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The Impact of Foreign Ownership on Stock Price Volatility: Evidence from Thailand

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Abstract

This paper examines the impact of foreign ownership on stock price volatility in an emerging market, namely, Thailand. The data were obtained from SETSMART, the database of the Stock Exchange of Thailand (SET). After removing financial firms, banks, and insurance companies as well as filtering outliers, the final sample covers 1,755 firm-year observations from 371 nonfinancial firms listed on the SET over the five-year period from 2014 to 2018. The regression model consists of stock price volatility, measured by two methods, as the dependent variable, foreign ownership as the main independent variable, and firm characteristics including firm size, leverage, market-to book ratio, and stock turnover as the control variables. The pooled OLS, fixed effects, and random effects estimations are employed to examine the relationship between foreign ownership and stock price volatility. The results reveal that foreign ownership has a negative and significant impact on stock price volatility. The two-stage least squares (2SLS) are also performed to address potential endogeneity problem. The results still indicate a negative relationship between foreign ownership and stock price volatility. Taken together, the findings of this study suggest that foreign investors help reduce stock price volatility and thus stabilize share price in the Thai stock market.

Keywords: Foreign Investor, Foreign Ownership, Volatility, Thailand

JEL Classification Code: G10, G30, G32

1. Introduction

The presence of foreign investors in emerging countries has increased significantly over recent years as a result of global economic and financial liberalization. According to Li, Nguyen, Pham, and Wei (2011), stock market liberalization is one of the most important policies for foreign investors to tap into emerging markets. Prior studies (e.g., Stulz, 1999; Bekaert & Harvey, 2000; Bekaert, Harvey, & Lundblad, 2001; Doidge, Karolyi, & Stulz, 2004; Li et al., 2011) document that foreign investors provide local stock markets with several benefits such as increased supply of capital, reduced cost of capital, higher market efficiency, liquidity enhancement, stock price stabilization, higher information disclosure, and better corporate governance. However, higher participation of foreign investors could be associated with higher volatility due to speculative short-term behavior of international capital (Stiglitz, 1999; Bae, Chan, & Ng, 2004; Chen, Du, Li, & Ouyang, 2013). The exposure of local stock markets to higher volatility is a pivotal concern for investors because it can bring about significant losses. According to Naufa and Lantara (2017), there was a strong link between high stock volatility and the Asian financial crisis in 1997 and the global financial crisis in 2008. Moreover, the authors argue that foreign ownership is believed to be a major cause of extreme volatility in emerging markets.

Previous studies examining the impact of foreign investors on stock price volatility have shown mixed results. On the one hand, Wang (2007), Li et al. (2011), Wang (2013), Vo (2015), Chiang and Chan (2017), and Naufa, Lantara, and Lau (2019) find that stock price volatility declines as foreign investors hold more shares. On the other hand, Lai, Lou, and Shiu (2008), Chen et al. (2013), and Naufa and Lantara (2017) argue that foreign investors are more likely to aggravate stock return volatility. Therefore, additional evidence is still needed to shed more light on this ongoing debate.

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This paper aims to investigate the impact of foreign ownership on stock price volatility in an emerging country, namely, Thailand. The Thai capital market is an interesting venue to study this issue for the following reasons: Firstly, the features of stock market in Thailand are in sharp contrast with those of developed countries. Compared to stock markets in developed countries, the Thai stock market is substantially smaller, less liquid, riskier, and, notably, more volatile. Stock volatility is an important factor for foreign investors to consider whether to invest in local markets. As argued by Rhee and Wang (2009), foreign investors can be discouraged from making investments in emerging markets if stock price is too volatile. Hence, an investigation into volatility of stock price in Thailand is essential on its own merit. Secondly, foreign investors have played an increasing role in the Thai stock market. During the period of this study from 2014 to 2018, the annual trading value by foreign investors in the Stock Exchange of Thailand (SET) has increased tremendously from 2.23 trillion THB (21.91% of total trading value) to 5.13 trillion THB (37.11% of total trading value). Moreover, a recent study by Khanthavit (2020) document that, in 2019, 30% of total shares in the SET were held by foreign investors while 33.22% and 11.57% were held by local individual investors and local institutional investors, respectively. Thirdly, research on the impact of foreign ownership on stock price volatility using the data from Thailand has barely been carried out despite a growing importance of foreign investors in the Thai stock market.

With the increasing role of foreign investors in the Thai capital market, we examine the effect of foreign ownership on stock price volatility by using a sample of 371 nonfinancial firms listed on the SET over the period 2014-2018. Our results demonstrate that there is a negative relationship between foreign ownership and stock price volatility after controlling for firm size, leverage, market-to-book ratio, and stock turnover and correcting for potential endogeneity problem. Collectively, the results suggest that foreign investors help reduce stock price volatility and thus stabilize share price in the Thai stock market.

This paper contributes to the existing literature in the following ways: Firstly, the finding of the current paper reconciles the mixed results regarding the impact of foreign investors on stock price volatility in emerging markets by showing that foreign investors reduce stock price volatility. Secondly, the paper offers better insights into how foreign investors affect stock price volatility in the Thai stock market where the research in relation to this issue has rarely been executed. Thirdly, the finding serves as a springboard for future investigations into the roles of foreign investors in other emerging markets.

2. Literature Review

The empirical evidence on the effect of foreign investors on stock price volatility is mixed. Several studies document that foreign investors reduce stock price volatility. For example, Wang (2007) find that foreign institutional investors have a negative effect on stock market volatility in Indonesia and Thailand during the Asian crisis. Umutlu, Akdeniz, and Altay-Salih (2010) investigate whether the degree of financial liberalization affects volatility of stock returns in 25 emerging markets and document a negative relationship between the degree of financial liberalization and volatility. The authors provide the reason that the broadened investor base with foreign investors helps improve the accuracy of public information and thus reduces volatility. Li et al. (2011) investigate the impact of large foreign ownership on stock return volatility in 31 emerging markets. The authors find a negative association between large foreign ownership and stock return volatility, suggesting a stabilizing role of large foreign investors in local stock markets. Examining the relationship between foreign ownership and stock volatility in Indonesia, Wang (2013) documents that foreign ownership is negatively related to future volatility in the periods before, during, and after the Asian financial crisis. A study by Vo (2015) in Vietnam stock market over the period 2006 to 2012 also points out that foreign investors help reduce stock price volatility and hence stabilize share price. Chiang and Chan (2017) investigate whether foreign investors have any significant influence on stock return volatility in Taiwan stock market. The authors find that foreign ownership is negatively related to stock volatility, thus showing a stabilizing role of foreign investors. A recent study by Naufa et al. (2019) in six ASEAN countries also demonstrates that stock return volatility diminishes as foreign investors hold larger equity ownership, particularly during and after a crisis.

Some literature suggests that foreign investors helps lower stock volatility through better information disclosure and corporate governance. According to Khanna and Palepu (1999), foreign investors are mainly institutional investors who have high potential to effectively monitor corporate decisions, thereby strengthening corporate governance of local firms. In addition, Stulz (1999) and Doidge et al. (2004) argue that foreign investors are likely to encourage and provide incentives to invested firms to raise the quality of information disclosure. Similarly, Li et al. (2011) and Vu (2020) document that foreign investors help improve the quality of information disclosure and enhance corporate governance in domestic stock market. Consequently, stronger corporate governance mechanism together with higher quality of information environment lead to lower stock price volatility.

In contrast, a number of studies document that foreign investors aggravate stock price volatility. For example, Lai et al. (2008) demonstrate that daily trading by foreign investors increases stock price volatility in Taiwan stock exchange. Chen et al. (2013) investigate the effects of foreign institutional ownership on stock return volatility in China over the period 1998 to 2008 and find that foreign institutional investors increase stock return volatility of Chinese firms. A study by Naufa and Lantara (2017) in Indonesia also points out that foreign investors exacerbate stock return volatility. In a relevant study, Vu, Phan, and Dang (2020) examine the relationship between ownership structure and systematic risks of listed companies in Vietnam stock market during the period from 2010 to 2017 and find that foreign ownership is positively related to systematic risks, implying that foreign investors increase stock price volatility. Nevertheless, many studies have not found any significant influence of foreign investors on stock price volatility. Bekaert and Harvey (1997) find that the relationship between stock returns in 20 emerging markets and world market significantly increases as a result of capital market liberalization but do not detect any significant increase in stock price volatility of local stock markets. Similarly, Kim and Singal (2000) examine changes in stock returns and volatility around the openings of 20 emerging markets and find that stock returns increase significantly without simultaneous increase in volatility.

With regard to foreign investors in Thailand, a study by Thanatawee (2019) examining the effect of foreign institutional ownership on stock liquidity in the Stock Exchange of Thailand (SET) over the period from 2011 to 2015 reveals that most of foreign investors in the Thai stock market are institutional investors who tend to adopt a buy-and-hold strategy, thereby impairing stock liquidity. As argued by Rhee and Wang (2009), low liquidity is a main source of high stock volatility in emerging markets. According to these arguments, we expect that foreign investors exacerbate stock price volatility in the Thai stock market and therefore propose the following hypothesis:

H1: *Foreign ownership is positively related to stock price volatility.*

3. Research Methods

3.1. Data and Sample Selection

This study examines a sample of nonfinancial companies on the Stock Exchange of Thailand (SET) over the period from 2014 to 2018. We exclude banks, financial companies, and insurance companies due to their different business operations and financial statements from nonfinancial firms. The data for stock price volatility, foreign ownership, and control variables were retrieved form SETSMART, the official database of the SET. The initial sample consists of 2,025 firm-year observations from 405 firms. To alleviate the effect of outliers, we winsorize all variables at the upper and lower 1%. After removing firms with incomplete data and filtering out outliers, the final sample is a balanced panel dataset comprising 1,755 firm-year observations from 371 nonfinancial firms over a 5-year period.

3.2. Model Specification

Similar to Chen et al. (2013) and Vo (2015), we estimate the relationship between foreign ownership and stock price volatility as follows:

$$\begin{aligned} VOL_{i,t} = {} & \alpha + \beta_1 * FOWN_{i,t} + \beta_2 * SIZE_{i,t} + \beta_3 * LEV_{i,t} \\ & + \beta_4 * MTB_{i,t} + \beta_5 * TURN_{i,t} + \text{Industry dummies} \\ & + \text{Year dummies} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The dependent variable is the annual stock price volatility . It is calculated by two approaches following Bae et al. (2004), Chen et al. (2013) and Vo (2015). The first approach is the natural logarithm of squared daily return and the second approach is the standard deviation of daily stock return:

$$VOL1_{i,t} = \frac{1}{n}\sum_{1}^{n} \ln(return_{j,k})^2 \quad (2)$$

$$VOL2_{i,t} = \sqrt{\frac{1}{n-1}\sum_{1}^{n}(return_{j,k} - MEAN_{i,t})^2} \quad (3)$$

Where $return_{i,k}$ is the daily return of stock i in day k; n is the number of trading days of stock i in a year; $MEAN_{i,t}$ is the annual average of stock returns of firm i in year t.

The main independent variable is foreign ownership (FOWN), the proportion of shares held by institutional and individual foreign investors. The control variables are firm characteristics that have possible effects on stock price volatility and have been regularly employed by prior literature. These variables consist of firm size (SIZE), financial leverage (LEV), market-to-book ratio (MTB), and stock turnover (TURN). SIZE is the logarithm of total assets. Bae et al. (2004), Li et al. (2011), Chen et al. (2013), and Chiang and Chan (2017) find that stock of larger firms is less volatile. LEV is the ratio of total debt to total assets. Wei and Zhang (2006), Li et al. (2011), and Vo (2015) document that financial leverage is positively correlated with stock volatility. MTB is the stock price divided by book value per share. Vo (2015) find that there is a negative and significant relationship between market-to-book ratio and stock price volatility. TURN is the average number of daily shares traded over a year divided by the number of shares

outstanding. Stock turnover is found to be positively related to stock return volatility (Li et al., 2011; Chen et al., 2013; Chiang & Chan, 2017). We also include industry dummies to control for industry effects. The SET classifies listed companies into eight industries. These are agriculture and food, consumer products, financials, industrials, property and construction, resources, services, and technology. Finally, we add year dummies to control for the effects of macroeconomic variations.

4. Empirical Results

4.1. Descriptive Statistics

Table 1 presents the descriptive statistics of variables. The data shows that the mean values of stock price volatility measured by VOL1 and VOL2 are 0.519 and 2.281, respectively. The mean foreign ownership (FOWN) is 13.9%, with the minimum level of 0% and maximum level of 49% (The limit of foreign ownership in Thailand). The level of foreign ownership in Thailand is similar to 15.58% and 13.61% in Vietnam documented by Vu (2020) and Vu et al. (2020), respectively. In addition, the sample data shows that, on average, firm size (SIZE) is 9.705 (the logarithm of total assets); financial leverage (LEV) is 37.8%; market-to-book ratio (MTB) is 2.435, and stock turnover (TURN) is 0.512.

4.2. Tests of Differences in Stock Price Volatility

In this section, we partition the sample into high and low groups by the mean values of independent variables and compare the stock price volatility between both groups. The results in Table 2 reveal that firms with higher foreign ownership (FOWN) have significantly lower stock price volatility measured by VOL1 and VOL2. These findings suggest that foreign investors reduce stock price volatility. In addition, the results indicate that larger firms have significantly lower stock price volatility. Moreover, it is found that firms with higher turnover (TURN) have significantly higher stock price volatility. However, there is no significant difference in stock price volatility measures (VOL1 and VOL2) between both groups when the sample is divided by financial leverage (LEV) and market-to-book ratio (MTB).

4.3. Correlation Matrix

Table 3 shows the correlation matrix of variables. It indicates that foreign ownership has a negative and significant correlation with stock price volatility measures, suggesting that foreign investors reduce stock price volatility in the Thai stock market. Similarly, negative and significant correlations between firm size (SIZE) and stock price volatility measures (VOL1 and VOL2) reveal that larger firms have lower stock price volatility.

Table 1: Descriptive Statistics

Variables	Obs.	Mean	Median	Minimum	Maximum	Std. Dev.
VOL1	1,755	0.519	0.497	-0.837	2.321	0.490
VOL2	1,755	2.481	2.210	0.319	14.781	1.337
FOWN	1,755	0.139	0.058	0.000	0.490	0.183
SIZE	1,755	9.705	9.588	7.866	12.010	0.653
LEV	1,755	0.378	0.377	0.001	0.968	0.210
MTB	1,755	2.435	1.560	0.140	48.220	2.872
TURN	1,755	0.512	0.233	0.010	9.109	0.770

Table 2: Differences in Stock Price Volatility

Variables	VOL1		Difference in VOL1	VOL2		Difference in VOL2
	High	Low		High	Low	
FOWN	0.4079	0.5790	-0.1710***	2.2152	2.6244	-0.4091***
SIZE	0.4532	0.4948	-0.1159***	2.2006	2.6940	-0.4934***
LEV	0.5329	0.5056	0.0273	2.4427	2.5199	-0.0771
MTB	0.5502	0.5061	0.0441	2.5164	2.4667	0.0497
TURN	0.9281	0.3516	0.5767***	3.2787	2.1549	1.1238***

Notes: ***, **, * denote statistically significance at 1%, 5%, and 10%, respectively.

Table 3: Correlation Matrix

Variables	VOL1	VOL2	FOWN	SIZE	LEV	MTB	TURN
VOL1	1						
VOL2	0.717***	1					
FOWN	-0.171***	-0.166***	1				
SIZE	-0.186***	-0.220***	0.318***	1			
LEV	0.026	-0.042	0.046	0.381***	1		
MTB	0.004	-0.013	0.020	0.063***	0.089***	1	
TURN	0.562***	0.422***	-0.159***	-0.134***	0.066***	-0.012	1

Notes: ***, **, * denote statistically significance at 1%, 5%, and 10%, respectively.

In addition, the results indicate that stock turnover (TURN) is positively correlated with stock price volatility measured by VOL1 and VOL2. Moreover, there is a positive and significant correlation between foreign ownership (FOWN) and firm size (SIZE). This finding suggests that foreign investors prefer to invest in larger firms. Overall, the correlation coefficient between any pair of explanatory variables lies in the range of -0.4 and 0.4. According to Lind, Marchal, and Wathen (2015), the issue of multicollinearity may be present if the correlation coefficient between any pair of independent variables exceeds 0.7. Therefore, there is no serious multicollinearity problem in this study.

4.4. Impact of Foreign Ownership on Stock Price Volatility

Table 4 reports the impact of foreign ownership (FOWN) on stock price volatility, measured by VOL1 and VOL2. The result from the pooled OLS estimation in Panel A indicates a negative and significant relationship between foreign ownership (FOWN) and stock price volatility (VOL1). This finding reveals that stock price volatility decreases as foreign investors hold more shares. In addition, there is a negative and significant association between firm size (SIZE) and stock price volatility (VOL1), suggesting that stock price of larger firms tends to be less volatile. Moreover, stock turnover (TURN) is found to be positively related to stock price volatility (VOL1). This shows that stock with higher turnover tends to be more volatile. However, we do not find that leverage (LEV) and market-to-book ratio (MTB) are significantly related to stock price volatility measured by VOL1.

The impact of foreign ownership on stock price volatility is also estimated by the fixed effects (FE) and the random effects (RE) models. According to Wooldridge (2016), the fixed effects and the random effects models are more appropriate for panel data analysis than the pooled OLS model, which ignores the nature of panel data and does not account for unobserved heterogeneity. The random effects model seems to be more attractive than the fixed effects model in terms of its ability to account for both variations within and between firms while the fixed effects model considers only variation within firms. However, the random effects model tends to be biased in a large sample due to correlations between the effects and the explanatory variables (Hill, Griffiths, & Lim, 2012). In this regard, the Hausman (1978) test can be performed to determine whether the fixed effects or the random effects estimation is more appropriate. The significant value of Hausman (χ^2) suggests preference for the fixed effects estimation.

Since the value of Hausman (χ^2) is statistically significant in Panel A of Table 4, the fixed effects (FE) estimation is preferred to the random effects (RE) estimation. The results from the FE regression show that foreign ownership (FOWN) has a negative and significant effect on stock price volatility (VOL1). Thus, hypothesis H1 is rejected. With respect to the control variables, the results indicate a significantly negative coefficient of firm size (SIZE). This finding reveals that larger firms are more likely to have lower stock price volatility. Besides, a positive and significant coefficient of market-to-book ratio (MTB) implies that stock with higher market value tends to be more volatile. Further, it is found that stock turnover (TURN) has a positive and significant effect on stock price volatility (VOL1). This finding shows that stock with higher turnover tends to be more volatile.

Panel B of Table 4 reports the impact of foreign ownership on stock price volatility measured by VOL2. The result from the pooled OLS model is similar to that in Panel A. Particularly, we find a negative and significant coefficient of foreign ownership (FOWN). In addition, the result shows a significantly negative coefficient of firm size (SIZE) but a significantly positive coefficient of stock turnover (TURN). The statistically significant value of Hausman (χ^2) in Panel B points out that we should rely on the FE model rather than the RE model when VOL2 is the dependent variable. The result from the FE model indicates a negative and significant association between foreign ownership (FOWN) and stock price volatility measured by VOL2. Therefore, we reject H1.

Regarding the control variables, we find that firm size (SIZE) is negatively related to stock price volatility (VOL2). This suggests that stock price of larger firms is less volatile. On the contrary, a positive and significant relationship between market-to-book ratio (MTB) and stock price volatility (VOL2) indicates that stock of higher growth firms tends to be more volatile. Moreover, stock turnover (TURN) is found to be positively related to stock price volatility measured by VOL2. This finding reveals that stock with higher turnover has more volatility.

Overall, the results from the FE estimations in Table 4 reveal that foreign ownership has a negative and significant relationship with stock price volatility. This finding suggests that foreign investors provide benefits to the Thai stock market by reducing stock price volatility and thus stabilizing share price. The evidence that foreign ownership is negatively related to stock price volatility is consistent with previous studies such as Wang (2007), Umutlu et al. (2010), Li et al. (2011), Wang (2013), Vo (2015), Chiang and Chan (2017) but in contrast with Lai et al. (2008), Chen et al. (2013), and Naufa and Lantara (2017).

4.5. Possible Endogeneity

To cope with the possible endogeneity issue, we estimate the relationship between foreign ownership and stock price volatility by a two-stage least squares (2SLS) method. Particularly, we construct two instrument variables using methods similar to those in Prommin, Jumreornvong, Jiraporn, and Tong (2016). The first instrument is predicted FOWN, which is a linear projection from each firm's foreign ownership in 2014 to the sample mean of foreign ownership in 2018. The second instrument is an industry-median foreign ownership. The logic is that an industry-median foreign ownership should be correlated with firm-level foreign ownership but not be correlated with firm-level stock price volatility.

Table 5 presents the results from 2SLS regressions. The first stage regression shows that both instrument variables are highly significant. In the second stage, the results indicate that foreign ownership (FOWN) has a negative and significant relationship with stock price volatility measured by VOL1 and VOL2. These findings are consistent with the results in Table 4.

Table 4: Impact of Foreign Ownership on Stock Price Volatility

	Panel A: VOL1			Panel B: VOL2		
Variables	**Pooled OLS**	**FE**	**RE**	**Pooled OLS**	**FE**	**RE**
Constant	0.9729***	1.3909***	1.0253***	4.4340***	0.7808	3.7945***
	(6.0553)	(2.7483)	(4.4038)	(9.0410)	(0.5420)	(5.2426)
FOWN	-0.1732***	-0.2679***	-0.2240***	-0.5187***	-0.6851**	-0.6433***
	(-3.1473)	(-2.6008)	(-3.1426)	(-3.0875)	(-2.3360)	(-2.9931)
SIZE	-0.0809***	-0.1225**	-0.0858***	-0.2557***	-0.2167**	-0.1925**
	(-4.6785)	(-2.3352)	(-3.4881)	(-4.8459)	(-2.5819)	(-2.5233)
LEV	0.0427	0.0394	0.0057	-0.0965	-0.1209	-0.0897
	(0.8871)	(0.4909)	(0.9488)	(-0.6561)	(-0.5289)	(-0.4983)
MTB	0.0043	0.0171***	0.0112***	0.0079	0.0220*	0.0139
	(1.2772)	(3.8171)	(3.0496)	(0.7767)	(1.7362)	(1.2861)
TURN	0.3109***	0.2305***	0.2580***	0.6370***	0.5445***	0.5646***
	(24.4987)	(18.2741)	(22.3650)	(16.4414)	(15.1676)	(16.9022)
Industry dummies	Yes	No	No	Yes	No	No
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Hausman (χ^2)			32.0362***			39.9953***
Adjusted R^2	0.3969	0.7150	0.4001	0.2445	0.6896	0.2737

Notes: The values in parentheses are t-statistics under White robust standard errors. ***, **, * denote statistically significance at 1%, 5%, and 10%, respectively.

Table 5: 2SLS Regression Results

	First Stage	Second Stage	
Variables	**FOWN**	**VOL1**	**VOL2**
Intercept	-0.5768***	1.0896***	4.9454***
	(-11.5307)	(6.9122)	(10.3757)
Predicted FOWN	1.2379***		
	(35.7508)		
Industry-mean FOWN	0.6149***		
	(8.2362)		
FOWN		-0.1452**	-0.4703**
		(-2.5267)	(-2.4574)
SIZE	0.0492***	-0.0779***	-0.2791***
	(9.3841)	(-4.5067)	(-5.3438)
LEV	-0.0493***	0.0743	-0.0784
	(-3.1320)	(1.5336)	(-0.5346)
MTB	0.0018*	0.0041	0.0037
	(1.7352)	(1.2683)	(0.3802)
TURN	-0.0094**	0.3264***	0.6460***
	(-2.3050)	(25.9492)	(16.9854)
Industry dummies	No	No	No
Year dummies	Yes	Yes	Yes
Adjusted R^2	0.5239	0.3734	0.2297
Sargan statistic		2.5023	0.8831

Notes: The values in parentheses are t-statistics. ***, **, * denote statistically significance at 1%, 5%, and 10%, respectively.

To check whether the proposed instruments are valid, the Sargan tests are carried out. Since the values of Sargan statistic are not significant, we have no evidence to suggest that both instruments are invalid. Hence, the 2SLS results confirm that the regression results in Table 4 are not likely to be susceptible to endogeneity problem.

5. Conclusions

This paper tests whether higher participation of foreign investors is associated with more stock price volatility by using a panel dataset of 1,755 firm-year observations from 371 nonfinancial firms listed on the SET over the five-year period from 2014 to 2018. After controlling for firm size, leverage, market-to book ratio, stock turnover, and correcting for potential endogeneity problem, we find that foreign ownership is negatively related to stock price volatility. This finding suggests that foreign investors help reduce stock price volatility and hence stabilize share price in the Thai stock market. Our finding has clear implications for different parties. For academics, the finding provides better understanding about the beneficial role of foreign investors on stock price volatility in emerging markets. To further reduce stock price volatility, policy makers should adopt measures to attract foreign investors to hold more shares of Thai listed companies. That is, they may consider lifting the current legal limit of 49% foreign ownership in Thailand. Besides, investors can make better investment decisions in the Thai stock market by taking into consideration of equity ownership held by foreign investors.

References

Bae, K. H., Chan, K., & Ng, A. (2004). Investibility and return volatility. *Journal of Financial Economics*, *71*(2), 239–263. https://doi.org/10.1111/0022-1082.00154

Bekaert, G., & Harvey, C. R. (1997). Emerging equity market volatility. *Journal of Financial Economics*, *43*(1), 29–77. https://doi.org/10.1111/0022-1082.00154

Bekaert, G., & Harvey, C. R. (2000). Foreign speculators and emerging equity markets. *The Journal of Finance*, *55*(2), 565–613. https://doi.org/10.1111/0022-1082.00154

Bekaert, G., Harvey, C. R., & Lundblad, C. (2001). Emerging equity markets and economic development. *Journal of Development Economics*, *66*(2), 465–504. https://doi.org/10.1016/S0304-3878(01)00171-7

Chen, Z., Du, J., Li, D., & Ouyang, R. (2013). Does foreign institutional ownership increase return volatility? Evidence from China. *Journal of Banking & Finance*, *37*(2), 660–669. https://doi.org/10.1016/j.jbankfin.2012.10.006

Chiang, Y. C., & Chan, M. H. (2017). Foreign ownership and firm-level stock return volatility in Taiwan. *Investment Management and Financial Innovations*, *14*(3), 261–269. http://dx.doi.org/10.21511/imfi.14(3-1).2017.10

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2004). Why are foreign firms listed in the US worth more? *Journal of Financial Economics*, *71*(2), 205–238. https://doi.org/10.1016/S0304-405X(03)00183-1

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, *46*(6), 1251–1271. https://doi.org/10.2307/1913827

Hill, R. C., Griffiths, W. E., & Lim, G. C. (2012). *Principles of Econometrics* (4th ed.). New York, NY: John Wiley & Sons.

Kim, E. H., & Singal, V. (2000). Stock market openings: Experience of emerging economies. *The Journal of Business*, *73*(1), 25–66. https://doi.org/10.1086/209631

Khanna, T., & Palepu, K. (1999). *Emerging Market Business Groups, Foreign Investors, and Corporate Governance* (No. 6955). National Bureau of Economic Research. https://doi.org/10.3386/w6955

Naufa, A. M., & Lantara, I. W. N. (2017). Foreign Ownership, Return Volatility, Trading Volume, and Risk of Stocks in

Indonesia. *International Journal of Banking and Finance*, *13*(2), 119–141. https://doi.org/10.32890/ijbf2017.13.2.8507

Naufa, A. M., Lantara, I. W. N., & Lau, W. Y. (2019). The impact of foreign ownership on return volatility, volume, and stock risks: Evidence from ASEAN countries. *Economic Analysis and Policy*, *64*, 221–235. https://doi.org/10.1016/j.eap.2019.09.002

Khanthavit, A. (2020). Foreign Investors' Abnormal Trading Behavior in the Time of COVID-19. *The Journal of Asian Finance, Economics and Business*, *7*(9), 63–74. https://doi.org/10.13106/jafeb.2020.vol7.no9.063

Lai, C. J., Lou, K. R., & Shiu, C. Y. (2008). Foreigner investors and stock volatility: Evidence from Taiwan. *International Journal of Information and Management Sciences*, *19*(2), 315–328.

Li, D., Nguyen, Q. N., Pham, P. K., & Wei, S. X. (2011). Large foreign ownership and firm-level stock return volatility in emerging markets. *Journal of Financial and Quantitative Analysis*, 1127–1155. https://doi.org/10.1017/S0022109011000202

Lind, D. A., Marchal, W. G., & Wathen, S. A. (2015). *Statistical Techniques in Business and Economics* (16th ed.). New York, NY: McGraw-Hill Irwin.

Prommin, P., Jumreornvong, S., Jiraporn, P., & Tong, S. (2016). Liquidity, ownership concentration, corporate governance, and firm value: Evidence from Thailand. *Global Finance Journal*, *31*, 73–87. https://doi.org/10.1111/0022-1082.00154

Rhee, S. G., & Wang, J. (2009). Foreign institutional ownership and stock market liquidity: Evidence from Indonesia. *Journal of Banking & Finance, 33*(7), 1312–1324. https://doi.org/10.1111/0022-1082.00154

Stiglitz, J. E. (1999). Reforming the global economic architecture: lessons from recent crises. *The Journal of Finance*, *54*(4), 1508–1521. https://doi.org/10.1111/0022-1082.00154

Stulz, R. M. (1999). Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance*, *12*(3), 8–25. https://doi.org/10.1111/j.1745-6622.1999.tb00027.x

Thanatawee, Y. (2019). Foreign Institutional Ownership and Liquidity: Evidence from Thailand. *ABAC Journal*, *39*(4), 34v49.

Umutlu, M., Akdeniz, L., & Altay-Salih, A. (2010). The degree of financial liberalization and aggregated stock-return volatility in emerging markets. *Journal of Banking & Finance*, *34*(3), 509–521. https://doi.org/10.1016/j.jbankfin.2009.08.010

Vo, X. V. (2015). Foreign ownership and stock return volatility–Evidence from Vietnam. *Journal of Multinational Financial Management*, *30*, 101–109. https://doi.org/10.1016/j.mulfin.2015.03.004

Vu, T. M. T. (2020). Stock Price Co-movement and Firm's Ownership Structure in Emerging Market. *Journal of Asian Finance, Economics and Business*, *7*(11), 107–115. https://doi.org/10.13106/jafeb.2020.vol7.no11.107

Vu, V. T. T., Phan, N. T., & Dang, H. N. (2020). Impacts of Ownership Structure on Systemic Risk of Listed Companies in Vietnam. *Journal of Asian Finance, Economics, and Business*, *7*(2), 107–117. https://doi.org/10.13106/jafeb.2020.vol7.no2.107

Wang, J. (2007). Foreign equity trading and emerging market volatility: Evidence from Indonesia and Thailand. *Journal of Development Economics*, *84*(2), 798v811. https://doi.org/10.1016/j.jdeveco.2006.05.001

Wang, J. (2013). The impact of foreign ownership on stock volatility in Indonesia. *Asia–Pacific Journal of Financial Studies*, *42*(3), 493–509. https://doi.org/10.1111/ajfs.12022

Wei, S. X., & Zhang, C. (2006). Why did individual stocks become more volatile? *The Journal of Business*, *79*(1), 259–292. https://doi.org/10.1086/497411

Wooldridge, J. M. (2016). *Introductory Econometrics: A Modern Approach* (6th ed.). Boston, MA: Cengage Learning.