THE IMPACT OF THE BOARD OF DIRECTOR CHARACTERISTICS AND OWNERSHIP STRUCTURE ON VIETNAMESE BANK PERFORMANCE

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ABSTRACT

This paper aims to investigate the impacts of the board of director characteristics and ownership structure on bank performance in Vietnam from 2013 to 2017. In detail, there are statistically significantly positive relationships between the share of foreign investor on board and bank performance proxied by ROA, ROE and NIM. Also, the outcome shows that larger board drives bank profitability to increase in the case of NIM. However, CEO duality has a significantly negative influence on NIM, referring to agency theory. It is presented that because listed commercial banks have more standards regarding information and are more well-known to find more sources of funds, these banks have higher ROA, ROE, and NIM than non-listed ones. Nevertheless, the paper has no evidence of the relation among the percent of female and institutional investors on board and bank performance.

Keywords: corporate governance, bank performance, ownership structure, Vietnam.

1. Introduction

From the end of 1980s, Vietnam has shifted from a centrally planned economy to a more market-oriented one in which the state no longer takes an exclusive role, yet still keeps a dominant position in operating the economy. Over the past two decades, the Vietnam economy had many positive achievements reflecting through a high growth rate (well-over 7% every year) which is maintained in a relatively long time. This impressive development has resulted from a series of reforms implemented by the Vietnamese government for the whole economy in general and the banking sector in particular. The fact of Vietnam during this period has demonstrated the findings of some studies that gradual changes in banks' governance structure have positively correlated with economic growth.

There have been various existing changes in Vietnam banking system since 2008 and some of them are the variations in bank governance. Bank restructuring, nationalization of the four greatest state-owned commercial banks, founding of joint-stock banks and new law issuance on credit institutions in 2010 are buffers for the changing process. In this context, bank governance which is related to structure of ownership and board composition, has become an increasing concern for authorities, shareholders and relevant entities because of various reasons. Firstly, the Asian financial crisis in 1997 explored the weaknesses of corporate governance in the banking sector such as lending out for each other, crossed-ownership. Secondly, one of the reasons why the US financial crisis in 2008 occurred is that the return scheme is not reasonable, which is blame for short-term benefits, taking more risks and ignoring bank's long-term remunerations. Thus, more research in activities of corporate

governance in the banking industry is necessary to take in place, particularly in Vietnam. Thirdly, in Vietnam, the bank capitalization started in 2007 and Vietcombank was a pioneer. Before that, there were 27 joint-stock commercial banks and 4 state-owned commercial banks which, especially, comprised 70 to 80 percent of total asset and credit sector. In this process, failure of commercial bank's irresponsible corporate governance is precisely due to state-owned matter in which after transferring from state-owned model to joint-stock model, those bank were no longer sponsored by government. Furthermore, it has been an increased notice on board and management composition with the key emphasis being on gender. In fact, issues of institutional investors and foreigners are attractive to researchers and regulators, for example, their role in monitoring or affecting bank managers.

In recent years, there has been a bulk of studies exploring the governance-performance relationship of banking industries in transition economies, which mostly directed the concerns to countries in East Europe, Latin America, and especially China. Most of the available research of this topic about Vietnam were combined with other nations in East Asia region (e.g., Cornett et al., 2009), while studies have specifically focused on Vietnam case are very limited. This generates a huge void in in-depth literature of the relationship between governance structure and efficiency of Vietnamese banks. This fact drives the author to conduct this paper to examine the relationship between the board of directors characteristic and ownership structure on Vietnamese bank performance from 2013 to 2017, referring to the aspect of internal bank governance.

The remainder of this study is organized as follows. Section 2 summarises the relevant current literature and then establishes the hypotheses. Section 3 presents empirical models and describes the data before results and discussions are reported in Section 4. Section 5 provides the final conclusions as well as some recommendations for Vietnamese banking system.

2. Literature review

2.1. Overview of corporate governance in banking sector

There are many different definitions of corporate governance. La Porta et al. (2000) consider corporate governance as a set of mechanisms in which outside investors protect themselves against problems arising from conflicts of interest from the managers and controlling shareholders. The OECD principles define corporate governance as a group of connection among managers, board of director and other relevant counterparties and it stipulates the structure in which all participants set objectives, along with directions for those objectives (OECD's Principles of Corporate Governance, 2004). Another well-known definition of Corporate Governance proposed by Singaporean Committee on Corporate Governance is "corporate governance is basically about putting in place the structure, processes and mechanisms by which business and affairs of the company are directed and managed in order to enhance the long term shareholder value through accountability of managers". In comparison with other sector, governance in the banking sector plays a significant part owing to the unique nature of this financial institution. Levine (2004) and O'hara (2003) find out the existing problem related to board of directors in banks such as information asymmetries and complexity concerning the ambiguous quality of loans, complicated financial statements. Thus, it should be a standard board

that either is able to monitor managers efficiently or to provide independent and valuable advice to those individuals in the purpose of running the banks. Macey and O'Hara (2011) drew a framework of corporate governance in the banking sector, including internal and external bank corporate governance. In particular, while the former is related to management structure and ownership structure, the latter focuses on market controlling and regulatory systems. Consistently, this paper will mainly focus on internal bank corporate governance, including the board of director characteristics and ownership structure.

2.2. Impacts of board of director characteristics on bank performance

Board composition

Recently, both agency theory and stewardship theory review the board composition that is the connection between outsider and insider director. According to Levrau and Van den Berghe (2007), the former stated the board with a lot of outsiders is to prove the presence of interest conflicts that shareholders act against managers. Otherwise, the latter mentioned in the paper of both Muth and Donaldson (1998) and Levrau and Van den Berghe (2007) is to support a high fraction of inside directors who act as good stewards of banks. In a report of Mishra and Nielsen (2000), return on average asset and return on average equity proxies for bank performance which is in a negative relation to CEO duality (CEO is also a member of board directors). In case of Vietnam, there are a lot of studies about this issue and the author desires to re-examine the following hypothesis:

H_1: *There is a negative relation between percentages of CEO sitting on board on bank performance*

Board size

Efficient supervisions and further human resources is expected to be brought to managers by a board of director with a lot of members. In fact, there are also a set of studies which are relevant to the investigation between board size and corporate performance. As the study of Cheng (2008) indicates, the variability of corporate performance changes positively with board size independent of the existence of agency problems with a larger board, which means that board size is an important determinant of the volatility in corporate profitability. In addition, another study by Adam and Mehran (2005) shared similar conclusions by the finding that board size is positively correlated with performance, as measured by Tobin's Q. Nevertheless, a great number of people gathered on board leads to matters of controlling, coordination and diversity in making decisions. The study of Yermack (1996) on a sample of large U.S corporations examined empirically the relation between Tobin's Q and size of board. His results confirm that there is a significant adverse relationship concerning board size and Tobin's Q. Hermalin and Weisbach (2003) indicated that since there is an upward in agency problems, the larger board is likely to less well-organized than smaller board. In the context of European banks, Panagiotis et al. (2007) pointed out that banks with smaller boards perform better than banks with larger one. Research of Mamatzakis et al (2015), by applying a plethora of measure and using a dynamic panel analysis, shows that the size of board has a negative influence on bank performance, in particular for financial institutions with more than ten participants in board. Based on current status of Vietnamese banking system, the second hypothesis is as follow:

H_2: *There is a positive relation between board size and bank performance*

Gender

Panthan and Faff (2013) find a positive impact of gender diversification which is proxied by a proportion of female directors in the board on bank performance estimated as Tobin's Q, ROA, and POI ratios. Consistent with the existing research, Mateos de Cabo et al. (2012) shows that lower-risk banks, as well as banks with a growth orientation, might favour higher percentage of female directors. Conversely, a study of Berger et al. (2013) for German banks from 1994 to 2010 indicates that female sitting on the board upward leads bank risk to increase. It is explained that compared to male board members, female ones may have less experience in handling excessive risks. In the background of Vietnam banking system, the number of female members on the board of directors is still very moderate. Hence, the author takes account for female on the board with the following empirical hypothesis:

H_3: *There is a negative relation between the number of female directors and bank performance*

2.3. Impacts of ownership structure on bank performance

Institutional investor

In terms of financial firms, referencing from McConnell and Servaes (1990), corporate performance proxied by Tobin's Q is positively connected to the fraction of institutional investor ownership. To be more advanced, Nesbitt (1994) and Del Guercio and Hawkins (1999) add various ways concerning firm performance measurement to confirm above relationship. In contrast to the above review, numerous authors hold same researching outcomes, for instance, Agrawal and Knoeber (1996), Karpoff et al. (1996), Faccio and Lasfer (2000) who do not discover any substantial connection between two objectives. Henceforth, institutional investors effect on corporate performance is still ambiguous. Consequently, the researcher desires to study this matter in the Vietnam environment with an empirical hypothesis:

H_4: *There is a negative relation between institutional ownership and bank performance*

Foreign investor

The view that the entry of foreign investor has improved the efficiency of domestic banks through uplifting the competitiveness in emerging market have been shared by many authors (e.g, Drakos, 2003; Hasan and Marton, 2003; Fries and Taci, 2005). The participation of external factors will force banks to change the conventional mode of operation to cope with high competitive pressure in the new environment. Not only bring about the increase in profitability accounting ratios of individual bank, foreign owners also would support the improvement in corporate governance and operation transparency as well as establishment stable development of banks which foreign ownership involves in (Hermes and Lensink, 2002). Moreover, exploring banking reform of China and India, Saez (2004) points out the banks with foreign ownership have the tendency to go public and list their share on stock exchanges, which will enhance the privatization and liberalization process in financial sector of transition economies. These are the reasons why the author enhances a concern about the foreign ownership by empirical hypothesis:

H_5: *There is a positive relationship between foreign ownership and bank performance*

3. Data and methodology

3.1. Data

This paper collects data from the annual reports of 31 Vietnamese commercial joint-stock banks (in which there are 4 state-owned commercial banks) and the website of Vietstock (a leading financial database in Vietnam) from 2013 to 2017. The panel data set strongly balance and has 155 bank-year observations and these banks include 11 listed commercial banks in both Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX).

Table 1: Definitions of variables

Variables Label	Type of data	Type of variables	Measurement
ROA	Cardinal	Continuous	Total income on its total assets
ROE	Cardinal	Continuous	Net Income after Taxes divided by Total Equity Capital
NIM	Cardinal	Continuous	The difference between interest received from lending activities and interest paid from taking deposits
SIZE	Cardinal	Continuous	Number of directors on board
INSTI	Cardinal	Continuous	The proportion of institutional investors on board
FORE	Cardinal	Continuous	The proportion of foreign investor on board
FEMALE	Cardinal	Continuous	The proportion of female directors on board of director
CEODUAL	Cardinal	Continuous	The proportion of CEO on board of director
LISTED	Nominal	Dummy	Status of individual bank 1 = listed, 0 = Non-listed

3.2. Methodology

The author runs 3 regressions for 3 single models with distinctive measurements of bank performance metrics like ROA, ROE, and NIM respectively. While ROA is to estimate how managers perform to employ a corporate's assets completely, ROE is deployed by shareholders in making decisions to invest, and NIM indicates interest margin between amount paid to depositors and amount received from creditors. Since Jacobson (1987) pointed the high correlation between ROA and ROE, this paper use three proxies to bank performance interchangeably. There are five explanatory variables, including (1) board size, the proportion of (2) institutional investors and (3) foreign investors, (4) female directors and (5) CEO being board directors. Moreover, this paper also employs one controlling variable: bank status as a dummy variable.

The general model is presented below with the definitions of variables are summarized in Table 1:

$$\begin{Bmatrix} Bank \\ performance \end{Bmatrix} = \begin{Bmatrix} \beta_1 + \beta_2 SIZE_{i,t} + \beta_3 INSTI_{i,t} \\ + \beta_4 FORE_{i,t} + \beta_5 FEMALE_{i,t} \\ + \beta_6 CEODUAL_{i,t} + \beta_7 LISTED_{i,t} + u_{i,t} \end{Bmatrix}$$

Where: i denotes individual Vietnamese bank with i = 1,2,3…38; t denotes yearly time period with t = 2015, 2016, 2017; β is the parameter to be estimated with β(1,2,…,6); $u_{i,t}$ is error term.

To select an appropriate method, the author does the 2 tests: F-test and Hausman test to choose one out of 3 methods with different features as shown. The author will carry out 2 comparative tests of OLS, FE and RE models: before working with the FE model, the author checks whether this fixed effects should be included in the model, against the OLS method, by using the standard F test (the null hypothesis: all the constant are the same). Then, the Hausman test helps the author to choose a better model between FE and RE model. These tests are shown in Appendix.

4. Empirical results

4.1. Descriptive statistics

Table 2 shows the correlation matrix among explanatory variables and the results prove that coefficient correlations of each pair of them are less than 50%, referring that there is no error named multicorrelinearity. Thus, it is reasonable to include them into the model.

Table 2: Correlation matrix

	SIZE	INSTI	FORE	FEMALE	CEODUAL	LISTED
SIZE	1.0000					
INSTI	0.3245	1.0000				
FORE	0.3273	0.0502	1.0000			
FEMALE	0.0065	0.1336	0.0570	1.0000		
CEODUAL	0.0787	0.2523	0.1963	0.1955	1.0000	
LISTED	0.4511	0.0850	0.2499	0.0641	0.0900	1.0000

In Panel X of Table 3, ROA takes a mean value of nearly 0.55% with a standard deviation of 0.4232 and the maxima and minima of ROA are 2.54% and 0.01% respectively. On the contrary, the mean value of ROE and NIM, in turn, are 6.77% and 2.84% with standard deviations of both are 5.67 and 1.89. While the minima of ROE and NIM are 0.08% and -0.68%, maxima of them are 27.72% and 9%. Descriptive statistics for independent variables are provided in Panel Y of Table 3. The average of board size is 7.4 with a standard deviation of 1.81. While the certain bank has 5 members on board (minima), the other has 13 directors (maxima). In addition, the proportion of institutional investors has a mean value of 44.17% with a standard deviation of 24.23, minima 2.55 and maxima 97.96 which is reported that the bank is mostly state-owned. On average, the share of foreign investor account for 10.89%. Female directors comprise, on average, 16.62% on board with standard deviation of 13.94, minima 0% and maxima 50%. In

contrast, CEO duality accounts for, on average, 14.27% of board with standard deviation of 11.40, maxima 20% and minima 0%.

Table 3: Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Panel X: Dependent variables					
ROA	155	0.5482	0.4232	0.01	2.54
ROE	155	6.7703	5.6784	0.08	27.72
NIM	155	2.8391	1.8985	-0.68	9
Panel Y: Explanatory variables					
SIZE	155	7.4156	1.8066	5	13
INSTI	155	44.1709	24.2365	2.55	97.96
FORE	155	10.8931	13.4125	0	67
FEMALE	155	16.6288	13.9445	0	50
CEODUAL	155	14.2745	11.4039	0	20

Table 4 shows descriptive statistics for controlling variable – bank status (listed or listed bank) which takes a form of dummy variable. Basically, all measure of bank performance of listed banks is greater than ones of non-listed banks on average. In terms of listed banks, ROA, ROE and NIM has mean values of 0.77%, 10.13%, and 3.77% respectively. However, banks that are not listed in stock exchanges, has an average value of 0.45%, 5.41% and 2.46% in turn. Especially, there is a negative value of NIM of a certain non-listed bank.

Table 4: Comparison between listed and non-listed banks

Variables	Number of banks	Mean	Std. Dev.	Min	Max
Panel A: Listed banks					
ROA	11	0.775111	0.4658795	0.02	2.54
ROE	11	10.13659	5.461144	0.35	27.72
NIM	11	3.76907	1.900664	0.36	9
Panel B: Non-listed banks					
ROA	20	0.453611	0.3667907	0.01	2.09
ROE	20	5.411477	5.19873	0.08	26
NIM	20	2.465234	1.77289	-0.68	8

4.2. Results of empirical panel model

4.2.1. Impacts on ROA

Table 5 and 6 provides the results of ROA model by different methods. Under random effect method, only FORE - the proportion of foreign investors on board has a positive relation with ROA at a 5% significant level. Due to only two out of 6 independent variables having relation with ROA, the method has a relatively low R-square (16.44%). Under the rejected null

hypothesis of Breuch-Pagan LM test and Wooldridge test, the ROA model has a presence of both heteroskedasticity and first-order autocorrelation. Thus, the Feasible Generalized Least Squares method is applied to adjust for these errors. This method shows a positive correlation between the proportion of foreign investors on board (FORE) and ROA at a 5% significant level, being consistent with the random effects method's result. In addition, the positive coefficient of LISTED variable indicates that listed-banks have a higher ROA than non-listed banks do. In both methods do not show any relationship between other explanatory variable and ROA.

Table 5: The random effects method for ROA model

Dependent variables: ROA			R-square within = 0.1644	
Number of observations = 155			Between = 0.2315	
Wald Chi-square (6) = 28.28			Overall = 0.2265	
P-value (>Chi2) = 0.0001***				
	Coefficient	Std. Dev.	T-statistics	P-value
SIZE	-0.0214	0.0243	0.88	0.379
INSTI	0.0012	0.0020	0.60	0.546
FORE	0.0125	0.0031	3.99	0.000
FEMALE	-0.0015	0.0026	0.58	0.564
CEODUAL	0.0031	0.0030	1.02	0.309
LISTED	-0.2778	0.1017	2.73	0.006
_cons	0.4200	0.1932	2.17	0.030
***, **, * denote statistically significant at the 1%, 5%, 10% level				

Table 6: The FGLS method for ROA model

Dependent variables: ROA			Number of observations = 155	
Panels: Heteroskedasticity			Wald Chi-square (6) = 56.84	
Correlation: first-order autocorrlation			P-value (>Chi2) = 0.0000***	
	Coefficient	Std. Dev.	T-statistics	P-value
SIZE	-0.0078	0.0148	-0.53	0.598
INSTI	-0.0006	0.0011	-0.56	0.578
FORE	0.0067	0.0023	2.89	0.004
FEMALE	-0.0015	0.0016	-0.94	0.345
CEODUAL	0.0024	0.0019	1.24	0.215
LISTED	0.3414	0.0705	4.84	0.000
_cons	0.4069	0.1215	3.35	0.011
***, **, * denote statistically significant at the 1%, 5%, 10% level				

4.2.2. Impacts on ROE

Table 7 and 8 provide the ROE model with diverse methods whose outcome is quite different as found in the ROA model. Both the random effects and FGLS method reveal the positively

significant relationship between the percent of foreign investors on board (FORE) and ROE. However, while the FGLS method shows the correlation between controlling variable - bank status (LISTED) at a 5% significant level, the random effects method implies this relationship at 10% significant level. Moreover, no more correlation between ROE and other independent variables are revealed in both methods.

Table 7: The random effects method for ROE model

Dependent variables: ROE		R-square within = 0.1532		
Number of observations = 155		Between = 0.2286		
Wald Chi-square (6) = 27.20		Overall = 0.2594		
P-value (>Chi2) = 0.0001***				
	Coefficient	Std. Dev.	T-statistics	P-value
SIZE	-0.0279	0.2702	-0.01	0.918
INSTI	0.0310	0.0242	1.28	0.200
FORE	0.1579	0.0356	4.43	0.000
FEMALE	-0.0119	0.0295	-0.41	0.685
CEODUAL	0.0145	0.0330	0.44	0.661
LISTED	2.2941	1.1952	1.92	0.055
_cons	3.3442	2.2648	1.48	0.140
***, **, * denote statistically significant at the 1%, 5%, 10% level				

Table 8: The FGLS method for ROE model

Dependent variables: ROE		Number of observations = 155		
Panels: Heteroskedasticity		Wald Chi-square (6) = 18.48		
Correlation: first-order autocorrlation		P-value (>Chi2) = 0.0034***		
	Coefficient	Std. Dev.	T-statistics	P-value
SIZE	-0.0555	0.1064	-0.52	0.602
INSTI	0.0235	0.0133	1.77	0.077
FORE	0.0487	0.0230	2.11	0.035
FEMALE	0.0010	0.0138	0.07	0.942
CEODUAL	0.0230	0.0167	1.38	0.169
LISTED	1.7711	0.7710	2.30	0.022
_cons	4.2513	0.8609	4.94	
***, **, * denote statistically significant at the 1%, 5%, 10% level				

4.2.3. Impacts on NIM

Table 10 and 11 indicate the results of NIM model under both the random effects and FGLS method. The positive significant relationship between the share of the investor on board and NIM is consistent with the outcomes found in ROA and ROE model. Controlling variable – bank status (listed or non-listed banks) has a positive impact on NIM in both methods. Especially, the

FGLS method for NIM model is used to adjust for only error of heteroskedasticity. However, both methods have slightly distinctive outcomes. For instance, board size (SIZE) has significantly negative influences on NIM at a 5% significant level. While the random effects method shows no connection between CEO duality (CEODUAL) and NIM, the FGLS reveals the positive one at a 5% significant level. There is a positive relationship between the percent of female directors on board and NIM in the random effects method at a 5% significant level, but not in the FGLS model. There is no evidence that the proportion of institutional investors on board affects NIM under both methods.

Figure 9: The random effects method for NIM model

Dependent variables: NIM			R-square within = 0.1781	
Number of observations = 155			Between = 0.2122	
Wald Chi-square (6) = 29.74			Overall = 0.1886	
P-value (>Chi2) = 0.0000***				
	Coefficient	Std. Dev.	T-statistics	P-value
SIZE	0.1750	0.0876	-2.00	0.046
INSTI	0.0013	0.0079	0.18	0.861
FORE	0.0342	0.0117	2.93	0.003
FEMALE	0.0290	0.0099	2.93	0.003
CEODUAL	-0.0118	0.0114	-1.04	0.298
LISTED	1.3442	0.3871	3.47	0.001
_cons	2.9619	0.7421	3.99	0.000
***, **, * denote statistically significant at the 1%, 5%, 10% level				

Figure 10: The FGLS method for NIM model

Dependent variables: NIM			Number of observations = 155	
Panels: Heteroskedasticity			Wald Chi-square (6) = 46.85	
Correlation: no autocorrlation			P-value (>Chi2) = 0.0000***	
	Coefficient	Std. Dev.	T-statistics	P-value
SIZE	0.1375	0.0626	-2.19	0.028
INSTI	-0.0060	0.0038	-1.57	0.116
FORE	0.2438	0.0075	3.22	0.001
FEMALE	0.0050	0.0075	0.67	0.503
CEODUAL	-0.0218	0.0084	-2.59	0.010
LISTED	1.0904	0.2548	4.28	0.000
_cons	3.4260	0.4743	7.22	0.000
***, **, * denote statistically significant at the 1%, 5%, 10% level				

5. Discussions of main findings

Firstly, it is empirically shown that board size has a positive impact on bank performance in term of NIM, while significant effects on ROE and ROA are not observed. Due to numerous benefits

related to a bigger board, this result is relatively reasonable. A larger board could also favor better decisions since it is likely to be based on diversified competencies and experiences. In Vietnamese banks, this positive relation between board size and bank performance would likely support the resource-based viewpoint that appreciates complementary skills and diversified knowledge from different directors in the board. Furthermore, besides promoting open and constructive engagement within board discussions and decision-making process, board diversity can be a good element in the lower probability of power concentration into the hands of a small number of directors. This outcome is also consistent with the previously related research in Vietnam banking system (Binh and Giang (2012); Bishnu and Hoang (2014)). While some argue that there is no significant effect of size of board on the bank performance or negative connection among these (Yermack (1996); Eisenberg et al. (1998); Dalton et al. 1999), it can be said that the relationship between board size and bank performance is a trade-off between managing and supervising roles.

Secondly, empirical results point out the negative impact of CEO duality on bank performance in the case of NIM. However, empirical result shows no significant relationship between CEO duality and ROA and ROE. It refers that agency theory might outweigh the stewardship effect (favours CEO-Chairman position), which is supported by Jermias and Gani, 2014. In addition, Gillan (2006) also supports the board's independence of the CEO as this helps boards to avoid being unbiased supervision to inspect the CEO's functions.

Thirdly, it is indicated that only the proportion of foreign investors has a significantly positive impact on all of ROA, ROE, and NIM. Opening up the banking system to foreign ownership involvement is another milestone of financial liberalization in addition to privatization (Xu, 2011). As has been observed in many developing economies, a foreign shareholder is expected to transfer and apply the advanced management experiences as well as modern financial services to Vietnamese commercial banks. These activities will raise the competitiveness of the financial market, from which induce positive results to the bank with foreign ownership and Vietnamese banking system as a whole (Berger et al., 2007).

Lastly, the positive impact of bank status on bank performance is shown in this study, implying that listed banks have higher profitability than non-listed ones. This is consistent with Giang, Phung and Tröge, Micheal (2018) that listed banks have expressively higher ROA, ROE, and NIM. However, this paper shows the insignificant relationship between the institutional investors on board; female-board directors and bank performance. This view is also shared by Dobbin and Jung (2011), who concluded that gender diversity has a negative and neutral effect on performance. Similar results are found with Adams and Ferreira (2009) that find negative or no relation between gender diversity and firm performance. In the Vietnamese banking system, due to cultural and economic background, the presence of women on the board of banks is relatively limited, thus they will have difficulty in influencing on executive decisions.

6. Conclusion

In the process of the restructuring banking system, corporate governance in banks again becomes a topic of concern for a wide range of the authorities, executives of the bank as well as

researchers. This study will focus on understanding the influences of some elements belonging to corporate governance to the Vietnamese banks' performance through quantitative models. The data used in the model is panel data of 31 Vietnamese commercial banks from 2013 to 2017. There are significantly positive relationships between the share of foreign investors on board and bank performance. Also, the outcome indicates that a larger board drives bank performance to increase in the case of NIM. However, CEO duality has a significantly negative impact on NIM, and the study has no evidence of the relation among the percent of female and institutional investors on board and bank performance.

The model results suggested that in order to improve the efficiency of commercial banks, the quality of corporate governance is a crucial issue that Vietnamese commercial banks need to pay attention to. The board structure should be designed in a way that the interests of all stakeholders are considered and protected as until now, in Vietnam, only the interests of the main owners/shareholders are considered. Besides, the board of directors is ultimately responsible for the operations and financial soundness of the bank. Thus, it should be ensured that board members are qualified for their positions, have a clear understanding of their role in corporate governance and are not subject to undue influences from management or outside concerns.

In regards to ownership structure, foreign investor presence and listing status should be encouraged. Vietnam government should continue to prompt the involvement of foreign factors to raise the competition of the financial market. Opening the banking system should initially begin from the improvement in the investment environment and legal framework to attract the participation of foreign-owned banks as well as a capital injection to domestic banks in the form of foreign ownership. This progress has been implemented quickly in the Latin American countries and the transition economy of Central Europe throughout the 1990s, thus sustainability changes the image of banking sectors in such countries. Importantly, the association of foreign ownership with desirable and stable domestic banks' performance is just witnessed in a banking environment where foreign involvement is closely and properly regulated.

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APPENDIX

The standard F-tests:

$$\begin{cases} \text{The null hypothesis } H_0: \text{the FE method is not preferred} \\ \text{The alternative hypothesis } H_a: \text{the FE method is preferred} \end{cases}$$

Results of the standard F-tests

Models with dependent variables	F-Statistics	Degree of Freedom	P-value
ROA	6.01	6	0.0000***
ROE	11.29	6	0.0000***
NIM	12.51	6	0.0000***
***denote statistically significant at the 1% level			

The Hausman tests:

$$\begin{cases} \text{The null hypothesis } H_0: \text{the RE method is preferred} \\ \text{The alternative hypothesis } H_a: \text{the FE method is preferred} \end{cases}$$

Results of Hausman tests

Models with dependent variables	Chi-squared Statistics	Degree of Freedom	P-value
ROA	2.25	6	0.8955
ROE	0.99	6	0.9858
NIM	2.80	6	0.8335
***denote statistically significant at the 1% level			