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ABSTRACT

In this paper, we apply the threshold cointegration model of Hansen and Seo (2002), incorporating differences in the nonlinear behavior of investors across regimes. An examination of the trading behavior of foreign, domestic institutional, and domestic individual investors in Taiwan revealed no predominance among the three types of investors. When the market was near equilibrium, the purchases of domestic individual investors positively impacted stock prices. This finding, which is consistent with Choe et al. (2005), suggests that domestic individual investors have an edge in investment performance over other types of investors. However, when the market departed substantially from equilibrium, the purchases of foreign and domestic institutional investors predicted a rise in stock prices. On the other hand, domestic individuals traded at worse stock prices; these prices tended to fall (rise) after the purchase (sale).

1. Introduction

The debate about whether domestic or foreign investors have an information advantage over the other is far from over. One argument is that foreign investors are better traders because of their presumed information advantage. Grinblatt and Keloharju (2000), Seasholes (2000), and Froot and Ramadorai (2008) interpreted the predictive power of information flow as providing foreign investors with an information

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advantage On the other hand, Brennan and Cao (1997), Hau (2001), Dvorak (2005), and Choe et al. (2005) reported the opposite. Brennan and Cao (1997) argued that an information disadvantage on the part of foreign investors can turn them into trend followers, buying when the market rises and selling when it falls. Dvorak (2005) attributed this inferior trading performance of foreign investors to an information disadvantage, whereas Choe et al. (2005) attributed it to poor timing of their trades.

Recent studies further explore the possible factors that might reconcile the contradictory findings. For example, Choe et al. (2005) find that whether foreign investors have better information or not is strongly related to their trading size: they were at a disadvantage for medium and large trades but not for small trades. Agarwal et al. (2009), who classified executed orders as initiated and non-initiated, found that foreign investors underperformed domestic investors for non-initiated orders but outperformed them for initiated orders. Moreover, they attributed the overall underperformance of foreign investors to aggressiveness rather than to an information disadvantage or timing of trades. Taechapiroontong and Suecharoenkit (2011) found that foreign investors performed best when buying medium- and large-cap stocks during a bull market. Bae et al. (2011) attributed foreign investors' superior performance to their ability to discern whether a company's stock was good or bad.

The evidence suggests that foreign investors prefer large-cap stocks with high dividends, individual investors prefer small-cap, high-leveraged, low-dividend-paying stocks, and local institutions tend to buy small-cap, low-leveraged stocks. Institutional investors, both foreign and domestic, behave like short-term momentum traders by pursuing growth (value) stocks, whereas individual investors trade like contrarians.

Nevertheless, the classification of stock prices or firm size is subject to arbitrarily chosen threshold values that can create bias. We therefore used the threshold cointegration model developed by Hansen and Seo (2002) to investigate threshold effects and non-linear dynamic behavior in the Taiwan stock market. We empirically examined the existence of threshold cointegration in the trading behavior of foreign, domestic institutional and individual investors. We then applied the threshold cointegration model to examine the causal relationships between the stock price index and the trading behavior for different types of investors.

For our study, we selected a sample of stocks listed on the Taiwan stock market to contrast the trading behavior and performance of different types of investors. Our reasons for selecting the Taiwan stock market are as follows. First, whether to open their domestic market to foreign investors remains a topic of controversy for governments of countries with emerging markets. Some might argue that openness to foreign investors enhances the efficiency of domestic stock markets, whereas others have been concerned that the induction of sophisticated foreign investors sweeps all the profits away from domestic investors. Second, ever since the abolishment of the Qualified Foreign Institutional Investor (QFII) system, foreign investors have increased their ownership of firms listed on the Taiwan stock exchange, which has increased their influence on both individual stock prices and overall market momentum.[1] This makes it worthwhile to investigate the trading behavior and performance of different types of investors.

Our main findings can be easily summarized as follows. First, neither foreign, domestic, nor individual investors were found to be predominant in the market. Second, when the market is around equilibrium, domestic individual investors' buy-in causes the stock prices to rise, consistent with the finding of Choe et al. (2005) and Taechapiroontong and Suecharoenkit (2011) that individual domestic investors had an edge over other types of investors with respect to trading performance. However, when the market departed markedly from equilibrium, purchases by foreign and domestic institutional investors had a positive impact on stock prices, but the trading of individual investors had a negative impact on them.

An important difference between our study and prior ones can be briefly summarized as follows. First, Bae et al. (2011) noted that both foreign and local institutional investors behave like short-term momentum traders, whereas individual investors trade like contrarians. This conclusion is similar in spirit to our finding that when the market was not in equilibrium, institutional investors' purchases had a positive impact on stock prices, whereas individual investors' purchases had a negative impact on them. Second, like Brennan and Cao (1997) and Seasholes (2000), we examined foreign investors' trading to judge whether they have been trend followers and to determine from the predictability of their trading on subsequent stock prices whether they have an information advantage. Nevertheless, because we recognize that the buying and selling behavior of

[1] The percentage of total trades on the Taiwan stock market made by foreign investors increased from 2.41% in 1999 to 18.40% in 2006 (see Table 1 for detailed statistics).