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Stock Price Co-movement and Firm's Ownership Structure in Emerging Market*

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Abstract

This study is concerned with the relationship between firm's ownership structure and the co-movement of the stock return with the market return. Four different types of firm ownership, including managerial ownership, state ownership, foreign ownership, and concentrated ownership, are among the main features of the company's governance mechanism and have been separately documented in the previous research to understand their impact on stock price synchronicity. We constructed the regression model, using stock price synchronicity as the dependent variable and the above four components of ownership structure as explanatory variables. The pooled OLS, the fixed effects model, and the random effects are employed to investigate the outcome of the study. Data used in the research are of public firms listed on the Ho Chi Minh City Stock Exchange (HOSE) during the five-year period term from 2015 to 2019. The data sample contains 235 companies from 10 industries with 1135 observations. The results revealed by the fixed effects model, the large ownership and the managerial ownership are found to have adverse effect on the stock price synchronicity, whereas the foreign ownership model is revealed to have positive influence on the stock return co-movement. The effect of the state ownership on the stock price synchronicity is not confirmed.

Keywords: Concentrated Ownership, Foreign Ownership, Managerial Ownership, State Ownership, Stock Price Synchronicity

JEL Classification Code: G10, G30, G34

1. Introduction

Stock Price Synchronicity presents the extent to which stock prices in the market co-move with each other. This concept is first proposed by Roll (1988) in traditional CAPM model and quickly became an interesting topic for researchers around the world. It is often studied in the relation with the transparency and the quality of the information environment. While studying developed countries, researchers found the negative relationship between stock price synchronicity and the efficiency of information environment. In detail,

they proposed that strong investor protection in developed markets encourages investors to make informed trading, leading to high level of private information in stock price and therefore, lower synchronicity (Morck, Yeung, & Yu, 2000). However, there exists a contrasting viewpoint about the relationship between the level of stock price's co-movement and the efficiency of information environment. Especially, this assertion seems to become a dominant trend for recent studies which has been carried out in emerging markets. Commonly, in these markets, studies reveal the low level of stock prices' co-movement, and they proposed that the asynchronous movement of stock return with market's return is explained by firm's inefficient corporate governance mechanism and the wide market's poor protection of property rights (Pham, Vu, Nguyen, & Nguyen, 2020).

Similarly, another topic of literature that is well-documented to have effects on the firm's informational environment and the investors' decision making is corporate governance. A number of studies evidently revealed that better corporate governance improves the quality of information disclosed to outsiders, enhancing their confidence in decision making and the efficiency of the market. For example, Kanagaretnam, Lobo, and Whalen

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(2007), Shleifer and Vishny (1997) showed that a company with effective corporate governance implementation has lower information asymmetry and better long-term performance. Warfield, Wild, and Wild (1995) contended that the strong corporate governance mechanism helps to reduce earnings manipulation that is a temptation to do for the managers. Studies exploring the relationship between corporate governance and the quality of disclosure are usually concerned with some common characteristics of corporate governance mechanisms, for instance, board size, board components, board structure, board role, and ownership structure.

This paper links these two strands of literature in order to investigate the impact of corporate governance on stock return co-movement in the context of the Vietnamese market. In particular, we support the latter view about the relationship between stock return synchronicity and information environment regarding the emerging market in Vietnam and concentrate on the impact of firms' ownership structure, a crucial component of corporate governance. With 18 years of development, Vietnamese stock market has made a rapid growth and has become one of the most attractive emerging markets in Asia. From the time of economic transformation, the Vietnamese government has been making a lot of effort to reduce their ownership proportion in businesses, giving way for firms to operate more independently and effectively. This process has been implemented also by welcoming and encouraging capital investments from foreign investors. What is brought by foreign owners is not only a considerable amount of capital, but also good corporate governance and management practices for firms and the economy as a whole. Therefore, at the moment, there exist multiple types of ownership among firms in Vietnam, and each of them plays a different role on firm's management and performance. In this research, we focus on the influence of four types of ownership structure, including state ownership, managerial ownership, ownership concentration, and foreign ownership on stock price synchronicity.

2. Literature Review

Information incorporated in firm's stock price contains three levels, including market-level, industry-level, and firm-specific information (Piotroski & Barren, 2004). The variations in these three levels of information lead to the changes in the level of stock price co-movement. More information at market-level and industry-level reflected in stock price means higher level of stock return synchronicity. Chan, Hameed, and Kang (2013) provided empirical finding that a more transparent environment associated with less firm-private information capitalized into stock prices and higher stock price synchronicity. Dasgupta, Gan, and Gao (2010) performed both theoretical

and empirical approaches and came to the conclusion about the positive relationship between stock price synchronicity and stock's liquidity and informativeness. They added that a rapid incorporation of information into the stock prices reduces idiosyncratic return volatility and encourages the co-movement. In the context of Vietnamese developing market, the term "stock price synchronicity" might sound a bit "worrying" for some researchers as there might have been an existence of anomalies associated with the market inefficiency. However, there is strong evidence that Vietnamese emerging market is efficient in the weak-form and even characterizes many traits of "Adaptive market hypothesis", which is the new concept harmonizing the efficient market hypothesis and the behavioural finance (Dzung & Hung, 2019; Gupta, Yang, & Basu, 2014). Vo (2017) conducted his research in Vietnamese market by using stock price synchronicity as the direct measure for stock price informativeness and he postulated that a better corporate governance and a more transparent disclosure lead to the higher level of synchronicity and, therefore an improvement in the informational efficiency. We follow the previous researches on stock price synchronicity in emerging markets and consider a higher level of stock return synchronicity as a signal of the better governance mechanism and vice versa.

Corporate governance is described as the system through which firms are controlled and operated. The corporate governance mechanism's root cause is the agency theory in which the interest conflict between the agent (the board) and the principal (the shareholder) is raised. Directors are delegated power from the shareholders with hope that they will act for the shareholder's best interest. However, the separation between the ownership and the power to control creates the asymmetry of information and opportunities for the managers to seek for their own benefits against the shareholder's (Glinkowska & Kaczmarek, 2015). As a result, the concept of corporate governance was developed to solve the problem. Corporate governance is, therefore, concentrates on maximizing the shareholder's wealth by exercising control over the company's management. The reflection of financial reporting failures in the 21st century, such as the scandal of Enron, World Com, Tyco, as well as the unprecedented collapse of a Big-5 audit firms had led to the development of corporate governance. From this, the whole business world realised the role of corporate governance to the accuracy and the quality of information disclosure by the firm. How the board of director functions and their accountability were taken more seriously and the new frameworks for corporate governance were established worldwide. A good corporate governance's implementation means more transparent and reliable information disclosed by firms, decreasing information asymmetry and an increase in the precision of investors' anticipations.

Anh, Thu, and Quynh (2020) proposed that an efficient corporate governance mechanism enables firms to reduce earnings manipulation, which managers is often tempted to do. According to Jin and Myers (2006), the more transparent the information environment is, the more firm-specific information will be revealed to outsiders, leading to the improvement in the investor's forecasts. Outside investors, then, will, trade stocks based on these anticipations and will capitalise on the occurring probability of predicted events into the share price. As stock price responds only to announcements that are unknown or not already predicted by the market's participants, these events, subsequently, will not create much surprises and shocks if they occur in the future, causing little reaction from the market. More information about share price today should result in less private information incorporated in the firm's future's share price, and, therefore, higher synchronicity. Dasgupta, Gan, and Gao (2010) described this mechanism as "the intuitive implication of market efficiency".

The discussion over corporate governance covers all perspectives regarding the thinking and practice of the shareholders, the directors and management. Among diversified components of corporate governance, ownership structure is a important one. The concept ownership structure is often broken down into different types of ownership, and the common ones that has been studied in prior reseaches are ownership concentration, foreign ownership, managerial ownership, and state ownership. Each type has certain interests and affects the company in different ways. Vietnamese economy used to be a centrally planned mode in the past, which is entirely dominated by the state-owned enterprises. From the innovation which started around forty years ago, the existence and essential role of a multi-ownership structure in the economy has been recognised.

2.1. State Ownership

The relationship between State ownership and the return synchronicity in the market remains a controversial issue among reserchers. Studies in different context has come up with different findings. Hamdi and Cosset (2014) studying a sample including privatized firms from 41 countries between 1980 and 2012 and revealed that the relationship between state ownership and the stock price informativeness depends on political institutions. In particular, they used stock price synchronicity as an inverse measure for stock price informativeness and found the adverse effect between state ownership and stock price's informativeness in countries with lower political rights. In contrast, Dasgupta, Gan, and Gao (2010) examined the state-owned enterprises and cross-listed companies and showed the strong support for the dynamic response of stock price co-movement to the improvement of information efficiency.

However, there is consistent viewpoint that the government ownership, unlike other typical shareholders, pursues political objectives other than maximizing their profitability in the company. The government is a special type of investor who has more power and incentives to tunnel corporate resources, and overwhelm other minority shareholders for its political benefits. It might manipulate earnings, impede the flow of firm's important information to outsiders, leading to poor financial disclosure and less transparent environment. Liu and Subramaniam (2013) claimed that there was less chance that Chinese State-owned enterprises appoint Big Four Auditors or state-owned enterprises often have lower audit fee compared to their non- state-owned peers. In Vietnam, Nguyen and Vo (2020) posited that state listed firms have less incentives to disclose firm-specific information and state ownership is the major obstacle to the transparent disclosure process. Therefore, in the context of Vietnamese emerging market, we expect that stock return synchronicity is inversely related to state ownership.

H1: Stock return synchronicity is inversely related to the State ownership

2.2. Managerial Ownership

Managerial ownership is the case that the company's shares are owned by its managers, their spouses, and children. There are very few studies executed on the direct relationship between the stock co-movement and managerial ownership. Although managerial ownership is considered to be a potential solution for agency conflict as they are, at the same time, the owner of the company, many reseachers expressed their concerns about the adverse effect of managerial ownership on the transparency of firm disclosure if managers hold a large amount of shares in firm. Leuz, Nanda, and Wysocki (2002) pointed out that managers can be opportunistic and more self-interest if they have more influences and controlling power as the large owners. They have more incentives to intervene reporting process and withhold information from outsiders. Empirical studies also evident that the level of earnings manipulation would increase along with the proportion of of managerial ownership. Therefore, we propose that a greater amount of stock held by the manages, the lower level of stock price synchronicity.

H2: Stock return synchronicity is negatively associated to the managerial ownership

2.3. Ownership concentration

Ownership concentration presents a status when a large percentage of shares of a firm are owned by one or few

shareholders, resulting in the power concentration of voting right. Jalila and Devi (2012) argued that strict and close supervision of large shareholder forces the managers to work for the common good of the owners. Many studies on the ownership concentration are inclined to the view that major share owners of the company can have good effect on firms' disclosure policy and mitigate the agency problem. However, if the large shareholders' interests do not go with the others', it is a different story. Gul, Kim, and Qiu (2010) asserted that largest ownership concentration is a crucial factor determining synchronicity and he argued that concentrated ownership could have two contrasting effects on synchronicity, depending on "whether the managerial entrenchment effect or the incentive alignment effect is dominant". In the former case, entrenched controlling shareholders can extract their private control benefits by taking advantage of their concentrated power to access firm-specific information and try to deter the flow of these information to the minor investors, leading to poor reporting disclosure and contribute to more opaque information environment.

Corporate structure, especially ownership concentration is considered as a main cause for the problem in emerging countries. The ownership usually concentrates in hands of the entrepreneurs and their relatives. Meanwhile, in the case of transition economies, the largest shareholders are closely related to the State. The case of Vietnam is not an exception with firms that are characterized by highly concentrated ownership structures.

From these discussions, we conjecture that ownership concentration negatively affects stock price synchronicity in the case of Vietnamese emerging market.

H3: Stock return synchronicity is inversely related to the ownership concentration

2.4. Foreign Ownership

Among different types of ownership, foreign ownership seems to receive more interests from studies in emerging markets. All agreed on the good impact of foreign shareholders on both general information environment and firm's corporate governance. Kho, René, and Francis (2009) described that foreign investors who come from countries with "efficient corporate governance mechanism" would exert pressure on governments and firms in developed or emerging markets, contributing to the improvements and positive changes in those markets. Foreign investors, such as institutions and professional funds, requires high information quality and greater transparency (Mitton, 2006). Their presence can enhance the firm's valuation, improves operating performance as well as lowers stock risk and volatility (Ferreira & Matos, 2008). In Vietnam, from 2015, the restriction on the ratio of foreign ownership had

been removed by the government, attracting a considerable amount of international capital poured into the market as foreign investors recognise the potential prospects of the emerging economy (Nguyen, Nguyen, Ho, & Ngo, 2019). They have contributed to the essential improvement in liquidity and efficiency of the Vietnamese market.

We argue that foreign ownership has a positive influences on share return co-movement in the context of Vietnamese emerging market. It is well documented that international investors prefer stock of firms which has better operating systems and more transparent disclosures (Parrino, Richard, & Laura, 2003). More firm-private information incorporated in stock price means more risks for foreign investors, especially institutions as they are the most diversified investors in the market. Therefore, institutional investors will try to minimize those risks and expect to experience only the risks from the wide market (Farooq & Ahmed, 2014). Hence, the stock return's variation should be mainly explained by the variation in the return of the market, signifying the high level of stock price co-movement as Hu and Liu (2013) confirmed "we do find that stocks with higher synchronicity are more likely to be held by institutional investors than those with lower synchronicity".

H4: Stock return synchronicity is positively related to the foreign ownership

3. Research Model

3.1. Measure for Stock Price Synchronicity

Roll (1988) first suggested the measure for stock price non-synchronicity based on the two-factor market model regression or traditional CAPM model (Equation 1). The logic of the model, as he proposed, is that the stock return's variation can be broken down into systematic variations, including market-wide variation and industry variation, and firm fundamentals variation. In other words, variation in stock price can be explained by market variation, industry variation and firm-specific information. Roll (1988) also elucidated that the stock return's co-movement depends on the amount of information (at both industry-level and market-level) incorporated into the stock price. Therefore, the first two systematic elements reflect stock return synchronicity, which is measured by the value of R-square (coefficient of determination) estimated in the proposed model. This measure has been widely used on a large body of literature of the stock price co-movement.

$$RC_t^i = \beta_{i,0} + \beta_{i,1} RM_t^m + \beta_{i,2} RP_t^i + \varepsilon_{i,t} \quad (1)$$

Where:

RC_t^i represents the return of company "i" at time "t"

RM_t^m represents the return of the market at time “t”
 RI_t^j represents the return of the company’s industry “j” at time “t”

Morck, Yeung, and Yu (2000) modified Roll’s model by removing the impact of industry return on the level of co-movement between stock return and market return as he argued that in emerging markets, it is problematic if industries’ returns are added in to the regression model as in these markets’ economies, few industries might be more dominant than the others, making it difficult to separate these industries’ effect from the market’s. Moreover, the industry returns estimated from these dominant firms may reflect these firms’ fundamentals rather than industry news. Therefore, the result for synchronicity of emerging market can be inaccurate if industries’ returns are added into the model. The equation (2) is the modified Roll’s fomulation for estimating synchronicity as proposed by Morck, Yeung, and Yu (2000).

$$RC_{i,j,t} = \beta_{i,0} + \beta_{i,1} RM_t + \epsilon_{i,t} \quad (2)$$

Where:

$RC_{i,j,t}$ is the return of firm i in industry j at week t

$RM_{m,t}$ is the return of the market at week t

Also, in the model, we regress the weekly return of each firms on the weekly return of the market insteads of daily returns to deal with inferequent trading in the market (Morck, Yeung, & Yu, 2000). To deal with the naturally bouded value of R-square as the coefficient of determination in the regression, which is within unit interval [0, 1], we use logarithmic transformation of R^2 in order to yield an appropriate dependent variable with a normal distribution. Finally, synchronicity (SYNCHO) is defined by the equation (3).

$$SYNCHO_{it} = \text{Log} [R^2/(1-R^2)] \quad (3)$$

3.2. Research Model

The research adopts the approach of deduction to explain the influence of the different compoments of firm’s ownership

on the co-movement of stock return with the market return in Vietnamese emerging market. Firm’s ownership struture are broken down into 4 types and reviewed in the literature section. We build the following model to test the 4 respectively proposed hypotheses:

$$SYNCHO_{it} = \alpha_0 + \alpha_1 SOWN_{it} + \alpha_2 MOWN_{it} + \alpha_3 LOWN_{it} + \alpha_4 FOWN_{it} + \gamma CONTROL_VAR_{it} + \epsilon_{it} \quad (4)$$

where i represents firm and t represents year. The table 1 illustrates coding and definitions for variables of the model (See Table 1).

Some control variables (codeds as CONTROL_VAR) are also included in the model as previous reseaches documented their effects on stock price synchronicity.

AGE is the firm age, which is calculated by the number of years from the time that firm first went to operation. According to Dasgupta, Gan, and Gao (2010), as firms grow older, the market learns more about the intrinsic quality of firms, leading to higher stock return synchronicity.

SIZE is firm size defined as the firm’s total assets. Roll (1988) evidently showed that larger firms’ stock price tends to capture more systematic information. Large firms can act as a leading market indicator by signaling more macroeconomic events, resulting in higher stock return co-movement (Piotroski & Roulstone, 2004).

RISK is an indicator of the market votatility and measured by standard deviation of the stock price’s daily return. The wider range of the stock standard deviation signals the more unpredictable the price action, and the greater risk (Pham, Vu, Nguyen, & Nguyen, 2020).

LEV is the code for the company financial leverage, which is defined as the ratio of long-term debt to equity. LEV is widely used as a control variable in many reseaches on stock price synchronicity (Boubaker, Mansali, & Rjiba, 2014; Rajgopal & Venkatachalam, 2011). Hutton, Marcus, and Tehranian (2009) contended that firms with high leverage shift risks from equity to debtholders, who bear higher idiosyncratic volatility, hence reducing stock return synchronicity.

Table 1: Illustration of explanatory and independent variables

No.	Code	Variable	Definition
1	SYNCHO	Synchronicity	Estimated from Equation (2) and (3)
2	SOWNS	State ownership	Propotion of stock hold by the State
3	MOWNS	Managerial ownership	Stock holding by directors, their spouses and children
4	LOWNS	Ownership concentration	Total holding of shareholders who own from 5% of the company’s stocks.
5	FOWNS	Foreign ownership	Stock holding by foreign investors

MTB is market to book ratio (or Tobin's Q) and calculated as book value of debts plus market value of equity divided by total value of assets (Kim & Cho, 2020). This ratio is used as the proxy for firm value in prior researches of stock return synchronicity.

4. Results and Discussions

4.1. Data Collection and Descriptive Statistics

Data used in the research are of public firms listed on the Ho Chi Minh City Stock Exchange (HOSE) in the five-year period from 2015 to 2019. We remove all financial companies, including banks, insurance, and securities from the sample due to their special business nature. Firms studied must be listed and remain being listed during the period of study. Eventually, our research sample contains 235 companies from 10 industries with 1135 observations.

Table 2 describes statistic results for all variables in the model. R-square has the value range from 0 to 0.93 and the mean of 0.09. Following, the highest, lowest and mean value for SYNCHO are -3, 1.12, -1.43, respectively. These results for the period from 2015 to 2019 is improved compared to those in the period from 2007 to 2015 in the study of Vo (2017), which were -17.73, 0.94 and -2.27 respectively, revealing that stock returns are more synchronous for the period studied in this research. However, compared to other countries' figures, R-square and SYNCHO for Vietnamese market are at relatively low level, and it is one of the emerging market' characteristics, showing the inefficient information environment (Kelly, 2014).

State ownership (SOWNS) has the value range from 0% up to 97%. The average proportion of shares held by the State

in a HOSE listed firm is 15%. The Vietnamese government planned to divest State capital in most of companies by 2020 in order to improve the companies' management and operation. However, this divestment targeted in 2020 seems to be an impossible task and requires more detailed plan for the latter stages in the process due to the firms' cumbersome structure. The high value of SOWNS standard deviation of 23.84 shows the big gaps and differences between the government ownership rate in different companies and their average figure.

As expected, the level of ownership concentration (LOWNS) in Vietnamese listed firms is relatively high, at an average of 50%. The highest percentage of stocks owned by large shareholders in a company is 99.5%, which means that large owners have extremely dominant controlling rights and power in a number of Vietnamese firms listed (See Table 2).

On an average, managers in a listed firm of HOSE own nearly 16% of their company's shares. This figure is lower than in the past (nearly 30% according to the research of Vo and Van (2014)) but still high compared to reported data in other countries, such as 12% in the US and 13.3% for the UK (Short & Keasey, 1999).

For foreign ownership (FOWNS), the minimum level is 0% and the maximum level is 77.58%. The mean is 16%, which is nearly double the value of the period from 2007 to 2015 (Vo, 2017). This is because from 2015, the Vietnamese government has allowed the removal of foreign ownership cap of 49% for public companies. This new regulation lifting foreign ownership limit has had positive effects on the whole market, and created motivations for the foreign investors to be involved more in the business' management and operation.

Table 2: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
SOWNS	0	97.00	15.23	23.84
LOWNS	0	99.51	49.79	22.49
MOWNS	0	73.12	15.80	10.94
FOWNS	0	77.58	15.58	16.06
SIZE	128	287,974	4,545	14,965
AGE	6.00	91.00	25.53	13.52
RISK	103	52,852	3,606	4,856
ROE	-1.90	1.61	0.13	0.17
LEV	0.01	140.26	1.68	4.83
MTB	0.07	35.44	1.25	1.42
R ²	0.00	0.93	0.09	0.11
SYNCHO	-3.00	1.12	-1.43	0.78

* SIZE unit: Billion Vietnamese Dong ** AGE unit: Year

Table 3 presents the correlation result among variables of the research sample with 1135 observations. Generally, the correlation coefficients between variables are below 0.05. The only noticeably high value of 0.618 is the correlation between leverage (LEV) and market-to-book ratio (MTB), which signals the suspicion of multi-co linearity. However, all the VIF indexed shown with the regression results are smaller than 5, showing, showing that there does not exist the serious multi-co linearity issue between variables (See Table 3).

4.2. Results and Discussions

The results of the three models: pooled regression (OLS), fixed effects (FEM) and random effects (REM) are represented in the table 4. The coefficient of determination (R-square) under the three models are 27.02%, 25.22%, 27.58%, respectively. To make the better choice among the three models, F-test and Hausman test are performed, indicating that the FEM is the best for analysis purpose.

Table 3: Correlation Matrix

	SOWNS	LOWNS	MOWNS	FOWNS	SIZE	AGE	RISK	LEV	MTB	VIF
SOWNS	1									1.26
LOWNS	.390**	1								1.23
MOWNS	-.180**	0.003	1							1.06
FOWNS	-0.033	-0.001	-.089**	1						1.11
SIZE	-0.005	0.021	-.078**	.180**	1					1.08
AGE	.133**	.148**	-0.027	-.093**	-.082**	1				1.06
RISK	-0.018	.125**	-0.001	.201**	.151**	.109**	1			1.4
LEV	-0.046	-0.036	0.012	-.082**	0.017	-0.009	-0.036	1		1.98
MTB	0.004	.086**	-0.008	.075*	.147**	.069*	.377**	.618**	1	2.3

Table 4: Regression Results

	Pooled OLS		Fixed Effects (FEM)		Random Effects (REM)		Robust FEM	
	Coeff.	Std. Error	Coeff.	Std. Error	Coeff.	Std. Error	Coeff.	Std. Error
SOWNS	0.0034***	0.0011	0.0014	0.0016	0.0034***	0.0011	0.0014	0.0017
LOWNS	-0.052***	0.0012	-0.0031*	0.0018	-0.0052***	0.0012	-0.0031*	0.0022
MOWNS	-0.054**	0.0020	-0.0085***	0.0029	-0.0055**	0.0022	-0.0085***	0.0032
FOWNS	0.021***	0.0016	0.0166***	0.0026	0.0210***	0.0017	0.0166***	0.0027
SIZE	4.62E-09**	1.85E-09	3.57E-10	3.41E-09	4.62E-09**	1.85E-09	3.57E-10	1.10E-09
AGE	-0.002	0.0022	-0.1025***	0.0129	-0.0020***	0.0129	-0.1025***	0.0131
RISK	-4.68E-06	5.11E-06	6.21E-07	5.87E-06	4.68E-06	5.11E-06	6.21E-07	5.22E-06
LEV	0.0164**	0.0068	0.0190**	0.0094	0.0164**	0.0068	0.0190**	0.0073
MTB	-0.0567**	0.0246	-0.0680**	0.0338	-0.0576**	0.0246	-0.0680**	0.0298
R-Square	0.2702		0.2522		0.2758			
Obs. ⁽¹⁾	1135		1135		1135			
F-test					3.52***			
Hausman Test					80.58***			
Chi square (χ ²) (Heterokedasticity)					1.7E+30**			

(1) Observations

Generally, according to the result revealed by the FEM, state ownership (FOWNS), ownership concentration (LOWNS), and managerial ownership (MOWNS) are found to have an adverse effect on stock price synchronicity (SYNCHO), whereas foreign ownership (FOWNS) has a positive influence on stock price synchronicity (SYNCHO). However, only three among these independent variables show significant results (See Table 4).

State ownership (SOWNS) are found to be inversely but insignificantly correlated to stock price co-movement (SYNCHO). The research, hence, does not find the relationship between state ownership and stock price synchronicity. The hypothesis H1 is rejected.

As expected, ownership concentration (LOWNS) and managerial ownership (MOWNS) are proven to have a negative impact on stock price synchronicity. It can be inferred that the higher amount of stocks owned by large shareholders or managers in the company, the more likely that they will face entrenchment problems. The more voting powers or dual positions (being owners and managers at the same time) creates incentives for large shareholders and managers to expropriate minor investors' benefits by impeding related information leakage, withholding unfavorable information or disclosing selected information, leading to the poor information reporting, and, therefore, making stocks less synchronous (Gul, Kim, & Qiu, 2010). We accept the hypotheses H2 and H3.

Foreign ownership (FOWNS) shows a positive and significant effect on stock return co-movement under FEM. The hypothesis H4 is accepted. As foreign investors get involved more in the market and own more shares of the companies, stock prices co-move more together. This effect can be explained by the inter-relationship of the two factors to the informational environment. Previous studies proved the active role of foreign investors to the markets, especially in the developing and emerging markets. They are described as dynamic market participants and shareholders who come from developed countries with strong corporate governance mechanisms and a more efficient market-wide environment, and, hence, will urge for the efficiency improvements in the environment's efficiency inside and outside firms. Once the quality of information disclosed is enhanced, stock returns become more synchronous.

5. Conclusion

Stock price synchronicity and ownership structure are well-documented in previous researches to be associated with firms' information environment. By reasoning the inter-relationships in emerging markets, we bring these two concepts together and make assumptions on the relationship between them. Four types of ownership structure are examined, including ownership concentration, foreign ownership, managerial ownership, and state ownership.

Our finding shows a strongly positive effect of foreign ownership and a significantly negative effect of ownership concentration and managerial ownership on stocks' co-movement. Nevertheless, the relationship between stock price synchronicity and state ownership is not confirmed.

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