CORPORATE GOVERNANCE STRUCTURES AND PERFORMANCE OF FIRMS IN ASIAN MARKETS: A COMPARATIVE ANALYSIS BETWEEN SINGAPORE AND VIETNAM

Nguyen Van Tuan*
Dalat University, Vietnam

Nguyen Anh Tuan
Vietnam National University, Vietnam

Abstract. *A cross-country comparative analysis of corporate governance structures and financial performance of publicly listed companies in Singapore and Vietnam, covering a four-year period from 2008 to 2011, is undertaken in this study. More specifically, the similarities and differences in the corporate governance structures and financial performance of the companies are compared and interpreted in the institutional context of each market. On an average basis, we find that the size, composition and diversity of the boards in these two markets are statistically significantly different. In contrast, there is no statistical evidence to reject the similarities in ownership structure, board leadership structure, and financial performance between the firms of the two markets. In addition, our comparative analysis on the corporate governance structures–financial performance nexus also reveals that the performance effects of corporate governance structures vary significantly between the two markets, thus supporting the view that the performance effects of corporate governance structures are country-specific. Our findings suggest that country-level characteristics should be captured when modelling the corporate governance–firm performance relationship in cross-country comparative corporate governance research.*

Keywords: corporate governance; comparative study; firm performance; Singapore; Vietnam.

1. Introduction

Over recent decades, especially after the Asian Financial Crisis of 1997, the corporate governance–financial performance relationship has emerged as one of the most fascinating and controversial issues in the corporate finance literature. A survey conducted by Ahrens, Filatotchev, and Thomsen (2011) shows that there are more than 7,776 refereed journal articles on corporate governance, most of which (4,783 items) have been published since 2004. The Global Financial Crisis of 2007 raised further concerns

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* Faculty of Economics and Business Administration, Dalat University, No. 01 Phu-Dong-Thien-Vuong street, Dalat, Lamdong, Vietnam; email: tuannv@dlu.edu.vn; tel.: +84 1218 280 442

about the nature of corporate governance practiced by publicly listed companies. It also raised an important research question as to whether improved corporate governance structures indeed lead to better financial performance of the firm.

Love (2011) reports that numerous studies that have been undertaken regarding the corporate governance structures and financial performance (CGFP relationship) can be divided into two distinct groups: (i) Law-finance multidisciplinary studies relating to country-level distinctions in terms of institutional, legal characteristics, and corporate governance features; and (ii) Studies focusing on modelling of the CGFP nexus at firm-level either within a single country or in cross-national contexts. The first strand of literature stresses the importance of the influences of regulatory quality and legal enforcement on corporate governance system and firm financial performance (see, Klapper & Love, 2003; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). The second strand of corporate governance studies offers inconclusive findings of the CGFP relationship. Many of these empirical studies suffer from endogeneity problems leading to spurious correlations and unreliable interpretations (Bhagat & Bolton, 2008; Love, 2011; Reddy, Locke, & Scrimgeour, 2010). Moreover, these studies are mostly conducted in a single developed country with a large-scale capital market such as the US or the UK (Love, 2011; Reddy, 2010), and therefore, the CGFP relationships in emerging markets and cross-national comparisons are still unexplored properly.

It is also reported that cross-national comparative studies of the CGFP relationship increasingly attract international attention (Love, 2011). The importance and influences of regulatory quality and legal enforcement upon corporate governance practices and firm financial performance, as mentioned above, require that empirical research should be deployed in various countries and take into account similarities and differences in terms of national institution. This implies that it is necessary to conduct further cross-national comparative studies in order to have a thorough grasp of the CGFP relationship within various contexts, for example, in emerging markets and more mature markets.

In addition, it is stated in a recent comprehensive review paper by Filatotchev, Jackson, & Nakajima (2013) that most prior corporate governance research, focusing on the US or UK markets, has not taken into account country-specific characteristics when investigating the relationship between corporate governance structures and firm performance. Consequently, it remains unclear how effective corporate governance structures are in different institutional settings (Kumar & Zattoni, 2013). It is therefore necessary to re-examine the non-contextualised, traditional agency framework to understand contexts outside Anglo-American jurisdictions, especially in the Asian region where the corporate governance arrangements are greatly different from those of the US and UK markets.

This paper bridges the gap in the extant corporate governance literature by examining the relationship between corporate governance structures and financial performance relationship of listed companies in the Singaporean and Vietnamese markets

from a comparative perspective. We choose Vietnam to be a platform of this study as while corporate governance attributes and firm performance have been substantially explored in at least nine Asian countries thus far, Vietnam is not one of them. By contrast, Singaporean market, which has been already studied in several papers, is the best benchmark in terms of corporate governance practice and national governance quality among the East Asia-Pacific and OECD economies. Moreover, these two markets are the most representative markets in terms of corporate governance practices and national governance quality in the Asian region (Nguyen, Locke, & Reddy, 2015b). Therefore, a comparative analysis of corporate governance attributes and firm performance between the two countries has potential to offer an interesting research case to better understand the governance – performance relationship in the Asian context.

We do not derive any hypotheses in this study. Instead, we address two research questions: (i) do corporate governance structures and firm performance vary across the two markets?; and (ii) do potential effects of corporate governance structures on firm performance vary across the two markets? To answer the first question, we provide evidence from a cross-country comparative analysis in which the corporate governance structures and firm performance are discussed and compared in the institutional scenario of each market. Taking country-specific institutional characteristics into consideration to interpret the empirical findings, we answer the second research question by conducting multivariate regression analyses using the datasets of the two countries. The econometric models employed aim to investigate the potential effects of firm-level governance mechanisms on determining the financial performance of listed companies in the two countries. The rest of this paper is structured as follows. First, we briefly introduce the common definitions of corporate governance and the base for choosing comparative criteria between the two markets in section Definitions of Corporate Governance. Second, we discuss the corporate governance systems of Singapore and Vietnam in section Research Background. In section Data and Method, we describe data, data sources, and methods used in this study. We present the empirical results along with discussions in section Empirical Results and Discussion and conclude the paper with section Conclusion.

2. Definitions of Corporate Governance

There are many different definitions of corporate governance which are usually classified as either 'narrow' or 'broad' (Claessens & Yurtoglu, 2013). According to Claessens & Yurtoglu (2013), the narrow cluster of definitions mainly focuses on the role of key internal governance mechanisms, such as board characteristics and ownership structure, in determining the performance of firms and maximising the benefit of shareholders. This type of definition is logically suitable for studies on corporate governance within an individual country (Claessens & Yurtoglu, 2013).

On the other hand, the broad set of definitions considers the external institutional environment within which firms operate. These definitions are suitable for cross-

country comparative studies as they allow researchers to investigate how differences in country-level specific characteristics affect the behavioural patterns of firms, shareholders and stakeholders (Claessens & Yurtoglu, 2013). For analysis purposes, especially comparative analyses, this current study collectively employs both narrow and broad definitions of corporate governance.

The most typical 'narrow' definition in finance literature is originally sourced from Shleifer and Vishny (1997, p. 737) who define corporate governance as "the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment". Denis and McConnell (2003, p. 2) likewise define corporate governance as "the set of mechanisms, both institutional and market-based, that induces the self-interested controllers of a company to make decisions that maximise the value of the company to its owners". In a similar vein, the Cadbury Committee (1992, para. 2.5) describes corporate governance as a "system by which companies are directed and controlled". These definitions, generally focusing on how shareholders maximise their profit and protect themselves against expropriation from managers, are the foundation for solo-country analyses in this study.

A broader definition of corporate governance is proposed by OECD (2004, p. 11) as follows:

> Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.

This definition shows that corporate governance goes beyond the internal corporate governance structures and shareholders' profit to take account of external corporate governance mechanisms and stakeholders' benefits. By integrating the external environment within which firms operate, this stakeholder perspective on the firm is suitable for analysing corporate governance in a cross-country framework.

Taking both perspectives together, researchers have often classified corporate governance mechanisms into two sets which are either internal or external to firms (Gillan, 2006). It is argued that such a dual classification is somewhat limited and may not capture the "multidimensional network of interrelationships" (Gillan, 2006). However, for convenience, this study follows Gillan (2006) and consistently considers capital structure, ownership structure, and board structure (including the diversity, composition, leadership structure, and size of board) to be the most important internal corporate governance mechanisms. The comparative analysis in this study, therefore, is based on this argument.

3. Research Background

This section presents the contexts of corporate governance in Singapore and Vietnam to provide a research background for the empirical analyses implemented in the next

section. According to the Asian Development Bank (2013), the regulatory system of corporate governance for publicly listed companies in the Singaporean market includes a number of corporate governance rules, principles, and recommended practices, all of which are administered by some primary regulatory bodies, including: (i) the *Accounting and Corporate Regulatory Authority*; (ii) the *Monetary Authority of Singapore*; and (iii) the *Singapore Exchange Limited* (SGX). The primary sources of corporate governance rules, principles, and recommended practices are presented below[1].

(i) Companies Act of 1967 (and subsequent amendments). According to the Singapore Ministry of Finance (2012), the Companies Act applies to all companies incorporated in Singapore, and contains provisions relating to the life-cycle of companies, from incorporation to management to winding up. The Act also contains some provisions that apply only to publicly listed companies and branches of foreign companies that are operating in Singapore.

(ii) Securities and Futures Act of 2001 (and subsequent amendments).

(iii) Listing Requirements (the Rulebook). To be listed in the stock exchange market, the companies must comply with the Listing Requirements issued by the SGX. The SGX provides two types of exchange market with different listing requirements, namely *Mainboard* and *Catalist*. The *Catalist* is a secondary board with lower listing requirements.

(iv) The Code of Corporate Governance of 2001 (and subsequent revisions). This Code provides most of the principles and recommended practices for good corporate governance for publicly listed companies in Singapore.

The Code of Corporate Governance, first promulgated by the *Singapore Corporate Governance Committee* in 2001, was reviewed in 2005 and became effective from 2007 (hereafter the Singaporean Code)[2]. The Singaporean Code was most recently revised in May 2012, and a number of major changes in corporate governance requirements were introduced into the listing rules. The Singaporean Code takes the principle-based approach (also known as 'comply or explain' approach). It means that compliance with the Singaporean Code is voluntary, but under the Listing Requirements, publicly listed companies are required to disclose their corporate governance practices and explain non-compliance in their annual reports. Therefore, it will imply that the company is following the recommendations of the Singaporean Code if non-compliance is not mentioned (Mak, 2007). It is argued that the Singaporean corporate governance system, due to its strict discipline and effective implementation, is considered to be better structured than many other East Asian countries (Lim, 2010).

Similarly, the corporate governance regulatory system in Vietnam comprises a number of corporate governance regulations, and several primary regulatory bodies (Asian

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[1] It should be noted that for the sampling period 2008–2011 of this study, the companies in the sample are governed by the Companies Act (the 2006 revised edition), the Securities and Futures Act (the 2009 revised edition), and the Code of Corporate Governance (the 2005 revised edition).

[2] The *Monetary Authority of Singapore* and the *Singapore Exchange Limited* have supervised the implementation of the Singaporean Code since September 2007.

Development Bank, 2013). The primary regulatory bodies of corporate governance in the Vietnamese market comprise: (i) the *Vietnamese Ministry of Finance* (MOF); and (ii) the *Vietnamese State Securities Commission* (SSC). The SSC governs two corporate governance regulatory sub-bodies for Vietnamese publicly listed companies, including the *Ho-Chi-Minh Stock Exchange* (HOSE) and the *Hanoi Stock Exchange* (HNX), which are two stock markets, in southern and northern Vietnam[3], respectively. The primary corporate governance regulations in the Vietnamese market include: (i) the Law on Enterprises of 2005 (LOE 2005); (ii) the Law on Securities of 2006; (iii) the Model Charter of 2007; (iv) the HOSE and HNX Listing Requirements, and (v) the Code of Corporate Governance for Listed Companies of 2007 (hereafter the Vietnamese Code). Under the LOE 2005, the Vietnamese Code was promulgated in March 2007 and updated in July 2012[4] by the MOF. Although the Vietnamese Code reflects most of the OECD Principles of Corporate Governance (the OECD Principles)[5], it is compulsory for all Vietnamese listed companies to conform with this Code (Le & Walker, 2008).

In line with Weimer and Pape (1999), we compared seven characteristics of the corporate governance systems between Singapore and Vietnam, including: (i) the type of systems of corporate governance; (ii) the board system; (iii) the legal system; (iv) the characteristics of external market for corporate control; (v) the concentration of ownership structure; (vi) the approach of corporate governance practices; and (vii) the corporate governance practice. These seven comparative characteristics are summarised in Table 1.

With regard to the type of systems of corporate governance, it is argued that the corporate governance systems in Singapore and Vietnam appear to be characterised by a combination of family-based and government-based systems of corporate governance (IFC, 2010; Mak, 2007; Nguyen, 2008; World Bank, 2006). The type of corporate governance systems in Singapore and Vietnam is therefore different from the market-based corporate governance in the US, the bank-based corporate governance in Japan and Germany, or the family-based corporate governance in Hong Kong. It should be also noticed that, in general, there are two major corporate governance systems in the extant literature, including the Anglo-American corporate governance system and Continental-European one. The former is characterised by short-run equity finance, dispersed ownership, strong shareholder rights, active markets for corporate control, flexible labour markets, little direct government intervention, and minimal legal rights for stakeholders (Aguilera & Jackson, 2003; Aguilera & Jackson, 2010). In addition, Aguilera, Filatotchev, Gospel, and Jackson (2008) argue that the Anglo-American sys-

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[3]   From 2009, Vietnamese joint-stock companies can also trade their securities on the *Unlisted Public Company Market* (UPCoM), organised by the HNX.

[4]   The issuance of the Vietnamese Code in March 2007 is under Decision 12/2007/QD-BTC. The Vietnamese Code was revised in July 2012 under Circular 121/2012/TT-BTC.

[5]   The OECD Principles of Corporate Governance were approved by the *Organisation for Economic Co-operation and Development Ministers* in 2004 and have since become an international benchmark of corporate governance practices for policy makers worldwide.

TABLE 1: **A comparison of corporate governance systems between the Singaporean market and the Vietnamese market**

No	Comparative characteristics	Singapore	Vietnam
1	Type of corporate governance system	Mix between family-based and government-based system	Mix between family-based and government-based system
2	Board system	One-tier: executive and non-executive board	Two-tier: board of directors and board of supervisors
3	Legal system	The Companies Act is influenced by the Anglo-American pattern	The LOE 2015 is influenced by the Anglo-American pattern
4	External market for corporate control	Rather weak	Weak
5	Ownership concentration	High	High
6	Corporate governance approach	Voluntary	Mandatory
7	Corporate governance practice	Very good	Poor

Note: The comparative characteristics form 1 to 5 are based on the taxonomy of corporate governance systems of Weimer and Pape (1999). The sixth and seventh characteristics are added by the authors of the current study.

tem should be complemented by some other attributes such as independent directors, executive pay incentives, and information disclosure. Meanwhile, the Continental-European system is characterised by long-run debt finance, concentrated ownership, weak shareholder rights, inactive markets for corporate control, and inflexible labour markets (Aguilera & Jackson, 2003; Aguilera & Jackson, 2010).

With regard to the board system, Maassen (2002) argues that the organisation of boards of directors (BOD) can be categorised as two primary models: (i) the Anglo-American one-tier board model; and (ii) the Continental-European two-tier board model (these prototypical models have several variants; See Maassen (2002) for more details). The one-tier board model refers to a type of organisational structure in which executive and non-executive directors operate together. Meanwhile, there are two organisational layers in the two-tier board model, including a board of supervisors (BOS) (in charge of control decisions) and a BOD (in charge of managerial decisions). In this regard, the two-tier board model obviously separates the executive function of the management board from the control function of the supervisory board (Maassen, 2002).

Under the one-tier board model, it is recommended by the OECD (2004) that some important committees, such as audit, remuneration, and nomination committees be established to enhance the level of independence of the BOD through effectively implementing monitoring functions. Although the Vietnamese Code follows the two-tier board model, it does allow Vietnamese listed companies to establish subcommittees

such as remuneration, nomination, or strategic planning subcommittees to assist their BOD's activities. On the contrary, the organisation of the BOD in Singaporean companies follows a one-tier model in which the audit, nomination and remuneration committees should be established. Mak (2007) indicates that all of Singapore's listed corporations have established audit committees, and most of them (over 93%) have nomination and remuneration committees. In fact, the presence of these subcommittees appears to have positive influences on the quality of financial reporting and auditing effectiveness in Singapore (Goodwin & Seow, 2002).

With regard to the legal system, as a former British colony, Singapore's legal system is based on common law. This implies that the Anglo-American model is the origin of Singapore's legal system, which has a significant influence on the development of the Singaporean market economy and business sector. It would be noted that, in terms of jurisdiction, Anglo-American model refers to the system of common law jurisdiction with legal foundations and principles originating from the UK (Kimber, Lipton, & O'Neill, 2005). It is argued that the Companies Act and corporate governance system of Singapore are similar to those of Australia, New Zealand, and the UK. For example, the Companies Act of Singapore is derived from the UK Companies Act 1945 and the Australian Companies Code 1961 (Kimber et al., 2005). For the Vietnamese market, despite the fact that Vietnam has its legal traditions rooted in French civil law and is guided by socialist legal theory, the Anglo-American pattern is a major inspiration for the Vietnamese lawmakers to promulgate the LOE 2005 (Le & Walker, 2008). Thus, both Singaporean and Vietnamese corporate governance systems are influenced by the Anglo-American pattern.

Regarding the characteristics of external market for corporate control, Singapore has a weak market for corporate control (Mak & Li, 2001), characterised by an inactive takeover market (Mak, 2007; Mak & Li, 2001; Phan & Yoshikawa, 2004; Witt, 2012). Likewise, the market for corporate control in Vietnam is not an external corporate governance mechanism at all (Le & Walker, 2008; Nguyen, 2008; World Bank, 2006). In summary, it appears unlikely that the markets for corporate control in Singapore and Vietnam are effective external corporate governance mechanisms.

In regard to the concentration of ownership structure, it is observed that highly concentrated ownership and government participation in the business sector as a blockholder of numerous companies are two noticeable characteristics of the corporate governance systems in Singapore and Vietnam (Kimber et al., 2005; Mak & Li, 2001; World Bank, 2006). Indeed, the Vietnamese corporate governance system is characterised by a concentrated ownership structure (IFC, 2010). Most of the listed companies are equitized state-owned enterprises[6] of which the significant proportion of capital, approximately 26% on average, is held by the government (World Bank, 2006). Similarly, for the Singaporean market, Anwar and Sam (2006) document that Singapore pursues

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[6]   The predecessors of these companies are the state-owned enterprises transformed through the so-called 'equalisation process' which is privatisation by nature.

a model of state directed capitalism and employs the so-called 'government-linked corporations' to join in the economy. Consequently, a common type of state-owned firms in Singapore is 'government-linked companies' (hereafter the GLCs), which are mostly controlled by the government and dominate the Singaporean economy (Claessens & Fan, 2002). According to Ang and Ding (2006), the GLCs account for approximately 24% of the stock market's total capitalisation and control over 10% of the economic output of the country.

Because corporate governance practices are affected by the institutional characteristics, legal systems, and the stages of development of a country, every corporate governance study should take these factors into consideration (Aguilera & Jackson, 2010; Claessens & Fan, 2002; Klapper & Love, 2003). For that reason, we also briefly introduce some differences and similarities between Singapore and Vietnam in terms of the abovementioned factors.

Vietnam is a Marxist-Leninist one-party state, (governed by the *Vietnam Communist Party*) but pursues a 'market economy with socialist orientation' in which: (i) the role of the state sector is predominant; (ii) the protection of private property rights is poor; (iii) most of the essential economic resources (such as natural resources, land) are under public ownership; and (iv) government intervention in the economy is strong (Abonyi, 2005; Bui, 2006; Le & Walker, 2008; World Bank, 2006). While Vietnam is an emerging market[7] with per capita GNI about US$ 1,110 in 2010, Singapore is considered the most advanced economy in the region with the highest level of GNI per capita about US$ 41,430 in 2010[8]. Also, being situated in the East Asian region, Singapore is one of the most active and successful economies in the world. Indeed, Singapore was not only the second-most competitive economy in the world in 2011, and has remained in the first position among Asian economies for many years, it also leads the world in terms of financial market development (World Economic Forum, 2011). Singapore is also ranked the best for government efficiency and the least for corruption in the world (World Economic Forum, 2011).

Recent studies (see e.g., Aslan & Kumar, 2014; Van Essen, Engelen, & Carney, 2013) suggest that the corporate governance–firm performance relationship is influenced by the efficiency of the national governance system in which firms operate. Globerman, Peng, and Shapiro (2011, p. 1) emphasise that: "...one needs to understand the institutional framework in which organisations operate in order to understand the rationale for and consequences of specific corporate governance models, as well as the likelihood

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7   The World Bank divides economies into four groups according to 2010 GNI per capita: (i) low income, $1,005 or less; (ii) lower middle income, $1,006–$3,975; (iii) upper middle income, $3,976–$12,275; and (iv) high income, $12,276 or more. Meanwhile, the International Monetary Fund divides the world into two major groups: (i) advanced economies, and (ii) emerging and developing economies. Singapore is listed in the former group and Vietnam belongs to the latter one.

8   GNI per capita is the gross national income, converted to US dollars using the World Bank Atlas method, divided by the midyear population. The data are provided by *World DataBank* of The World Bank, retrieved from http://data.worldbank.org/.

that specific governance reforms will be adopted and prove effective". This implies that the quality of corporate governance practice at a firm level is likely to be dependent on the quality of country governance. Kaufmann, Kraay, and Mastruzzi (2011) claim that the governance quality of a country is measured by six factors: *Voice and Accountability; Political Stability and Absence of Violence; Government Effectiveness; Regulatory Quality; Rule of Law;* and *Control of Corruption.*

TABLE 2: **The governance indicators (percentile ranks) of East Asia-Pacific region, OECD, Singapore, and Vietnam in 2013**

Governance Indicator 2013	Percentile Rank (0-100)			
	Singapore	Vietnam	East Asia-Pacific Average	OECD Regional Average
Voice and Accountability	52.1	11.8	53.8	87.0
Political Stability	95.7	55.9	63.2	75.8
Government Effectiveness	99.5	44.0	49.4	87.5
Regulatory Quality	100.0	28.2	46.5	87.6
Rule of Law	95.3	39.3	56.4	87.2
Control of Corruption	96.7	36.8	53.4	84.7

Source: http://info.worldbank.org/governance/wgi/index.aspx#home. The methodology used to calculate the governance indicators was developed by Kaufmann, Kraay, and Mastruzzi (2011).

Note: The list of countries in the East Asia-Pacific region is available at http://go.worldbank.org/. The list of 34 member countries worldwide of the OECD is available at http://www.oecd.org/. Percentile ranks indicate the percentage of countries worldwide that rate below the selected country. Higher values indicate better national governance ratings.

Table 2 provides the national governance indicators for the East Asia-Pacific region, OECD, Singapore, and Vietnam in 2013. It shows that the national governance ranking of Vietnam regarding all governance indicators is lower than the average ranking of other countries in the East Asian-Pacific region. Vietnam also lags far behind Singapore and the OECD countries in all national governance indicators. This suggests that the Vietnamese national governance system is underdeveloped. In contrast, Singapore is the best benchmark in terms of national governance quality among the East Asia-Pacific and OECD economies, suggesting that the Singaporean national governance system is well-established. As reported in Table 2, Singapore occupies the first position for five among six governance indicators in 2013, notably in governance effectiveness and control of corruption. Noticeably, the level of corruption in Singapore is very low when compared with the other countries. It is argued that "strong government effectiveness coupled with low levels of corruption can be expected to translate into relatively effective corporate governance" (Robertson, 2009, p. 623).

4. Data and Method

4.1 Data and Data Sources

For the Singaporean market, financial data and data on corporate governance structures are downloaded and/or collated from *Thomson One Banker Database* and the website of *Singapore Exchange Ltd. Company*, including listed companies' annual reports. For the Vietnamese market, data are provided by *StoxPlus Corporation* and/or downloaded from *Thomson One Banker Database*, and/or extracted from companies' annual reports which are all downloaded from *FPT-Ez-search Online Information Gateway* and *Vietstock.* Table 3 summarises the general information of the sample sizes employed in alternative situations of analysis for the two markets.

In this study, the following criteria will be employed to guide the choice of the sample of companies: (i) the companies must be listed on the SGX *Mainboard* (for the case of Singapore), or the HOSE and the HNX (for the case of Vietnam); (ii) financial firms and banks are excluded from the sample; (iii) the companies must be locally incorporated; (iv) the firms' annual reports for the period of 2008–2011 are available; and (v) the firms' corresponding financial data for the period of 2008–2011, including market-based data and accounting-based data, must be available on *Thomson One Banker*

TABLE 3: **Sample sizes for the Singaporean and Vietnamese markets**

		Singapore		Vietnam	
1	The initial sample size		1028		488
2	The number of outliers of Tobin's Q excluded	20		9	
3	The final sample size* (3) = (1) - (2)		1008		479
4	Panel A: For static models				
5	The number of observations removed because of missing values in variables used in the static models	77		31	
6	The common sample size for the static models (6) = (3) - (5)		931		448
7	Panel B: For dynamic models				
8	The number of observations lost because of using one-year lagged Tobin's Q as an explanatory variable in the dynamic models	250		121	
9	The number of observations lost because of missing values in variables used in the dynamic models	46		6	
10	The common sample size for dynamic models (10) = (3) - (8) - (9)		712		352

Note: * *individual samples' sizes may be various because of missing values. For the Singaporean market, raw data are downloaded from Thomson One Banker Database and the website of Singapore Exchange Ltd. Company, including listed companies' annual reports. For the Vietnamese market, the calculation is based on data directly provided by StoxPlus Corporation and/or downloaded from Thomson One Banker Database, and/or extracted from companies' annual reports which are all downloaded from FPT-Ez-search Online Information Gateway and Vietstock (accessed in December 2011).*

(*Worldscope database*). The time frame is kept the same in both markets to facilitate the comparative purposes of this study. In short, the sample includes all companies of the two markets that have full data on key corporate governance variables during a four-year period from 2008 to 2011.

4.2 Method

4.2.1 Variables

Following Chung and Pruitt (1994), this study employs Tobin's Q, defined as the market value of equity plus the book value of debt all divided by the book value of total assets (i.e. a numerical variable), as a dependent variable to measure a firm's performance. Based on the argument mentioned in section Definitions of Corporate Governance and in line with previous studies, the independent variables include six numerical variables and two categorical variables, all of which are well documented in the corporate governance literature. The six numerical variables are: (i) board diversity (the percentage of female directors); (ii) board composition (percentage of non-executive directors); (iii) board size (the total number of board directors); (iv) ownership concentration (the percentage of common stocks held by shareholders who own at least five percent of the total number of a firm's common stocks); (v) leverage (total debt over total assets); and (vi) the age of the firm (the number of years from the time a company first appears on the stock markets).

In line with previous studies (See, e.g., Adams & Ferreira, 2009; Dezsö & Ross, 2012), the two categorical variables include: (i) a dummy variable for gender diversity (a dummy variable that takes a value of one if there is at least one female director on boards, and zero otherwise); and (ii) a dummy variable for CEO duality (a proxy for board leadership structure, i.e. a dummy variable that takes a value of one if the chairperson is also the CEO, and zero otherwise). In addition, the firm's size (the natural logarithm transformation of the book value of total assets) and year dummy variables are included in all of the models reported in Table 8. It should be noted that the industry dummies, by construction, are not included in estimations with fixed effects, namely two-step System GMM estimator, of which the results are reported in Table 8. Finally, we employ the natural logarithm transformation of one-year lagged Tobin's Q as an explanatory variable to control for the dynamic nature of the CG–FP relationship as suggested by Wintoki, Linck, and Netter (2012).

4.2.2 Statistics Methods and Estimation Approaches

For comparison purposes, we answer the first research question through the use of: (i) *t*-test for the difference in the population means of the numerical variables; and (ii) *z*-test for the difference in the population proportions of the categorical variables. Following Adams and Ferreira (2009), the tests are conducted across firm-year observations instead of on a year-to-year basis in order to capture both cross-sectional and time-series variances. Subsections The difference in the means of the numerical

variables between Singapore and Vietnam and The difference in the proportions of categorical variables between Singapore and Vietnam discuss the test procedures in detail.

Multivariate regression techniques are employed to provide empirical evidence for the second research question. More specifically, we use the first-order autoregressive [AR(1)] panel model, which can be expressed as the following general model:

$$Y_{it} = \alpha_0 + \alpha_1 Y_{i,t-1} + \sum_{k=1} \beta_k X_{k,it} + \mu_i + \eta_t + \varepsilon_{it}. \tag{1}$$

Where, Y_{it} is Tobin's Q which is a proxy for a firm's financial performance of firm i in year t; α_0 is the constant; α_1 and β_k are unknown estimated coefficients; X is a vector of explanatory variables used in the model, including board structure, ownership structure, and other firm-level control variables. The definitions of these variables are as mentioned in Subsection Variables; μ_i represents unobserved firm fixed-effects; η_t represents time-specific effects that are time-variant and common to all companies, such as the effects of GDP growth, inflation rates, market fluctuations or other macroeconomic conditions; ε_{it} is the classical error term which is assumed to be independent and identically distributed.

A two-step system generalised method of moments (System GMM) estimation technique, which involves a system of two equations (one in differences and the other in levels), is employed to estimate model (1). This estimation technique allows us to treat all the explanatory variables in model (1) as endogenous variables (Roodman, 2009) and take into account potential sources of endogeneity, including unobserved time-invariant heterogeneity, simultaneity, and dynamic endogeneity (Wintoki et al., 2012). Following Wintoki et al. (2012), the firm's age and year dummies are deemed exogenous. We also employ a finite-sample corrected estimate of variance, suggested by Windmeijer (2005), to take into account the concern of Blundell and Bond (1998) about the downward-biased tendency of standard errors estimated by the System GMM approach for small samples.

5. Empirical Results and Discussion

5.1 The difference in the means of the numerical variables between Singapore and Vietnam

In this subsection, we compare the means of the numerical variables between the two markets through the use of a hypothesis-testing procedure in which the test statistic approximately follows a Student's t-distribution. This t-test procedure is based on two important assumptions that the populations should: (i) be normally distributed and (ii) have equal variances (Berenson, Levine, & Krehbiel, 2012). Therefore, checking if the populations are satisfied with such assumptions is essential to ensure the validity of the t-test procedure (Berenson et al., 2012). For this purpose, the remainder of this sub-

TABLE 4: **Shapiro-Wilk test for the normality of the numerical variables**

Variables	Vietnam sample			Singapore sample		
	Observations	z-statistics	p-values	Observations	z-statistics	p-values
Tobin's Q ratio	479	9.318	0.000	1008	11.963	0.000
Percentage of female directors (%)	472	5.406	0.000	1003	7.064	0.000
Percentage of independent / nonexecutive directors (%)	479	2.909	0.002	1004	5.404	0.000
Board size (person)	479	7.480	0.000	1005	8.131	0.000
Ownership concentration (%)	478	5.079	0.000	981	7.400	0.000
Firm age (year)	479	7.096	0.000	978	11.292	0.000
Leverage (%)	479	6.370	0.000	1008	9.044	0.000

Note: This table reports the results of Shapiro-Wilk test for the normality of seven numerical variables. The test is based on various individual samples which are reported in the column 'Observations'. The test is under the null hypothesis that a given numerical variable is normally distributed. The variables are as defined in Subsection Variables. For the Singaporean market, raw data are downloaded from Thomson One Banker Database and the website of Singapore Exchange Ltd. Company, including listed companies' annual reports. For the Vietnamese market, the calculation is based on data directly provided by StoxPlus Corporation and/or downloaded from Thomson One Banker Database, and/or extracted from companies' annual reports which are downloaded from FPT-Ez-search Online Information Gateway and Vietstock (accessed in December 2011).

section will proceed as follows. First, assumption (i) will be assessed by implementing the Shapiro–Wilk normality test. Second, assumption (ii) will be checked by executing the Levene's robust test for the equality of variances.

To evaluate the normality assumption necessary for using the t-test, the Shapiro–Wilk normality test (Shapiro & Wilk, 1965) is carried out on the two markets' sample datasets. As reported in Table 4, the null hypothesis that the numerical variables of interest are normally distributed cannot be accepted at any conventional level of significance. In other words, the assumption of normal distribution required for the t-test is violated. However, according to Berenson et al. (2012), in cases where the populations are not normally distributed, the t-test still can be used if the sample sizes are large enough ($N \geq 30$). It is evident from Table 3 that the sample sizes employed in the tests are large enough to reasonably assume that the populations are normally distributed. As suggested by Berenson et al. (2012), it is a standard practice to check the robustness of the t-test's results by implementing an alternative nonparametric test in which normality is not a strict constraint[9].

In a similar vein, we test whether the variance of a given variable differs by country. Given that none of the seven numerical variables are normally distributed, the normal-

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[9]   This will be discussed in more detail at the end of this subsection.

TABLE 5: **Levene's robust test for the equality of variances of the numerical variables**

Variables	Observations			F-statistics	p-values
	Total	Vietnam	Singapore		
Tobin's Q ratio	1487	479	1008	18.005	0.000
Percentage of female directors (%)	1475	472	1003	73.903	0.000
Percentage of independent and/or nonexecutive directors (%)	1483	479	1004	82.008	0.000
Board size (person)	1484	479	1005	49.649	0.000
Ownership concentration (%)	1459	478	981	25.834	0.000
Firm age (year)	1457	479	978	272.647	0.000
Leverage (%)	1487	479	1008	44.523	0.000

Note: This table reports the results of Levene's robust test for the equality of variances of seven numerical variables. The test is based on various individual samples which are reported in the column 'Observations'. The test is under the null hypothesis that the variances of a given variable are the same across the two-country sample. The variables are as defined in Subsection Variables. For the Singaporean market, raw data are downloaded from Thomson One Banker Database and the website of Singapore Exchange Ltd. Company, including listed companies' annual reports. For the Vietnamese market, the calculation is based on data directly provided by StoxPlus Corporation and/or downloaded from Thomson One Banker Database, and/or extracted from companies' annual reports which are downloaded from FPT-Ez-search Online Information Gateway and Vietstock (accessed in December 2011).

ity assumption of Bartlett's test for homogeneity of variances is thus violated. For this reason, the Levene's test for homogeneity of variance, which is robust under non-normality situations, is employed instead (Levene, 2006, as cited in Berenson et al., 2012). The test is under the null hypothesis that the variances of a given variable are the same across the two-country sample. The results displayed in Table 5 suggest that the null hypothesis cannot be accepted at any conventional level of significance.

Given the unequal population variances, the separate-variance t-test procedure developed by Satterthwaite (1946, as cited in Berenson et al., 2012) which takes into account the inequality of variances and sample sizes will be employed in this subsection to test for the difference in the population means of the numerical variables. Specifically, this subsection tests the hypothesis that there is no statistically significant difference between the mean values of a given variable between the two markets under the assumption that the two population variances are unequal. Formally, μ_v is the population mean of a particular variable from the Vietnamese market, and μ_s is the population mean of a corresponding variable from the Singaporean market. The null hypothesis of no difference in the means of two independent populations and the alternative hypothesis can be stated as follows:

$$H_0 : \mu_v - \mu_s = 0 \qquad H_1 : \mu_v - \mu_s \neq 0 \tag{2}$$

As reported in Table 6, there is not enough statistical evidence to reject the null hypothesis for two variables: (i) Tobin's Q and (ii) ownership concentration. This suggests that neither the means of Tobin's Q ratio nor the means of ownership concentra-

tion are statistically significantly different across the two markets. Given that the means of Tobin's Q ratio of companies in Singapore and Vietnam are both less than one, the companies, on average, did not create value for the shareholders during the four-year period of 2008–2011.

TABLE 6: **Two-sample *t*-test on the equality of population means with unequal variances**

Variables	Observations			Mean values			*t*-statistics
	Viet-nam	Singa-pore	Total	Viet-nam	Singa-pore	Difference	
Tobin's Q ratio	479	1008	1487	0.85	0.82	0.03	1.22
Percentage of female directors (%)	472	1003	1475	12.06	7.89	4.17***	5.82
Percentage of independent / nonexecutive directors (%)	479	1004	1483	48.91	61.84	-12.93***	-12.15
Board size (person)	479	1005	1484	5.81	6.94	-1.13***	-13.73
Ownership concentration (%)	478	981	1459	43.92	43.75	0.17	0.14
Firm age (year)	479	978	1457	3.34	10.56	-7.22***	-25.45
Leverage (%)	479	1008	1487	29.22	19.46	9.76***	9.11

Note: This table reports the results of two-sample t-test on the equality of population means (with unequal variances) of seven numerical variables. The test is based on various individual samples which are reported in the column 'Observations'. The test is under the null hypothesis that there is no statistically significant difference between the mean values of a given variable between the two markets (assume that the two population variances are inhomogeneous). The variables are as defined in Subsection Variables. Asterisk (***) indicates significance at the 1% level. For the Singaporean market, raw data are downloaded from Thomson One Banker Database and the website of Singapore Exchange Ltd. Company, including listed companies' annual reports. For the Vietnamese market, the calculation is based on data directly provided by StoxPlus Corporation and/or downloaded from Thomson One Banker Database, and/or extracted from companies' annual reports which are downloaded from FPT-Ez-search Online Information Gateway and Vietstock (accessed in December 2011).

The percentage of stock held by shareholders who own at least 5% of the common stock (*ownership concentration*) in both countries, on average, is approximately 44%, suggesting that ownership concentration is relatively high in these two markets. This finding is in agreement with the study undertaken by Claessens, Djankov, and Lang (2000) who document a highly concentrated ownership structure in almost all Asian markets. It is worth noting that although sharing a similar characteristic of a highly concentrated ownership structure, the two markets differ in terms of providing minority shareholder protection. While investor rights are well protected in the Singaporean market (World Bank, 2013), the protection of minority shareholder rights in the Vietnamese market is weak because both internal and external governance mechanisms are under-developed (Le & Walker, 2008; Nguyen, 2008; World Bank, 2006).

Remarkably, Table 6 shows that there are statistically significant differences in the population means of the other numerical variables under consideration. More specifically, there is statistical evidence to document that the percentage of female directors; percentage of independent and/or non-executive directors; board size; leverage; and firm age are significantly different by country. The percentage of female directors of Vietnamese companies is 4.17 percentage-points (equivalent to 53%) higher than that of Singaporean companies. This may be the consequence of the concerted efforts of the Vietnamese government for gender equality towards an advanced gender-related institutional environment. Also, the greater boardroom gender diversity in Vietnamese companies may be a reflection of a higher proportion of females in the labour force (World Bank, 2011). In contrast, the smaller number of female directors in Singaporean boardrooms "may stem from the traditional view of women as primarily responsible for family care and welfare in Singapore, where women are often the default caregiver or homemaker" (Kang, Ding, & Charoenwong, 2010, p. 890).

The percentage of independent and/or non-executive directors of Vietnamese companies, on average, is approximately 13 percentage-points lower than that of Singaporean companies. It should be noted that the Singaporean Code and the Vietnamese Code both stipulate that independent and/or non-executive directors should make up at least one-third of the board. Because the board size of Vietnamese companies (mean ≈ 5.81 persons), on average, is statistically significantly smaller than their Singaporean counterparts (mean ≈ 6.94 persons), the significantly lower percentage of independent and/or non-executive directors on Vietnamese companies is a reasonable and credible finding. Table 6 also shows that, on average, Vietnamese companies are younger than Singaporean companies. This is plausible because almost all Vietnamese companies were first listed on the Vietnamese stock exchange markets from 2007 onwards. This also reflects the different development history of the stock exchange markets in the two countries.

With regard to using financial leverage in the two countries, it is evident from Table 6 that, on average, Vietnamese firms employ approximately a ten percentage point higher debt ratio than Singapore firms. In other words, Vietnamese companies tend to use more interest-bearing liabilities in their financial structures. This finding is consistent with the characteristics of the financial market in each country. Given an under-developed financial market, the financial structure of Vietnamese companies is considered to be a bank-based type (World Bank, 2006) where firms predominantly use bank loans to finance their business operations. On the contrary, Singaporean companies enjoy a market-based financial system (Anderson & Gupta, 2009) where financing decisions are primarily based on the activities of the stock market. In addition, this finding may also be a reflection of differences in institutional characteristics between the two countries which have the potential to affect the capital structure choices of firms (Antoniou, Guney, & Paudyal, 2008). As one example, operating in an institutional environment with more efficient law enforcement regulations, especially in bankruptcy laws, Singaporean companies, naturally, tend to keep their financial leverage lower to alleviate the risk of bankruptcy.

In an additional (unreported) analysis, the robustness of the comparative results obtained from the *t*-test procedure is checked by using an alternative nonparametric approach which does not require the normality assumption. Specifically, the Wilcoxon rank-sum test (Wilcoxon, 1945, as cited in Berenson et al., 2012) is performed under the null hypothesis that there is no statistically significant difference between two medians of a given variable. In general, the results of this nonparametric test are numerically equivalent to those of its parametric counterpart. This suggests that the comparative findings obtained from the *t*-test procedure are robust even after the non-normality of data is taken into consideration.

5.2 The difference in the proportions of categorical variables between Singapore and Vietnam

The aim of this subsection is to compare the proportions of the categorical variables between the two markets by employing a *z*-test on the equality of proportions using large-sample statistics in which the test statistic is approximated by a standardized normal distribution (Berenson et al., 2012). The null hypothesis of the *z*-test is that the population proportions of a given categorical variable are equal across the two countries. As mentioned earlier, the two categorical variables under consideration are: (i) a dummy variable for gender diversity (*dwomen*); and (ii) a dummy variable for CEO duality (*dual*). It should be noted that since these dummy variables use a [0, 1] system of values, their 'mean' values are actually the proportions of those observations that take the value of one. For example, the dummy variable for gender diversity for the Vietnamese market has the 'mean' value of 0.51. This means that 51% of companies in the sample have at least one female director in their boards. As reported in Table 7, the proportion of companies having one or more female directors in their boardrooms in Vietnam (mean ≈ 51%) is statistically significantly different from

TABLE 7: **Two-sample *z*-test on the equality of population proportions**

Variables	Observations			Proportions			*z*-statistics
	Vietnam	Singapore	Total	Vietnam	Singapore	Difference	
dwomen	472	1003	1475	0.51	0.42	0.09***	3.16
dual	479	1005	1484	0.32	0.35	-0.03	-0.98

Note: This table reports the results of two-sample z-test on the equality of population proportions of the two categorical variables, including dwomen and dual. The test is based on various individual samples which are reported in column 'Observations'. The test is under the null hypothesis that the population proportions of a given categorical variable are equal across the two markets. The variables are as defined in Subsection Variables. Asterisk (***) indicates significance at the 1% level. For the Singaporean market, raw data are downloaded the website of Singapore Exchange Ltd. Company, including listed companies' annual reports. For the Vietnamese market, the calculation is based on data directly provided by StoxPlus Corporation, and/or extracted from companies' annual reports which are downloaded from FPT-Ezsearch Online Information Gateway and Vietstock (accessed in December 2011).

that in Singapore (mean ≈ 42%). On an average basis, this nine percentage-point distinction indicates that the number of companies with at least one female director on boards in Vietnam is about 21% higher than in Singapore. With regard to dummy variable for CEO duality, there is statistical evidence to conclude that the companies across the two countries are not significantly different from each other with respect to the proportions of those CEOs who are also chairpersons. The relatively modest proportions of companies with a dual leadership structure (around 32% to 35% for the Vietnamese and Singaporean markets, respectively) suggest that CEO duality is uncommon in both markets.

5.3 A cross-country comparative analysis of the CG–FP relationship

In this subsection, a cross-country comparative analysis of the CG–FP relationship is performed on the basis of the empirical results obtained from estimating model (1). Accordingly, the role of country-specific institutional characteristics is taken into consideration to interpret the similarities and differences in the CG–FP relationship of each country. In other words, each market is examined separately and the impact of corporate governance structures on performance of firms is discussed and compared in the institutional context of each market. Detailed robust estimation results using a dynamic panel estimation technique (System GMM) are reported in Appendices A

TABLE 8: **Summary of empirical results obtained from the System GMM estimation approach: A cross-country comparison**

Determinants	Measures	Dependent variable: Tobin's Q ratio	
		The Vietnamese market	The Singaporean market
Past firm performance	One-year lagged Tobin's Q	+*	+*
Board gender diversity	Percentage of female directors (%)	+*	–*
Board composition	Percentage of non-executive directors (%)	–*	∅
Board leadership structure	Duality	∅	∅
Board size	Board size	∅	–*
Ownership concentration	Ownership concentration (%)	+*	+*

Note: This table presents the summary of empirical evidence on the relationship between corporate governance structures and financial performance of listed companies in Vietnam and Singapore. The table is based on the robust estimation results reported in Nguyen et al. (2015a) for the Vietnamese market and in Nguyen et al. (2014) for the Singaporean market, both of which are presented in Appendices A and B (reproduced with permission from Elsevier). The variables are as defined in Subsection Variables. Symbols (+), (–) and (∅) represent positive, negative, and no significant relationships, respectively. Asterisk (*) indicates significance at the 10% level or better.

and B[10]. In this subsection, the robust empirical evidence on the relationship between corporate governance structures and firm performance of listed companies in Vietnam and Singapore is summarised in Table 8.

Table 8 shows that the relationship between the current performance and one-year lagged performance is statistically significantly positive in both markets. This empirical finding strongly supports the arguments of Pham, Suchard, and Zein (2011); Schultz, Tan, and Walsh (2010) and Wintoki et al. (2012) among others that the CG–FP relationship should be investigated in a dynamic framework. This means that past firm performance should be considered an important independent variable to control for potential effects of unobserved historical factors on current corporate governance structures and performance. This is consistent with Wooldridge (2009), who argues that including a lagged dependent variable as a proxy for omitted variables is a simple and useful approach to account for historical factors having effects on current differences in the regressant. This also implies that other commonly used static estimators that ignore the dynamic nature of the CG–FP relationship may be biased (Wintoki et al., 2012). This finding therefore supports the recent calls for applying dynamic panel GMM estimator in corporate governance research in particular (Wintoki et al., 2012) as well as in corporate finance studies in general (Flannery & Hankins, 2013).

As reported in Table 8, it is found that the relationship between board gender diversity and firm performance is positive in the weak corporate governance system (Vietnam) but negative in the strong one (Singapore). Since the estimated coefficients on the variable *Board gender diversity* are not only statistically significant but also economically meaningful, boardroom gender diversity appears to be value-relevant for firms in both countries. In addition, the direction of the relationship between the two variables in each country well follows what one would expect. Specifically, the presence of female directors on board has a significantly positive effect on financial performance for companies in Vietnam where corporate governance is under-developed. In contrast to the finding for the Vietnamese market, having a woman on board leads to a significantly lower financial performance for companies in Singapore where corporate governance is well-developed.

The significantly positive relationship for the Vietnamese market is in agreement with Adams and Ferreira (2009) and Gul, Srinidhi, and Ng (2011), who argue that higher gender-diverse boards may offer stronger monitoring, and therefore may substitute for weak corporate governance mechanisms. This implies that there is potential for poorly-governed companies to benefit from board gender diversity (Adams & Ferreira, 2009). It is therefore plausible to expect that board gender diversity will have a positive effect on financial performance of companies operating in the under-developed corporate governance system of Vietnam. By way of contrast, Adams and Ferreira (2009) also

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[10]   These results have been published separately in Nguyen, Locke, and Reddy (2014) for the Singaporean market and in Nguyen, Locke, and Reddy (2015a) for the Vietnamese market. However, this subsection, for the first time interprets the estimation results of the two markets from a comparative perspective, taking into account national institutional characteristics.

argue that although more diverse boards may add value in weak-governed companies, it is likely that they would decrease the value of companies that have strong governance. A plausible reason could be that more gender-diverse boards may offer stronger monitoring, which could result in over-monitoring in well-governed companies (Adams & Ferreira, 2009). Therefore, it is reasonable to expect that board gender diversity will have a negative effect on the financial performance of companies operating Singapore where corporate governance practices are well-established.

The current study finds that the greater presence of non-executive directors on boards is significantly associated with lower firm value in the Vietnamese market (Table 8). It is also observed that non-executive directors have no significant effect on the financial performance of Singaporean companies. The finding is consistent with Campbell and Mínguez-Vera (2008) who posit that in countries where external corporate governance mechanisms are under-developed, the boards' monitoring function becomes an important internal corporate governance mechanism. In that situation, if the so-called non-executive directors play a vague role, the boards will not perform their monitoring functions effectively, allowing opportunists to follow their self-interests. Consequently, the presence of ineffective non-executive directors will ultimately lead to decreasing the firm value. This finding may be explained from the perspective of institutional theory. According to this theory, companies may randomly invite non-executive directors to participate on their boards to demonstrate merely that they comply strictly with the rule, and for this reason, they can obtain their legitimacy. In that case, the presence of non-executive directors on the board may not necessarily have a beneficial impact on the independence of the board or on firm performance (DiMag & Powell, 1983, as cited in Peng, 2004). By extension, it is likely that firms apply corporate governance rules or recommendations to seek firm legitimacy instead of improving firm performance (Lynall, Golden, & Hillman, 2003). Institutional theorists argue that popularly institutionalised norms in the society in which companies are situated will largely establish the composition of boards. As a consequence, "boards of organisations in the same institutional set will tend to be more similar to each other than to the boards of organisations outside their set" (Lynall et al., 2003, p. 419). This point of view, again, indicates that it is necessary to take institutional perspectives into consideration for comparative studies on corporate governance between countries, such as Vietnam (characterised by a weak institutional environment and a poor corporate governance system) and Singapore (characterised by an advanced institutional environment and a strong corporate governance system).

Table 8 shows that there is no significant relationship between board leadership structure (measured by *dual*) and financial performance of companies in both countries. It is necessary to recall that the comparative result reported in Table 7 shows that only 32% to 35% of the chairpersons of the two countries' boards play dual roles. This result suggests that most companies in both countries follow a board leadership structure in which the CEO and chairperson roles are separated. However, the non-dual leadership structure may be more form than substance for the Singaporean

companies (Mak & Kusnadi, 2005) and also for the Vietnamese companies (World Bank, 2006). For example, the Guideline 3.1, Principle 3 of the Singaporean Code (2005, p. 4) recommends that "the chairman and chief executive officer should in principle be separate persons, to ensure an appropriate balance of power, increased accountability and greater capacity of the board for independent decision making". Mak (2007), in his study, reports that 59% Singaporean listed companies establish a dual leadership structure to enhance the independence of the board. However, "while there is some anecdotal evidence of an improvement in willingness of directors to act independently, there remains considerable scepticism in the market about whether many independent directors really do exercise independent judgement and act in the interest of all shareholders" (Mak, 2007, p. 43). It is therefore plausible to infer that the board leadership structure has no significant influence on financial performance of Singaporean listed companies.

It is also common in the two markets that the chairperson is in practice an executive director who is also a major shareholder and interferes in the CEO's operational decisions (Mak & Kusnadi, 2005; World Bank, 2006). For example, the LOE 2005 provides that the board chairperson appointed by the *General meeting of shareholders* can also be the CEO, unless otherwise stipulated by the company's charter. A study conducted by Nguyen (2008) shows that most directors of Vietnamese listed firms including the board chairperson are majority shareholders, and therefore, they are elected as senior executive managers for their company. This implies that the board leadership structure in the two countries may be in fact a dual system but not a non-dual system as described by the statistical numbers reported in Table 7.

As reported in Table 8, the relationship between board size and firm performance is not significant for the Vietnamese market but significantly negative for the Singaporean market. The finding for the Singaporean market is consistent with the prediction of agency theory suggesting that firm performance will be able to be enhanced if the size of the board is small (Jensen, 1993). Therefore, Jensen (1993) suggests that the optimal threshold of board size should not be more than eight. Meanwhile, the finding for the Vietnamese market is in line with Schultz et al. (2010) and Wintoki et al. (2012) who, among others, have documented an non-significant relationship between board size and firm performance after controlling for endogeneity issues.

Table 8 also indicates that the relationship between ownership concentration and firm performance is statistically significantly positive in both markets. This finding is generally in agreement with Heugens, Van Essen, and Van Oosterhout (2009); Ma, Naughton, and Tian (2010); and Yabei and Izumida (2008), among others. This empirical evidence supports agency theory's perspective that ownership concentration is an effective internal corporate governance strategy that helps to enhance financial performance of firms operating in markets where the ownership structures are highly-concentrated, such as Singapore and Vietnam. Accordingly, by owning a large proportion of shares, controlling shareholders have strong incentives to actively monitor and real power to discipline

and/or influence management (Shleifer & Vishny, 1986). This helps to mitigate agency problems and improve performance (Jensen & Meckling, 1976).

In summary, it is documented in this subsection that financial performance of listed companies in both markets is quite persistent, i.e., past performance has a statistically significant influence on current performance. With regard to corporate governance structures, it is found that greater gender-diverse boards are significantly positively related to the financial performance of Vietnamese listed companies but significantly negatively correlated with the financial performance of their Singaporean counterparts. While ownership concentration has a significantly positive effect on firm performance in both markets, the leadership structure of boards has no significant effect at all.

It is also evident from this subsection that the presence of non-executive directors on boardrooms appears to have significantly negative influence on the financial performance of Vietnamese companies but no significant impact on financial performance of their Singaporean counterparts. Finally, there is statistical evidence to conclude that the relationship between board size and financial performance is not significant for Vietnamese firms but significantly negative for Singaporean companies. These comparative findings support the view that the effectiveness of corporate governance structures: (i) is country-specific; and (ii) appears to be contingent upon the institutional environment within which firms operate.

6. Conclusion

Our findings indicate that corporate governance structures including board size, board composition and board diversity of firms in the two markets are statistically significantly different, whereas the ownership structure, board leadership structure, and financial performance of companies in both markets are not. We also find that financial performance of listed companies in both markets is quite persistent, i.e. past performance has statistically significant influence on the current performance. With regard to corporate governance structures, we find that greater gender-diverse boards are significantly positively related to financial performance of Vietnamese listed companies but significantly negatively correlated with performance of Singaporean counterparts. While the ownership concentration has a significantly positive effect on firm performance in both markets, the leadership structure of boards has no significant effect at all. It is evident from our study that the presence of non-executive directors on the boards appears to have a significantly negative influence on financial performance of Vietnamese companies but has no significant impact on financial performance of Singaporean counterparts. Finally, there is statistical evidence to conclude that the relationship between board size and financial performance is not significant for Vietnamese firms but significantly negative for Singaporean firms. Our findings support the view that the effectiveness of corporate governance structures is country-specific and therefore the characteristics of the institutional environment within which firms operate should be taken into consideration when conducting cross-country comparative corporate governance studies.

It should be noted that this paper aims to investigate and compare the potential effects of firm-level governance mechanisms on determining the financial performance of listed companies in the two countries. For this reason, the author estimated empirical models separately for each country and then compared the two countries' results. Another approach is that using the aggregated sample of the two countries. This approach may allow future research to directly control for country-specific characteristics in the empirical models, given that the number of countries in the dataset is large enough.

Acknowledgments

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APPENDIX A: **A System GMM estimation on the relationship between corporate governance structures and performance of publicly listed companies in the Vietnamese market**

Dependent variable: Tobin's Q ratio [*lnq*]		
Explanatory variables [*notation*]	b/[*p*]	(*t*)
	(1)	(2)
Intercept	-4.795*	(-1.680)
	[0.096]	
One-year lagged Tobin's Q [*laglnq*]	0.633***	(3.791)
	[0.000]	
Percentage of female directors (%) [*female*]	0.021**	(2.109)
	[0.037]	
Percentage of non-executive directors (%) [*nonexe*]	-0.019**	(-2.429)
	[0.017]	
Duality [*dual*]	-0.017	(-0.084)
	[0.933]	
Board size [*lnbsize*]	-1.429	(-1.373)
	[0.172]	
Ownership concentration (%) [*block*]	0.014**	(2.237)
	[0.027]	
Firm age [*lnfage*]	0.430**	(2.578)
	[0.011]	
Firm size [*fsize*]	0.227*	(1.744)
	[0.084]	
Leverage (%) [*lev*]	-0.000	(-0.013)
	[0.990]	
Industry dummies [*industry*]		no
Firm fixed-effects		yes
Year dummies [*year*]		yes
Number of observations		352
F statistic		12.721***
Number of instruments		21
Number of clusters		120
Arellano-Bond test for AR(1) in first differences (*p*-value)		0.085
Arellano-Bond test for AR(2) in first differences (*p*-value)		not defined
Hansen-J test of over-identification (*p*-value)		0.220

Note: Asterisks indicate significance at 10% (*), 5% (**), and 1% (***). The t-statistics are reported in parentheses and are based on Windmeijer-corrected standard errors. The p-values are presented in brackets. Lags 2 and 3 of the levels of firm performance variable (lnq), lag 2 of the levels of board structure variables (female, nonexe, dual, and lnbsize) and other control variables (block, fsize, and lev) are employed as GMM-type instruments for the first-differenced equation. Lag 1 of the first differences of firm performance, board structure variables, and other control variables are used as GMM-type instruments for the levels equation. Year dummies and lnfage are treated as exogenous variables. Year dummy variables are included in the regression but not reported.

APPENDIX B: **A System GMM estimation on the relationship between corporate governance structures and performance of publicly listed companies in the Singaporean market**

Dependent variable: Tobin's Q ratio [*lnq*]		
Explanatory variables [*notation*]	b/[*p*]	(*t*)
	(1)	(2)
Intercept	-2.330	(-1.029)
	[0.304]	
One-year lagged Tobin's Q [*laglnq*]	0.305**	(2.245)
	[0.026]	
Percentage of female directors (%) [*female*]	-0.030*	(-1.822)
	[0.070]	
Percentage of non-executive directors (%) [*nonexe*]	-0.003	(-0.493)
	[0.623]	
Duality [*dual*]	-0.088	(-0.262)
	[0.793]	
Board size [*lnbsize*]	-1.156*	(-1.868)
	[0.063]	
Ownership concentration (%) [*block*]	0.007*	(1.793)
	[0.074]	
Firm age [*lnfage*]	-0.129*	(-1.724)
	[0.086]	
Firm size [*fsize*]	0.229	(1.488)
	[0.138]	
Leverage (%) [*lev*]	0.003	(0.741)
	[0.459]	
Industry dummies [*industry*]		no
Firm fixed-effects		yes
Year dummies [*year*]		yes
Number of observations		712
F statistic		8.343***
Number of instruments		20
Number of clusters		243
Hansen-J test of over-identification (*p*-value)		0.324

Note: Asterisks indicate significance at 10% (*), 5% (**), and 1% (***). The p-values are presented in brackets. The t-statistics are based on Windmeijer-corrected standard errors and presented in parentheses. Lag 2 of the levels of lnq, female, nonexe, dual, lnbsize, block, fsize and lev are employed as GMM-type instruments for the first-differenced equation. Lag 1 of the first differences of these variables is used as GMM-type instruments for the levels equation. Year dummies and lnfage are treated as exogenous variables. Year dummies are included but not reported.