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Stock holding decisions of foreign investors in emerging stock markets: A case study in Vietnam

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C H R O N I C L E

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A B S T R A C T

This study investigates the behavior of foreign investors' investment decisions in Vietnam stock market, an emerging stock market. The study employs time series quarterly data over the period from quarter 1, 2005 to quarter 4, 2018 which extended before and after the global financial crisis in 2008. The results indicate that foreign investors were positive feedback traders in Vietnam stock market. Concurrently, the findings of GARCH model also reveal that foreign investors' investment decisions in Vietnam stock market were influenced by unusual past shocks. However, these decisions lack the stability and periodicity. These are some empirical evidence on foreign investors' behavior of investment decisions in Vietnam stock market. These results also provide the authorities in Vietnam a basis to develop suitable policies in order to comprehensively restructure the stock market to aim the international integration and increasing the capacity of capital attraction for foreign investors.

1. Introduction

Vietnam stock market was officially launched in 2000. Despite being young, it has gradually showed its importance in providing middle-term and long-term capital for the economy. In addition, this is an emerging stock market which attracts significant amount of attention from both local and foreign investors. Although Vietnam government states that foreign investors are subject to a cap of 49% ownership at the maximum in public firms, they attend to comprehensively reform the stock market in the aim of international integration. Especially, Vietnam government believes that it is essential to improve policies in order to raise foreign capital in stock market because attracting investment from foreign investors is an indispensable trend of stock market in the process of international integration. Therefore, Vietnam stock market is and will be paid attention by many foreign investors. In emerging stock markets, the value traded by foreign investors is still limited meanwhile the majority of trading are domestic investors (Park et al., 2019). However, with the trend of international integration, the traded value of foreign investors is increasing. Their participation will bring many benefits to emerging stock markets. For example, emerging stock markets can diversify approached capital sources and attract great capital from foreign investors. The participation of foreign investors can also bring local investors more opportunities to experience and then improve their investment capacities (Bekaert et al., 2017). On the basis of stocking holding decisions of foreign investors, the local investors can realize potential investment opportunities. In other words, the participation of foreign investors helps them reduce impulsive investment and aim to more professional investing techniques. Despite the above benefits, this participation also brings some disadvantages to emerging stock markets. For instance, speculative trading of foreign investors may cause instability in emerging stock markets (Samarakoon, 2009). The fluctuation in foreign capital flows may be the reasons for financial crisis in emerging economies (Ahmed, 2017). From the perspectives of local investors, they are afraid of competing against foreign investors

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(Park et al., 2019). In fact, local investors seem to be more comfortable to invest in familiar markets excluding foreign investors (Coval & Moskowitz, 1999). On the other hand, foreign investors are superior to local ones with their greater capital as well as investing experience in sophisticated stock markets (Vo, 2017), and more specially, their advantage to access to many essential international information sources (Kang et al., 2016). To foreign investors, investing in emerging stock markets is more advantageous than doing in their own countries. Furthermore, this investment helps them diversify the portfolio and distribute risks (Vo, 2017). Emerging stock markets are even safe places during global financial crisis because they are less affected by the crisis (due to its limited international economic integration) or affected at a certain lag. However, when participating in emerging stock markets, foreign investors have many difficulties due to the limit in accessing to local information (Dvořák, 2003). Thus, they tend to consider and choose thoroughly before making a stock holding decision in emerging stock markets. In emerging stock markets, foreign investors usually have behavior of positive feedback trading (Froot et al., 2001; Karolyi, 2002; Kim & Wei, 2002; Ülkü & Weber, 2013). It means that foreign investors have a tendency to decide to hold stocks when the market increases and sell them during the fall. Behavior of positive feedback trading is affected by shocks in equity market, especially in the period of financial (Karolyi, 2002). Behavior of crowd investment (i.e. investors observe others' behaviors to make decisions) can increase the instability in stock market.

In addition to the behavior of positive feedback trading of foreign investors, researchers have also paid attention on other topics. Brennan and Cao (1997), Brennan et al. (2005) and Kang et al. (2016) investigated the phenomenon of information asymmetry to foreign investors during their participation in stock market. Jeon and Moffett (2010) analyzed the role of foreign investors in increasing the rate of return of stock market. Meanwhile, He and Shen (2014) investigated the role of foreign investors in informational efficiency of stock price in equity market. In fact, there have been only few empirical studies on behavior of positive feedback trading of foreign investors in emerging stock markets. Although behavior of stock holding decisions of foreign investors plays an important role in expressing the international integration ability of stock market (Bartram et al., 2015), almost none of studies analyzed the periodicity of this behavior as well as the behavior when being affected by unusual shocks in emerging stock markets. Hence, this paper analyzes the fluctuation of behavior of stock holding decisions of foreign investors in Vietnam stock market. These decisions will be measured by the net value traded of foreign investors which is an important indicator representing for behavior of their participation in the market (Llorente et al., 2002). The paper will be conducted to find out answers to the following questions: (1) Does positive feedback trading behavior of foreign investors really exist in Vietnam stock market?; (2) Are stock holding decisions of foreign investors affected by unusual past shocks?; (3) Are stock holding decisions of foreign investors periodic?

In the rest of the paper, we highlight the fluctuation in behavior of stock holding decisions of foreign investors in Vietnam stock market, then give answers to the questions mentioned above.

2. Data and Methodology

2.1. Data Collection

Data of net value traded of foreign investors (FI) which represents for stock holding decisions of foreign investors in the period from quarter 1, 2005 to quarter 4, 2018 are collected from Ho Chi Minh Stock Exchange. In Vietnam, there are two stock exchanges which are in Hanoi and Ho Chi Minh. However, Hanoi Stock Exchange is quite small in comparison with Ho Chi Minh Stock Exchange which is the first centralized exchange in Vietnam. Thus, data from Ho Chi Minh Stock Exchange have been used to represent for Vietnam stock market. Data have been collected quarterly from State Securities Commission of Vietnam (SSC). Although Vietnam stock market was officially established in 2000, it was not until 2005 that foreign investors started trading in the market. Therefore, data over this period are chosen for the paper. More specially, it is the time when global financial crisis occurs, so it helps clarify foreign investors' behavior of stock holding decisions during the difficulties.

2.2. Methodology

GARCH(1,1) model is developed to analyze conditional variance of forecast error. GARCH(1,1) model is as follows:

$$\sigma_t^2 = \gamma + \alpha\sigma_{t-1}^2 + \beta\varepsilon_{t-1}^2 \quad (1)$$

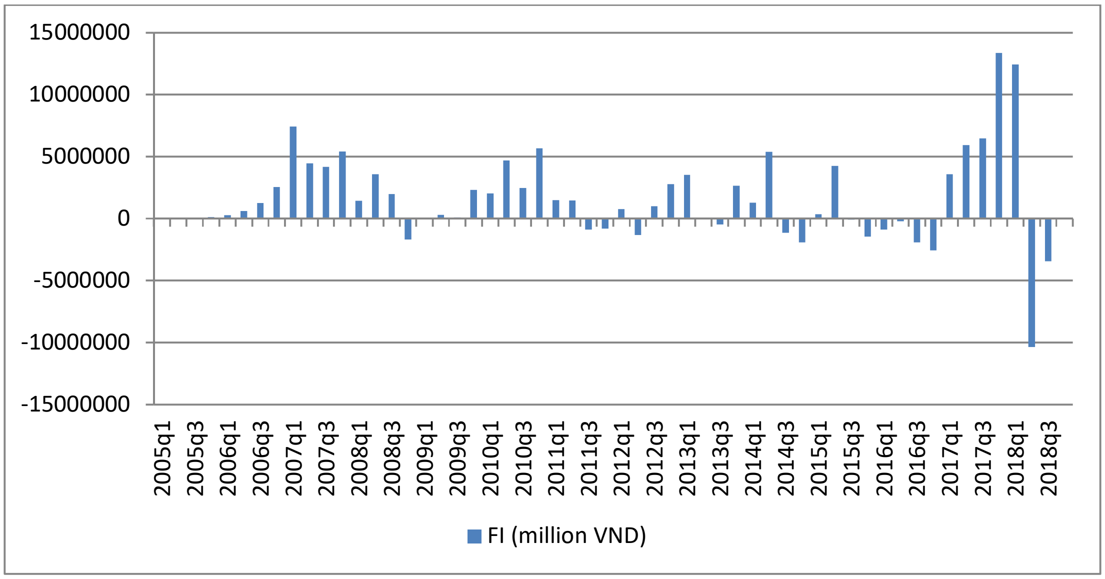
where σ^2 is conditional variance and ε^2 is error, or called ARCH model. We utilize GARCH(1,1) model for this paper because this is a simple one and can overcome some drawbacks of ARCH(p) model (Bollerslev, 1986).

3. Empirical Results

3.1. Descriptive Data

On 28/7/2000, Vietnam stock market officially started its operation. This is an emerging market with many limits in attracting equity from foreign investors. Fig. 1 reports that the net value purchased by FI was high in the period from 2006 to 2007 when

Vietnam stock market was growing fast. This confirms behavior of positive feedback trading. Further, the state of high net value purchased by FI lasted until the beginning of 2008. Although it was time when the global financial crisis occurred, FI still reached the value of net purchase. That indicates that during global financial crisis, foreign investors tend to transfer capital to emerging markets like Vietnam. Clearly, they hope that an emerging market with a small scale will be affected by the crisis at a certain lag. However, FI fluctuated constantly and transformed to net sales right after that. It can be seen that during the period of global financial crisis, foreign investors still hesitated to invest in Vietnam stock market, tended to hold Blue chip in short term and minimized investment in high-risk stocks. State of net sales occurred a lot in the period 2011 to 2012 and in 2016 because it was time stock market decreased dramatically and the economy experienced many predicaments. Hence, it can be asserted that positive feedback trading behavior of foreign investors in Vietnam stock market was clearly expressed during the studied period. In other words, foreign investors have tendency to hold stocks when Vietnam stock market are growing and sell them when there is a fall. This is interestingly in line with previous findings of Froot et al. (2001), Karolyi (2002), Kim and Wei (2002), Ülkü and Weber (2013). As a result, the first question is answered as follows: Positive feedback trading behavior of foreign investors really exists in Vietnam stock market. Nevertheless, that FI fluctuates continually proves the instability in stock holding of foreign investors in Vietnam stock market. Recently, although price of stock held by foreign investors improves considerably, FI is still unstable.



Source: SSC.

Fig. 1. Net value traded of foreign investors (FI) in Vietnam stock market

3.2. Dickey-Fuller test

An augmented Dickey Fuller (ADF) test suggested by Dickey and Fuller (1979) is used to test stationarity of data series. Hypothesis H_0: the data series is not stationary.

Table 1
Dickey-Fuller test

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-5.043	-3.573	-2.926	-2.598

p-value = 0.000***

Note: *** indicates significance at the 1% level.
Source: Author's computed.

Table 1 indicates that FI is stationary at database series I(0), so we utilize data series FI to test ARCH effects and GARCH estimation model.

3.3. ARCH effects

We employ LM test to examine ARCH effects in the model (1).
Hypothesis H_0: No ARCH effects.

Table 2
LM test

lags(p)	chi2	df	Prob > chi2
1	24.281	1	0.000***

Note: *** indicates significance at the 1% level.
Source: Author's computed.

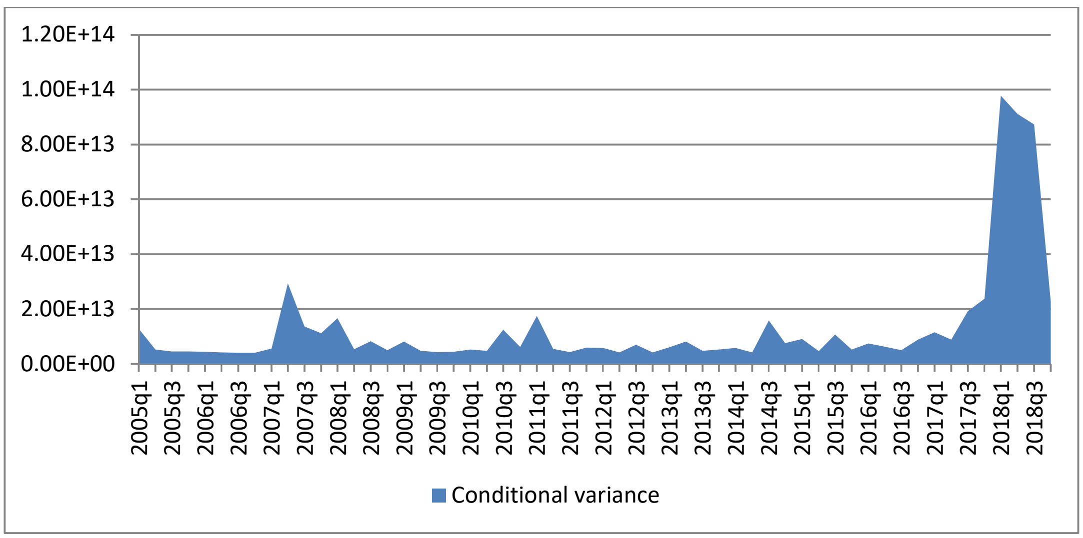
Table 2 reports there are ARCH effects in the model (1).

3.4. GARCH estimation model

Table 3
GARCH estimation model

Variable	Coef.	Prob.
ARCH(1)	0.593	0.050**
GARCH(1)	0.090	0.690
Constant	925215.6	0.044**

Note: ** indicates significance at the 5% level.
Source: Author's computed.



Source: Author's computed.

Fig. 2. Conditional variance

Table 3 indicates that ARCH effects in the model (1) is statistically significance at the 5% level with the regression coefficient of 0.593. In other words, forecast error significantly influences conditional variance, which indicates that stock holding decisions of foreign investors was influenced by unusual past shocks. This is intriguingly in line with previous finding of Karolyi (2002). During global financial crisis (the period of 2007 to 2008), FI still gets net purchase value. It reports that despite shocks caused by global financial crisis, foreign investors still decide to hold stocks in Vietnam stock market. However, due to the long-lasting instability of global financial crisis, they decide to sell their stocks right after that. State of net sales occur more in the period of 2011 to 2012 and in 2016 when stock market decreased dramatically and the economy experienced many predicaments. Thus, during the time of economic predicaments, value of stock held by foreign investors are not static, so we can conclude that foreign investors still hesitate to invest in Vietnam stock market. With recent prosperity in Vietnam economy, although value of stock held by foreign investors increases considerably, it still lacks stability. This instability in stock holding decisions of foreign investors is understandable because Vietnam stock market is still young and contains many risks and limited in policies to attract capital into the market. More specially, there are great fluctuations in the local and global macro-economy over this period. Consequently, the answer to the second question is given as follows: stock holding decisions of foreign investors in Vietnam stock market is influenced by unusual past shocks. With this database, we cannot find the statistical significance of GARCH effects, so we can conclude that stock holding decisions of foreign investors in Vietnam stock market is not periodic and unstable. The reasons are that Vietnam is a changing emerging market and foreign investors still hesitate in investment. Hence, the third question is answered as follows: stock holding decisions of foreign investors in Vietnam stock market is not periodic.

4. Conclusions

The current paper has employed GARCH(1,1) model to analyze behavior of stock holding decisions of foreign investors in Vietnam stock market. The findings have indicated that stock holding decisions of foreign investors in Vietnam stock market fluctuated constantly and lack stability. It can also give answers to three raised questions as follows: (1) Positive feedback trading behavior of foreign investors really exists in Vietnam stock market.; (2) Stock holding decisions of foreign investors in Vietnam stock market is influenced by unusual past shocks; (3) Stock holding decisions of foreign investors in Vietnam stock market is not periodic. As a result, it is necessary to develop Vietnam stock market in the stable and steady direction in order to improve the ability to attract investment from foreign investors. It can be concluded that the paper fulfills its original purposes. On the basis of the paper, the authorities in Vietnam can develop suitable policies in order to restructure the stock market in the direction of international integration and increasing the capacity of investment attraction from foreign investors. Its findings provide first empirical evidence revealing stock holding decisions of foreign investors in Vietnam stock market. These findings also have strong implications for managers concerned in restructuring the stock market in the direction of international integration and increasing the capacity of investment attraction from foreign investors. Some of implications are suggested as follows:

-Vietnam government should keep track well of world economic situations and improve forecast on world economy. Then, it provides the basis to apply suitable policies to foster the stock market in the direction of international integration and increasing the capacity of investment attraction from foreign investors.
- Vietnam government should comprehensively reform the stock market to develop the stock market stably and steadily; improve publicity and transparency of the market to assure fairness among foreign investors in approaching information; encourage enterprises to start securities listing and publicize financial statements with the word standard.
- Vietnam government should keep developing the legal framework and reforming administrative formalities to help foreign investors easily approach Vietnam stock market.
- State Securities Commission of Vietnam should coordinate with other concerned authorities to complete legal documents in order to comprehensively develop the stock market in terms of quality and quantity. These documents need developing on the basis of the reality and international practice. Concurrently, international cooperation should also be enhanced in the stock market.
- State Securities Commission of Vietnam should improve management efficiency, supervise the stock market and strictly handle violations in the stock market. That can help obtain foreign investors' faith.
- Vietnam stock market should increase supply, improve its quality and diversify securities products. Thus, the number of enterprises with big trading scale in stock market needs growing to bring more quality supply. At the same time, new products should be always developed, especially derivative products. That brings foreign investors more choice in investing as well as helps prevent risks. Also, the process of capitalizing state enterprises and combining the capitalization with stock trading in the market should be fostered so that it increases the number of enterprises with big trading scale in stock market and simultaneously improves the scale of stock market. It will raise the number of quality securities symbols to bring foreign investors more choice and then attract more investment from them.

The paper succeeded in finding first empirical evidence on behavior of stock holding decisions of foreign investors in Vietnam stock market. However, it has some restraints when factors which may influence behavior of stock holding decisions of foreign investors in Vietnam stock market are still not analyzed. That will be an interesting trend for future studies.

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