The Impact of Corporate Governance on Financial Risk in Vietnamese Commercial Banks

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Abstract

This paper approaches the corporate governance mechanism to study the impact of corporate governance factors on capital risk, credit risk, and liquidity risk in Vietnamese commercial banks. This approach divides corporate governance into internal mechanism and external mechanism. The empirical study investigates 26 joint-stock commercial banks in the period of 2009-2013. The empirical study indicates that board strengths, foreign capital, information disclosure, and stakeholder roles have significant impacts on financial risk management in the banking systems. The study result provides key indicators for policy makers to build corporate governance mechanism for the financial risk management in Vietnam banking system.

Keywords: corporate governance, financial risk, stakeholders, board strengths, banking system

1. Introduction

Corporate Governance (CG) is only part of the larger economic context in which companies operate that includes macroeconomic policies and the degree of competition in product and factor market. Corporate Governance is a system of rules, practices and processes by which a company is directed and controlled (Organization for Economic Co-operation and Development (OEDC), 2004). It is used to balance the interest of different stakeholders in a company, including shareholders, perspective investors, managers, employees, customers, suppliers and government to deliver a long-term successful story (Financial Reporting Council (FRC), 2014). In other words, corporate governance mentions about structuring the hierarchy of a company, separate the authorities and responsibilities of shareholders, board of directors, the committees to ensure that the company is running effectively and smoothly to persuade its long-term aspirations.

According to Basel committee on banking supervision, effective corporate governance practices are essential to achieving and maintaining public trust and confidence in the banking system, which are critical to the proper functioning of the banking sector and economy as a whole (Bank for International Settlement (BIS), 2010). Since the banking system contributes a significantly specific role in the economy, corporate governance is critical and so the risk management is essential in financial institutions. Therefore, researches on corporate governance and risk management have been interested in the recent academic literature (Zhong, Gribbin, & Zheng, 2007; Tsorhe, Aboagye, & Kyereboah-Coleman, 2011; McNulty, Florackis, & Ormrod, 2012; Salhi & Boujelbene, 2012). Tsorhe et al. (2011) emphasized the impact of board strengths and stakeholder behaviors on the management of bank capital risk, credit risk, and liquidity risk. McNulty et al. (2012) studied the impacts of board behaviors and director characteristics on the financial risk management. Salhi and Boujelbene (2012) investigated the relationship between internal governance mechanism and risk taking in banking industry. Their study emphasized on the impact of ownership structure and the board on bank risk. Even many earlier researches concern on the relationship between corporate governance and financial risk, there is still not much the research of financial risk in banking under the effects of corporate governance mechanism. For that reason, this paper approaches the bank corporate governance mechanism including external mechanism and internal mechanism to study the impact of corporate governance factors on the financial risk management in Vietnamese commercial banks.

2. Literature Review

Corporate governance is necessary to maintain and improve public confidence in the bank system about its abilities to properly manage its assets and liabilities, showing their commitment to the depositors, shareholders and others stakeholders. The characteristics of competition, high regulation, agency problems and high information asymmetric of banking system lead to the intense concern about the corporate governance in banking system. As BIS (2010) specified, corporate governance in banking is about the board of management governing the business and affairs. A regulation and supervisory systems emphasizing on information disclosure will boost performance and stability of banking system (Barth, Caprio, & Levine, 2004). Moreover, permitting foreign investors and management helps improve the banking developments (Barth et al., 2004).

Corporate governance in Vietnam banking system is considered as inadequate and weak. Moreover, lack of awareness of the necessary of a corporate governance framework is one critical reason for its weaknesses. There is also a significant gap between the corporate governance practice in Vietnam banking system and international principal (Tu, Son, & Khanh, 2014). Tu et al. (2014) also found corporate governance practice in banking that the supervisory board and board of directors is the weakest part using the corporate governance index (CGI). They also stated that the corporate governance has positive impact on the performance of Vietnam banking system. They suggested that the shareholder meetings, board of directors and information disclosure have positive impact on ROA and ROE.

Risk could be defined in many ways, as the firm value reductions due to changes in some fundamental factors of the business environment (Pyle, 1999) or the uncertainties in the firm value or firm performance, the probabilities of occurrence and non-occurrence (Raghavan, 2003). Financial risk is so type of risk associated with financial part which means that possible losses due to financial variables. It could be from the financial market, such as interest rate risk, foreign exchange risk or credit risk, or from the internal business, such as liquidity and capital risk. Financial institutions can face some type of risks: risk that can be eliminated by properly organized business, risk that can be transferred to others using some financial instruments and those that can be managed by the firm (Oldfield & Santomero, 1995). For those that could not be eliminated or transferred, and should be absorbed at the bank level, the bank should manage risk effectively so that it can achieve its financial performance goal (Santomero, 1997).

As stated in Country Risk Report (A.M. Best Company, Inc (AMB), 2014), Vietnam has very high financial system risk. Under an adverse macro situation, Vietnamese commercial banks could not absorb the credit losses (Nguyen, 2015). Also, there was a reverse relation between the NPL (Non-Performing Loan) ratio and GDP growth (Nguyen, 2015). In 2012, NPLs rose to 4.67% (KPMG Vietnam (KPMG), 2013). Moreover, 16% of loans outstanding are for state-owned enterprises and only 2% for foreign invested enterprises and approximately 60% of loans outstanding are short-term loans (KPMG, 2013).

Researches on impacts of corporate governance on financial risk are much interested in the academic literature. The earlier researches emphasized risk taking practices and key indicators that the corporate governance process are accountable for managing the different dimensions of financial risk. Table 1 summarizes main researches on the impact of corporate governance factors on the financial risk management.

Table 1. Review on corporate governance and financial risk

Variable	Authors	Conclusions
Board size	McNulty et al. (2012), Salhi and Boujelbene (2012)	McNulty et al. (2012) indicate the smaller board size, the less financial risk-taking decisions after examining the data from questionnaire survey of chairman at 1000 largest companies in the UK in early 2008. Salhi and Boujelbene (2012) uses data set of 10 Tunisian banks over 8 years from 2002-2009, they find that a smaller board size helps decreasing risk-taking activities.
Board composition	Booth, Cornett, and Tehranian (2002), Tsorhe et al. (2011), McNulty et al. (2012)	Booth et al. (2002) suggest that a smaller proportion of outside directors lead to more risk-bearing actions of the bank due to agency conflicts. Tsorhe et al. (2011) state that the proportion of outside members represents independence and strength of board. They find out that board strength does not have significant impact on capital risk, credit risk and liquidity risk. McNulty et al. (2012) state that the proportion of non-executive board does not have any significant effect on financial risk.

Audit committee	Beasley (1996), Tsorhe et al. (2011)	Beasley (1996) finds evidence that audit committee does not have relationship with financial statement fraud. Tsorhe et al. (2011) include audit committee in the board index, their results indicate that audit committee does not statistically significantly impact the capital, credit and liquid risks in 23 Ghana bank during 2005-2008.
Foreign capital	Salhi and Boujelbene (2012), Zhong et al. (2007)	Salhi and Boujelbene (2012) indicate that the participation of foreign investors has a positive impact on the credit risk management. Zhong et al. (2007) find that foreign investors help reducing risk by using data of traded companies in New York.
Information disclosure	Kohli (2003)	Kohli (2003) finds that good corporate governance would disclose more information to the market comparing to poor corporate governance.
Stakeholders' role	Tsorhe et al. (2011)	Tsorhe et al. (2011) find there is no evidence in support to shareholders helping to decrease credit risk, depositors affect liquidity risk only.

3. Methodology

This paper is based on corporate governance mechanism of Macey and O'Hara (2003) that includes internal mechanism and external mechanism as in Figure 1. Ciancanelli and Reyes-Gonzalez (2000) show that rule and regulation in banking industry represent for external factor of corporate governance. Meanwhile, as Llewellyn and Sinha (2000), internal corporate governance mechanism is about accountability, monitoring and controlling of a firm's management with respect to the use of resources and risk taking.
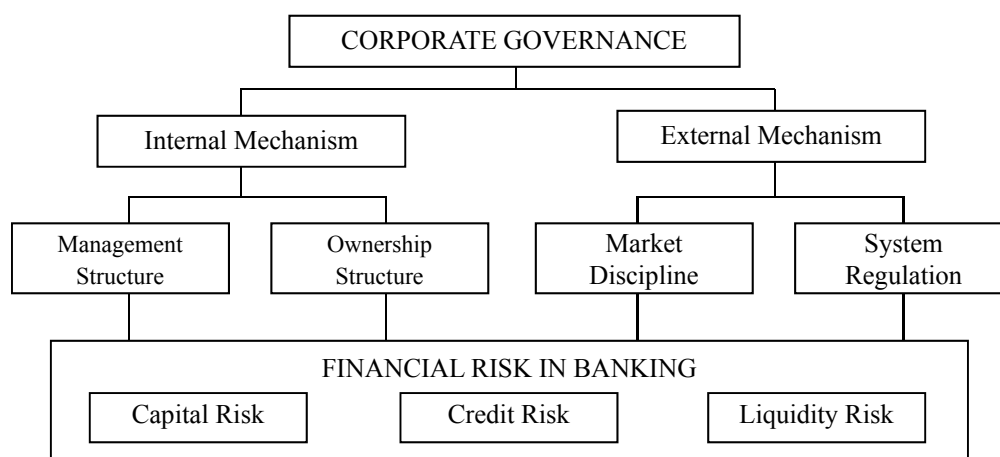

Figure 1. Corporate governance mechanism and financial risk in banking

Since bank financial risk includes capital risk, credit risk, and liquidity risk, these financial risk indicators are used as dependent variables in the models.

Capital plays an important role and is the greatest concern of shareholder. There are many criteria for evaluating capital risk. Most of bank managers should maintain a minimum Capital Adequacy Ratio (CAR) which should be followed Basel II. Moreover, many earlier researches also use CAR as an evaluation standard for capital risk. Therefore, this study uses CAR for capital risk in the model. Credit is regarded as a major activity in bank's asset portfolio. However, the credit quality is not high and proportion of bad credit is large indicating the credit risk. This type of risk usually involves in and causes damage to commercial bank activities. The Non-Performing Loan ratio (NPL) is used to evaluate credit risk. In recent years, high level of liquidity shortage is one reason of bankruptcy, so that liquidity risk should not be ignored. Thus, this paper uses the Cash Reserve Ratio (CRR) to valuate liquidity risk. CRR is a specified minimum fraction of the total deposits of customers which commercial banks have to hold as reserves either in cash or as deposits with the central bank.

Board size has impact on supervision, management and consultation capacities of managers. Lipton and Lorsch (1992) show that a smaller board size works more effective since a larger board will encounter more difficulties when supervising managers. However, Pearce, and Zahra (1992) suggest a larger board size will strengthen capacity to supervise and improve information sources.

Board composition indicates a proportion of non-executive board members that contributes an objective view in consultation and making decision process of the board. An overwhelmed percentage of non-executive board members could spoil the consultation roles of the board since it may prevent the executives from participating the board which then leads to the difficulties in transferring the information between the board and the executives (Brickley, Coles, & Jarrell, 1997; Adams & Mehran, 2008).

Audit committee may have impact on the risk level of company to a noticeable degree. Because one of main responsibilities of audit committee is supervise the integrity of financial statements, internal auditing and risk management.

Ownership structure is also a critical determinant of corporate governance. Capital structure relates to foreign capital, state-owned capital, majority shareholders. Almost a third of Vietnamese commercial banks have foreign strategic partnerships or foreign investors. Consequently, capital proportion of foreign investors may represent for an ownership factor of internal governance.

System regulation plays central roles, in which information disclosure regulation is one of the challenges in corporate governance. Being a bridge between the bank and related authorities, the board is responsible for disclosing information transparently to shareholders, authorities and other stakeholders. This is compulsory for large and listed companies in banking industry.

Market discipline is also a factor probably added to the regulation and supervision of the government. BIS (2010) specifies market discipline is one of three pillars and foundation for financial regulation in the future. Market discipline mentions about roles of depositors and shareholders in punishing the bank for unacceptable risks. Specifically, depositors can withdraw their money or require a higher interest rate to compensate for a higher risk (Hosono, 2003). Shareholders can sell their shares and push the price down. Then, when the bank can realize a situation of higher funding cost or high withdrawing deposit can endanger their existences, they will avoid involving in too high risk activities and conduct safety management (Hosono, 2003).

Table 2 presents dependent and explanatory variables in the models in order to study impacts of corporate governance on the financial risk.

Table 2. Dependent and explanatory variables

	Variables	Symbol	Measure
	Financial Risk		
Dependent variables	1. Capital Adequacy Ratio (represents capital risk)	CAR	$\dfrac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weighted Assets}}$
	2. Non-Performing Loan (represents credit risk)	NPL	$\dfrac{\text{Non} - \text{performing loans}}{\text{Total gross loan}}$
	3. Cash Reserve Ratio (represents liquidity risk)	CRR	$\dfrac{\text{Cash}}{\text{Total deposits}}$
	Corporate Governance – Internal Mechanism		
	1. Board Size	BOSI	Number of members in the board
	2. Board Composition	BOCO	The ratio of non-executive directors to total board directors
Explanatory variables	3. Audit Committee	AUCO	Audit Committee size
	4. Foreign Capital	FORC	Proportion of foreign investor capital over total capital
	Corporate Governance – External Mechanism		
	1. Information Disclosure	INFD	Management report disclosure 1 - Yes; 0 - No
	2. Shareholders' Role	SHAR	Total equity/Total loans
	3. Depositors' Role	DEPR	Total loans/Total deposits

This study models the relationship between three indicators of the financial risk that a bank faces and a vector of explanatory variables which include corporate governance factors.

$$Y_j = C_j + \sum_{k=1}^{n} \beta_{jk} \times X_{jk} + \varepsilon_j \tag{1}$$

Where, Y_j is a dependent variable of the financial risk model j, where j runs through capital risk, credit risk, and liquidity risk. X_{jk} is a explanatory variable k in the financial risk model j. β_{jk} is coefficient k to be estimated in the model j. C_j and ε_j is intercept and residual of the estimated model j, respectively.

Multiple linear regression analysis is used to estimate the fixed effects model (FEM) and random effects model (REM). These two models test the differences between banks by analyzing the impacts of corporate governance factors on financial risk management in banking. The difference between FEM and REM is the variation of independent variables. In FEM, the variation is correlated to independents. In REM, the variation is assumed to be random and not correlated to independents.

4. Empirical Results and Discussions

Data is extracted from financial reports, annual reports, management reports and information from official websites of 26 randomized banks in 32 joint-stock commercial banks till 31/12/2013. Data is from 2009 to 2013. Totally, there are 103 observations of panel data. Table 3 presents descriptive statistics of regression variables.

Table 3. Descriptive statistics of regression variables

Variables	Observations	Mean	Std. Dev.	Minimum	Maximum
CAR	103	17.1700	10.7117	8.0000	62.0000
NPL	103	2.4181	1.6770	0.0000	11.4000
CRR	103	51.8527	39.4045	5.7200	341.5300
BOSI	103	7.5581	2.3482	4.0000	15.0000
BOCO	103	88.0719	13.5326	46.1500	100.0000
AUCO	103	3.5923	0.8952	3.0000	7.0000
FORC	103	9.1436	11.0280	0.0000	30.0000
INFD	103	0.6538	0.4775	0.0000	1.0000
SHAR	103	16.3397	18.2342	1.3000	169.2500
DEPR	103	93.3237	40.7311	41.1100	351.9900

Prior to estimating the coefficient of the models, the data panel is also tested for multicollinearity. Correlation coefficient matrix is presented as in Table 4. It shows that most cross-correlation terms for the variables are relatively small. The highest correlation coefficient value is 0.7716, and the others are below 0.5. Consequently, it concludes that there is no problem of multicollineariry among variables.

Table 4. Pearson correlation coefficient matrix

Variables	CAR	NPL	CRR	BOSI	BOCO	AUCO	FORC	INFD	SHAR	DEPR
CAR	1.0000									
NPL	0.0511	1.0000								
CRR	0.4495	-0.1996	1.0000							
BOSI	-0.2722	-0.0512	-0.0714	1.0000						
BOCO	0.1809	0.0980	-0.0647	-0.3270	1.0000					
AUCO	-0.0373	-0.0462	-0.0963	0.0299	-0.1141	1.0000				
FORC	-0.0830	-0.2765	0.1684	0.5088	-0.1633	0.0624	1.0000			
INFD	-0.2548	-0.1680	-0.2696	0.1104	-0.1040	0.0784	-0.0373	1.0000		
SHAR	0.7716	0.0194	0.2641	-0.2278	0.1589	0.0148	-0.0102	-0.1698	1.0000	
DEPR	0.6371	0.0490	0.3699	-0.0731	0.1605	0.0738	0.1228	-0.1898	0.7041	1.0000

The research runs regression for both FEM and REM on three models of capital risk (CAR), credit risk (NPL), and liquidity risk (CRR). While board size (BOSI) and Audit committee (AUCO) are statistically insignificant in the financial risk models, shareholders' role (SHAR) has statistically significant impact on the financial risk models. In addition, foreigner capital (FORC) proved to be highly significant relation to the credit risk, information disclosure (INFD) and depositors' role (DEPR) remained highly significant relation to the capital risk and the liquidity risk. The R square and Durbin Watson for the fixed effects models are higher than those for the random effects models. Thus, it may be better off using the estimation of the fixed effects models.

Table 5. Effects of explanatory variables on financial risk under FEM and REM

Variables	Capital risk (CAR)		Credit risk (NPL)		Liquidity risk (CRR)	
	FEM	REM	FEM	REM	FEM	REM
C	-3.5298	-0.0815	7.1363	1.1842	49.1993	72.9390
	(-0.5594)	(-0.0165)	(3.6089)	(0.7777)	(1.2691)	(2.6862)
BOSI	-0.1350	-0.1954	0.1268	0.1404	-0.9669	-2.9811
	(-0.4276)	(-0.7193)	(-1.2329)	(1.5747)	(-0.4983)	(-1.9606)
BOCO	0.1268	0.1137	-0.0069	-0.0133	0.1214	0.4362
	(2.7712)	(2.7399)	(0.4700)	(0.9874)	(-0.4319)	(-1.8778)
AUCO	0.0289	-0.1885	-0.0283	-0.0734	1.4633	-2.4747
	(0.0558)	(-0.3714)	(-0.1673)	(-0.4042)	(0.4597)	(-0.8115)
FORC	0.0882	-0.0507	-0.5406	-0.0606	-0.5738	0.4570
	(0.2710)	(-0.5478)	(-5.0946)	(-2.6719)	(-0.2868)	(1.1166)
INFD	3.5433	0.5448	0.6591	-0.4923	-18.356	-17.9550
	(2.2257)	(0.4194)	(1.2966)	(-1.2230)	(-1.8764)	(-2.5677)
SHAR	0.0956	0.1965	0.0230	0.0050	-1.4840	-0.9107
	(2.1690)	(5.2262)	(1.8530)	(0.5088)	(-5.4776)	(-4.2679)
DEPR	0.0654	0.0637	-0.0006	0.0002	-0.6927	-0.6984
	(2.9321)	(3.2601)	(-0.1892)	(0.0677)	(5.0485)	(6.2060)
Observations	103	103	103	103	103	103
R-square	0.9222	0.4387	0.6864	0.0898	0.8025	0.2736
F-statistic	22.7114	10.6098	4.1905	1.3403	7.7826	5.1117
Prob (F-statistic)	0.0000	0.0000	0.0000	0.2400	0.0000	0.0000
Durbin-Watson	2.1437	1.2657	2.6158	1.5214	2.9884	1.5129

Note. t-Statistics are shown in brackets.

From the above empirical results, some discussions on the impact of corporate governance factors on the financial risk management are as follows:

Board size has a statistically insignificantly negative relation to financial risk management. Tsorhe et al. (2011) also found out this variable is insignificant. However, the sign of coefficient suggests a negative impact which means that increasing board size will result in a worse risk management. This result is also consistent with the study of Salhi and Boujelbene (2012), they found that a smaller board size helps decreasing risk-taking activities.

Board composition indicates that the fraction of non-executive board members positively affects the financial risk management. Also, this variable has a little significant impact on the capital risk. The independence of non-executive board members acts as an objectively external factor in the consultation and making decision process of the board. However, the fraction of non-executive board members presents independence and strength of board that has does not have significant impact on credit risk and liquidity risk (Tsorhe et al., 2011; McNulty et al., 2012).

Audit committee is statistically insignificant in the model. This result is relatively consistent with the research of Tsorhe et al. (2011). They also found that there is a relationship between financial risk management and the board factors such as the board size, audit committee size. However, the sign suggests that the effect of audit committee size on risk management is positive. Certainly, the more members the audit committee has, the better the supervision and risk management are.

Capital proportion of foreign investor variable is insignificant in the capital risk and liquidity risk models. This result is relatively inconsistent with the earlier researches (Zhong et al., 2007; Salhi & Boujelbene, 2012), in which foreign ownership helps reducing the financial risk. However, the result finds that this relationship is statistically negative significant in the credit risk model. The negative sign suggests that the ownership of foreigners help improving the financial risk to some extent.

Information disclosure has statistically significant impacts on the financial risk management. This result supports Kohli (2003) emphasizes that good corporate governance would disclose more information to the market comparing to poor corporate governance. CAR in banks that discloses management report is higher than that in non-disclosure banks. The higher CAR banks indicate the better risk management procedure. Meanwhile, the negative significant impact of information disclosure on the liquidity risk suggests that information

disclosure may help improving the liquidity risk management.

Stockholders' roles have statistically positive significant impacts on capital risk and credit risk. This implies that the lower ratio of total equity and total loans, the lower level of capital and credit risks. However, both stockholders and depositors are statistically negative significant impacts on the liquidity risk. The changes in total equity, total loans, and total deposits have great impacts on the liquidity risk. This result provides important indicators on investment and financing decisions in Vietnam joint stock commercial banks.

5. Conclusions

Corporate governance has influence on the health of business and the economy as a whole. How corporate governance impacts on the financial risk management is much interested in both researchers and practitioners. The paper approaches the corporate governance mechanism to study the impact of corporate governance on the financial risk in Vietnamese commercial banks. The empirical result indicates that corporate governance factors have statistically significant impacts on the financial risk including board strengths, foreign capital, information disclosure, and stakeholders' role. While the information disclosure regulation has a great significant impact on the capital risk, the proportion capital of foreign investors has a strong impact on the credit risk. In addition, behaviors of stockholders and depositors have high significant impacts on the liquidity risk.

These findings are important for establishing a regulatory framework for bank supervision, in which a supervisory review process is to set minimum capital adequacy ratio requirements and a set of disclosure standards. The loan classification system was designed to enhance the understanding of asset quality that relates to information disclosure and supervision role of foreign investors. In addition, stakeholder behaviors play important role in developing an effective framework for liquidity risk management under normal and stressed situations. As a result, the study provides empirical evidence on the impact of corporate governance factors on the financial risk management that provides key indicators for policy makers to build corporate governance mechanism in the financial risk management.

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