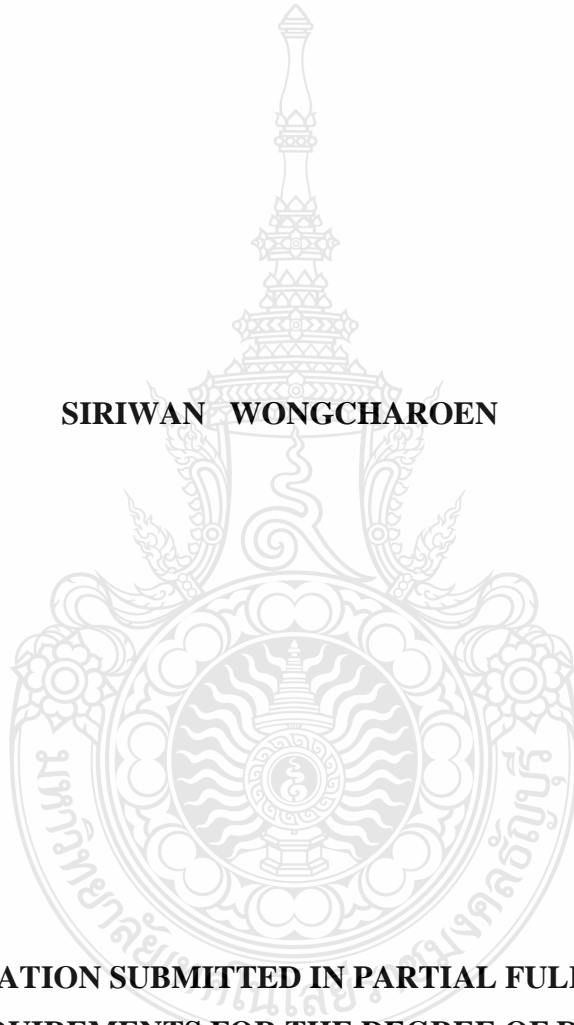


**THE EFFECTS OF CORPORATE GOVERNANCE AND FINANCIAL
LEVERAGE ON MARKET VALUE OF EQUITY OF
THAI LISTED COMPANIES**

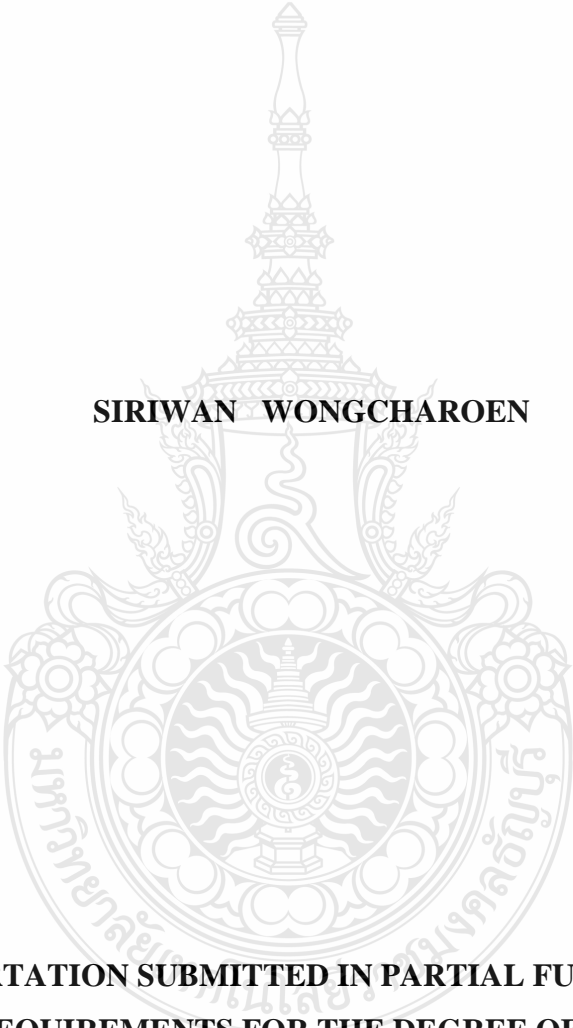
SIRIWAN WONGCHAROEN



**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION
FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI
ACADEMIC YEAR 2016
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Dissertation Title The Effects of Corporate Governance and Financial Leverage on Market Value of Equity of Thai Listed Companies

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Dissertation Title	The Effects of Corporate Governance and Financial Leverage on Market Value of Equity of Thai Listed Companies
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Program	Business Administration
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ABSTRACT

This research was a quantitative study on the effects of corporate governance mechanisms based on board responsibilities on financial leverage and market value of equity of the three industrial groups listed in the Stock Exchange of Thailand (SET), namely agro and food, property and construction, and technology. The objectives of this study were as follows: a) to investigate corporate governance affecting financial leverage, b) to investigate corporate governance affecting the market value of equity, and c) to investigate corporate governance affecting market value of equity through financial leverage. Data were collected over the period of 2010-2014 from Form 56-1 (financial statements) and annual reports of the three industrial groups, totaling 161 companies with 805 data entries. The independent variables representing corporate governance were board size, board composition, chief executive director/chair duality, board committees, institutional shareholding, shareholding of board members and board remuneration. Financial leverage and market value of equity were used as intervening and dependent variables respectively. This study then tested the research hypothesis by using Path Analysis, one of the Structural Equation Modeling (SEM) techniques, conducted by AMOS, the statistical program designed for analyzing the level of goodness of fit measures in SEM and to validate the harmony or consistency of the model with the variables. Based on the hypothesis testing results, corporate governance directly and indirectly affected financial leverage and market value of equity, and that corporate governance did not significantly affect market value of equity through financial leverage. Considering the direct and indirect effects, it could be interpreted that corporate governance mechanisms

affected market value of equity both directly and indirectly, although the results of the examination of each parameter path line had a significant or insignificant influence.

The results of this study consisted of the direct effects of the corporate governance variables on the financial leverage in the negative direction at the statistical significance level of 0.05 comprising of the proportion of board composition and the proportion of board committee. The remaining five variables, namely, board size, chief executive director/chair duality, institutional shareholding, shareholding of board members and board remuneration had insignificant effects on financial leverage. The direct effects of the corporate governance variables on the market value of equity in a positive direction at the statistical significance level of 0.05 were consisted of board size, board composition, institutional shareholding and board remuneration. The direct effects of the corporate governance variables on the market value of equity in the negative direction at the statistical significance level of 0.05 were comprised only of the shareholding of the board members. The direct effects and indirect effects of the corporate governance variables on the market value of equity were insignificant at the statistical significance level of 0.05. Furthermore, the said effects were comprised only of the proportion of chief executive director/chair duality and board committee members appointed to the board. Overall, the effects of the corporate governance variables passed through financial leverage on the market value of equity were statistically insignificant.

As a result of this study, it is important to note that the efficient and effective implementation of good corporate governance policy depends on the board's responsibility to balance profitability of the business with the best practices that take into account the interests of all stakeholders. To widely promote the importance and the adoption of corporate governance, further studies should be done with incorporated companies, and small and medium enterprises, using primary data and other tools for measuring the performance of financial markets and market values, such as value added economics, increased cost of market value, and economic profit, as well.

Keywords: corporate governance (CG), financial leverage (LEV), market value of equity (MVE)

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CHAPTER 1

INTRODUCTION

1.1 Background and Statement of the Problem

Business and social environments are changing drastically nowadays, affecting business performance. The management of any organization has to find ways to survive in a competitive environment and create sustainable growth in the long run (Tsang, 1997). It is important that the stakeholders, including management, investors and shareholders, have to know the factors affecting corporate performance. According to the agency theory, good quality management information builds trust and expresses a professional way of doing business to its shareholders (Jenson & Meking, 1976). However, there are some problems relating to the conflicts of interest between principals and agents. Thus, good corporate governance (CG) mechanisms, as stated by the Organization for Economic Cooperation and Development (OECD, 1961), should be used in monitoring and controlling the organization so that the organization will have transparency and disclosure of information to the stakeholders. Thus, CG is a concept which expresses the relationship between managerial factors. It is also an important mechanism for business development because it helps to protect the country's economy and enhances moral and ethical behaviors for living in a community by creating a balance between business profitability or performance and the public good. Key activities include supervision and monitoring of executives' responsibilities as well as to creating satisfaction beyond the scope of work for regulatory bodies (Tricker, 1984; Black, Jang & Kim, 2002; Yeh, Lee & Ko, 2002). In addition, the OECD stated that the guidance and control systems allocate rights and responsibilities for assigning rules and regulations to company's stakeholders including committees, managers, shareholders and other stakeholders. These systems help the monitored companies achieve their objectives, improve their performance, and build the competitiveness and stability for sustainable growth in the long run. All of the operational activities must directly and indirectly attract their stakeholders into consideration. In short, the principles of good CG are that the company has an operational system which is efficient and effective, standard, transparent, accountable and reliable for all stakeholders.

The review of research found that, in the countries facing economic crisis, entrepreneurs had financial and operational problems caused by inefficient and ineffective management. These problems include lack of good internal controls, inability to do risk evaluation due to lack of reliable information, insufficient disclosure of information necessary for management, creation of accounting or financial statements that caused damage to investors, and lack of good CG. Thus, in capital markets around the world, the CG concept is used in management and is considered as an important factor of social responsibility, thereby creating a good image of the organization and causing stakeholders to be treated fairly. This concept is in accordance with the conclusions of the World Economic Forum of 2003 that CG was concerned with operating performance, corporate social responsibility and transparency (Arora & Dharwadkar, 2011). Van den Berghe & Louche (2005) stated that implementing CG would be a value-added increase to the business. Brown and Caylor (2004) studied the financial reports of listed companies in the US and then ranked their CG according to three dimensions: (1) operating performance was measured by return on equity, profit margin, and sales growth, (2) firm value was measured by Tobin's Q, and (3) shareholder payout was measured by dividend yield and stock repurchases. The findings of this study showed that good CG resulted in good performance. Gompers et al. (2003) also found that CG yielded positively in the same direction as shareholder payout. Pham, Suchard & Zein (2011) conducted a study of the relationship between CG and firm performance of 150 companies with the most capital in Australia, using Tobin's Q and Economic Value Added (EVA) to measure firm performance and using three variables of evaluation to measure CG. They were (1) board independence ratio and board size, (2) the number of internal shareholders, and (3) the number of external shareholders. The findings showed that all variables had an effect on financial and economic return on equity.

In previous studies, several scholars were interested in studying the effects or influences of good CG on economic efficiency and effectiveness of the business and financial leverage. They are used as important measures of accounting profit, focusing on the usefulness of financial report information to the investors. Financial reports show operating capital and profit, helping investors make decisions on investment. This

creates satisfaction to stakeholders and reflects the increase in cost of debt and cost of equity. As for financial analysis, it is used as a tool to show the real profits calculated from capital structure management and market value of equity (MVE). In conclusion, previous studies revealed the development of CG mechanisms in business sector and the influences or effects of good CG on business performance. Thus, good CG is a concept on which rules and regulations as well as monitoring mechanisms are based. Board responsibilities under the Agency Theory are supervised and monitored through good CG which is an efficient and effective mechanism for supervising and monitoring management with transparency, good internal control, accountability, sufficient information disclosed to investors, and business value-added (Klapper & Love, 2004). Due to the importance of CG leading to growth, shareholders' trust and confidence in investment, shareholders' financial stability and the good image of the company, the researcher, therefore, was interested in studying the effect of CG on market value of equity of Thai listed companies in 2010-2014 in three industries: (1) agro & food (AGRO), (2) property & construction (PROPCON), and (3) technology (TECH). In this study, the variables affecting market value of equity (MVE) through financial leverage (LEV) are board size (BZ), board composition/ non-executive directors (NED), chief executive officer/chair duality (DUALITY), board committee (BCMT), institutional shareholding (INSTSH), shareholding of board members (MANGSH), and board remuneration (BRMRT).

1.2 Objectives of the Study

The objectives of this study were as follows:

1. To investigate CG-affected financial leverage of Thai-listed companies in 2010-2014.
2. To investigate how CG affected the market value of equity of Thai-listed companies in 2010-2014.
3. To investigate whether or not CG affected market value of equity through financial leverage of Thai-listed companies in 2010-2014.

1.3 Research Question and Hypotheses

The main motivation behind this study was to investigate how CG affected shareholders' capital, thereby producing value added for shareholders from realized gain. The amount of realized gain is bigger than that of the invested capital (Desai & Ferri, 2005), meaning that management affects the increase and decrease in MVE. This is useful for investors to make a decision on investment. That is, investors can expect good return on their investment in the form of dividend or profit. Thus, performance evaluation should measure change in MVE, or the measure of operating performance (Sharma & Kumar, 2012). This is consistent with a previous research finding that economic profit was different from accounting profit (Price, 2009). The research question and hypotheses of this study are as follows:

1.3.1 Research Question

How did Thai-listed companies' CG affect their financial leverage (LEV) and market value of equity (MVE) of Thai-listed companies?

1.3.2 Research Hypotheses

Hypothesis 1: Board size (BZ) had a positive effect on financial leverage (LVE).

Hypothesis 2: Board size (BZ) had a positive effect on market value of equity (MVE).

Hypothesis 3: Board composition (NED) had a positive effect on financial leverage (LVE).

Hypothesis 4: Board composition (NED) had a positive effect on market value of equity (MVE).

Hypothesis 5: CEO/chair duality (DUALITY) had a positive effect on financial leverage (LVE).

Hypothesis 6: CEO/chair duality (DUALITY) had a positive effect on market value of equity (MVE).

Hypothesis 7: Board committee (BCMT) had a positive effect on financial leverage (LVE).

Hypothesis 8: Board committee (BCMT) had a positive effect on market value of equity (MVE).

Hypothesis 9: Institutional shareholding (INSTSH) had a positive effect on financial leverage (LVE).

Hypothesis 10: Institutional shareholding (INSTSH) had a positive effect on market value of equity (MVE).

Hypothesis 11: Shareholding of board members (MANGSH) had a positive effect on financial leverage (LVE).

Hypothesis 12: Shareholding of board members (MANGSH) had a positive effect on market value of equity (MVE).

Hypothesis 13: Board remuneration (BRMRT) had a positive effect on financial leverage (LVE).

Hypothesis 14: Board remuneration (BRMRT) had a positive effect on market value of equity (MVE).

Hypothesis 15: Corporate governance (CG) had a positive effect on market value of equity (MVE) through financial leverage (LEV).

1.4 Conceptual Framework

The conceptual model of this study was derived from the literature review, including related theories and research results. There were seven independent variables, one dependent variable and one intervening variable. The conceptual model is presented in Figure 1.1, and the hypotheses are depicted Figure 1.2:

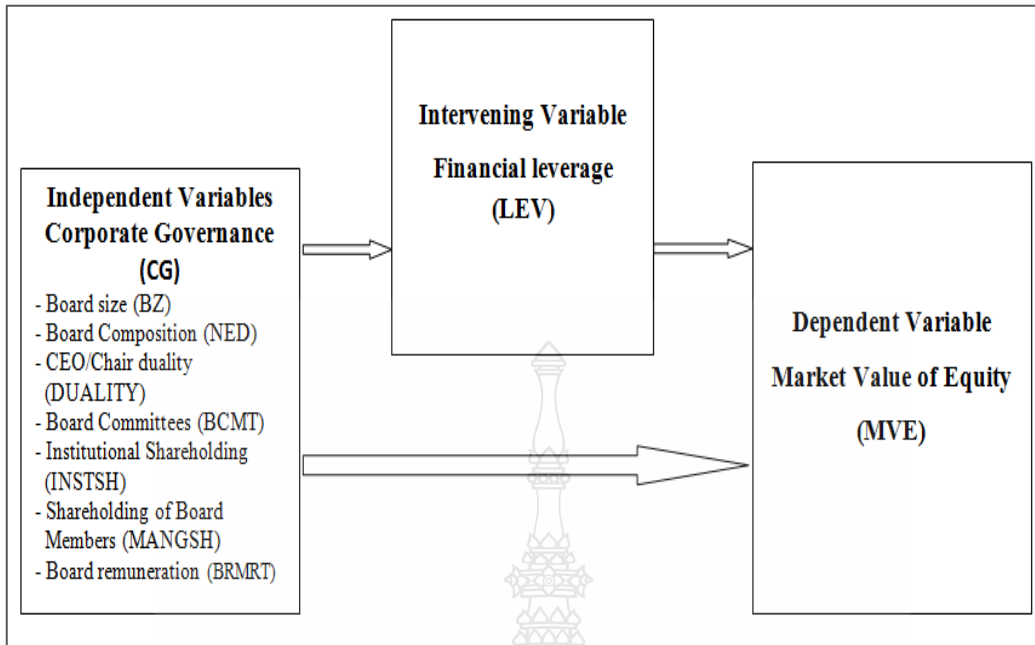


Figure 1.1 Conceptual model of the Study

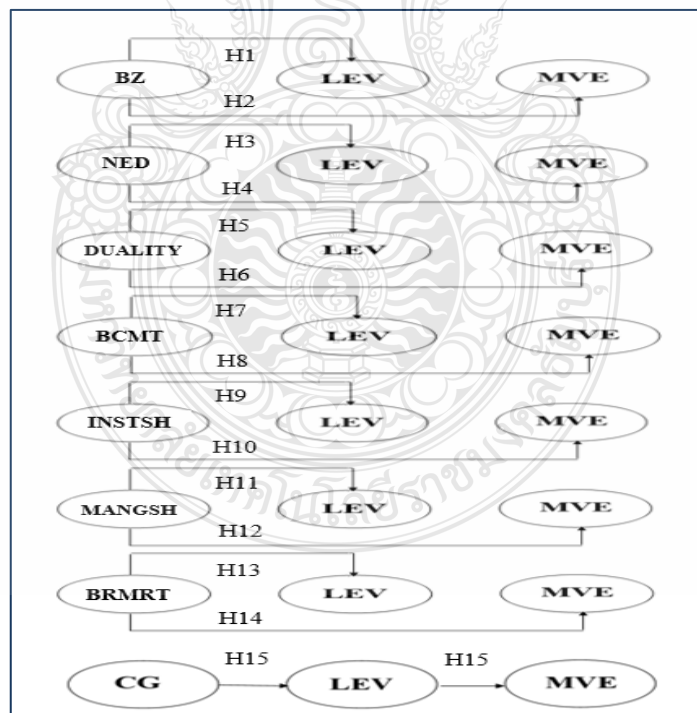


Figure 1.2 Research Hypotheses

1.5 Theoretical Perspectives

1.5.1 Agency Theory

Agency Theory explains the relationship between the principals which are the firm's shareholders or investors, and the agents which are firm management (Jensen & Mecking, 1979). The agents manage the firm to achieve the best benefit for the shareholders or investors. Thus, Agency Theory is a concept of the highest profitability, wealth creation and sustainable growth of the firm. In addition, Agency Theory is related to the concept of CG because it separates firm owners from management. This separation provides the supervision and monitoring performance of the agents.

1.5.2 Stakeholder Theory

Post et al. (2002) defines stakeholders as individuals or groups of individuals affected by the agents' decision-making in terms of policy and its implementation. Thus, Stakeholder Theory proposes the methods in managing the business by considering the morals and ethics which impact stakeholders directly or indirectly. The main purposes are for the business achievement and the satisfaction of the shareholders. Thus, Stakeholder Theory values the concepts of CG Theory and Social Responsibility Theory in business management (Freeman, 1994).

1.6 Definition of Terms

The variables this study comprise CG, financial leverage and MVE. The definitions of specific terms and phrases for the purpose of this current research are as follows;

1.6.1 Corporate governance (CG): A system guiding and controlling the allocation of rights and responsibilities for decision making and creating the balance of the financial system for doing business efficiently and effectively. The details of each component of CG are as follows:

1. Board size (BZ)

Board size is measured as a logarithm of the number of board members.

2. Board Composition (NED) Board composition/non-executive directors is calculated as the number of non-executive directors divided by total number of directors
3. CEO/Chair duality (DUALITY) Dummy variable is taken as 0 if CEO is chairman; otherwise, it is taken as 1.
4. Board Committees (BCMT) Board committee is measured as the logarithm of the number of board appointed committees.
5. Institutional Shareholding (INSTSH) Institutional shareholding is measured as the percentage of shares held by institutions as disclosed in the annual financial reports.
6. Shareholding of Board Members (MANGSH) Shareholding of board members is measured as the percentage of shares held by members of the board disclosed in annual financial reports.
7. Board remuneration (BRMRT) The average (per capita) cash remuneration, paid to executives, estimated as the ratio of executive compensation to the total number of executives.

1.6.2 Financial Leverage (LEV) Using debts to finance the business leverage is quantified by using total liabilities divided by total assets

1.6.3 Market Value of Equity (MVE) A concept for measuring short-term risk, MVE is calculated by using the closing price at the end of the year multiplied by the number of listed shares.

1.7 Limitations of the Study

This study was based on secondary data collected from annual, financial statements and reports of Thai-listed companies over the period of 2010-2014 published by the Stock Exchange of Thailand by focusing on three industries: (1) agro & food, AGRO, (2) property & construction, PROPCON, and (3) technology, TECH. In this study, the integrative literature review and the findings of related research revealed that there are several variables relating to CG. However, the researcher used only seven key variables. Other variables not included in this study include government shareholding and shareholding of foreigners, which also had an effect on financial leverage and MVE.

1.8 Benefits of the Study

1. This study attempted to introduce variables representing CG as publicly recommended by OECD principles, using a judgmental checklist. The researcher believed that this study would contribute to understanding of how CG affects financial leverage and MVE of Thai-listed companies for sustainability leading to positively significant outcomes. Thus, the CG concept was adopted in the process of CG implementation, especially in the areas of owner structure and board responsibilities.

2. This study investigated CG data in the comprehensive environmental context. It is believed that different companies will use different criteria for good CG. Therefore, the results of this study will be used as a guideline for setting up efficient and effective CG strategies.

CHAPTER 2

REVIEW OF THE LITERATURE

In That study, frameworks, approaches, theories, etc., related to corporate governance (CG), financial leverage and market value of equity (MVE) were reviewed from textbooks, articles, writings and research. The detailed related literature used for building the conceptual research framework, were as follows:

2.1 The Theoretical Concept

2.1.1 Agency Theory

To make the business grow and to gain maximum profit are what business owners (principals) aim for. For them, to fulfill these aims means to get higher returns on their investment including wealth. When economic conditions change and grow, the fulfillment of the aims can help owners/principals expand their business in raising funds, expanding business size and developing management systems. And when there is a change in the form of sole ownership of the business to a business with multiple owners/principals, business organizations face more complex management. That is, business owners/principals must appoint their representatives to the management as discussed in Agency Theory. This theory discusses the relationship between the shareholders, who are owners of capital (principals), and the management (agents), who act on the behalf of the owners/principals in management. Thus, this concept is to separate ownership and internal control in the organization. That is, the two parties (principals and agents) agree on management in which the agents act responsibly towards shareholders. Shareholders as principals or owners are at risk in the investment and are interested in their investment returns arising from the increased value of the business. Agents, as executives hired by shareholders or principals, pay attention to personal benefits in return, such as salary, bonus, welfare and reputation in their career. Agency Theory is thus a theory focusing on the highest profitability for stability and growth of business organizations. In this way, principals and agents can serve their self-interests as they expect from a business organization. Agency Theory was developed by Berle and Means (1932), as their book entitled “The Modern Corporation and Private

Property” showed the concept of separation of ownership and internal control in organization. Later on, as business development grew larger, large companies needed management that could address the needs of large enterprises. Thus, Agent Theory was developed to be used in management (Jensen & Mecking, 1976). Due to the separation of ownership and management, both principals and agents try to do everything for their own interest. This can cause a conflict of interest and mutual risk between them because principals cannot closely monitor the performance of their agents (Fama & Jensen, 1983). To solve the problem, the mechanisms of monitoring, controlling and management through CG are needed (Anand, 2007; Clarke, 2004). Through CG, business operations will be transparent, verifiable, efficient and effective (Bureekul, 1998). Moreover, CG helps to promote participation of stakeholders (Low & Cowton, 2004) to monitor the performance of agents in decision-making on behalf of the principals. However, to efficiently and effectively implement the CG policy, the board and executives, as agents, must give priority to encourage and promote good practices of CG, thereby bringing about satisfaction of all stakeholders.

2.1.2 Stakeholder Theory

The importance of this theory is that it is the basic concept of organizational management by taking into account the manuals and ethics to balance the conflicts between shareholders and other stakeholders. Thus, organizational management must not focus only on making the highest profitability, but it must pay attention to the satisfaction of all stakeholders. This theory was developed by Barnard (1938) to support the idea of social responsibility written in his book entitled “The Functions of the Executive”. Later on, Freeman (1984) asserted that executives or managers needed to satisfy stakeholders, including employees, customers, suppliers and local community organizations. This was because they are affected both directly and indirectly from the success of the organization. This is in line with the definition offered by Post Lawrence and Weber (2002) that stakeholders were affected by the policy setting and implementation of the organization. Therefore, organizations must take responsibility and have a wider perspective about Stakeholder Theory. This theory leads to the understanding shareholders’ expectations that want the organization to take on more responsibilities, provide more care to shareholders’ returns on investment, and take into

account local communities and environment (Simmons, 2004). This differs from the past view that organizations mainly focused on their own survival and success. It can be concluded that Stakeholder Theory is a cornerstone in the development of social responsibility and highlights the important role of executives or managers to satisfy individuals and groups who influence organizational performance (Freeman, 1984). Thus, organizational management plays a significant role in doing the right thing for the society as a whole and in creating the balance between the organization and its stakeholders through CG. That is, executives must run the business with morals and ethics, transparency and verifiability. In addition, they must create organizational performance that satisfies all of the stakeholders affected by policy and implementation of the organization. CG is the only way to solve the differences between individuals, and it is a tool for measuring both organizational performance and evaluating job satisfaction of the executives (Richard et al. 2009). In conclusion, the main principle of Stakeholder Theory is to establish a strong relationship between the enterprise and corporate executives to act properly for the satisfaction of the society as a whole.

2.2 The Concept of Corporate Governance

2.2.1 Corporate governance (CG)

CG is a monitoring system that sets up the structure and management processes to be efficient, effective, transparent and verifiable in the operations. This leads to an increase in the value of the business and sustainable growth of the organization by taking into account the relationship between principals or shareholders and agents or executives, as well as all of other stakeholders. CG is often associated with the agency problems and a separation of ownership from management for the purpose of internal control in the organization.

The Stock Exchange of Thailand (SET) has developed a system of CG to support and encourage listed companies to have more transparency to boost investor confidence. SET conducted a study on the role of the audit committee in 1995, two years before the economic crisis in 1997. In 1978, SET issued regulations for listed companies to appoint audit committees by 1999. SET then issued a “Code of Best Practice for Director of Listed Companies” to be practical guidelines for board of

directors. To represent its management efficiency and effectiveness from the accounting period ending December 31, 2002 onwards, the Good CG Committee of SET published a report of appropriate practices for listed companies to disclose information that complied with the principles of CG. Information disclosure helps to build trust and confidence of shareholders, investors, other stakeholders and any other concerned parties. In 2006, SET amended the Code of Best Practice declared in March 2002 to be in accordance with the 2004 OECD Principles of CG, and consistent with the recommendations of the World Bank resulting from its participation in the project called CG Reports on the Observance of Standards and Codes (CG-ROSC). This amendment required listed companies to follow the 15 amended clauses stipulated in “the Principle of Good CG for Listed Companies 2006”. The contents are divided into five sections, namely 1) rights of shareholders 2) equitable treatment to shareholders 3) roles of stakeholders 4) information disclosure and transparency, and 5) board responsibilities.

In 2012, SET amended the Principle of Good CG for Listed Companies again. This time, the amendment was made to all of the five sections to be in line with the ASEAN CG Scorecard which has been an instrument used for measuring the level of “CG of listed companies” doing business with ASEAN member countries. This amendment has enabled listed companies to operate concretely according to the survey and evaluation criteria concerned. In addition, it has helped to promote the Principle of Good CG, affecting the economic efficiency and effectiveness; it has been used as an efficient and effective measure of accounting profit. In particular, it has helped investors receive information from financial reports reflecting real profit, and financial analysts are able to explain how the financial instruments reflect the real profit calculated from the MVE, and the company stakeholders are more satisfied with the operation according to the five sections of the Principles of Good CG for Listed Companies. These governance mechanisms help to monitor the implementation of the concept of Agency Theory, promoting management with transparency, verification and adequate data and information disclosure to investors and the public. Research done in the past studied significant effects of CG on firm performance (Klapper and Love, 2004) and found that CG affected firm performance and the value of equity. Beiner, Drobetz, Schmid and Zimmermann (2004) studied the relationship of board size and firm performance by

using four variables: board size, the proportion of independent directors, shareholding structure and debt levels, and found that shareholding structure significantly affected the value of equity. Vafeas (1999) studied the relationship between the activities of the board and firm performance, and found that the relationship of the activities of the board to the value of equity was in the opposite direction. Bhagat and Black (2001) studied the relationship between the independence of directors and firm performance and found that CG had positive relationship with common stock returns but negative relationship with firm performance. However, the success of implementing the policy of CG requires adherence to the role and responsibilities of the board and management, as firm leaders, in advocating CG by means of cultivating knowledge and understanding of the CG principles (Van den Berghe & Louche, 2005). These activities of the board and management promote sustainable growth and development of the organization towards goodness and excellence. That is, the success of promoting CG sustainably increases value added to the organization in addition to sustaining profitability alone. In addition, this success shows the responsibility of the organization towards society as a whole. Jamali, Safieddine, & Rabbath (2008) advocated that CG was one of the factors that led to social responsibility due to its two components showing the responsibilities of the organization towards all stakeholders, society and environment and the participation of the board and transparency. The study of Shahin & Zairi (2007) found that CG was an important element in building social responsibility and led the organization to have satisfactory results. Yeh, Lee, and Ko (2002) and Black, Jang, and Kim (2003) found that companies with good CG yielded better firm performance and that equality in obtaining information allowed organizations to reduce the opportunities for corruption. Thus, the application of the CG principles is an important part that affect' firm performance.

In conclusion, CG is a significant element to economic growth because the best practices of CG can reduce the risk for investors, encourage more investment and enhance the efficient and effective performance of the firm (Spanos 2005). Efficient and effective implementation of CG is deemed as the responsibility of the organization to ensure that enhancing the reliability to investors and quality of financial information can increase the integrity and efficiency and effectiveness of capital markets (Rezaee 2009).

Cadbury (1992) stated that CG meant “the system by which companies are directed and controlled” in the matters relating to the duties and responsibilities of agents or management. The successful performance was based on the relationship between agents, shareholders and other stakeholders, and that the implementation of good CG contributed to investor confidence that was necessary for the capital markets.

2.2.2 CG variables

Reviewing texts, articles and research on CG concepts, the researcher summarized that CG played an important role in organization management. In this way, the researcher found that the interesting variables affecting CG to be appropriately used in That study were the role and responsibilities of the board and management that complies with CG in that the board or management had an important role in conducting business responsibly towards its shareholders by means of overseeing the company's activities to be carried out correctly, legally and ethically for the best benefit of all stakeholders. The variables used in that study are then described as follows.

1. Board Size (BZ)

The board of directors is the highest body of a company. They are responsible for policy setting, strategic planning and monitoring business activities, and entrusting by shareholders to protect the company’s benefits for all stakeholders. The Board is therefore the center of CG mechanisms that helps to alleviate critical issues in the company (Shin-Ping & Hui-Ju, 2011; Daily et Al., 2003) and reduce a conflict of interest among stakeholders. Therefore, determining the optimal number of directors is an issue that should be debated first. Many scholars have studied the size of the board, such as Vintila & Gherghina (2012), who said that a small board size had the ability to enhance the efficient and effective performance. This was in line with the findings of Reddy & Locke (2010) that the companies with a small board size had a tendency to promote better participation of the members in working together than that with a large board size. On the other hand, Tai (2015) found that a large board size could lead to adverse effects associated with returns on investment due to an increase of the expenses paid to the board members. The study of Jensen (1993) also found that a large board size resulted in less efficient and effective performance than a small board size due to the delay of decision-making causing loss of business opportunities. This is consistent

with the findings of Brennan (2007) that too large a board size resulted in difficulties in solving operations and management of business issues. However, Kyereboach and Beikpe (2002) found that large board size was better due to the varieties of knowledge, abilities and experiences necessary for decision making in the right direction.

Thus, determining the optimal size of the board is considered to be very important for the organization. Typically, optimal board size cannot be exactly determined due to the different characteristics of the business and individual members in terms of knowledge, expertise, experience, etc. It is important to take into account that if the board size is too large, there will be potential causes for working process delay. This could adversely affect business or business opportunity. If the board size is too small, it may not suit the scope of the business, causing lost business opportunities. Thus, the number of board members needed at any given time varies according to the scope of business and the urgency of the issues needed to be solved.

2. Board Composition (NED)

Board composition (non-executive directors) is one element of the role and responsibilities of the board, and it complies with CG mechanism on the board structure stipulating that the board should not have too many roles in order to perform their duties efficiently and effectively. So the organization should define the roles of non-executive directors to cope with the business characteristics. The company should disclose the board composition to all shareholders. Thus, the organization with the appropriate numbers of NED are able to receive a high level of acceptance by shareholders. This is in line with the research findings of Pfeffer and Salancick (1978) that NED played an important role in enhancing the organization's capability and are recognized by external shareholders for the purpose of fund raising. There were research findings revealing that higher levels of NED led to higher levels of debt to equity. While Wen (2002) studied the evidences about the NED and found that organizations with more NED could monitor the performance more efficiently and effectively, resulting in lower level of debt to equity and better firm performance. This was because NED were not bound to their duties, leading to an increase in the ability and MVE. This is consistent with the research findings by Weir and Laing (2001) that NED helped monitoring mechanisms to be more efficient and effective and in the same direction. Ezzamel & Watson (1993)

also found that NED had a positive correlation with the profitability of the company. Black et Al. (2006) found that the company with higher CG scores indicated the increase of its MVE. Chen (2008) pointed out that the creation of efficient and effective CG mechanisms contributed to the improvement in the added value of the company. Velnampy & Pratheepkanth (2012) found empirical evidence on the relationship between the stability of the company and its composition of the board. Some case studies found that a link between the performance of the company and the number of its NED were positive and in the same direction, and that to examine the relationship between CG mechanisms of the company and its performance as an internal mechanism helped to attract institutional shareholding as an external mechanism.

3. Chief executive officers, CEO/Chair duality (DUALITY)

The Thai SET has recommended that the board must demonstrate leadership and have the freedom to decide the management in order to gain trust and confidence of the public and perform their duties with transparency and independence of shareholders and any other parties. In addition, the organization should have a power-balancing system and a clear separation of duties in order to promote efficient and effective monitoring and evaluation. The position of Chairman/Chief Executive and president must be clearly separated by giving a clear description of duties and responsibilities, preventing vague roles. In particular, the roles of chair and chief executive officers should be definitely separated. But, in practice, the chairman may hold the position of CEO (chair duality) or the CEO holds the position of chairman. Thus, the recruitment process for senior positions should be established and approved by the board of directors so that the senior management can perform their duties with transparency and verifiability under CG principles as assigned in efficient and effective policies and plans of the organization. In the research of Fama & Jensen (1983), it was suggested that the control process and management decision functions be separated. Peel & O'Donnell (1995) concluded that separating the roles of CEO and chairman would result in modifying operational efficiency. The studies of Sanda et. Al. (2003), Brown & Caylor (2006) and Kang & Zardkoohi (2005) also concluded the same. That is, there was a positive relationship between the CEO and chairman when the two roles were clearly separated from each other, resulting in better firm performance and increase in value of

equity of the company. The study of Abor and Biekpe (2007) also found that combining the monitoring and operating work in one person would result in a substantially decreased importance of the monitoring role based on CG. Meanwhile, Laing and Weir (1999) said that companies with Chair/CEO duality gave too much power to the leaders and resulted in inefficient and ineffective decision-making to increase wealth for shareholders. Therefore, the management roles should be separated from the controlling ones in order to create an efficient and effective mechanism of CG which leads to increased business value and fruitful use of resources of the company.

4. Board Committees (BCMT)

The Board committee (BCMT) plays a role in scrutinizing management. It helps to encourage businesses to act according to the principles of CG effectively. Thus, the board committee is critical to organizational management, and it helps to foster the development of CG of listed companies. The SET has stipulated the “Code of Best Practice for Directors of Listed Companies” in which one recommendation is that the board should set up committees (board committees) to enhance management to comply with CG. It is therefore the duty of the board to determine the criteria and the process for nominating qualified persons to hold the positions. In addition, the appointment process must be transparent and independent. The right persons must be put on the positions under the approval of the board and then at the shareholders’ meeting. In this way, the board committee can perform their duties independently. Each board committee assumes different roles, depending on the type of business. According to Fama (1980), independent directors appointed as board committee members helped to reduce the problems arising from the board members appointed from insiders and the conflict of interests between executives and shareholders. It could also help to take care of the interests of minority shareholders equally. Board composition is a mechanism of CG within the organization, ensuring that the management performs their duties by taking into account the best benefits of all stakeholders, including shareholders (Reddy & Locke, 2010). Krivogorsky (2006) also said that board committees served as a link between executives’ responsibilities and the company environment, leading to better work performance. Meanwhile, Rajendran (2012) explained that separation of the board members’ roles was an important CG mechanism, resulting in best practice in

management. This is consistent with Hermalin and Weisbach (1991) who said that board structure was a very important factor for company performance. Therefore, the appropriate number of board committee members is set up according to company policy, including the duties of the board committee to efficiently and effectively promote CG.

5. Institutional Shareholding (INSTSH)

The roles of institutional shareholders have an influence on the capital market, since their investment strategies are based on the demand of investors and they try to keep the invested proportion at a reasonable level for the purpose of achieving returns on investment in the short-term rather than in the long-term. Institutional shareholding is an important mechanism in regulatory control of the business, which relates to CG. Brickley et al. (1997) who said that institutional shareholders played a role in monitoring investment consistently and appropriately. The study of Bennett et al. (2003) noted that all types of institutional shareholders were there to create pressure to sell securities in the case that management does not comply with the policies as assigned by shareholders and to help protect the business from hostile acquisition. In Thailand, institutional shareholding comprises mutual funds banks, asset management companies, insurance companies, securities companies and pension fund, etc. The study of Rubin (2007) showed that the liquidity of stocks correlated with the proportion of shareholding by institutional shareholders, making the market prices of securities different from the real value and, thereby, possibly causing the gap between buying and selling price. In addition, the proportion of institutional shareholders have power to negotiate, thereby helping to add value to the business and reflecting better earnings (Ferreira & Matos, 2008). In Thailand, institutional shareholding is less productive than in other countries, since independent shareholders play a more active role than institutional shareholders. However, institutional shareholding is a source of long-term debt that helps to raise long-term funding at reasonable costs for funding, serving as a mechanism for ensuring more effective strategic decisions for the company, helping to reduce opportunistic management, and building more confidence among investors and the public as well. These are important factors creating favorable terms of borrowing from capital markets (Arshad & Safdar, 2009) and reflecting business performance complying with CG.

6. Shareholding of Board Members (MANGSH)

The shareholding structure is one of the key mechanisms of CG and related to the protection of the rights of shareholders, since shareholders are aware of their gain and loss in the business and share in the responsibility for the financial risks and their own interests. So the shareholding ratio affects the distribution of power between shareholders and executives and is an impetus for organizations to optimize operational organization in order to maximize wealth (Vintila & Gherghina, 2012). However, the Exploitation Theory describes that the shareholding ratio reflects the ownership and the power to control the business. That is, powerful shareholders are only interested in their own benefits rather than the benefits of all stakeholder as a whole. This effect may lead to a serious conflict between the minority and majority shareholders (Leung & Horwitz, 2010). Increased efficiency of organizational management results from the separation of duties under the Agency Theory and the incentive to balance the interests of all stakeholders. One of the most powerful incentives motivating executives to dedicate themselves to the best firm performance is shareholding of board members. Motivated by a sense of ownership, board members will be dedicated to the best performance, thereby resulting in increased wealth for shareholders and other investors. The study of Mehran (1995) found a positive relationship between the proportion of shares held by the management and firm performance. Aguilera & Jackson (2003) studied the shareholding of board members and found that board members that held shares and regularly attended the annual meeting were the driving force for the protection of the rights of shareholders, thus contributing to system of corporate control. In addition, board members holding shares helps to reduce their management cost, since the shares they hold will give them a sense of being part of a business owner. This makes them feel more dedicated to maximizing value-added for themselves, thereby making the demands of principals and agents in the same direction and reducing the conflict of interests as stipulated by Agency Theory. But, in practice, this gives the executives too much power or the right to vote, leading to excessive demand for personal benefit. Thus, CG is a critical mechanism that can help to determine the optimal proportion of shareholding of board members and the authority of the board. This is consistent with Morck et Al. (1988), who stated that the benefits between the principals and agents was

truly in the same direction when the agents as executives had the sense of ownership and a stake in the venture in proportion high enough to make them focus on the interests of the organization, thereby resulting in the best firm performance and the maximum business value-added. This is consistent with Jensen & Murphy (1990), who said asserted that low benefits for management made firm performance inefficient and ineffective, causing conflict of interest between shareholders and executives. This increases the threat of insolvency caused by management expecting to benefit their own interests over the benefits of stakeholders as a whole.

7. Board remuneration (BRMRT)

Board remuneration is an issue of benefits which is defined in the organizational management policy as reward given to executives. Board compensation is also considered as a tool to motivate the executives to perform their duties efficiently and effectively. Appropriate board remuneration helps to reduce cost of management caused by agency problems, and it can solve the problems of inefficient and ineffective management. The study of Thiery (1987) found that the appropriate system of board remuneration was based on three components, namely (1) transparency, (2) justice, and (3) control. Thus, the board remuneration policy must be designed in accordance with the interests of executives and shareholders in order to motivate executives to perform their duties efficiently and effectively, thereby resulting in sustainable growth. According to Kleiman (2000), the effectiveness of board remuneration management improved management costs, contributed to an efficient and effective recruitment process, and reduced morale problems and turnover rates as well. In practice, the board may appoint a committee (board committee, BCMT) to consider board remuneration so that the consideration will be done with independence, transparency and justice. This issue must be studied carefully, since board remuneration reflects firm performance, accounting profits and share price. Decenzo & Robbins (2002) said that the process of board remuneration was to design the remuneration structure of the organization aiming to satisfy all parties. Also, several researchers studied the relationship between the board remuneration and firm performance. For example, Tackao et al. (2003) found that board remuneration had a significantly positive relationship with firm performance measured by MVE. This is consistent with the study of Smith and Watts (1992), which asserted

that growing businesses tended to have a remuneration policy which could be measured by firm performance and served as a good tool for measuring efficiency and effectiveness of board management. This is also in line with Jensen and Meckling (1976) who said that a good management mechanism resulted from motivating CEOs to perform their duties by using their knowledge and experience by paying good remuneration. The study of Mehran (1995) concluded that there was a positive correlation of board remuneration with the efficiency and effectiveness of firm performance. Brown & Caylor (2005) found that the CG on board remuneration was significantly correlated with value of equity. In conclusion, the remuneration paid to the board is an important part of corporate management, linking to the mechanism of CG practices.

2.3 Financial Leverage (LEV)

Financial Leverage in economics refers to the practice of using debts the business is under to obtain effective financial performance. Utilizing financial leverage varies according to the industry features. Even in the same industry, there is debt in different capital structures. A high degree of financial leverage means high burden of interest payments, including high burden of cost of debt. This is why companies must have a balanced financial policy and capital structure appropriate to the financial operation. Source of funding consists of three parts: (1) the shareholders' equity (2) preferred shares, and (3) liabilities. For their business stability in the long term, companies with different capital structure use all three funding sources in a different proportion. Like a double-edged sword, utilizing debt is both advantageous and disadvantageous. That is, using financial debt may result in financial risk. However, financial debt can be a financial instrument or accelerator in the business and increase investment opportunities if future sales and earnings will increase as expected. So utilizing financing debt for recapitalization is better than issuing common stocks, as the issuance of new shares increase the denominator of the profit, resulting in the decreasing of the EPS. This is consistent with the study of Heng, Azrbajani, & San (2012), which found that firms could improve their value and growth rates by varying the optimal ratio between equity and debt to finance their business activities. So there is

a concept of managing optimal capital structure, which can create the highest satisfaction of shareholders. It can be concluded that capital structure is considered as a choice between risk and return. Increasing financing debts makes shareholders increase risk and may affect the market price of the ordinary shares. This is consistent with the study of Chen, Cheng, He & Kim (1997), which found that capital structure was one of the key factors of corporate finance, both in theory and practice, as it affects the financial health of the company in achieving the maximization of shareholders' wealth.

Nowadays, the level of financing debt or financial leverage, which is part of the capital structure, is analyzed by using financial tools—the tool for measuring the funding of future businesses and the ability to pay debt. Also, the level of financing debt or financial leverage reflects financial risk and liquidity of the company. The theory of capital structure (Modigliani-Miller (MM) of Franco Modigliani and Merton Miller (1958 & 1963) states that the company is able to increase its value and growth rate by changing the proportion of equity and debt. Grossman and Hart (1982) pointed out that financing liabilities increase expenses, leading to the increased risk of insolvency. But effective management of debts can stimulate investment. In addition, using financial leverage can avoid bankruptcy and reduce conflicts between management and shareholders. Fischer, Heinkel & Zechner (1989) stated that the difference between Debt Ratios and Leverage Ratios —high or low level-- depended upon the costs caused by decision making on capital structure and the period of debt management. Claessens et al, (2002) identified that the mechanism of CG enabled companies to access good financing and then reduce the cost of debt. The board, with responsibility for the management of the company, plays a pivotal role in making decisions on financial integration for the best benefit of the organization.

2.4 Market Value of Equity (MVE)

Market value of equity is an economic concept for measuring short- term risk since it is determined as cash value depending upon the current market price of outstanding shares as illustrated in the financial report. Also, MVE is an indicator of the perception of shareholders and all of other stakeholders that indicates the ranking of companies based on capital base, value of the business in the capital market, and the

successful implementation. The MVE is determined by the value assessed by investors from demand for buying and selling the securities in the market. Thus, the MVE fluctuates over time and is influenced by the business cycle. MVE is highly valued at the time of business expansion and less affected by market environment and economic recession.

MVE refers to the total of market value of all outstanding shares of a company. That is, the MVE is the overall value of listed securities of any company, calculated from the closing price of the listed securities (shares in stock market resulting from the last transaction after a price that reflects the demands for buying and selling from investors at the time) multiplied by the number of securities listed at present (Listed Shares). (Listed securities is calculated by using the change either increased or decreased or no trading at the closing time of the securities traded on the stock exchange at the end of that fiscal year.) Thus, MVE reflects a difference from book value of shareholders' equity, the capital structure of the market, and helps investors be able to measure the size of the company that are at different levels of risk. Also, MVE is an indicator of a company's success and is the easiest tool used to monitor exchange of stocks traded on the stock exchange. This tool is recognized and widely accepted. Many scholars studied the relationship of CG with the MVE and found that CG contributed to higher MVE. For example, Gomper (2003) found that higher CG index contributed to a better return on the stock in the long term. Core et al. (2006) examined the ownership structure and the MVE and found a positive relationship, causing a worthy business to invest. Black, Love & Rachinsky (2006) found that the level of CG was an effective measure to predict the rising of stock prices. Black, Jang & Kim (2006) stated that the overall CG index is an important device for describing the trend of the MVE.

2.5 Literature Review: Relevant Research Results

2.5.1 Darweesh (2015) investigated the relationship between CG mechanisms, financial performance and market value in Saudi Arabia's 116 non-financial firms for the time period 2010-2014. CG and financial data of the selected companies were available on the websites of these companies and Tadawul. The theoretical framework

of that study were the Agency Theory and Institutional Theory. The independent variables were board size, board independence, board committees, shareholding ownership structure, and executive compensation. Dependent variables were corporate financial performance and market value. That study analyzed samples of firms by using descriptive statistics and inferential statistics (linear relationship, standard multiple regression and ANOVA). The findings of multiple regression tests revealed a statistically significant relationship between CG mechanisms, corporate financial and market value. That is, CG had a significant role in improving firm performance, possibly helping business leaders understand the influence of CG on their firms' success and the country's growth. In addition, academic researchers, investors, regulatory bodies, practitioners and experts in the area of CG benefited from them as well. In detail, the study findings regarding the relationships between the individual CG mechanisms and firm performance in terms of financial performance and market value were divided into three groups: (a) the significant relationship, the findings of which revealed that board size and executive compensation had significant relationships with financial performance measured by ROA and ROE; (b) the negative or inverse relationships, which related to the negative relationships, the findings of which revealed that board independence had inverse relationships with both ROA and ROE, while board size, and board committees had inverse relationships with market value measured by Tobin's q; and (c) the non-insignificant relationships, the findings of which revealed that board committees and ownership structure had insignificant relationships with financial performance, while board independence, ownership structure, and executive compensation had insignificant relationships with the market value. Based on the literature review, it was recommended that the board directors of publicly listed firms be at least eight members, that firms use long-term compensation schemes for rewarding corporate executives financially aligning firm interests with shareholders' interests, that the Stock Market Authority pass a law enforcing companies to hire a larger portion of independent board members to monitor companies' activities, and that in general, regulators enact harsh penalties for firms and business leaders for noncompliance with CG. That study indicated a need for further studies in CG, using primary data rather

than secondary data, market-based measures of financial performance and market value, external factors rather than the internal processes of a firm, and different mechanisms.

2.5.2 Zaharia & Zaharia (2012) examined the current literature as to the effect of ownership structure (conflict of interests between controlling and outside shareholders [particularly hedge funds], relating to board independence, institutional shareholders, etc.), on firm value, the driving motive behind the corporation (nature of corporations), the linkages among CG, stock market development, enforcement (product market competition acting as a substitute for CG as competitive pressure enforces disciplines on profitability maximization), and firm value, and the relationship between firm-level CG and firm value. This secondary research revealed strong correlations between CG measures in determining firm value during a crisis (having a high effect on increased leverage firms), the relation between overall firm governance and firms' market values (performance), the changing nature of the corporation, and the difficulties identifying specific channels through which the CG reforms affected firm value. The implications of that study suggested a growing need for a research on economic concepts of the corporation, the mechanisms of CG and their empirical relation to firm performance. In addition, that study also suggested the potential role of shareholder activism in improving the governance of firm value.

2.5.3 Rouf (2011) empirically tested the relationship between the financial performance (profitability) and the level of CG Disclosure (CGD) of 94 listed non-financial companies in Bangladesh in 2007 under Stakeholder Theory, Agency Theory, Legitimacy Theory and Potential Economy Theory. Data were taken from annual reports of the listed companies. The sample data was collected from the Dhaka stock exchanges seminar library in 2006-7. CG disclosure items were classified into seven categories: shareholders, board of commissioners, board of directors, audit systems, corporate secretary, stakeholders, and disclosure information. Independent variables were profitability measured by return on assets (ROA), ownership structure (higher management measured by equity owned by insiders, EOI), board audit committee and firm size. The dependent variable was CG disclosure (CGD). In addition to descriptive statistical analysis, the method of analysis was multiple regression. Also, Ordinary Least Square (OLS) was used as the method of estimation. The results of That study found

that the financial performance (profitability), measured by ROA and Board Audit Committee were positively correlated with the level of CG Disclosure (CGD); percentage of equity owned by the insiders was negatively associated with the CGD, and that empirical evidence was provided to policy makers and regulators in South Asia. Thus, the researcher recommended that future research on CGD seek to take into account all listed companies under non-financial groups and in different industrial sectors.

2.5.4 Aggarwal (2013) attempted to find the answer to the research question “Are CG and corporate profitability related?” in the short term, particularly in an Indian context by determining the direction of causality between them, using secondary data (governance ratings and corporate profitability variables) of 34 Indian non-financial companies listed on S&P CNX Nifty 50 Index from FY 2010-11 to FY 2012-13. The governance and sustainability ratings data was obtained from “CSR Hub database” (the world’s largest database of corporate sustainability ratings principally adhering to GRI guidelines), while the financial data were taken from companies’ websites, annual reports, financial statements and “moneycontrol.com”. Two sets of secondary data (independent variables and control variables) were used in that study. The independent variables used to measure corporate profitability were ROA, Return of Equity (ROE), Return on Sales (ROS), and Return on capital employed (ROCE). Control variables were firm size (SIZE), environment (ENV), community (COM) and employee-related sustainability performance of companies (EMP). The dependent variable was CG. A series of statistical tools, e.g., descriptive statistics, multiple regression, correlation and test of significance (t-test and F-test) were applied to analyze the data. The results of that study found that governance rating had a positive but insignificant impact on corporate profitability of the firm and that corporate profitability also had an insignificant positive impact on governance rating of firm. Thus, the researcher suggested that Indian companies improve the way in which their companies are governed by taking care of the interest of various stakeholder groups and by emphasizing qualified and independent directors, business ethics, transparency and fairness in corporate disclosures, protection mechanisms and accountability.

2.5.5 Yu & Chen (2013) analyzed the interaction effects between CG mechanisms which were accounting measures (Book Value of Equity [BVE], Net Income [NI] and Market Value of Equity [MVE]) of 423 manufacturing companies (1773 samples) of the stock market in Shanghai and Shenzhen (China A share market) from 2007 to 2011 in three pathways of market value transaction (performance pathway, direct pathway and capital maintenance pathway). In addition to descriptive statistical analysis, the method of analysis was a Partial Least Square (PLS) regression model, which was used to analyze the interaction effects. The results of That study showed that most corporate mechanisms which had a significant relationship with BVE and NI were significantly related with MVE simultaneously, validating the transmission pathway hypothesis. That is, CG did transmit market value through the three pathways. As for the corporate mechanisms whose significance directions were different among NI, BVE and MVE, that could be explained from the perspective of basic features of variances themselves, the efficiency of transmission pathway and influence direction.

2.5.6 AL-Haddad, Alzurqan & Al_Sufy (2011) explored the relationship between the independent variables (factors measuring profitability) with CG (mediator variables) and dependent variables (corporate performance) in order to find whether the factors (variables) (Earning per Share [EPS], Size [S], Liquidity [LIQ], Business Risk [BR], Dividends per Share [DPS], Return on Assets [ROA], and Leverage [LV]) taken under consideration in that study could determine the firms' performance indicators through CG for 44 (out of 96) Jordanian industrial companies listed on the Amman Stock Exchange (ASE) from 2000-2007. The data for that study were collected from companies' guides and financial reports. In addition to descriptive statistical analysis, the method of analysis was that of regression analysis, which was used to determine the overall efficiency scores of the sampled companies. Overall, the study provided evidence that CG of the Jordanian industrial firms did matter and was positively related to firm value. That is, there was a positive direct relationship between CG and corporate performance (measured by Price to Earnings per share, Market Price to Book Value ratios and the market price). In detail, there was a positive direct relationship between each of these variables/factors: profitability (measured either by Earning per Share (EPS) or Return on assets (ROA), liquidity, Dividend per share (DPS), firm size

(measured by Log TA). The researcher proposed recommendations that Jordanian industrial firms take into consideration the main factors (EPS, liquidity, size, dividend per share that was found significant in determining CG and corporate performance), that the firms provide publication of manual rules of CG and contribute to the public in order to benefit from the application of rules by the management and employees and the various activities of the company.

2.5.7 Abulgasem, Elhaj, Muhamed & Ramli (2015) provided empirical findings whether or not CG, financial ratios, and sukuk structure had a significant influence on firms' sukuk ratings (credit ratings or bond ratings of firms, determined by the assessment of the probability distribution of future cash flows to bondholders of the rating agencies, which in turn, depends on the future cash flows to the firms), based on a sample of 25 Malaysian publicly-listed traded firms in the Malaysian Stock Exchange during 2008 and 2012. The data for that study was drawn from annually returns of all sukuk issuing firms listed in Bursa Malaysian after extracting from the security commission database. The study used ordered logit regression model as a statistic method in addition to descriptive statistics (percentage, median, means, standard deviation, minimum and maximum). The study used Spearman rank-order correlations to present relationships among variables. There were three groups of independent variables affecting sukuk ratings (bond rating) and one dependent variable. The three groups of independent variables were CG (board size, CEO DUALIT [CEOPOWER] and board independent), financial ratios (financial leverage, profitability, sukuk issue size) and Sukuk structure (Ijarah [assets], Musharakah [project], Murabahah [debts], Sukuk istithmar [investment] and Al-Bai' Bithaman Ajil). Overall, that study found that CG, financial ratios (measures), and sukuk structure of firms contributed positively to sukuk ratings study, suggesting that this was an important factor that helped broaden knowledge of sukuk rating in Islamic financial literature. In detail, CG was positively related to sukuk rating. That is, chairman duality, board size and board independence were positively related to of CG in relation to sukuk ratings. Sukuk ratings were negatively related to financial leveraging and positively related to profitability and issue size. Financial leverage was negatively related to financial measures and sukuk ratings. The sukuk ijarah (assets) was positively related to sukuk structure and sukuk rating.

2.5.8 Gupta & Newalkar (2015) analyzed the impact of CG in the determination of firm performance taken from Audit Financial Statement of 30 sampled Indian-listed companies on the Indian National Stock Exchange over a period of five years from FY 2010-11 to FY 2014-15 through the link between four CG mechanisms (board size, chief executive status, annual general meeting and audit committee, which were secondary data called governance ratings) and three firm performance actions (Return on Equity [ROE], Return on Asset [ROA] and Market Book Value [M/B], which were secondary data called corporate profitability variables). Pearson Co-Relation and Multiple Regression analysis were used to check the importance and dependency of the study variables. Overall, the results of that study found that CG had a positive significant impact on Return on Equity (ROE). In detail, the result of That study found that ROE was positively co-related with CEO status, and Market Book Value was positively and significantly co-related with CEO status and Audit committee. In addition, governance rating of company had a significant impact on ROE, but not on other profitability measures, i.e. ROA and Market Book Value.

2.5.9 Rostami, Rostami & Kohansal (2016) stated that studies had shown that the results of research on CG in different countries were different and that, in Iran, the issue of CG with its current concept had been proposed in recent years. That study was conducted to investigate the effect of CG components (ownership concentration, institutional ownership, Board independence, Board size, CEO duality and CEO tenure as independent variables) on firm financial performance evaluation criteria (return on assets and stock return) of companies listed on Tehran Stock Exchange during a 7-year period from 2006-2012). The sampled companies were not one of the investment companies, financial intermediaries, banks, insurance companies, and holding and leasing companies, and they should have institutional investors. In order to test the hypothesis, 469 firm-year observations (67 companies per year and a total of 469 year-company) were selected using systematic sampling for a period of seven years. Multivariate regression model was used to evaluate each hypothesis. The control variables of the study were MVE and the ratio of book value to MVE. The research findings, which were based on estimated generalized least squares method, indicated that there was a significant positive relationship between ownership concentration,

Board independence, CEO duality and CEO tenure with return on assets, but there was a significant negative relationship between institutional ownership and board size and return on assets. In addition, there was a significant positive relationship between institutional ownership, Board independence, CEO duality and CEO tenure with stock return, while there was a significant negative relationship between ownership concentration and Board size with stock return. That study suggested measures to achieve good governance through the Tehran stock exchange.

2.5.10 Thomsen (2005) tested the impact of CG structure on corporate values of 72 of the largest Danish firms responding to questionnaire on corporate values. Government-owned companies and subsidiaries of foreign multinationals were not included in that study. The data set from the questionnaire on corporate values (sent to CEOs) was combined with accounting figures and other company data. That study used descriptive statistical analysis, and it employed factor analysis and three-stage least squares to identify and explain variance in corporate values. The results of the study found that ownership structure, board and stakeholder structure (bargaining power) influenced corporate values, and that there was no significant relationships between value and performance (profitability--ROA) when value determinants were taken into account. The results empirically implied that corporate values should be grounded in the company's ownership, board and stakeholder structure, meaning real changes in corporate values may require real changes in governance structure. The value of that study was to test a new approach to the study of corporate values which connected values to governance. A key priority for future research in this area is clearly to examine the robustness of corporate value measures. For example, there is a need to check the validity of the values that the CEOs state on behalf of their corporation.

2.5.11 Valenti, Luce & Mayfield (2011) conducted a survey to investigate the effects of prior firm performance on both board composition and governance structure of 90 out of 120 companies listed on National Association of Securities Dealers Automated Quotations (NASDAQ). That study used descriptive statistics and correlations, and it employed both general linear regression and logic regression analyses to test the hypotheses. There were various types of variables, namely predicting variables measured by accounting measures (return on assets [ROE] and

return on equity [ROE) and by market measures (return to stakeholders and P/E), moderating variables (CEO power and percentage of outsiders on the board), control variables (institutional ownership, firm size and average performance for the period between 2003 and 2005) and one dependent variable (CG). The results of that study found that prior negative change in firm performance was significantly related to a decrease in the overall number of directors and a decrease in the number of outside directors, practically implying that directors possibly wanted to consider the implications for the governance practices, especially whether smaller boards with fewer outsiders were appropriate following periods of performance decline. That study contributed to the extant literature in that it suggested that the results of large-corporation studies possibly apply in the same way to small and mid-size firms.

2.5.12 Cho & Pucik (2005) conducted a survey to examine the relationship between innovativeness, quality, growth, profitability, and market value of more than 40 industries of the Fortune 1000 companies. That study used data obtained from Fortune Corporate Reputation Survey (FRS) and the COMPULSTAT database. Given a documented relationship between innovativeness and growth and between quality and profitability, the researcher proposed the hypothesized mediation model: Innovativeness-Quality-Performance (IPS) model, which were examined by Structural equation modeling (SEM). Independent variables were innovativeness, growth (financial performance) and profitability (financial performance), and one dependent variable was market value (financial performance). The results of that study found (1) that innovative mediated the relationship between quality and growth, (2) that quality mediated the relationship between innovativeness and profitability, (3) that both innovativeness and quality had mediation effects on market value, and (4) that both growth and profitability had mediation effects on market value. The results of that study supported the resource-based view of the firm, as they empirically demonstrated how a firm's intangible resources, in this case its capability to manage both innovativeness and product/service quality, could be the source of value. The researcher believed that that study possibly provided new insights on how to evaluate firm performance in terms of firm's capability to create new knowledge and utilize it and that it also showed a possible path to superior market performance and contributed to the development of

more robust theories putting a firm's capability to deal with innovativeness and product/service quality at the center of its value creation processes.

2.5.13 Eldomiaty (2002) examined the dynamic relationships between changes in firm's capital structure (measured by the Debt ratio: Total debt/Total Assets) and their effects on firm's market value (MV), which is defined as the number of shares outstanding times the current closing price per share on the date of financial statement preparation, under the prevalence of three different levels of systematic risk (high, medium, and low), based on Capital Structure, Market Value and Financial Agency Signaling Theory. That study used descriptive statistical analysis and properties of partial adjustment autoregressive models, where the desired (or target) level of market value is adjusted according to both of the changes in actual market values and changes in firm's capital structure. The sample of that study consisted of 99 non-industrial firms with the high market value listed on Egypt stock market during the 8-year period from 1994-2001. The results of that study indicated that under the levels of systematic risks, firms were concerned with adjusting market value to a target level; and that a positive relationship existed between long, rather than short, term debt and market value, which supported the relevance theory of capital structure, thus indicating financial agency-signaling effects. The researcher concluded that the higher the degree of systematic risk, the more firms' managers were concerned with certain determinants (target debt ratio, bankruptcy risk, degree of assets liquidity and interest rates) and that had a significant signaling effect on market value (MV).

2.5.14 Luvembe, Njangiru & Mungami (2014) conducted a census survey of all 10 listed banks in Kenya as at December 2010, based on both secondary data (obtained from Nairobi Security Exchange from the period between 2006 and 2010) and primary data (collected from senior financial officials through an interview schedule) under Dividend Irrelevance Theory, Agency Costs Theory of Dividend Policy, The Information Content of Dividends (Signaling) Theory, High Dividends Increase Stock Value (Bird-In-The-Hand Theory), Low Dividends Increase Stock Value (Tax-Effect Theory), and Clientele Effects of Dividends Theory. That study used both descriptive and inferential statistics (regression analysis) with the aid of SPSS software Version 20 as well as content analysis for qualitative analysis. Overall, that study found a

significant and positive relationship between market value and capital structure, corporate earnings, dividend payout ratio and capital market investment in the most of the years. In detail, That study found that there was a relationship between capital structure and market value, implying that ownership concentration had an impact on dividend payments; that corporate earnings had a positive effect on market value, implying that earnings determined availability of profits to pay dividends; and that there was positive and significant relationship between dividend payout ratio and market value, implying that dividend payout ratio affected firm market value.

2.5.15 Ting (2012) conducted a study to indicate what the primary goal for a business was in making a financial plan for investment, using a mathematic model based on optimal control theory and derived from comparison study about maximization. The results of that study found that investment plan pursued maximum return rate on capital and maximum return rate on equity simultaneously. Maximum return rate on capital was the primary goal for firms because maximum return rate on capital guaranteed efficiency. Thus, maximum profit, maximum market value of the firm, maximum value of equity and maximum return rate on equity were inappropriate to be the primary goal. Because gross profit was dependent on capital structure, capital structure just distributed return on capital into equity and debt (i.e., maximum return rate on equity determined capital structure). So the maximum return rate on equity was the secondary goal that the firm pursued. That is, that study stated clearly about how to make a financial plan or investment plan: firstly, to determine the optimal amount of capital (i.e., optimal size of the firm) to make maximum return rate on capital assure maximum gross profit and maximum market value of the firm, resulting in efficiency; secondly, to use maximum return rate of equity to determine the maximum ratio of debt to equity. The notices given from that study were that maximum rate on capital was prior to maximum return rate on equity and that return rate on capital was independent of capital structure because capital structure could not affect gross profit.

2.5.16 Livnat and Segal (2016) examined whether stock market participants seemed to incorporate into the price per share the potential dilution due to accounting Common Stock Equivalents (CSE). Most stock market participants calculate the MVE through a multiplication of the price per share by the number of outstanding shares if the

market price incorporates all CSE, although, in practice, market professionals ignore accounting CSE in calculations of the MVE. That is, the researcher examined how close were the accounting CSE to those inferred by market participants in their determination of market price because information about CSE can be found by examining all the financial instruments of a firm that can potentially be converted into common stock; but one easily accessible source for the CSE is the accounting calculation of Earnings Per Share (EPS), where the account profession follows a rigid set of rules to calculate the potential dilution in the number of outstanding shares due to CSE. Using Ohlson's (1995) valuation model, which was based on the assumption that the share price equaled the present value of future dividends, to estimate the intrinsic market value of all 96 sampled industrial firms attracted from the COMPUSTAT Annual Industrial and Research Files of the years 1986-1996, That study indicated that the market and the accounting CSE converged for firms with high levels of potential dilution due to CSE, but not for low levels of potential dilution (below 5-6%). Thus, the disclosure of Basic EPS (with the assumption of zero CSE) and Diluted EPS (with the assumption of all CES) according to the FASB (the Financial Accounting Standard Board) standard on EPS (Earning per Share) (FASB 1979) enabled market users to select the number of shares they deem most appropriate for the firm's level of potential dilution.

2.5.17 Okiro, Aduda and Omoro (2015) carried out a census of 56 out of 98 listed firms in Kenya, Tanzania, Uganda, Rwanda and Burundi (the East African Securities Exchange [EAC]: Nairobi Securities Exchange, Uganda Securities Exchange, Dar es Salaam Stock Exchange and Rawanda Stock Exchange) between 2009 and 2013 to examine the effect of capital structure on the relationship between CG and firm performance, based on both Agency Theory and Free Cash Flow Theory. The study only considered the firms which had been listed and had full financial reports during the time period. A standardized structured CG index (CGI) was used and the survey questions were constructed using information obtained from the best code of practice of CG from the regulatory authorities in the EAC exchanges. The researcher used descriptive statistics (means, standard deviation, skewness, kurtosis, maximum and minimum), and it employed multiple regression analyses to assess the strength of relationship between dependent variables (ROA) independent variable (determinants of

CG) and intervening (leverage) variable. The results of that study found that there was a significant positive relationship between CG and firm performance and that there was a positive significant intervening effect of capital structure (leverage) on the relationship between CG and firm performance. That is, from a theoretical perspective, the findings of that study not only explained how CG affected firm performance, but also uncovered the importance of capital structure (leverage) in CG system.

2.5.18 Jaradat (2015) tested whether CG variables like Board size, Board gender, outsider director and CEO duality (as independent variables) affected the capital structure (as dependent variable measured by the leverage) in 129 (out of 645) Jordanian listed firms except the financial sector during the period 2009-2013, based on Agency Theory. Yearly annual reports downloaded from Amman stock exchange of the sampled firms included the financial and nonfinancial reports like: income statement, balance sheet, cash flow, statement of changes in owners' equity, auditors' report and a CG report. That study used descriptive statistical analysis and multiple regression analysis (Ordinary Least Square, OLS regression). Control variables possibly affecting capital structure (dependent variable) consisted of firm size, profitability, tangibility and returns on assets. In addition, the book values were used to measure all study variables because the data collected from the firm's annual reports. The result of that study approved that board size, board diversity and outside directors were positively related to the leverage, while CEO duality had no significant relationship with leverage. The control variables like Managerial ownership, Profitability and return on Assets were negatively and significantly related to leverage, while firm size was positively related to the leverage.

2.5.19 Kajanathan (2012) investigated whether there was any relationship between some specific features of CG and capital structure of 28 listed manufacturing firms in Colombo stock exchange in Sri Lanka during the period 2009 until 2011, collecting data from websites, annual reports and publication of the stock exchange. The independent variables (CG variables) included board structure components, namely board size (executive directors), board meeting, board committee, proportion of independent NED (board composition) and leadership style (if the position of chairman and CEO were held by single person or two separate persons). The dependent variable was decided to be debt ratio (leverage ratio indicating the efficiency of financial

decisions and considered as proxy for capital structure in that study) (as a criterion for capital structure). Various statistics were used in that study: cross-sectional analysis, descriptive statistics and regression analysis. The results of that study found that CG practices had 34% impact on capital structure and that among the CG variables board committee had a significant effect on firms' capital structure. The researcher recommended that further studies be able to consider other CG variables and be conducted in both mature and emerging markets to be helpful in terms of international comparability.

2.5.20 Kuo, Wang & Liu (2012) examined the effects of CG on capital structure of 145 small and medium-sized enterprises (SMEs) listed on Taiwan Stock Exchange in the manufacturing, construction, mining, or extractive industries and with a staff of less than 200 people over the period 2000-2007. Sampled data were retrieved from the Taiwan Economic Journal Database (TEJ). The empirical variables of that study were internal CG variables as independent variables or testing variables, board capital structures variables as dependent variables and the firm characteristic variables as control variables. As for the internal CG variables, the researcher focused on divergence ratio (the degree of divergence between earning, shareholdings [mostly held by families in Taiwan] and director seats [mostly taken by families in Taiwan]), ownership structure, the board of director structure, the pledged shares ratio of directors or supervisors. In terms of capital structure variables, the researcher included debt ratio, long-term and short-term debt ratio. To control the influences of the firm's profitability, the researcher included size and industry. That study used descriptive statistics analysis and panel data regression analysis. The results of that study found (1) that when there was a high divergence between shareholding and director seats, conventional industries preferred to use long-term debt financing, while high-tech industries preferred the opposite; (2) that for large firms, block-holders and independent directors preferred lower long-term debt financing, but family shareholders and managerial directors preferred lower short-term debt financing; and (3) that family shareholding ratio and family directors were the two important factors affecting the SMEs' debt ratio; that is, the higher the family shareholding ratio was, the more short-term debt financing would be. (However, family director could reduce the incidence of using short-term debt to

support long-term financing needs.) Further research could include other director characteristic variables, such as education and experience of directors and their social and economic status to test their influences on the firm capital structure.

2.5.21 Saad (2010) investigated the compliance level among publicly-listed companies with the implementation of CG code of best practices and the association to firm's capital structure in Malaysia, based on the survey on the analysis of companies' annual report and Thompson DataStream for a sample of 126 (out of 556) companies in four industries (consumer products, industrial products, trading/services, and plantations) public listed in the Main Board of the Bursa Malaysia (formerly known as Kuala Lumpur Stock Exchange) over the 9-year period from 1998 to 2006. Financial institutions were excluded because they were governed by special rules. There were two main variables in That study: independent variables or explanatory variables comprised Dual Leadership, Board Size and Board Meeting; and dependent variable (Capital Structure), including the proxies that represented the dependent variables, were Debt Ratio (DR), Debt to equity (D/E) and Interest Coverage (IC). That study employed multiple regression analyses on board director's facts such as dual leadership, board size and board meeting. The preliminary results of that study revealed that most of the companies complied well with the code, that there was a significant association to the firm's capital structure and that several companies did not disclose their number of directors and board meeting in their annual as reports to comply with the Malaysian Code on CG (MCGG). That study highly recommended for companies to comply with the code in order to give investor confidence in the company.

2.5.22 Ajanthan (2013) investigated whether there was any relationship among some specific characters of CG, capital structure and profitability of 18 hotels and restaurant companies listed in Colombo Stock Exchange (CSE) during the 2007-2012, based on secondary data extracted from the comprehensive income statements and financial position of the sampled companies in addition to scholarly articles from academic journals and relevant textbooks, and using correlation and multiple regression analysis with SPSS 16.0 Version. The Board Composition, (BC), Board Size (BS) and CEO duality (CEOD) were considered as independent variables (CG), whereas Capital Structure Ratios (Debt Ratio [DR], Debt-to-Equity Ratio [(DER]) and Profitability

ratios (Returns on Equity [ROE] and Returns on Assets [ROA]) as dependent variables. The results of that study indicated that there was a mix relationship (positive and negative) among CG practices, firm profitability and capital structure. In detail, the results indicated a positive relationship between BS, BC, CEOD, ROE, ROA and DER, whereas a negative relationship between BS, BID and DR. In addition, CEOD had a positive relationship with DR, and none of variables had a significant relationship with capital structure and profitability.

2.5.23 Vakilifard, Gerayli, Yanesari & Ma'atoofi (2011) investigated whether there was a relationship between some specific features of Board of Managers (as one of the mechanisms of firm's CG and firm's capital structure) of 110 listed firms in Tehran Stock Exchange (TSE) during the period of 2005 until 2010, using descriptive statistical analysis and a linear-multiple regression analysis. Financial institutions, banking, finance and investment firms were eliminated from that study due to their accounting and reporting environment different from those in other industries. The independent variables of that study included board size, CEO duality and proportion of outside directors, whereas dependent variables were debt ratio (as a criterion for capital structure). The results of that study showed that there was a significantly relationship between board size and debt ratio, indicating that firms having smaller board size due to weaker CG had to use more amount of debt to reduce agency problems; on the contrary, firms in which the duties of chairman of the board and CEO were very well separated from each other because of having a higher level of CG and less amount of agency problems, the amount of using debt decreased. However, no significant relationship was found between proportion of outside directors and capital structure. Future research should include the examination of the association that managerial ownership may have on capital structure decisions.

2.5.24 Hasan & Butt (2009) explored the relationship between CG and capital structure of 59 (out of 177) randomly selected Pakistani non-financial companies listed on Karachi Stock Exchange for the period 7/2002 to 6/2005 which started just after the promulgation of Code of CG in Pakistan, using multivariate regression analysis under fixed effect model approach. Independent variables used as measures of CG were board size, board composition, CEO/Chair duality, institutional shareholding and managerial

shareholding. Similarly, influence of control variables (firm size and profitability) on firms' financing mechanism was also investigated. Capital structure was the dependent variable and it is quantified by using debt to equity ratio. Debt to equity ratio can be calculated either by using market value or by using book value. The use of book value measure of leverage was preferred in that study. The results of that study revealed that board size and managerial shareholding was significantly negatively correlated with debt to equity ratio; however, corporate's financial behavior was not found significantly influenced by CEO/Chair duality and the presence of NED on the board, possibly implying that Pakistani NEDs were not independent in true sense. Nevertheless, correlation analysis suggested that CEO/Chair duality and manager ownership were negatively correlated with profitability. On the other hand, managerial ownership had a negative relationship with debt to equity ratio, but institutional ownership had a positive relationship with capital structure. As for control variables, firm size and profitability (return on assets) had a significant effect on capital structure, thereby suggesting that CG variables like size and ownership structure and managerial shareholding play important role in determination of financial mix of the firms.

2.5.25 Waworunt, Tjahjana * Rusmanto (2014) examined the effect of CG on capital structure decision, based on annual reports of public listed companies in the period 2007-2011, using multiple regression analysis and multicollinearity test. That study used Kompas 100 index as per August 2012-January 2013 as the base of the sampled firms with exclusion of financial firms, banks and insurance companies. To describe CG, the proxies employed were the existence of independent commissioner (BOC), audit committee possessing financial knowledge, audit committee's frequency of meeting, big 4 auditors, ownership concentration, managerial ownership, and CEO tenure; whereas, the proxy for capital structure was debt ratio (DEBT). Control variables used in That study were firm size (SIZE) and profitability (return on equity [ROE]). Overall, the results of that study found that some variables of CG did have relationship with capital structure in Indonesian public listed company. In detail, the presence of an independent commissioner in BOC and the meeting frequency of audit committee were significantly negatively associated with debt ratio; however, the presence of financial experts in audit committee was significantly positively associated

with debt ratio. Other measures of CG were not significant in their influence on debt ratio. Interestingly, those significant CG variables were all parts of BOC which was considered as the most important element of CG, thus indicating BOC affected capital structure in the sampled listed companies in Indonesia.

2.5.26 Zheka (n.d.) investigated the impact of CG (shareholder rights, transparency and supervisory board arrangements [structure and procedure]) on the pace of capital structure (level of leverage [liquidity]) adjustment (especially the required leverage adjustment) of all open joint-stock companies in Ukraine for years 2000-2007. Other CG variables used in that study were firm size, growth opportunities, tangibility, profitability and foreign ownership/firm. The sampled companies' annual financial statement came from SMA database (www.sma.us). That study used descriptive statistical analysis and a dynamic capital structure model. The results of That study were that typical firm in Ukraine completed the required leverage adjustment in about two years, since the results showed that significantly improved liquidity during 2000-2007 stimulated firms in Ukraine to quickly adjust their capital structure. That is, it was found that there was statistically and economically significant relationship between CG and the speed of adjustment of capital structure. In addition, the coefficients for shareholder rights, supervisory board structure and supervisory board procedure were found to be significant; however, transparency variable was not found to have significant impact on speed of adjustment. Other control variables for the speed of adjustment determinants, such as control for asymmetry of responses did not have statistically significant coefficient, implying that speed at which firms adjusted their leverage did not depend upon whether they adjusted it upward or downward. With respect to long-term effects, growth prospects variable was found to have significant and positive effect on target leverage in regression with shareholder right variable, while the coefficient of tangibility variable was found to be significant in regression with board structure index. In both cases just mentioned, the direction of effect was positive, implying that both better growth prospects and more tangibility implied larger target leverage. Finally, other variables such as firm's size, profitability and foreign ownership were not found to have significant relationship to long-run target leverage level. In sum, that study found that firms practicing better CG benefited from the improved liquidity in 2000-2007 the most,

as they adjusted their financial structures at higher rates. The coefficients for shareholder rights, supervisory board structure and supervisory board procedure were found to be significant; on the contrary, the transparency variable was not found to have significant impact on speed adjustment.

2.5.27 Makki & Lodhi (2013) revealed and determined the existence of critical structural relationship between CG measures and financial performance, based on annual reports of all Karachi Stock Exchange listed companies. The researcher developed a model to link CG and financial performance and then to verify it through structural equation modeling based on partial least square and used with PLS Graph software. That study concluded that there was no direct impact of company's CG measures on financial performance. In sum, Good CG had mixed impact on financial performance in Pakistan over the period 2005-2209. That is, CG measures did not improve financial performance consistently. Rather, it proposed that corporate governors could enhance financial performance significantly through exploiting intangible resources.

2.5.28 Maher % Andersson (1999) addressed CG and its effect on corporate performance and economic performance by presenting some of the underlying factors that promoted efficient CG, examining some of the strengths, weaknesses and economic implications associated with various CG systems, and providing a survey of empirical evidence on the link between CG, firm performance and economic growth. So That study could identify areas in which a consensus view emerging in the literature and areas in which further research should be needed. The researcher conducted a survey of empirical evidence on the research topic, based on previous work undertaken by DSTI and lessons gleaned in the development of OECD principles for CG, underlying factors promoting efficient CG, strengths and weaknesses and economic implication concerning various CG systems, and identifying areas in which a consensus view having emerged in the literature and areas in which further research still needed. That study analyzed empirical data by using descriptive statistical analysis, Tobin's q (for measuring performance) and considering backgrounds or approaches often employed as analytical framework of shareholder and stakeholder models of governance, namely the shareholder model, the stakeholder model, and the interaction of CG with the

institutional and economic framework. That study found that one of the most striking differences between countries' CG systems was the difference in the ownership and control of firms that existed across countries. That is, systems of CG could be distinguished according to the degree of ownership and control and the identity of controlling shareholders, while some systems were characterized by wide dispersed ownership (outsider systems [notably the US and UK] in which the basic conflict of interests was between strong managers and widely-dispersed weak shareholders). Other systems tended to be characterized by concentrated ownership or control (insider systems [notably Germany and Japan] in which the basic conflict of interests was between controlling shareholders [or block-holders] and weak minority shareholders.) The other findings of That study were that there was no single model of good CG and that both insider and outsider systems had their strengths, weakness, and different economic implications, that the effectiveness of different CG systems was influenced by differences in countries' legal and regulatory frameworks and historical and cultural factors in addition to the structure of product and factor markets. In addition, CG mechanisms and their effectiveness also varied very depending on industry sectors and types of product activity, such as monitoring mechanisms possibly required for improving firm performance. It was found difficult to identify what constituted good CG practice and under what circumstances, so the challenge was not only to identify the strengths and weaknesses in each individual system or groups of systems, but also to identify what were the underlying conditions upon which these strengths and weaknesses depended. The benefits of concentrated ownership were that it brought more effective monitoring of management and helped overcome the agency problems; however, the costs associated with concentrated ownership were low liquidity and reduced possibilities for risk diversification. Dispersed ownership brought higher liquidity, which could be vital for the development of innovative activity. On the other hand, it did not encourage commitment and long-term relationships probably required for certain types of investments; for example, corporations owned and controlled by each other could reduce transaction costs and incentives to engage in opportunistic behavior, making stakeholders have a greater incentive to invest in relationship specific management. On the other hand, this could reduce the level of product market

competition. Since equity markets were important for R&D and innovative activity, entrepreneurship, and the development of an active SME sector, CG had underlying impact on economic growth and development, enhancing policy makers to develop a good CG framework which could secure the benefits associated with controlling shareholders acting as direct monitors, while at the same time ensuring that they did not impinge upon the development of equity markets by expropriating excessive rents.

2.5.29 Peter Hardi & Krisztina Buti (2011) conducted a research aiming at focusing on how to help to discover and explain the similarities and differences of variables and impacts of CG practice in Central-Eastern Europe (EEC). That study was an extensive review of the secondary literature on CG issues in CEE published in referred journals mainly, book chapters, conference papers, reports and unpublished materials. The researcher intended to provide an opportunity to map out new terrains or to find critiques of the direction of a research field. Also, That study intended to discuss the key topics and variables according to the requirements of a holistic approach to CG comprising geographic variety, systematic conditions (legal and economic systems, compliance and enforcement mechanisms) and social and culture (value) pluralism. Overall, that study found that CG practices offered valuable insights to the mechanisms of institutional change in the CEE region during and after the transition that defined the formal (legal) and informal (social-norms-based) rules and the incentive structures of societies and economies. In detail, it was found that there had been much work on a significant set of CG variables both in the domestic context (privatization and the legal environment primarily, institutions and market conditions secondarily) and international context (impact of foreign direct environment, European Union directives and expectations, globalization and global institutions like OECD and the WB), but this body of research had not been discussed comparatively within the context of a holistic model. However, CG practice in CEE region demonstrated much more diversity than expected in generally similar transaction economies and that the analysis of international governance and market factors (as external factors) and national legislation, institutional arrangements, social structure factors (as internal factors). These external and internal factors significantly influenced the emergence and practice of CG, possibly adding important insights to the understanding of the variables of CG

on the macro level. That study also indicated that there was no systematic review of the micro-level factors and how they interacted and/or depended on the macro-level factors.

2.5.30 Aytekin, Miles and Esen (2016) did a comparative study on CG at firm level. Its main objective was mainly to analyze the development of CG performance in Turkey particularly after 2006 in comparison with that of Canada, a country reputed to have one of the best CG systems in the world. Its comparison process was to identify current strengths and weaknesses of the Turkish system to determine whether Turkey was moving forward faster in terms of CG than Canada. Based on Agency Theory, in which CG is grounded, and best code of practice of Turkey and Canada, That study found many factors affecting CG, such as the board, managers, shareholders, the value of the organization, corporate growth, control mechanism, financial performance, firm size, profitability, efficiency, legal system (including best code of practice), human resource management practice, national culture, multinationality, macroeconomic outlook, political and economic conditions, proprietary structure, etc. According to the literature review, that study indicated various factors affecting CG, such as the board, development and its function. That study showed that Turkey had improved its CG continuously with extremely quick development of many respects of modern CG. On the other hand, it was found that development of effective and efficient boards represented a variable slowing down this development progress. Other significant findings of that study were that developing countries could close the gap they had in terms of CG with developed countries as claimed and that although there was no change in Turkey positive trend in CG development during the 2008-2009 financial crisis, Canada's CG practice and reputation were negatively affected in a notable way during this period. That study concluded that researchers and practitioners should give special attention to board development and its function in order to develop CG in Turkey and also in Canada because this factor was found to be weak compared to other factors in Turkey and Canada.

2.5.31 Li, Xu, Niu and Qiu (2011) surveyed recent literature in the field of CG, intending to find out the development trends and extracted the main line of recent literature on and practices of Chinese CG. Also, that study intended to provide future research directions. That study provided international studies on CG which comprised

internal governance (ownership structure and shareholder governance, board governance and managerial governance) and external governance (investor protection and its measurements, political connection, stakeholder governance and market of control/product and media) and other fruitful work (dynamic optimization and adjustment of CG evaluation, literature on transition of emerging market and financial institutions governance and governance risk). As for CG in China (evidence and overview), that study provided literature review on CG in China (internal and external governance, and China's mode: from administrative governance to economic governance). Under the context of reform, the researcher of that study proposed that administrative governance was the induction and core of administrative operational objectives, executive appointments and dismissal and resource allocation. That is, in planning economy, the government played the most critical roles in business activities. Although recent reform in the enterprise has enhanced autonomous ability of enterprises and role of the market, the signs of administrative behaviors have still existed and this transition process would continue over a period of time shaping the CG practices in China. During this process, some scientific propositions including the characteristics, the path, the driven factors and economic performance of this transaction as well as the framework for studies on this transition must be defined and analyzed. As for framework for analyzing China's CG transition, the researcher proposed that administrative governance comprised ownership structure (operational goals--whether enterprises assumed other goals), administrative appointment (the appointment of key positions was intervened by government or not), and political condition (resource allocation by government--whether various channels were constructed for obtaining resources.). Then the researcher proposed the changes accordingly: from administrative operational goals to economic operational goals, from administrative appointment to scientific appointment, and from resource allocation by government to allocation by market. According to the researcher, in enhancing economic performance of transition competitiveness, governance efficiency, etc., there were driving factors of transition, legal, economic and social factors. For the approaches, the researcher considered rigorous deduction by disposing endogeneity and constructing a mathematical model, and they adopted approaches like experiment and case study to explain the realities of

CG in combination with theories and practices which means the literature emphasized more of combination of theories and practices. That study found that recent literature on CG provides some new insights into subtle characteristics of governance, governance effects of relational network, political connections, CG evaluation and financial institution governance. Also, it found that during the past decade, the literature on Chinese CG had referred to some new areas during the transition process from administrative governance to economic governance. In addition, that study tried to put forward an analytical framework and the proposition that Chinese CG was in the transition process from administrative governance to economic governance.

2.5.32 Obradovich and Gill (2013) examined the impact of CG and financial leverage on the value of 333 American firms listed on New York Stock Exchange (NYSE) for a period of 3 years from 2009-2011. A random sample of American firms was drawn from Mergent Online [<http://www.mergentonline.com/compsearch.asp>] out of approximately 800 financial reports between January 1, 2009 and December 31, 2011, and only 333 financial reports were usable, resulting in 999 total observations. There were three types of variable used in that study: independent variables (board size, CEO duality, audit committee and financial leverage), control variables (firm size, return on assets (ROA), insider holdings and industry dummy (Ind) and one dependent variable (firm value). Co-relational and non-experiment research design was used to conduct That study, employing descriptive statistics, Tobin's q, bivariate correlation analysis (Pearson correlation) and Ordinary Least Square (OLS) multiple regression analysis. Overall, the findings of That study showed that larger board size negatively impacted the value of American firms, while CEO duality, audit committee, financial leverage, firm size, return on assets and insider holdings positively impacted the value of American firms. Also, that study found that the impact of CG and financial leverage differed between manufacturing and service industries. In detail, that study found in the manufacturing industry that larger board size negatively impacted the value of American manufacturing firms that CEO duality, audit committee, financial leverage, firm size and insider holdings positively impacted the value of American manufacturing firms, and that return on assets had no impact on the value of American manufacturing firms. In the service industry, That study found that larger board size negatively

impacted the value of American service firms, that financial leverage and return on assets positively impacted the value of American service firms, and that CEO duality, audit committee, firm size and insider holdings had no impact on the value of American service firms. That study contributed to the literature on the relationships between CG, financial leverage and firm value in at least two ways. Firstly, it focused on American firms while very limited research had been conducted on such firms recently. Secondly, it validated the findings of previous authors by testing the relationships between CG, financial leverage and firm value of the sample firms. Thus, that study added substance to the existing theory developed by previous authors.

2.5.33 Akbari & Rahmani (2013) conducted a study aiming at examining the role of ownership structure and CG on capital structure in Iran, using sample of 78 (out of 90) non-financial firms (totally 390 observations) listed on the Tehran Stock Exchange during 2008-2012. The relevant data were collected from the annual general meeting, companies' financial statements and notes. Multivariate regression analysis in a panel data frame work was used in that study. Dependent variable of that study was capital structure (financial leverage, LVE). Measured of CG employed were board size (BZ), board composition (proportion of NED) (NED) and CEO/Chair duality (DUALITY). While, measures of the impact of shareholding (ownership structure) on financial decision were managerial shareholding (MANGSH) and institutional shareholding (INSTSH). Similarly, influence of controlled variables like firm size (SZ) and profitability (return on assets, ROA) on firms' financing mechanism was also investigated. The findings of that study suggested that board size was insignificantly related to capital structure. However, the presence of NED (NEDs) on the board had significantly negatively correlated with capital structure, possibly explained by really independent Iran NEDs. CEO/Chair duality and managerial shareholding was found significantly negatively correlated with profitability; on the other hand, managerial shareholding negatively correlated with debt to equity ratio, indicating that the concentration of ownership induced the managers to lower the gearing levels. Institutional ownership negatively correlated with capital structure, being consistent with CG philosophy. Traditional determinants like size and profitability had significantly effect on corporate financial decision. Profitability negatively correlated

with debt to equity ratio. Similarly, size positively correlated with debt to equity, showing the large firm could arrange debt. In sum, findings of that study indicated that CG variables like size and ownership structure had important role in determination of financial mix of the firms.

2.5.34 Ibrahim and Salihu (2015) examined the relationship between board size (as CG attribute) and market value of firm (price of shares used as proxy MVE) of all six firms in Nigerian chemical and paints industry listed on Nigerian Stock Exchange (NSE) during 2004-2012. Using correlation and multiple regression analysis as main statistical techniques as well as descriptive statistics, the results of that study showed that board size (BZ) had significant and negative impact on MVE, implying that increasing the number of directors on the board decreased the market value. Therefore, this suggested that the industry should maintain a small but effective board capable of exercising better control and monitoring of management activities.

2.5.35 Budiandriani and Mahfudnurnajamuddin (2014) conducted descriptive and explanatory research to analyze the influence of intellectual capital components which consisted of value added capital employed, value added human capital, value added structural capital of financial performance, value of the firm, and financial performance of all 464 public firms in 34 sectors listed on Indonesian Stock Exchange in 2012, using purposive sampling method to get representative sample in accordance with determined sample criteria. Secondary data obtained from documentation and financial report of each sample firm, Indonesian Capital Market Directory (ICMD), Capital Market Statistic, or the other written reports taken from literature-based study, references, documentation, and the other printed media and also firm rules relevant to That study. Three types of variables were independent variables (Value Added Capital Employed [VACE], Value Added Human Capital [VAHC] and Value Added Structural Capital [VASC]), intervening variables (financial performance [FP]—intervening variable EP also acting as an independent variable affecting the value of the firm [VM]), and one dependent variable (value of the firm [VF]). Using path analysis Model by means of program AMOS version 18 and under structural equation model, That study found that each of intellectual capital components consisting value added capital employed (VACE) and value added structural capital (VASC) gave positive and

significant effect on capital/financial performance and value of the firm, while value added human capital (VAHC) gave positive and insignificant effect on capital/financial performance as noted in Indonesia Stock Exchange. In addition, that study found that each of intellectual capital components consisting value added capital employed (VACE) and value added structural capital (VASC) directly or indirectly gave positive and significant effect on value of the firm, while value added human capital (VAHC) gave positive and insignificant effect on value of the firm as noted in Indonesia Stock Exchange. Then, financial performance gave positive and significant effect on value of the firm registered in Indonesian Stock Exchange, signaling to investor to invest in the firm to gain return. Thus, high and low rates of return to be received by investors reflect value of the firm. Based on these findings, the researcher proposed two suggestions for those companies listed on Indonesian Stock Exchange. One suggestion was that financial performance could be raised by investing in efficient intellectual capital because intellectual capital would have so strong competitiveness to encourage the company to keep moving in the future. The other suggestion was that as long as possible, there was a need to raise market reaction and credence of investors to the firm by keeping paying more attention to intangible value produced by non-physical asset utilization than to tangible value produced by physical asset utilization.

2.5.36 Eisenhardt (1999) determined the extent to which a company's employee management strategy (compensation packages, human relation strategy, and/or ability to challenge and motivate employees) impacts firm financial performance (enhancement of firm value) of 49 firm in food and personal household products, based on theoretical foundation derived from the stakeholder-agency concept of the firm. Secondary data were drawn from the Compustat tapes, the Department of Labor, the National Center for Employee Ownership, and the Council on Economic Priorities for the year 1991. That study employed three types of variables: Independent variables used as employee management strategies (presence of employee stock ownership plan [ESOP], presence of profit sharing plan [PRSH], benefits strategy of firm [BEN], degree of woman's advancement [WOM], degree of minority advancement [MIN], human relations strategy of firm [HR] and pension contribution as % of bet income [PENSN]), control variables (firm size [SIZE], book-to-market ratio [BOOK], growth rate of

earnings [GROW], excess cash measure for firm [XSCASH]) and dependent variable used as performance measures for evaluating employee strategies (excess value [a superior market firm performance measure sometimes used in place of or as a proxy for Tobin's q], cash flow performance measure and accounting ratio). In terms of That study's framework, management could implement strategies in order to provide various forms of employee compensation (ESOPs, profit sharing, benefits, etc.) in an effort to align the interests of employees (a major stakeholder) with those of management. Using multiple regression analysis to analyze the dataset, that study found that employee management strategy, in general, really impacted firm financial performance; however, the appropriate strategies, for the most part, seemed to be industry specific. In detail, employee stock ownership plans (ESOPs), in the aggregate, tended to have a significant, negative impact on shareholder wealth; In addition, the effect of RSOPs could vary by industry and by the proportion of employee stock ownership. (When the ownership percentage was in the 4-6% range, the financial performance of ESOPs approximated that of non-ESOP firms.). Profit sharing plans, collectively, seemed to have no significant effect on financial performance. The level of employee benefits, either in the aggregate or for specific industries, seemed to have no significant effect on shareholder wealth enhancement. Collectively, the human relations strategy had no direct impact on shareholder value. The degree of women's advancement, either in the aggregate or for specific industries, seemed to have no significant effect on wealth enhancement. In total, low and average degrees of minority advancement tended to have a significant, positive impact on shareholder value. Pension expense as a percentage of net income had no significant effect on financial performance in aggregate.

2.5.37 Hill & Jones (1992) proposed a paradigm, based on Agency Theory and stakeholder theory, to help to explain the following: (1) certain aspects of a firm's strategic behavior; (2) the structure of management-stakeholder contracts; (3) the form taken by the institutional structures monitoring and enforcing contracts between managers and other stakeholders; and (4) the evolutionary process shaping both management-stakeholder contracts and the institutional structures policing those contracts. In doing so, the researcher took Agency Theory and stakeholder theory as points of departure, then drew on literature of business and society, economics, finance,

and organizational theory. The researcher' intention was to join together notions of power and efficiency within the same framework so as to substantially increase the predictive power of the paradigm when compared to earlier "theories of the firm". Unlike earlier theories, the paradigm explicitly focused on the causes of conflict between manager and stakeholders following the emergence of disequilibrium conditions. In addition, stakeholder-Agency Theory also pointed the way towards a theory of the adjustment mechanisms that realigned management and stakeholder interests following disruption.

2.5.38 Heinfeldt &Curcio (1997) reviewed Agency Theory, its contributions to organization theory, and the extant empirical work. That study began with two extreme positions on Agency Theory, concluding that Agency Theory was an important, yet controversial, theory. Thus, that study intended to clarify some of the confusion surrounding Agency Theory and to lead organizational scholars to use Agency Theory in their study of the broad range of principal-agent issues facing firms. The researcher concluded that Agency Theory offered unique insight into information systems, outcome uncertainty, incentives, and risk and that Agency Theory was an empirically valid perspective, particularly when coupled with complementary perspectives. To incorporate an agency perspective in studies of the many problems having a cooperative structure was recommended by that study.

Table 2.1 Summary of Variable

Independent Variables	dependent Variables	Results		Authors	
		Significant positive	Significant negative		
Board Size (BZ)	-market value of equity		√	Ibrahim Hamidu, Salihu Aliyu Modibbo (2015)	
	-corporate financial performance(ROAandROE)	√		Mohamed Darweesh (2015)	
	-market value (Tobin's q)			√	Mohamed Darweesh (2015)
	-skukuk ratings		√	Mohamed Abulgasem A. Elhaj, Nurul Aini Muhamed and Nathasa Mazna Ramli (2015)	
	-capital structure (leverage)	√		Monther Soliman Jaradat (2015)	
	-capital structure (debt ratio [DR], debt to equity [D/E] and interest coverage [IC])	√		Noriza Mohd Saad (2010)	
	-capital structure (debt ratio)		√	Hamid Reza Vakilifard, Mahdi Safari Gerayli, Abolfazl Momeni Yanesari and Ali Reza Ma'atoofi (2011)	
	-capital structure (debt to equity ratio)		√	Arshad Hasan and Safdar Ali Butt (2009)	
	-capital structure (debt ratio)	√		Noriza Mohd Saad (2010)	
	- Market Book value (M/B)	√		Monika Gupta and Gaurav Nevalkan(2015)	
	-capital structure (financial leverage: LVE)			√	Mir Askari Akbari and Samira Rahmani (2013)
	-capital structure (debt ratio)		√	A.A.janthan (2013)	
	-capital structure (LVE)	√		Monther Soliman Jaradat (2015)	
	-capital structure (debt ratio)	√		Rajendran Kajanathan (2012)	
	- Market value of equity		√	Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016)	
Board Composition/ non-executive directors (NED)	-firm performance (ROA, Book value) (Intervening Variable)	√		Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015)	
	-capital structure (Firm Leverage)	√			
	-capital structure (debt ratio)	√		Rajendran Kajanathan (2012)	
	-capital structure (debt to equity ratio)	√		Arshad Hasan and Safdar Ali Butt (2009)	

Table 2.1 Summary of Variable (Cont.)

Independent Variables	dependent Variables	Results		Authors
		Significant positive	negative Insignificant	
Board Composition/ non-executive directors (NED)	- Financial Performance (ROI, ROE, NPAT)	√		Muhammad Abdul Majid Makki and Suleman Aziz Lodhi (2013)
	-capital structure (debt ratio)	√		A.Ajanthan (2013)
	-capital structure (financial leverage: LVE)		√	Mir Askari Akbari and Samira Rahmani (2013)
Chief executive officer/Chair duality (DUALITY)	- Market value of equiy		√	Mohamed Darweesh, (2015)
	-skukuk ratings		√	Mohamed Abulgasem A. Elhaj, Nurul Aini Muhamed and Nathasa Mazna Ramli (2015)
	-capital structure (leverage)		√	Monther Soliman Jaradat (2015)
	-Market book value	√		Monika Gupta and Gaurav Nevalkan(2015)
	-capital structure (debt ratio)		√	Hamid Reza Vakilifard, Mahdi Safari Gerayli, Abolfazl Momeni Yanesari and Ali Reza Ma'atoofi (2011)
	-capital structure (debt to equity ratio)		√	Arshad Hasan and Safdar Ali Butt (2009)
	-capital structure (financial leverage: LVE)		√	Mir Askari Akbari and Samira Rahmani (2013)
	-capital structure (debt ratio)	√		A.Ajanthan (2013)
	-capital structure (LVE)		√	Monther Soliman Jaradat (2015)
	- Market value of equiy	√		Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016)
Board Committees (BCMT)	-corporate financial performance (ROA and ROE)		√	Mohamed Darweesh, (2015)
	-market value (Tobin's q)		√	
	-capital structure (debt ratio)	√		Rajendran Kajanathan (2012)

Table 2.1 Summary of Variable (Cont.)

Independent Variables	dependent Variables	Results		Authors
		Significant positive	Significant negative	
Board Committees (BCMT)	-capital structure (debt ratio)		√	Stephanus Remond Waworuntu, Kezia Anastasia Nirmalasari Feyari Tjahjana and Toto Rusmanto (2014) Vitaliy Zheka (2008)
	-capital structure (level of leverage)	√		
Institutional Shareholding (INSTSH)	Market value of firms	√		Constantin Zaharia and Ioana Zaharia (2012)
	-capital structure (debt to equity ratio)	√		
	- Market value of equiy		√	Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016) Mir Askari Akbari and Samira Rahmani (2013)
	-capital structure (financial leverage: LVE)		√	
Shareholding of Board Members (MANGSH)	-corporate financial performance (ROA and ROE)			√ Mohamed Darweesh, 2015
	-market value (Tobin's q)			Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015)
	-firm performance (ROA, Book value)	√		
Board remuneration (BRMRT)	(Intervening Variable -capital structure (Firm Leverage))	√		Mir Askari Akbari and Samira Rahmani (2013)
	-capital structure (financial leverage: LVE)		√	
	-corporate financial performance (ROA and ROE)			Mohamed Darweesh, 2015
	-market value (Tobin's q)			Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015)
	-firm performance	√		
-capital structure (Firm Leverage)	√			

Table 2.1 summarizes the results of related research on the relationship between CG and firm performance efficiency and effectiveness. All of the various research instruments used in the related research represent financial leverage (LEV) and MVE Because the population of each related research varied according to the context of location, culture and environment, the researcher decided to choose variables and analysis based on the the literature review, including related research results.

CHAPTER 3

RESEARCH METHODOLOGY

This study was a Descriptive Correlational Research, using inferential statistics in the aspect of Structural Equation Model (SEM) to analyze several variables concurrently without having to analyze each of them separately as in regression analysis. SEM studies linear relationship structure by using the technique of causal relationships between direct and indirect influences (Marcoulider and Hershberges, 1977). To achieve its objective and to test its hypotheses, this study analyzed regression, the relationships of variables, covariance, the correlations between independent variables and both intervening variables and dependent variables, and the consistency of the research hypothesis model created using empirical data. The research methodology and design were determined in detail based on (1) population and sample (2) conceptual research framework (3) research instruments (4) data collection, and (5) data analysis methods.

3.1 Population and Sample

In this research, the researcher conducted a study of the population comprising companies listed on the Stock Exchange of Thailand (SET). Based on information publicly available from the database of the SET regarding its classification criteria of industry and business structures (last updated on February 19, 2016), the researcher found that 633 companies were classified into a total of eight industrial groups (as of October 16, 2016). The researcher studied the performance of the Thai companies listed in 2015 and the quarter 4/2015 (Siriyot Chutanonth and Paktida Kamthong, 2016) published in SET and found that the business situation of the Thai-listed companies in 2015 was affected by lower world oil prices, the slowdown of domestic economy, the weakening of the Thai baht, and the uncertainty of the political situation in the country. The results indicate that net profit of the year 2015 decreased by 11.2% compared to 2014; and that only the agricultural and food industry (Agro & Food Industry: AGRO), property & construction (PROP CON) and technology (TECH) had a growth rate of net profit as the top three respectively. Their growth rate of net profit increased by 5.7%

over 2014. For these reasons, the researcher used these top three industry to be sampled companies of this study (as shown in Table 3-1 below).

Table 3.1 The numbers of companies in industry and sector

Industry Name	Sector Name and Index	Total Companies
Agro & Food Industry [AGRO]	Agribusiness (AGRI)	12
	Food & Beverage (FOOD)	39
	Total	51
Property & Construction [PROP CON]	Construction Materials (CONMAT)	20
	Construction Services (CONS)	20
	Property Development (PROP)	53
	Total	93
Technology [TECH]	Electronic Components (ETRON)	11
	Information & Communication Technology (ICT)	28
	Total	39
Total		183

From Table 3-1, there were 183 companies under the study, include 51 companies in AGRO industry, 93 companies in PROP CON industry, 39 companies in TECH AGRI industry.

3.2 Conceptual Research Framework

The researcher built a conceptual research framework based on the literature review of corporate governance, financial leverage (LEV), market value of equity (MVE), Agency Theory and Stakeholder Theory, including related research. The variables influencing one another chosen from secondary data publicly disclosed on the database of the SET were consistent with those found in related research. Each type of variable is shown in Figure 3.1 below:

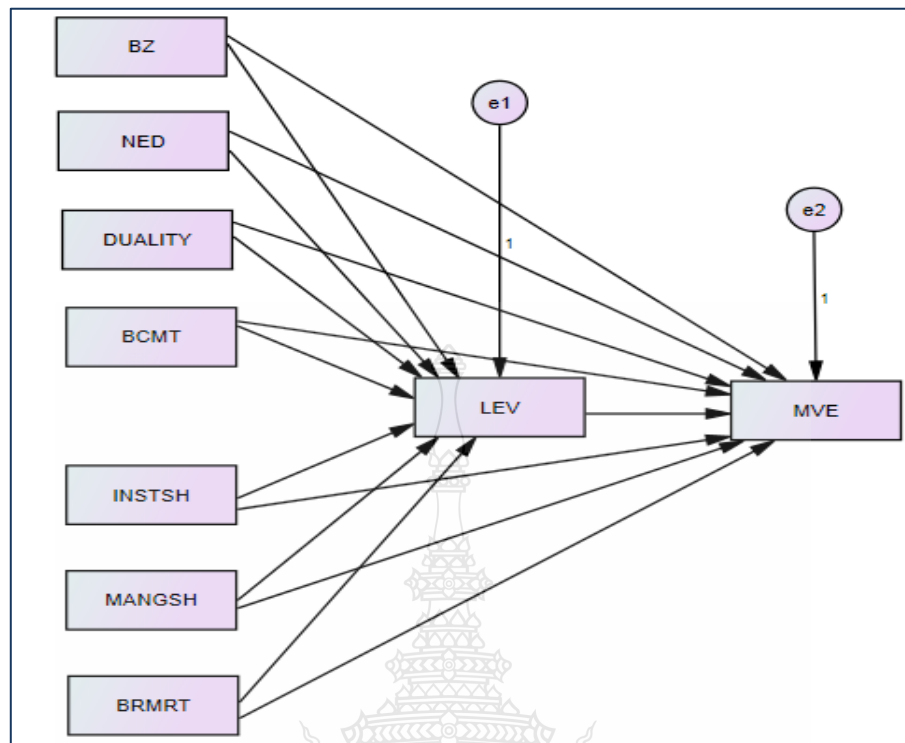


Figure 3.1 Conceptual Research Framework

From Figure 3.1, according to the conceptual research framework, there are three types of variables as follows:

3.2.1 Seven independent Variables:

- a. Board Size (BZ)
- b. Board Composition/non-executive directors (NED)
- c. Chief executive officer/Chair duality (DUALITY)
- d. Board Committees (BCMT)
- e. Institutional Shareholding (INSTSH)
- f. Shareholding of Board Members (MANGSH)
- h. Board remuneration (BRMRT)

3.2.2 One intervening variable:

Financial Leverage (LEV) refers to the use of debt to acquire additional assets. That is, the level of liabilities put into business and is measured by dividing total debt by total assets (Monther, 2015, Hamid, Mahdi, Abolfazl & Ali, 2011,

Hsien, Lie & Hui, 2012). The formula is as follows:

$$\text{LEV} = \text{total liabilities} \div \text{total assets}$$

3.2.3 One dependent variable:

Market Value of Equity (MVE), which is illustrated in the financial report, refers to the total of market value of all outstanding shares of a company at the end of an accounting period as shown in its balance sheet. It is calculated by multiplying the company's current stock price with the number of outstanding shares. The formula is as follows:

MVE = market price per share (at the end of accounting period) x the number of outstanding shares (at the end of a period)

From the conceptual research framework, it could be concluded that the definitions of variables as well as their other details are as shown in Table 3-2 below:

Table 3.2 Summary of definitions of variables in this study

Variable	Code	Definition	Prior study	Expected Sign/ Hypotheses	Data
Independent variable - Corporate Governance (CG)					
Board size	BZ	Board size is measured as logarithm of the number of board members.	Monther Soliman Jaradat (2015), Albert Ag-yei and Appiah Richard Owusu (2014), A.Ajanthan (2013), Rajendran Kajanathan (2012), Noriza Mohd Saad (2010), Hamid Reza Vakilifard, Mahdi Safari Gerayli, Abolfazl Momeni Yanesari and Ali Reza a'atoofi (2011), Arshad Hasan and Safdar Ali Butt (2009).	+	Report 56-1

Table 3.2 Summary of definitions of variables in this study (Cont.)

Variable	Code	Definition	Prior study	Expected Sign/Hypotheses	Data
Independent variable - Corporate Governance (CG)					
Board Composition	NED	Board Composition /non-executive directors is calculated as the number of non- executive directors divided by total number of directors	Kennedy Okiro, Josiah Aduda and Nixon Omoro. (2015), Albert Ag-yei and Appiah Richard Owusu (2014), A.Ajanthan (2013), Rajendran Kajanathan (2012), Arshad Hasan and Safdar Ali Butt. (2009).	+	Report 56-1
Chief executive officer/Chair duality	DUALITY	Dummy variable is taken as 0 if CEO is chairman; otherwise, it is taken as 1.	Monther Soliman Jaradat (2015), Albert Ag-yei and Appiah Richard wusu (2014), A.Ajanthan (2013), Hamid Reza Vakilifard,Mahdi Safari erayli,Abolfazl Momeni Yanesari and Ali Reza Ma'atoofi (2011), Noriza Mohd Saad (2010), Kajanathan (2012), Arshad Hasan and Safdar Ali Butt. (2009)	+	Report 56-1
Board Committees	BCMT	Board Committee is measured as logarithm of the number of board appointed committees.	Stephanus Remond Waworuntu, Kezia Anastasia Nirmalasari Feyari Tjahjana and Toto Rusmanto (2014), Albert Ag-yei and Appiah Richard Owusu (2014), Rajendran Kajanathan (2012).	+	Report 56-1

Table 3.2 Summary of definitions of variables in this study (Cont.)

Variable	Code	Definition	Prior study	Expected Sign/Hypotheses	Data
Independent variable - Corporate Governance (CG)					
Institutional Shareholding	INSTSH	Institutional Shareholding is measured as percentage of shares held by institutions as disclosed in annual financial reports	Albert Ag-yei and Appiah Richard Owusu (2014), Hsien- Chang Kuo, Lie-Huey Wang and Hui-Wen Liu (2012), Arshad Hasan and Safdar Ali Butt. (2009).	+	Report 56-1
Shareholding of Board Members	MANGSH	Shareholding of board members is measured as percentage of shares held by members of board disclosed in annual financial reports	Stephanus Remond Waworuntu, Kezia Anastasia Nirmalasari Feyari Tjahjana and Toto Rusmanto (2014), Albert Agyei and Appiah Richard Owusu (2014).	+	Report 56-1
Board remuneration	BRMRT	The average (per capita) cash remuneration, paid to executives, estimated as the ratio of executive compensation to	Monther Soliman Jaradat (2015), Ashleyand yang (2004), Choleras (2011, Shuto (2007), Sukanantaask (2014).	+	Report 56-1
Intervening variable – Financial Leverage (LEV)					
Financial Leverage	LEV	Leverage, it is quantified by using Total Liabilities divided by total assets	Arshad Hasan and Safdar Ali Butt. (2009), Lee and Park (2008), Ariff et. Al (2007), Black. Et. Al. (2006), Brown and ajler (2004), Gillan et. Al. (2003).	+	Calculate figures in Balance sheet

Table 3.2 Summary of definitions of variables in this study (Cont.)

Variable	Code	Definition	Prior study	Expected Sign/Hypotheses	Data
Dependent variable – Market Value of Equity (MVE)					
Market value of equity	MVE	MVE, it is quantified by using = Price per share X Number of outstanding shares (Year-end)	David Earle Coit (2016), Javanshir, Oladi, Ghadiri and Mojarad (2013), Hee and Vladimir (2005).	+	Calculate figures in Financial report

3.3 Research Instruments

This study collected secondary data from the companies in three industrial publicly-disclosed firms on the database of the SET, according to the variables specified in the conceptual research framework or according to the definitions of the variables used to investigate the direct and indirect influences between them in the Structural Equation Model (SEM). The sampled data were analyzed with descriptive statistics (frequency, percentage, maximum, minimum, mean, standard deviation, skewness, and kurtosis) to determine the distribution and dispersion of them. Inferential statistics were used with “AMOS”, the statistical program designed for analyzing the level of Goodness of fit measures in Structural Equation Modeling (SEM) and for testing the convergence/consistency of the research hypothesis theses with empirical data. The convergence/consistency showing the correlations in the same direction has positive values whereas the convergence/consistency showing the correlations in the opposite direction has negative values.

3.4 Data Collection

In this study, secondary data were collected over the period of 2010-2014 (five years) from annual financial statements, and annual reports of 183 Thai-listed companies on the SET in three industry groups.

3.5 Data Analysis Methods

The researcher used data analysis methods as described below.

3.5.1 The researcher used descriptive statistics to summarize and describe the characteristics of the sample and the distribution of the data used in this research. The data comprised seven independent variables, one intervening variable and one dependent variable as shown in the conceptual research framework. The descriptive statistics used to analyze the data were frequency, percentage, maximum, minimum, mean, standard deviation, skewness, and kurtosis. The relationships between variables were analyzed by using Pearson's Product-Moment Correlation Coefficient.

3.5.2 To analyze data with inferential statistics, the researcher used a software package program called AMOS (Moment Structures) to test the research hypotheses as well as the convergence/ consistency of research hypothesis model with the empirical data. AMOS was also used to analyze the direct, indirect, and total effects/influences of variables to see whether the research hypothesis converged or was consistent with the empirical data. The inferential statistics used in this study were as follows:

1. Chi-square Statistics (χ^2) in the AMOS software is called CMIN. It is used to test the convergence/ consistency of the research hypothesis theses with empirical data by calculating the expected convergence/consistency between matrix, variance values, and covariance values (Bollen, 1993). Chi-square values are the sum of degree of freedom multiplied by convergence/ consistency function. The convergence/consistency function results of zero or nearly zero (P-Value > 0.05) show that there is convergence/ consistency of the research hypothesis with empirical data as expected. That is, the collected data are compatible with the research hypothesis (Kline, 2005). In addition, in determining the suitability level of research hypothesis, the p values having a level of more than 0.05 indicate that there is no statistically significant difference in those relationships.

2. Chi-square Ratio/Degree of Freedom (Relative Chi-Square) determined by χ^2/df or CMIN /df is used to dilute the influence of sample size on Chi-square statistics in determining whether the research hypothesis model converges or is consistent with the empirical data. The dilution is done because the decrease in sample size can elevate Chi-square values which are not accurate. This can be solved by diluting the ratio of

Chi-square to a degree of freedom of not more than 3.0 (Kline, 1998a), showing that the research hypothesis converges or is consistent with empirical data. A ratio of more than 3.00 shows that the research hypothesis does not converge or is not inconsistent with the empirical data.

3. The Fit index, which is the use of the Chi-square value, was used to measure the convergence/consistency of the empirical data with the research hypothesis as follows:

- Goodness of Fit Index (GFI) is the measure of correlation between variance and covariance in the matrix of the empirical data collected from the sample (S). The correlation can be described by the matrix of the research hypothesis as expected. That is, the GFI value becomes high when the sample size is large. The negative GFI value is meaningless.

- Adjust Goodness of Fit Index (AGFI) is the measure of the convergence or consistency of the research hypothesis with empirical data as expected, which are adjusted by degree of freedom and the parameter number of the research hypothesis as expected.

- Normal Fit Index (NFI) is the measure of the ratio of the research hypothesis as expected to be better adjusted when compared to the free model of research hypotheses, which does not depend upon the sample size.

- Incremental Fit Index (IFI) is the measure of the convergence or consistency of the research hypothesis with empirical data as expected, which does not depend upon the sample size.

- Comparative Fit Index (CFI) is used to compare the expected research hypothesis with the free research hypothesis. The free research hypothesis model refers to the variables which are independent of one another or the value of the covariance which is zero. The values of Fit Index are between 0 and 1. A value of more than 0.95 indicates the convergence or consistency of the research hypothesis model with the empirical data (Arbuckle, 1995). A value closer to 1 of the Fit Index, the higher convergence or consistency of the research hypothesis with the empirical data (Bollen, 1993).

4. Root Mean Square Error of Approximation (RMSEA) is the measure of error/difference in degree of freedom. This index is developed by the Chi-square test. Its statistical values are based on a sample (N) and its degrees of freedom (df). If the number of parameter increases, Chi-square values tend to be statistically insignificant. Thus, RMSEA indicates the convergence/consistency of the research hypothesis model with the matrix of covariance with the value of less than 0.05 (Brown & Cudeek, 1993). However the RMSEA value of less than or equal to 0.8 might be accepted. The RMSEA value of zero shows that the convergence or consistency of the research hypothesis model has exact fit (Arbuckle, 1995).

5. Root Mean Square Residual (RMR) is the average value of error caused by matrix comparison of variance and covariance between the research hypothesis model as expected and the empirical data. The value ranges from 0 to 1, and it should be less than 0.05 (Brown & Cudeek, 1993). However, the accepted value should not be more than 0.08. This index can be used when all of the observable variables are standard variables. The RMR value of nearly zero shows the convergence of consistency of the research hypothesis model with the empirical data (Bollen, 1993).

In this research with SEM, the researcher used several symbols to describe the data analysis results and inferential statistics as shown in Table 3-3 below:

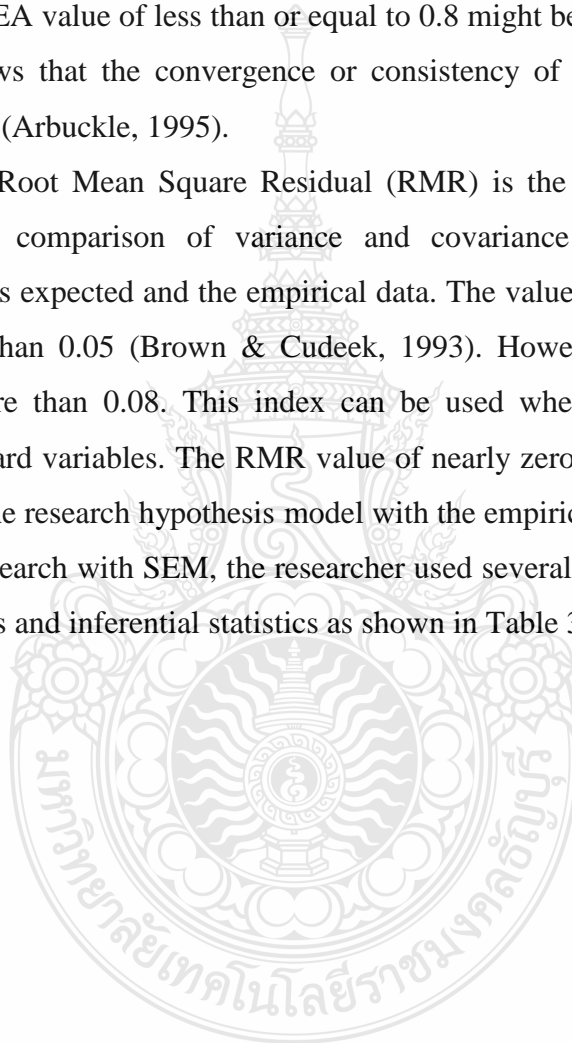


Table 3.3 Symbols and meaning of the statistics used in the study

SYMBOL	MEANING
N	Sample size
\bar{X}	Arithmetic mean
S.D.	Standard deviation
χ^2	Chi-square
df	Degree of freedom
GFI, AGFI	The index indicates the harmony and the empirical data with the model set up (GFI)Goodness of fit (AGFI)Adjust goodness of fit Index
NFI, IFI	(NFI)Normal fit index (IFI)Incremental fit index
CFI	Comparative fit index
RMSEA	Root mean Square error of approximation
RMA	Root mean square residual
S.E.	Standard error
r	Pearson 's correlation coefficient
R^2	Square multiple correlation
TE	Total effect
DE	Direct effect
IE	Indirect effect
Z	Z test Statistic
P	Probability value

CHAPTER 4

RESEARCH RESULTS

This chapter presents the results of the study. The data were analyzed by using the Structural Equation Model (SEM) as described in Chapter 3. This study aimed at examining the effects of corporate governance (CG) on both Financial Leverage (LEV) and Market Value of Equity (MVE). The sampled data (secondary) were collected from annual data entries (Form 56-1), financial statements and annual reports of Thai-listed companies that were publicly available on websites and any other form of electronic data sources provided by the SET. Descriptive statistics were firstly used to describe and summarize the basic characteristics of the sampled data. Then, inferential statistics were used to test the convergence/consistency of defined research hypothesis model with variables used in this study. The content of this chapter is divided into three parts: (4.1) Analysis of results of Thai-listed companies' data used as sample of this study, (4.2) Analysis of results of basic characteristics of variables used in this study, and (4.3) Results of data analysis for hypothesis testing using inferential statistics.

4.1 Analysis of Results of Thai-listed Companies' Data

This study used data from Thai companies listed on the SET over a period of five years from 2010-2014 in three industrial groups: (1) Agro & Food Industry, AGRO, (2) Property & Construction, PROPCON, and (3) and Technology (TECH). There was a total of number of the 183 companies in the initial sample, but only 161 companies had complete data due to the fact that some were listed after the year 2010, some submitted their financial statements and annual data entries (Form 56-1) late, or some were in the process of restructuring. By group, the sample comprises 43 companies (26.71%) from Agro & Food Industry, 79 companies (49.07%) from Property & Construction, and 39 companies (24.22%) from Technology. The details are shown in Table 4.1 below.

Table 4.1 The data used in the study form 2010-2014

Industry Group Name	Sector Name	Sector Index	Total Samples	%	complete data	%
Agro & Food	Agribusiness	AGRI	12	6.56	15	9.32
Industry [AGRO]	Food & Beverage	FOOD	39	21.31	28	17.39
	Total		51	27.87	43	26.71
Property & Construction [PROPCON]	Construction Materials	CONMAT	20	10.93	17	10.56
[PROPCON]	Construction Services	CONS	20	10.93	24	14.91
	Property Development	PROP	53	28.96	38	23.60
	Total		93	50.82	79	49.07
Technology [TECH]	Electronic Components	ETRON	11	6.01	11	6.83
[TECH]	Information & Communication Technology	ICT	28	15.30	28	17.39
	Total		39	21.31	39	24.22
Total sample			183	100	161	100

4.2 Analysis Results of Basic Characteristic of Variables used in this Study

The data were collected from financial statements, annual reports, Form 56-1, websites and electronic media which were publicly disclosed by the SET. As mentioned in Chapter 3, there were three types of variables used in this study, namely independent variables, an intervening variable and the dependent variable. The researcher preliminarily analyzed the data by using descriptive statistics with by industry group and by the types of variables in order to examine the data characteristics. That is, the data were checked to see whether their distribution is normal or not. Also, the data were checked to see if there were abnormal or extreme values that needed to be adjusted. The results showed that the distribution was not normal due to the nature of the data collected from secondary data sources, such as firm performance data and annual reports. Those were empirical data that were different by nature from data collected by questionnaire or other tools. The results are shown in Table 4.2

Table 4.2 Descriptive statistics of variables (805 data)

Variables	Mean	Minimum	Maximum	Std. Deviation	skewness	kurtosis
BZ	9.93	5	21	2.45	1.04	2.03
NED	64.07	0	100	18.37	-.57	1.34
DUALITY	0.83	0	1	0.38	-1.72	.97
BCMT	68.53	0	411.67	22.96	3.93	61.16
INSTSH	6.38	0	74.22	12.41	3.09	10.52
MANGSH	18.16	0	95	20.19	1.22	.95
BRMRT	5.03	0	115	8.79	8.19	88.19
LEV	.51	0	6.03	.37	7.02	87.45
MVE	19,708.43	16.46	746,246.93	67,713.43	6.37	47.07

The definitions of variables are given in Table 3.2 as shown follow:

1. Board Size (BZ)
2. Board Composition/non-executive directors (NED)
3. Chief executive officer/Chair duality (DUALITY)
4. Board Committees (BCMT)
5. Institutional Shareholding (INSTSH)
6. Shareholding of Board Members (MANGSH)
7. Board remuneration (BRMRT)
8. Financial Leverage (LEV)
9. Market Value of Equity (MVE)

This study modified the different quantitative data to reduce the problem of different data by taking a log value, using the log10 conversion with the Board Committees (BCMT), Board remuneration (BRMRT), Financial Leverage (LEV) and MVE variables to solve the problem of highly different values. This generated new variables for this study, namely Log Board Committees (logBCMT), Log Board remuneration (logBRMRT), Log Financial Leverage (logLEV) and Log MVE with normal or nearly normal distribution. The descriptive statistics were then used to preliminarily analyze the new variables by using descriptive statistics as shown in Table 4.3

Table 4.3 Descriptive statistics of variables (805 data) after using the log10 conversion

Variables	Mean	Minimum	Maximum	Std. Deviation	skewness	kurtosis
BZ	9.93	5	21	2.45	1.04	2.03
NED	64.07	0	100	18.37	-.57	1.34
DUALITY	0.83	0	1	0.38	-1.72	.97
LogBCMT	1.81	0	2.61	.20	-4.92	42.29
INSTSH	6.38	0	74.22	12.41	3.09	10.52
MANGSH	18.16	0	95	20.19	1.22	.95
LogBRMRT	6.33	0	7.80	1.03	-4.67	24.14
LogLEV	-.39	-2.59	.78	.36	-2.31	8.61
LogMVE	9.47	7.22	11.87	.80	.27	.30

Table 4.3, illustrates an overview of the preliminary data analysis results for 805 data entries from 161 companies in three industry groups, using descriptive statistics to analyze and describe the data by type of variable used in this study.

1. Board Size (BZ): The mean value of directors was 9.93 or 10 persons with the minimum value of 5 persons, the maximum value of 21 persons, the standard deviation value of 2.45, the skewness value of 1.04, and the kurtosis value of 2.03.

2. Board Composition/non-executive directors (NED): The mean value of NED was 64.07 with the minimum value of 0, the maximum value of 100, the standard deviation value of 18.37, the skewness value of -.57, and the kurtosis value of 1.34.

3. Chief executive officer/Chair duality (DUALITY): The mean value of DUALITY was .83 with the minimum value of 0, the maximum value of 1, the standard deviation value of .38, the skewness value of -1.72, and the kurtosis value of .97.

4. Log Board Committees (logBCMT): BCMT was created by using log10 to get logBCMT as a new variable, with mean value of 1.81, the minimum value of 0, the maximum value of 2.61, the standard deviation value of .20, the skewness value of -4.92 and the kurtosis value of 42.29.

5. Institutional Shareholding (INSTSH): The mean value of INSTSH was 6.38 with the minimum value of 0, the maximum value of 74.22, the standard deviation value of 12.41, the skewness value of 3.09 and the kurtosis value of 10.52.

6. Shareholding of Board Members (MANGSH): The mean value of MANGSH was 18.16 with the minimum value of 0, the maximum value of 95, the standard deviation value of 20.19, the skewness value of 1.22, and the kurtosis value of .95.

7. Log Board remuneration (logBRMRT): BRMRT was created by using log10 to get logBRMRT as a new variable, with mean value of 6.33, the minimum value of 0, the maximum value of 7.8, the standard deviation value of 1.03, the skewness value of -4.67 and the kurtosis value of 24.14.

8. Log Financial Leverage (logLEV): LEV was created by using log10 to get logLEV as a new variable, with mean value of -.39, the minimum value of -2.59, the maximum value of .78, the standard deviation value of .36, the skewness value of -2.31 and the kurtosis value of 8.61.

9. LogMVE was created by using log10 to get logMVE as a new variable, with mean value of 9.47, the minimum value of 7.22, the maximum value of 11.87, the standard deviation value of .80, the skewness value of .27 and the kurtosis value of .30.

The results of using descriptive statistics to analyze the variables used in this study showed a pair of the lowest and the highest statistical values. That is, among the mean values, the logLEV variable had the lowest mean value of -.39, and the NED variable had the highest mean value of 64.07. Among the minimum values, the logLEV variable had the lowest minimum value of -2.59, and the logMVE variable had the highest minimum value of 7.22. Among the maximum values, the logLEV variable had the lowest maximum value of .78, and the NED variable had the highest maximum value of 100. Among the standard deviation values, the logBCMT variable had the lowest standard deviation value of .20, and the MANGSH variable had the highest standard deviation value of 20.19. Among the skewness values, the logBCMT had the lowest skewness value of -4.92, and the INSTSH variable had the highest skewness value of 3.09. Among the kurtosis values, the logMVE variable had the lowest kurtosis value of .30, and the logBCMT had the highest kurtosis value of 42.29.

The data were preliminarily analyzed by using descriptive statistics as mentioned above, showing the distribution and difference of the variables as well as the characteristics of the data obtained from the data collection. The data were publicly

disclosed in financial reports. They were quantitative data derived from the actual sources which is different from quantitative data collected by using a questionnaire as a research instrument using ordinal/rating scales. The researcher adjusted values to reduce the skewness of the data by taking log values and checking the relationship between variables by graph plotting to simplify linear regression analysis and by using both histogram and box-plot to analyze whether a normal distribution of data achieved. The researcher found that the data of the variables used in this study were nearly normally distributed after adjustment. The researcher then conducted the data analysis to find the correlation coefficients of variables pair by pair. The results of data analysis are shown in Table 4-4.

Table 4.4 Correlation matrix of CG, financial leverage and MVE

	BZ	NED	DUALITY	Log BCMT	INSTSH	MANGSH	Log BRMRT	Log LEV	Log MVE
BZ	1.000								
NED	.172**	1.000							
DUALITY	-.037	-.247**	1.000						
LogBCMT	-.193**	-.242**	.292**	1.000					
INSTSH	.039	-.055	-.011	-.005	1.000				
MANGSH	-.100**	-.084*	.107**	.188**	-.213**	1.000			
LogBRMRT	.005	-.068	-.009	.014	.130**	-.040	1.000		
LogLEV	.014	-.110**	.030	-.099**	.085*	-.066	.073*	1.000	
LogMVE	.298**	.139**	-.032	-.098**	.223**	-.232**	.131**	-.033	1.000

Table 4.4 shows correlation coefficients, indicating the size and direction of the relationship between seven independent variables and the only one dependent variable pair by pair. Devore and Peck (1993:129) have observed the following regarding the size of the correlation coefficient: If two variables are highly correlated, the correlation values are less than -0.80 or greater than 0.80. If two variables are moderately correlated, the correlation values are between -0.50 to -0.80 or 0.50 to 0.80. So, if two variables are less correlated, the correlation values should be between -0.50 and 0.50. It was found from the correlation coefficient analysis that the values of

correlation coefficients between variables ranged from -.247 to .298, indicating that each pair had low inter-relationship. The relationship between variables could be described as follows.

1. Board Size (BZ): The BZ variable had the relationship in the same direction with the logLEV variable with the correlation value of .014, meaning that the increase in BZ was associated with the increase in Log Financial Leverage (logLEV) or the decrease in BZ was associated with the decrease in logLEV as well. Therefore, this showed that the analyzed relationship between BZ and logLEV variables was statistically insignificantly low.

2. Board Composition/non-executive directors (NED): The NED variable had the relationship in the opposite direction with the Log Financial Leverage (logLEV) variable with the correlation value of $-.110^{**}$, meaning the increase in NED was associated with the decrease in logLEV or the decrease in NED was associated with the increase in logLEV. Therefore, this showed that the relationship between NED and logLEV variables was low, but statistically significant at the .05 level.

3. Chief executive officer/Chair duality (DUALITY): The DUALITY variable had the relationship in the same direction with the Log Financial Leverage (logLEV) variable with the correlation value of .030, meaning the increase in DUALITY was associated with the increase in logLEV or the decrease in DUALITY was associated with the decrease in logLEV as well. Therefore, this showed that the relationship between DUALITY and logLEV variables was low and not significant at the .05 level.

4. Log Board Committees (logBCMT) The logBCMT variable had the relationship in the opposite direction with the Log Financial Leverage (logLEV) variable with the correlation value of $-.099^{**}$, meaning the increase in logBCMT was associated with the decrease in logLEV or the decrease in logBCMT was associated with the increase in logLEV. Therefore, this showed that the relationship between logBCMT and logLEV variables was low, but statistically significant at the .05 level.

5. Institutional Shareholding (INSTSH): The INSTSH variable had the relationship in the same direction with the Log Financial Leverage (logLEV) variable with the correlation value of $.085^{*}$, meaning the increase in INSTSH was associated with the increase in logLEV or the decrease in INSTSH was associated with the

decrease in logLEV as well. Therefore, this showed that the relationship between INSTSH and logLEV variables was low, but statistically significant at the .05 level.

6. Shareholding of Board Members (MANGSH): The MANGSH variable had the relationship in the opposite direction with the Log Financial Leverage (logLEV) variable with the correlation value of $-.066^{**}$, meaning the increase in MANGSH was associated with the decrease in logLEV or the decrease in MANGSH was associated with the increase in logLEV. Therefore, this showed that the relationship between MANGSH and logLEV variables was low, but statistically significant at the .05 level.

7. Log Board remuneration (logBRMRT): The logBRMRT variable had the relationship in the same direction with the Log Financial Leverage (logLEV) variable with the correlation value of $.073^*$, meaning the increase in logBRMRT was associated with the increase in logLEV or the decrease in logBRMRT was associated with the decrease in logLEV as well. Therefore, this showed that the relationship between logBRMRT and logLEV variables was low, but statistically significant at the .05 level.

8. Board Size (BZ): The BZ variable had the relationship in the same direction with the Log MVE (logMVE) variable with the correlation value of $.298^{**}$, meaning the increase in BZ was associated with the increase in logMVE or the decrease in BZ was associated with the decrease in logMVE as well. Therefore, this showed that the relationship between BZ and logMVE variable was low, but statistically significant at the .05 level.

9. Board Composition/non-executive directors (NED): The NED variable had the relationship in the same direction with the Log MVE (logMVE) variable with the correlation value of $.139^{**}$, meaning the increase in NED was associated with the increase in logMVE or the decrease in NED was associated with the decrease in logMVE as well. Therefore, this showed that the relationship between NED and logMVE variables was low, but statistically significant at the .05 level.

10. Chief executive officer/Chair duality (DUALITY): The DUALITY variable had the relationship in the opposite direction with the logMVE variable with the correlation value of $-.032$, meaning the increase in DUALITY was associated with the decrease in logMVE or the decrease in DUALITY was associated with the increase in logMVE. Therefore, this showed that the relationship between DUALITY and

logMVE variables was low and not significant at the .05 level.

11. Log Board Committees (logBCMT): The logBCMT variable had the relationship in the opposite direction with logMVE variable with the correlation value of $-.098^{**}$, meaning the increase in logBCMT was associated with the decrease in logMVE or the decrease in logBCMT was associated with the increase in logMVE. Therefore, this showed that the relationship between logBCMT and logMVE variables was low, but statistically significant at the .05 level.

12. Institutional Shareholding (INSTSH): The INSTSH variable had the relationship in the same direction with the Log MVE (logMVE) variable with the correlation value of $.223^{**}$, meaning the increase in INSTSH was associated with the increase in logMVE or the decrease in INSTSH was associated with the decrease in logMVE as well. Therefore, this showed that the relationship between INSTSH and logMVE variables was low, but statistically significant at the .05 level.

13. Shareholding of Board Members (MANGSH): The MANGSH variable had the relationship in the opposite direction with the Log MVE (logMVE) variable with the correlation value of $-.232^{**}$, meaning the increase in MANGSH was associated with the decrease in logMVE or the decrease in MANGSH was associated with the increase in logMVE. Therefore, this showed that the relationship between MANGSH and logMVE variables was low, but statistically significant at the .05 level.

14. Log Board remuneration (logBRMRT): The logBRMRT variable had the relationship in the same direction with the logMVE variable with the correlation value of $.131^{**}$, meaning the increase in logBRMRT was associated with the increase in logMVE or the decrease in logBRMRT was associated with the decrease in logMVE as well. Therefore, this showed that the relationship between logBRMRT and logMVE variables was low, but statistically significant at the .05 level.

15. Log Financial Leverage (logLEV): The logLEV variable had the relationship in the opposite direction with the logMVE variable with the correlation value of $-.033$ meaning the increase in logLEV was associated with the decrease in logMVE or the decrease in logLEV was associated with the increase in logMVE. Therefore, this showed that the relationship between logLEV and logMVE variables was low, and not significant at the .05 level.

Based on the results of the Correlation Matrix analysis between the variables, it could be concluded that the variables used in this study had a low inter-relationship and were generally independent of each other, indicating that they could be further analyzed by using inferential statistics.

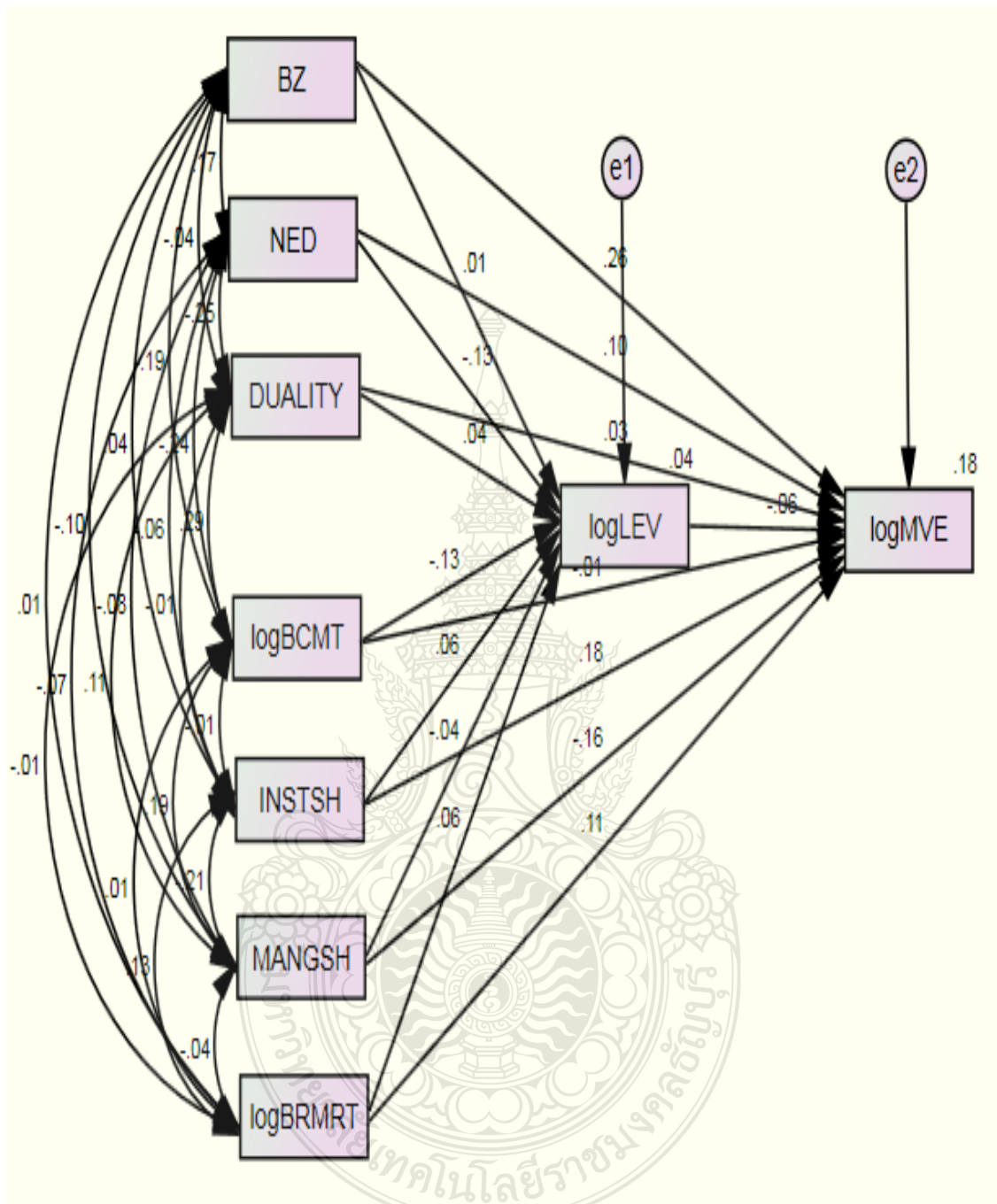
4.3 Results of Data Analysis for Hypothesis Testing using Inferential Statistics

The data analyzed for testing the research hypothesis in this study comprised three groups of 161 industrial companies listed on the SET with 805 quantitative data entries. The nature and characteristics of the data were examined and found to be normally or nearly normally distributed, and the relationships between variables were low and independent. Next, the data were analyzed by using the Structural Equation Modeling (SEM) technique. The SEM model is a causal analysis of the influence of several independent variables on the dependent variables chosen from the empirical data as mentioned above under related theories. This method is based on regression analysis that can explain both the size and direction of each path line in the model. Regression analysis by the SEM model is different from path by path regression analysis. This study used AMOS software for data analysis and for checking the harmony or consistency of the model according to the research hypotheses.

The results of the analysis of the model to see whether it is in harmony with the empirical data are shown in Figure 4.1 and Table 4.4. The statistical values of hypothesis testing include: Chi-square = .001 (in the AMOS program called CMIN) with Degrees of Freedom = 3 and Probability level = p-value = 1.000 indicating that the analysis results are consistent. In addition, CMIN/DF = .000 shows that the analysis results by the model is harmonic with the empirical data. So, when considering the RMSEA value of .000, it can be concluded that there is no deviation of the results of analysis from the expected model, indicating the results are in harmony with the empirical data. (The RMSEA value is the value used to check for deviations or differences to degrees of freedom according to the model expected to be in harmony with the empirical data. The value should not exceed 0.05). Considering the CFI = 1,000 with NFI = 1,000, the result value of greater than 0.95, the CFI and NFI values of between 0 and 1, it can be concluded that there is harmony between the model and the

empirical data. When considering the $GFI = 1,000$ with $AGFI = 1,000$, the result value of greater than 0.95 and $GFI \geq 0.95$ or $GFI \geq 0.9$, it can be concluded that the model is in harmony with the empirical data. (The GFI = the correlation between variance and covariance. Generally, in larger samples, GFI values will be higher, and the values can be negative but not significant [i.e., not meaningful]). $AGFI$ = GFI value obtained was by independent degrees, and the number of model parameters to measure $AGFI \geq 0.9$ (Schumacker & Lomax, 2004). Thus, the model is harmonized with the empirical data. Also referring to models in which all variables are independent (GFI and $AGFI$ values should be zero and negative, but not significant) $AGFI$ = statistical values obtained by adjusting GFI values by degrees of freedom and the number of model parameters are used to measure the normal consistency (Schumacker & Lomax, 2004). $AGFI \geq 0.9$ indicates the harmony of the model with the empirical data and refers to the model of which all variables are independent. (GFI and $AGFI$ values should be zero and negative, but not significant.)

The results of examining the consistency of the model with the empirical data by using inferential statistics showed that the model was in harmony with the empirical data. The coefficient forecasting the effects of CG variables on the MVE was equal to .18, indicating that the CG variables in the model could explain 18% of the variance of the MVE while the coefficient forecasting the effects of CG variables on financial leverage was .04, indicating that the CG variables in the model could explain 4% of the variance of the Financial Leverage.



Chi-square = .001, df = 3, p-value = 1.000, CMIN/DF = .000
 GFI = 1.000, AGFI = 1.000, CFI = 1.000, NFI = 1.000, RMSEA = .000

Figure 4.1 Model of the Relationship among CG, Financial Leverage and MVE

Table 4.5 Regression results of the Relationship among CG, Financial Leverage and MVE

	Variable	STD Estimate	S.E.	C.R.	P-value
logLEV	<--- BZ	.006	.005	.161	.872
logLEV	<--- NED	-.129	.001	-3.518	***
logLEV	<--- DUALITY	.042	.035	1.151	.250
logLEV	<--- logBCMT	-.134	.069	-3.568	***
logLEV	<--- INSTSH	.062	.001	1.737	.082
logLEV	<--- MANGSH	-.040	.001	-1.109	.267
logLEV	<--- logBRMRT	.056	.012	1.614	.106
logMVE	<--- BZ	.258	.011	7.862	***
logMVE	<--- NED	.096	.001	2.798	.005
logMVE	<--- DUALITY	.025	.072	.747	.455
logMVE	<--- logBCMT	-.009	.143	-.261	.794
logMVE	<--- INSTSH	.175	.002	5.306	***
logMVE	<--- MANGSH	-.162	.001	-4.851	***
logMVE	<--- logBRMRT	.112	.025	3.458	***
logMVE	<--- logLEV	-.062	.072	-1.896	.058

Table 4.5 shows the parameter validation (in the AMOS program, CR [Critical Ratio] of each variable) in analyzing the influence path of variables and in checking the standard error (SE) after having checked the model's overall harmony/consistency. The results show that the expected model is in harmony with the empirical data and has the relationship value with each variable having some significant parameters, indicating that the influence of CR and SE values needed to be checked.

1. NED had negative influence/effect on LogLEV with CR value = -3.518, p-value = .000. (p-value = *** meaning that the value was very low and near zero but less than 0.05.) A lesser proportion of the number of NED would result in more proportion of the amount of logLEV at the statistically significant level of 0.05.

2. Log BCMT had negative influence/effect on logLEV with CR value = -3.568, p-value = .000. (p-value = *** meaning that the value was very low and near zero but less than 0.05.) A lesser proportion of the number of logBCMT would result in

more proportion of the amount of logLEV at the statistically significant level of 0.05.

3. BZ had positive influence/effect on logMVE with CR value = 7.862, p-value = .000. (p-value = *** meaning that the value was very low and near zero but less than 0.05.) More proportion of the number of BZ would result in more proportion of the amount of logMVE at the statistically significant level of 0.05.

4. NED had positive influence/effect on logMVE with CR value = 2.798, p-value = .005, which was less than 0.05. More proportion of the number of NED would result in more proportion of the amount of logMVE at the statistically significant level of 0.05.

5. INSTSH had positive influence/effect on logMVE with CR value = 5.306, p-value = .000. (p-value = *** meaning that the value was very low or near zero but less than 0.05.) More proportion of the amount of INSTSH would result in more proportion of the amount of logMVE at the statistically significant level of 0.05.

6. MANGSH had negative influence/effect on logMVE with CR value = -4.851, p-value = .000. (p-value = *** meaning that the value was very low or near zero but less than 0.05.) Less proportion of the amount of MANGSH would result in more proportion of the amount of logMVE at the statistically significant level of 0.05.

7. LogBRMRT had positive influence/effect on logMVE with CR value = 3.458, p-value = .000. (p-value = *** meaning that the value was very low or near zero but less than 0.05.) More proportion of the amount of logBRMRT would result in more proportion of the amount of logMVE at the statistically significant level of 0.05.

The results of the parameter validation are that there are seven pairs of variables having significant influence/effect on each other at the statistically significant level of 0.05 as just mentioned. That is, any other pair of variables had influence/effect on each other, s above of 7 pairs. Other pairs of variables had no statistically significant influence/effect on each other. In addition, the direct, indirect, and overall influences/effects of CG on the Financial Leverage and the MVE could be found in the analysis. The analysis results are shown in Table 4.6.

Table 4.6 Analysis of influences/effects of CG on financial leverage and MVE

Variables		Total Effects	Indirect Effects	Direct Effects	P-Value (DE)	C.R.	significant		Insignificant
Independent	dependent						positive	negative	
BZ	logLEV	0.001	0.000	0.001	.872	.161			√
NED	logLEV	-0.003	0.000	-0.003	***	-3.518		√	
DUALITY	logLEV	0.040	0.000	0.040	.250	1.151			√
logBCMT	logLEV	-0.246	0.000	-0.246	***	-3.568		√	
INSTSH	logLEV	0.002	0.000	0.002	.082	1.737			√
MANGSH	logLEV	-0.001	0.000	-0.001	.267	-1.109			√
logBRMRT	logLEV	0.020	0.000	0.020	.106	1.614			√
BZ	logMVE	0.085	0.000	0.085	***	7.862	√		
NED	logMVE	0.005	0.000	0.004	.005	2.798	√		
DUALITY	logMVE	0.048	-0.006	0.054	.455	.747			√
logBCMT	logMVE	-0.003	0.034	-0.037	.794	-2.261			√
INSTSH	logMVE	0.011	0.000	0.011	***	5.306	√		
MANGSH	logMVE	-0.006	0.000	-0.006	***	-4.851		√	
logBRMRT	logMVE	0.084	-0.003	0.087	***	3.458	√		
logLEV	logMVE	-0.137	0.000	-0.137	.058	-1.896			√

Table 4-6 shows the coefficients of the total/overall, direct and indirect influences/effects of CG on the Financial Leverage at the statistically significant level of 0.05 (p-value). When considering the influence/effect paths, it was found that the NED and logBCMT had negative direct influences/effects with the value of -0.003 and -0.246 respectively. The remaining variables had statistically insignificantly positive direct influences/effects, namely BZ, DUALITY, INSTSH and logBRMRT variables had statistically insignificantly positive direct influences/effects with the values of 0.001, 0.040, 0.002 and 0.020 respectively, whereas MANGSH had statistically insignificantly negative direct influences/effects with the value of -0.001.

Considering the influence of CG variables on the MVE at the statistical significance level of 0.05, it was found that BZ, NED, INSTSH and logBRMRT variables had positive direct influences/effects with the values of 0.085, 0.004, 0.011 and 0.087 respectively, whereas MANGSH had negative direct influences/effects with the value of -0.006. The DUALITY variable had statistically non-significant positive direct influences/effects on the MVE with the value of 0.054. In contrast, the logBCMT variable had statistically insignificantly negative direct influences/effects on the MVE with the value of -0.037. Finally, when determining the influences/effects between the logLEV variable and the logMVE variable, it was found that both variables had

negative direct influences/effects on each other with the value of 0.137.

The analysis generated regression coefficients for each of these values by using the Z test statistics called C.R. (Critical Ratio) in the AMOS program as well as the results of checking for the model's harmony/consistency (Model Fit checking) in investigating the effects/influences of CG on the financial leverage and the MVE of 161 companies listed on the SET during 2011-2014, over five years, in three groups of industries with 805 data entries. The CG variables affected both financial leverage and MVE which were supported by the literature review (related theories, 38 related scholarly research paper, etc.). This study found that the model used in this study was in harmony/consistency with the empirical data collected from secondary sources publicly disclosed by SET. The findings and perspectives of scholars, particularly those supporting or against the analysis results presented in this chapter (Table 4-7), are next analyzed prior to presenting the conclusions, discussions and recommendations in Chapter 5.



Table 4.7 Summary of results

Hypothesis Testing	Expected sign	Results			As Expected for consistency with related research	Not as Expected for consistency with related research
		Significant		Insignificant		
		Positive	Negative			
H1	Board size (BZ) had positive effect on Financial leverage (LVE).	positive		√	Monther Soliman Jaradat (2015)	Mir Askari Akbari and Samira Rahmani (2013)
H2	Board size (BZ) had positive effect on market value of equity (MVE).	positive	√		Monika Gupta and Gaurav Nevalkan(2015)	Ibrahim Hamidu, Salihu Aliyu Modibbo (2015); Mohamed Darweesh (2015); Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016)
H3	Board composition (NED) had positive effect on Financial leverage (LVE).	positive	√		Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015); Rajendran Kajanathan (2012); Arshad Hasan and Safdar Ali Butt (2009); A.Ajanthan (2013)	Mir Askari Akbari and Samira Rahmani (2013)
H4	Board composition (NED) had positive effect on market value of equity (MVE).	positive	√		-	Mohamed Darweesh, (2015)

Table 4-7 Summary of results (Cont.)

Hypothesis Testing	Expected sign	Results			As Expected for consistency with related research	Not as Expected for consistency with related research
		Significant		Insignificant		
		Positive	Negative			
H5	CEO/chair duality (DUALITY) had positive effect on Financial leverage (LVE).	positive		√	A.Ajanthan (2013)	Monther Soliman Jaradat (2015); Hamid Reza Vakilifard, Mahdi Safari Gerayli, Abolfazl Momeni Yanesari and Ali Reza Ma'atoofi (2011); Arshad Hasan and Safdar Ali Butt (2009); Mir Askari Akbari and Samira Rahmani (2013); Monther Soliman Jaradat (2015)
H6	CEO/chair duality (DUALITY) had positive effect on market value of equity (MVE).	positive		√	Monika Gupta and Gaurav Nevalkan (2015); Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016)	-
H7	Board committee (BCMT) had positive effect on Financial leverage (LVE).	positive	√		Rajendran Kajanathan (2012); Vitaliy Zheka (2008)	Stephanus Remond Waworuntu, Kezia Anastasia Nirmalasari Feyari Tjahjana and Toto Rusmanto (2014)
H8	Board committee (BCMT) had positive effect on market value of equity (MVE).	positive		√	-	Mohamed Darweesh, (2015)

Table 4-7 Summary of results (Cont.)

Hypothesis Testing	Expected sign	Results			As Expected for consistency with related research	Not as Expected for consistency with related research
		Significant		Insignificant		
		Positive	Negative			
H9	Institutional shareholding (INSTSH) had positive effect on Financial leverage (LVE).	positive		√	Arshad Hasan and Safdar Ali Butt (2009)	-
H10	Institutional shareholding (INSTSH) had positive effect on market value of equity (MVE).	positive	√		Constantin Zaharia and Ioana Zaharia (2012)	Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016); Mir Askari Akbari and Samira Rahmani (2013)
H11	Shareholding of board members (MANGSH) had positive effect on Financial leverage (LVE).	positive		√	Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015)	Mir Askari Akbari and Samira Rahmani (2013)
H12	Shareholding of board members (MANGSH) had positive effect on market value of equity (MVE).	positive	√		-	Mohamed Darweesh, 2015
H13	Board remuneration (BRMRT) had positive effect on Financial leverage (LVE).	positive		√	Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015)	-
H14	Board remuneration (BRMRT) had positive effect on market value of equity (MVE).	positive	√		-	Mohamed Darweesh, 2015
H15	Corporate governance (CG) had positive value on financial leverage (LVE) and market value of equity (MVE).	positive		√	-	Mohamed Darweesh, 2015

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This chapter presents the results of research and is divided into four parts. The first part is a summary of methodology and research findings. The second part contains the discussions of research questions. The third part discusses the limitations of the study. The last part provides the implications of the research findings and guidelines regarding the corporate governance (CG) variables affecting on market value of equity (MVE) through financial leverage as well as suggestions for future research.

This study aimed to investigate the effects of CG on MVE through financial leverage. The objectives were: 1) to investigate how CG affects financial leverage, 2) to investigate how CG affects the MVE, and 3) to investigate whether or not CG affects MVE through financial leverage. The core research question was: How did Thai-listed companies' CG affect their financial leverage and MVE?

CG was comprised of independent variables such as board size, board composition/non-executive directors, chief executive officer/chair duality, board committee, institutional shareholding, shareholding of board members, and board remuneration. The dependent variable was MVE, and financial leverage was a mediating?

There were 15 hypotheses including: H1: board size had a positive effect on financial leverage; H2: board size had a positive effect on MVE; H3: board composition had a positive effect on financial leverage; H4: board composition had a positive effect on MVE; H5: chief executive officer/chair duality had a positive effect on financial leverage; H6: chief executive officer/chair duality had a positive effect on MVE; H7: board committee had a positive effect on financial leverage; H8: board committee had a positive effect on MVE; H9: institutional shareholding had a positive effect on financial leverage; H10: institutional shareholding had a positive effect on MVE; H11: shareholding of board members had a positive effect on financial leverage; H12: shareholding of board members had a positive effect on MVE; H13: board remuneration had a positive effect on financial leverage; H14: board remuneration had a positive effect on MVE; H15: CG had a positive effect on MVE through financial leverage.

Data were collected on Thai companies listed on the Stock Exchange of Thailand (SET) over a period of five years from 2010-2014 in three industrial groups: (1) Agro & Food Industry, AGRO; (2), Property & Construction, PROPCON; and (3) and Technology (TECH). The final sample included 161 companies with 805 complete data units.

This study used descriptive statistics comprising frequency, percentage, maximum, minimum, mean, standard deviation, skewness and kurtosis to preliminarily analyze general data. The analysis showed that the data were not normally distributed because of the skewness and kurtosis values of some variables. Thus, the data needed to be adjusted. Natural logarithms were applied to four variables including board committee, board remuneration, financial leverage and MVE in order to normalize the distribution. The mean board size, measured as a logarithm of the number of board members, was 9.93. The board composition/non-executive directors, calculated as the number of non-executive directors divided by total number of directors, was 64.07. The chief executive officer/chair duality factor was set as a dummy variable, and given a value of 0 if the CEO is chairman and 1 if not. The result for that measure was 0.83. The board committee, as measured by the logarithm of the number of board appointed committees, was 1.81. The institutional shareholding, as measured by the percentage of shares held by the institution, was 6.38. The shareholding of board members, as measured by the percentage of shares held by members of board, was 18.16. The board remuneration is the average (per capita) cash remuneration paid to executives, estimated as the ratio of executive compensation to the total number of executives, was 6.33. Financial leverage was measured by use debts to finance business leverage. This variable was quantified by using total liabilities divided by total assets. The value for this factor was -.39. MVE was calculated by using the closing price at the end of the year multiplied by the number of listed shares. The value for this factor was 9.47.

The next step in the analysis was to test the research hypothesis by using Path Analysis. This involved the structural equation modeling (SEM) technique, conducted by AMOS, to validate the harmony or consistency of the model. Hypothesis testing was done by applying Chi-square = .001, Degrees of Freedom = 3 and Probability level = p-value = 1.000, which indicates that the analysis results are consistent. In examining the

consistency/convergence of the research hypothesis model with the empirical data by using Chi-square, degrees of freedom, p-value, and critical ratio (as parameter validation), harmony was found. The results could explain and answer the research question that CG mechanisms influences financial leverage and MVE, and MVE is manifest through financial leverage. Although the results of the examination of each path line of the parameter had a significant or insignificant influence, this could be explained by considering the direct and indirect effects that CG mechanisms had on the MVE.

That is, CG had a significant negative influence on financial leverage for board composition/non- executive directors and the board committee. In other words, the increase in the proportion of board members/non-executive directors and the board committee caused a decrease in the financial leverage. These results are in line with those found by Wen (2002), Weir & Laing (2001) and Pfeffer & Salancick (1978) who said that non-executive directors help to monitor performance and to build investor confidence. This contributed to fundraising by lower financing costs. In addition, it was found that CG mechanisms have an insignificant direct effect on financial leverage, including board size, chief executive officer/chair duality, institutional shareholding, shareholding of board members, and board remuneration. This suggests that CG played an important role in increasing the value and growth of the company, causing the right change in the business. These results are consistent with those found by Kleiman (2000) and Darweesh (2015), who said that the efficiency of management would make organizations more efficient in their operations through appropriate management remuneration/compensation resulting in effectiveness in organizational performance and contributing to reducing corruption problems.

5.1 Discussion of Research Findings

The results of this study showed that CG, as recommended by OECD, played an important role in improving a company's performance to help it succeed and grow. CG was an important mechanism to increase the market value of the business (Darweesh, 2015). This study pointed out the need to follow CG principles that both directly and indirectly affect the MVE through financial leverage, supporting several

previous research studies and showing the difference in the structure of the management. Investment returns affecting the MVE were obtained by validating the research hypothesis model's consistency with the empirical data. The information can be used to develop the organization by setting up the direction of CG implementation for protecting the interests of various stakeholders and by setting up quality directors in accordance with business ethics, transparency and fairness (Aggarwal, 2013) and in accordance with Agency Theory (Jensen & Meckling, 1979) and Stakeholder Theory (Freeman, 1994, Post et al. 2002). Those theories relate to the concept of CG where there is separation of company ownership from management. This separation promotes more effective consideration of the interests of all stakeholders.

In addition, the summarized results of this study as mentioned above could answer the three research objectives and 15 research hypotheses. As for hypothesis testing, inferential statistics were used with a Path Analysis model by means of AMOS and under a structural equation model. The results of the hypothesis testing are discussed next.

5.1.1 Research objective 1: To investigate CG-affected financial leverage of Thai-listed companies in 2010-2014 by testing the proposing to be based on the research hypothesis. This study found that CG affected financial leverage. The analysis with inferential statistics based on the research hypothesis is as follows:

Hypothesis 1: Board size had a positive effect on financial leverage. In testing this hypothesis, it was found that board size had an insignificant effect on financial leverage. This finding is consistent with that of Jaradat, (2015) but in contrast to that of Akbari & Rahmani, (2013).

Hypothesis 3: Board composition had a positive effect on financial leverage. In testing this hypothesis, it was found that board composition had a negative effect on financial leverage. This finding is consistent with that of Okiro, Aduda and Omoro (2015), Kajanathan (2012), Butt & Hasan (2009), and Alagathurai (2013), was in contrast to that of Hamidu & Modibbo (2015), Darweesh (2015), and Rostami, Rostami & Kohansal (2016).

Hypothesis 5: Chief executive officer/chair duality had a positive effect on financial leverage. In testing this hypothesis, it was found that chief executive

officer/chair duality had an insignificant effect on financial leverage. This finding is consistent with that of Alagathurai (2013), but was in contrast to that of Jaradat (2015), Vakilifard, Gerayli, Yanesari & Ma'atoofi (2011), Butt & Hasan (2009), Akbari & Rahmani (2013), and Jaradat (2015).

Hypothesis 7: Board committee had a positive effect on financial leverage. In testing this hypothesis, it was found that board committee had a negative effect on financial leverage. This finding is consistent with that of Kajanathan (2012), and Zheka (2010), but in contrast to that of Waworuntu, Tjahjana & Rusmanto (2014).

Hypothesis 9: Institutional shareholding had a positive effect on financial leverage. In testing this hypothesis, it was found that institutional shareholding had an insignificant effect on financial leverage. This finding is consistent with that of Butt & Hasan (2009).

Hypothesis 11: Shareholding of board members had a positive effect on financial leverage. In testing this hypothesis, it was found that shareholding of board members had an insignificant effect on financial leverage. This finding is consistent with that of Okiro, Aduda & Omoro (2015), but in contrast to that of Akbari & Rahmani (2013).

Hypothesis 13: Board remuneration had a positive effect on financial leverage. In testing this hypothesis, it was found that board remuneration had an insignificant effect on financial leverage. This finding is consistent with that of Okiro, Aduda & Omoro (2015).

These results can be summarized in the following way: Board composition and board committee had negative significant roles in improving financial leverage. In other words, the decrease in board composition and board committee would result in greater financial leverage, or the increase in board composition and board committee would result in the increase in financial leverage as well. These results are consistent with the research hypotheses (Darweesh, 2015; Hamidu & Modibbo, 2015; and Vakilifard et al. 2011). The results of this study show that the decrease in the proportion of board composition and board committee significantly caused the increase in financial leverage, leading to the disclosure of the appropriate board structure for necessary consideration of firm performance (Zaharia & Zaharia, 2012).

This study found that board size, chief executive officer/chair duality, institutional shareholding, shareholding of board members and board remuneration had an insignificant direct effect on financial leverage. These results are not consistent with the research hypotheses, but are in line with those of Akbari & Rahmani, (2013) and Jaradat, (2015), who found that good CG is critical to long-term financial performance and management remuneration.

5.1.2 Research objective 2: To investigate how CG affected the MVE of Thai-listed companies in 2010-2014. This study found that CG affected MVE. The analysis with inferential statistics based on the research hypothesis is described below.

Hypothesis 2: Board size had a positive effect on MVE. In testing this hypothesis, it was found that board size had a positive effect on MVE. This finding is consistent with that of Gupta & Nevalkan (2015), but in contrast to that of Hamidu & Modibbo (2015), Darweesh (2015), and Rostami, Rostami & Kohansal (2016).

Hypothesis 4: Board composition had a positive effect on MVE. In testing this hypothesis, it was found that board composition had a positive effect on MVE. There was no related research consistent with this finding, but the study of Darweesh (2015) had results that are inconsistent with this study.

Hypothesis 6: Chief executive officer/chair duality had a positive effect on MVE. In testing this hypothesis, it was found that chief executive officer/chair duality had an insignificant effect on MVE. This finding is consistent with that of Gupta and Nevalkan (2015), and Rostami, Rostami and Kohansal (2016).

Hypothesis 8: Board committee had a positive effect on MVE. In testing this hypothesis, it was found that board committee had an insignificant effect on MVE. There was no related research that was consistent with this finding, while the study of Darweesh (2015) had findings that are inconsistent with this study.

Hypothesis 10: Institutional shareholding had a positive effect on MVE. In testing this hypothesis, it was found that institutional shareholding had a positive effect on MVE. This finding is consistent with studies of Zaharia and Zaharia (2012), but was in contrast to studies of Rostami, Rostami and Kohansal (2016), and Akbari and Rahmani (2013).

Hypothesis 12: Shareholding of board members had a positive effect on MVE. In testing this hypothesis, it was found that shareholding of board members had a negative effect on MVE. There was no related research that was consistent with this finding, but the study of Darweesh (2015) had findings that are inconsistent with this study.

Hypothesis 14: Board remuneration had a positive effect on MVE. In testing this hypothesis, it was found that shareholding of board members had a positive effect on MVE. There was no related research that was consistent with this finding, but the study of Darweesh (2015) had findings that are inconsistent with this study.

These results can be summarized as follows: Board size, board composition, institutional shareholding and board remuneration had positive significant roles in improving MVE, which related to the positive significant relationships in that the increase in CG would result in greater MVE as well. These results are consistent with the research hypotheses and are in line with the findings of Gupta & Newalkar (2015), Kajanathan, (2012), Butt & Hasan, (2009), Makki, Abdul, & Lodhi, (2013) Elhaj, Muhamed & Ramli, (2015), Okiro, Aduda & Omoro, (2015), Rostami, Rostami & Kohansal, (2016). Shareholding of board members had a negative insignificant effect (Darweesh, 2015). These results are not consistent with the research hypotheses. This study also found that chief executive officer/chair duality and board committee had insignificant effects on MVE. These results are not consistent with the research hypotheses. However, in examining the effects of CG mechanisms, this study found the potential effect of CG mechanisms on the MVE that could support the introduction of CG measures to raise the level of the business empowerment through empirical evidence used in conducting research (Rouf & Abdur, 2011).

5.1.3 Research objective 3: To investigate whether or not CG affected MVE through financial leverage of Thai-listed companies in 2010-2014. This study found that CG affected MVE through financial leverage. The analysis with inferential statistics based on the research hypothesis is described below.

Hypothesis 15: CG had a positive effect on financial leverage and MVE. In testing this hypothesis, it was found that CG had an insignificant effect on financial leverage and MVE. There was no related research that was either consistent or

inconsistent with this finding. In other words, CG had an insignificant effect on MVE through insignificant financial leverage.

These results can be summarized in the following way: CG mechanisms affected the MVE through financial leverage of Thai-listed companies in 2010-2014. That is, CG mechanisms had positive and negative significant effects in improving financial leverage. Using the seven corporate variables/mechanisms, this study supports the CG principles that OECD recommends and has encouraged to be adopted as guidelines by which the business sector puts values of transparency, morality and ethics into practices, showing responsible management of the executives. Therefore, the research results are important guidelines in setting up CG policy (Darweesh, 2015).

Lastly, the results of this research support Agency Theory. According to this theory, the role of business ownership and management should be rewarded in the same direction due to the fact that business owners and investors are subject to investment risks, while executives or management have a risk of making decisions. However, both sides focus on the highest profit for their own gain, despite the problems of Agency Theory. This is in line with the findings of Shin-Ping and Hui-Ju (2011), stating that CG was a tool that could alleviate organizational problems, help manage the organization's efficiency, protect investors' rights and create wealth by taking the benefits of all stakeholders into account. So under both Agency Theory and Stakeholder Theory, the efficient and effective promotion of CG depends upon the responsibilities of the board of directors and management for decision making and implementing CG policy and strategies by creating a balance between business profitability and the best practice for the society as a whole, leading to the growth of the economy of the country (Vintila & Gherghina, 2012, Kumar & Singh, 2012).

5.2 Limitation of the Study

1. This study purposely chose three groups of industrial companies: Agro and Food Industry, Property and Construction, and Technology, and the dataset in this study covered the period of 2010-2014. These companies differed in terms of registered capital, administration system, and external environment. These were factors that made their performance differ, and which could affect the results in different ways.

2. This study used publicly-available secondary data under the rules and regulations of the SET. This was an empirical study using archival data. Different research methodologies might reveal different trends. A qualitative method such as using in-depth interviews should be considered.

5.3 Implications for Practice and Future Research

5.3.1 Implications

The results of this study reveal that CG mechanisms/variables had significant and insignificant direct and indirect effects on the MVE. This study used seven independent variables, one intervening variable, and one dependent variable to investigate the usefulness of CG mechanisms under related concepts, theories and previous research. As a result of the above study, it is important to promote the importance of good CG, especially for the related organizations, for four major reasons. Firstly, the efficient and effective implementation of good CG policy depends on the board's responsibility to establish a good relationship between the company and both its financial structure and MVE to be in accordance with the highest values of business morals and ethics in implementing the good CG policy both inside and outside the company. In other words, the responsibility of the board for policy implementation is the right way to promote good CG. Secondly, good CG policy can be applied efficiently and effectively in managing the organization. Thirdly, good CG policy can be used as a part of policy formulation for the sustainable management and development of business organizations for the purpose of gaining the trust and confidence of all stakeholders, providing effective criteria for the consideration of investment in the SET, and realizing the lack of knowledge about good CG. Finally, CG policy can be used as a guideline to formulate strategies and tactics for putting good CG into practice, both within and outside the organization, leading to the realization of the significant role that the SET plays with the highest responsibility for the interests of all investors and stakeholders of its listed companies.

Therefore, the results of this study support the convergence of profitability and social responsibility that affects all dimensions of change management in both business and government sectors. Demonstrating the influence of CG on the level of financial

leverage may be helpful in planning for the company's level of debt generated by business loans, especially when examining the impacts of CG on the MVE through the level of financial leverage decision-making for firm performance maximization. (Darweesh, 2015).

5.3.2 Future Research

This study found that CG of Thai-listed companies in 2010-2014 affected MVE through financial leverage. That is, the seven independent variables representing CG mechanisms (board size, board composition/non-executive directors, chief executive officer/chair duality, board committee, institutional shareholding, shareholding of board members and board remuneration), with financial leverage as an intervening variable, and the MVE as dependent variable, had direct and indirect influence on one another. This finding supports CG principles, in line with OECD recommendations, which should result in firm performance efficiency and the promotion of morality and ethics in society. Further research based on the results of this study are recommended as follows:

1. Future studies could expand the population and sample scope to incorporate companies, and small and medium enterprises, widely promoting the importance and the adoption of CG.

2. Future research may increase or change the collection of data from secondary sources to primary sources. This may have the effect of enhancing the potential of research and give it wider reach and access to effective governance mechanisms.

3. Variables in other categories of good CG should be studied to promote the development of modern CG, thereby leading to the development of CG systems for efficient and effective management and enhancing good business morals and ethics.

4. Future studies should measure the performance of financial markets and market values with other tools, such as value-added economics, increased cost of market value, and economic profit, among others. This may be helpful for investors and information management, thereby giving useful information for investors and for use as business management information for the satisfaction of all stakeholders.

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Appendix

Appendix 1 Summary of scholarly research related to corporate

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
I. Mohamed Darweesh (2015)	Correlations Between corporate Governance, Financial performance, and market value	Kingdom of Saudi Arabia's 116 non-financial firms, from 2010 to 2014	Secondary data (corporate governance and financial data) From: Companies' websites and Tadawul	CG: -board size -board independence -board committees -shareholding ownership structure -executive compensation	Corporate financial performance: -ROA -ROE market value measured by Tobin's q (market value of equity plus total book value of liabilities divided by total book value of assets)	Analysis: -Descriptive statistical analysis -Inferential statistics (linear relationship, standard multiple Regression and ANOVA)	Corporate Governance had a significant role in improving firm performance. That is, the findings of multiple regression tests revealed a statistically significant relationship between corporate governance mechanisms and both corporate financial and market value: -For the significant relationships, board size and executive compensation had significant relationships with financial performance measured by ROA and ROE. -For the negative or inverse relationships, board independence had inverse relationships with both ROA and ROE, while board size and board committees had inverse relationships with market value measured by Tobin's q. -For the non-significant relationships, board committees and ownership structure had insignificant relationships with financial performance, while board independence, ownership structure, and executive compensation had insignificant relationships with the market

Appendix 1 Summary of scholarly research related to corporate (Cont.)

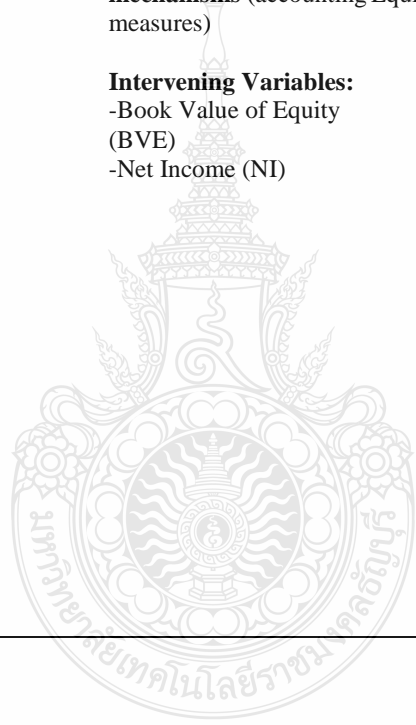
Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
2. Constantin Zaharia and Ioana Zaharia (2012) (University of Craiova, Romania)	Corporate Governance and the Market value of Firms	Current literature during the period of economic crisis	Secondary literature	CG: -ownership structure causing conflict of interests (board independence, institutional shareholders, etc.) -corporate nature -Economic crisis (having highly effect on increased leverage firms) -stock market development (product market competition pressing disciplines on profitability maximization to be enforced. -enforcement	Market value of firms or firm performance	Analysis of current literature review	The corporate governance measures/reforms had the effects on firms' market value or firms' performance in the long term.
3. Rouf, D., & Abdur, M. (2011)	The Financial Performance (Profitability) and Corporate Governance Disclosure in the Annual Reports of Listed Companies of Bangladesh	94 listed non-financial companies In Bangladesh in the 2007 by listed non-financial	Secondary data (annual reports) From: Dhaka stock exchanges seminar library	Financial performance: -profitability (measured by ROA) -ownership structure (higher management) -board audit committee -firm size	Corporate Governance Disclosure (CGD)	Analysis: -Descriptive statistical analysis -Multiple regression analysis -Estimation: Ordinary Least Square, OLS)	- Financial performances (profitability), measured by return on assets (ROA), and Board Audit Committee, were positively correlated with the level of Corporate Governance Disclosure (CGD) -Percentage of Equity Owned by the Insiders was negatively associated with the Corporate Governance Disclosure.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
4. Priyanka Aggarwal (2013)	Corporate Governance and Corporate Profitability: Are they Related? - A Study in Indian Context	34 Indian non-financial companies listed on S&P CNX Nifty 50 Index by three years from FY 2010-11 to FY 2012-13	Secondary data (governance, sustainability ratings, financial data) From: "CSRHub database", companies' websites, annual reports, financial statements and "moneycontrol.com"	Governance Ratings: -Board -Leadership Ethics -Transparency & Reporting	Profitability: -Return on Assets (ROA) -Return on Equity (ROE) -Return on Sales (ROS) -Return on Capital employed (ROCE) Control Variables: -size of firm (SIZE) -company's performance along employees (EMP) -community (COM) -environmental (ENV)	Analysis: -Descriptive statistical analysis -Multiple regression analysis -Correlation -Tests of significance (t-test and f-test)	Governance Rating had a positive but insignificant impact on corporate profitability of firm
				Profitability: -Return on Assets (ROA) -Return on Equity (ROE) -Return on Sales (ROS) -Return on Capital employed (ROCE) Control Variables: -size of firm (SIZE) -company's performance along employees (EMP) -community (COM) -environmental (ENV)	Governance Ratings: -Board -Leadership Ethics -Transparency & Reporting		Corporate profitability also had an insignificant positive impact on governance rating of firm.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
5. Tuanye Yu and Chucan Chen (2013)	Corporate Governance, Accounting Measures and Market Value	1773 samples of 423 manufacturing companies of China Stock Market in Shanghai and Shenzhen from 2007 to 2011	Secondary data	Corporate governance mechanisms (accounting measures) Intervening Variables: -Book Value of Equity (BVE) -Net Income (NI)	Market Value of Equity (MVE)	Analysis: -Descriptive statistical analysis -Partial Least Square (PSL) regression model (Excel, SPSS and SIMCA P)	-Most corporate governance mechanisms having significant relationships with BVE and NI were significantly related with MVE simultaneously, validating the transmission pathway hypothesis. That is, corporate governance did transmit market value through the three pathways: performance pathway, direct pathway and capital maintenance pathway. -The corporate mechanism whose significant directions were different among NI, BVE and MVE, could be explained from the perspective of basic features of the variance themselves, the efficiency of transmission pathway and influence direction.



Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
6. Waseem "mohammad yahya" Al-Haddad, Saleh Taher Alzurqan and Fares Jamil Al_Sufy (2011)	The Effect of Corporate Governance on the Performance of Jordanian Industrial Companies: An empirical study on Amman Stock Exchange	44 (out of 96) Jordanian industrial firms' governance of the Jordanian industrial firms listed at Amman Stock Exchange (ASE) from 2000-2007	Secondary data From: Companies' guide and financial reports	CG measured by factors measuring profitability: -Earnings per share (EPS) -Size (S), -Liquidity (LIQ) -Business risk (BR) -Dividends per share (DPS) -Return on assets (ROA) -Leverage (LV) Mediating variable: Corporate Governance	Firm performance	Analysis: -Descriptive statistical analysis -Regression Analysis	Overall, there was a direct positive relationship between corporate governance and corporate performance (measured by Price to Earnings per share, Market Price to Book Value ratios and the market price). In detail, there was a positive direct relationship between each of these variables/ factors: profitability (measured either by (ESP) or Return on assets (ROA), liquidity, Dividend per share (DPS), firm size (measured by Log TA).

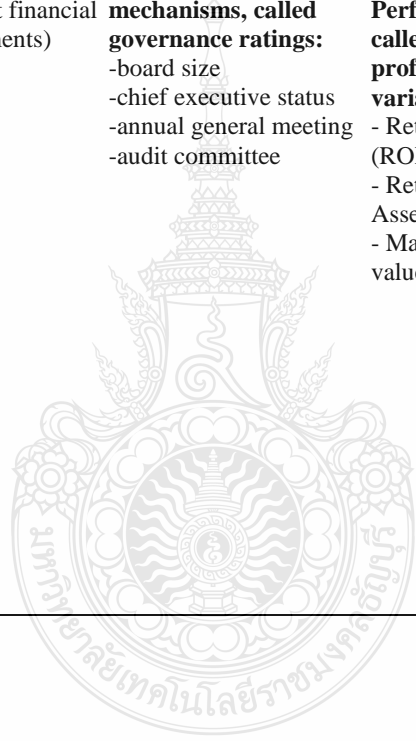


Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
7. Mohamed Abulgasem, A. Elhaj, Nurul Aini Muhamed and Nathasa Mazna Ramli (2015)	The Influence of Corporate Governance, Financial Ratios, and Sukuk Structure on Sukuk Rating	25 Malaysian publicly traded firms rated by Malaysian rating agencies of RAM and MARC equivalent to S&P over the 2008 and 2012 period	Secondary data From: Annually returns of all sukuk issuing firms listed in Bursa Malaysian after extracting from the security commission database.	Corporate governance: -Board Size -CEO duality -Board Independent Financial Ratios: -financial leverage (also known as debt ratio) -profitability -issue size sukuk structure: -Ijarah (assts) -Musharakah (project) -Murabahah (debts) -Istithmar (investment) -Al-Bai' Bithaman Ajil	Sukuk ratings (bond ratings of firms)	Analysis: -Descriptive statistical analysis -Ordered Logit Regression model - Spearman rank-order correlations	Overall, corporate governance, financial ratios, and sukuk structure of firms contributed positively to sukuk ratings (bond ratings of firms). In detail, corporate governance were positively related to sukuk rating. That is, chairman duality, board size and board independence were positively related to corporate governance in relation to sukuk ratings. Sukuk ratings were negatively related to financial leverages and positively related to profitability and issue size. Financial leverage was negatively related to financial measures and sukuk ratings relationship. The sukuk ijarah (assets) was positively related to sukuk structure and sukuk rating relationship.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
8. Monika Gupta and Gaurav Newalkar (2015)	Impact of Corporate Governance on the Profitability of a Firm: Empirical Study on National Stock Exchange	Audit Financial Statement of 30 Companies listed on the National Stock Exchange of India from 2010-2015	Secondary data (Audit financial statements)	Corporate Governance mechanisms, called governance ratings: -board size -chief executive status -annual general meeting -audit committee	Firm Performance, called corporate profitability variables: - Return on Equity (ROE) - Return on Asset (ROA) - Market Book value (M/B)	Analysis: -Pearson Co-Relation -Multiple Regression Analysis	Overall, corporate governance had positive significant impact on Return on Equity (ROE). In detail, ROE was positively co-related with CEO status, and Market Book Value was positively and significantly co-related with CEO status and Audit committee. Governance rating of company had a significant impact on ROE, but not on other profitability measures, i.e. ROA and Market Book Value.

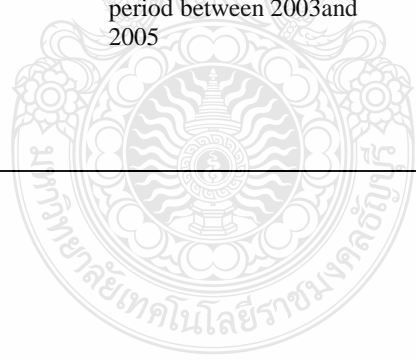


Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
9. Shoeyb rostami, Zeynab Rostami and Samin Kohansal (2016)	The Effect of Corporate Governance Components on Return on Assets and Stock Return of Companies Listed in Tehran Stock Exchange	Companies listed in Tehran Stock Exchange from 2006-2012 (about 469 firm-year observations--67 companies per year and a total of 469 year-company)	Secondary data	CG: -ownership concentration -institutional ownership -Board independence -Board size -CEO duality -CEO tenure	Financial Performance evaluation criteria: - return on assets - stock return Control Variables: -market value of the equity - the ratio of book value to market value of the equity	Analysis: Descriptive statistical analysis -Correlation -Multivariate regression models	-There was a significant positive relationship between ownership concentration, Board independence, CEO duality and CEO tenure with return on assets, but there was a significant negative relationship between institutional ownership and Board size and return on assets -There was a significant positive relationship between institutional ownership, Board Independence, CEO duality and CEO tenure with stock return, while there was a significant negative relationship between ownership concentration and
10. Steen Thomsen (2005)	Corporate governance as a determinant of corporate values	72 largest Danish firms responding to questionnaire out of 176 mailed (Government-owned companies and subsidiaries of foreign multinationals were not included in this study).	Secondary and primary data (Data set from questionnaire on corporate values [sent to CEOs] combined with accounting figures and other company data)	Corporate governance structure: -ownership structure -board composition -stakeholder bargaining power	Corporate values: -firm performance or profitability (ROE) - etc.	Analysis: Descriptive statistical analysis -Factor analysis and three-stage least-squares	-Ownership, board and stakeholder structure were found to influence corporate values. - There was no significant relationship between values and profitability when value determinants were taken into account.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
11. M. Alix Valenti, Rebecca Luce and Clifton Mayfield (2011)	The effects of Firm performance on corporate governance	90 (out of 120) companies listed National Association of Securities (NASDAQ) from 2000-2005	Secondary data on(a survey)	Firm performance as predicting variables: -Return on Assets (ROA) -Return on Equity (ROE) -Returns to shareholders -P/E ratios Moderating variables: -CEO power -percentage of outsiders on the board Control variables: -institutional ownership -firm size -average performance for the period between 2003and 2005	CG:	Analysis: -Descriptive statistics -Correlations - General linear regression analysis -Logit regression analysis	Firm performance was significantly related to a decrease in the overall number of directors and a decrease in the number of outside directors.



Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
12. Hee-Jae Cho and Vladimir Pucik(2005)	Relationship between Innovativeness, Quality, Growth, Profitability, and Market Value	More than 40 industries of the Fortune 1000 companies.	Secondary data (a survey) From: -Fortune Corporate Reputation Survey (FRS) -OMPULSTAT database.	-Innovativeness (products/services) -quality -financial performance (growth and profitability)	Financial performance: -Market Value	SEM Factor Analysis	Results of structural equation models indicated (1) that innovativeness mediated the relationship between quality and growth, (2) that quality mediated the relationship between innovativeness and profitability, (3) that both innovativeness and quality had mediation effects on market value, and (4) that both growth and profitability had mediation effects on market value. Thus, the results of this study supported the resource-based view of the firm, as they empirically demonstrated how a firm's intangible resources, in this case its capability to manage both innovativeness and product/ service quality, could be the source of value.



Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
13. Tarek I. Idomiaty (2002)	Dynamics of Firm's Market Value, Capital Structure and Risk	99 non-industrial firms with the highest market value listed on Egypt stock market during the 8-year period from 1994-2001	Secondary data	Firm's capital structure: - Debt ratio (total debt/ total assets) Control variables: (factors affecting firm's debt policy)	Firms' Market Value (MV)	Analysis: -Descriptive statistical analysis -Partial adjustment autoregressive models	The results indicated (1) that under the three levels of systematic risk (high, medium, and low), firms were concerned with adjusting market value to a target level; and (2) that a positive relationship existed between long, rather than short, term debt and market value, which supports the relevance theory of capital structure, thus indicating a financial agency-signaling effects.

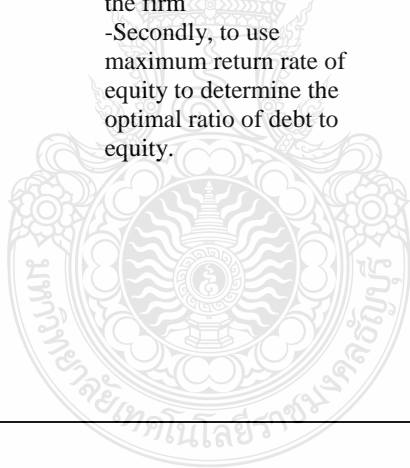


Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
14. Lilian Luvembe, Mungai John Njangiru and Eddie Simiyu Mungami (2014)	Effect of Dividend Payout on Market Value of Listed Banks in Kenya	10 listed banking companies in Kenya for the period between 2006 and 2010	Both secondary and primary data (a census survey and interviewing bank managers) From: -Nairobi Security Exchange -Interviewing senior financial officials	-capital structure -corporate earnings -dividend payout ratio -capital market investments	Market Value of a Firm	-Both descriptive and inferential statistics (Regression Analysis) with the aid of SPSS software -Content analysis for qualitative analysis.	Overall, there was a significant and positive relationship between market value and capital structure, corporate earnings, dividend payout ratio and capital market investments. In detail, this study found that there was a relationship between capital structure and market value, implying that ownership concentration had an impact on dividend payments; that corporate earnings had a positive effect on market value, implying that earnings determined availability of profits to pay dividends; and that there was positive and significant relationship between dividend payout ratio and market value, implying that dividend payout ratio affected firm market

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
15. Chao Chiung Ting (2012)— Michigan State University, USA	Market Value of the Firm, Market Value of Equity, Return Rate on Capital and the Optimal Capital Structure	A comparison study of about maximization literature for the purpose of making a financial plan for investment	Secondary	How to make a financial plan for investment : -Firstly, to determine the optimal amount of capital i.e. optimal size of the firm—When capital is given, maximum return rate on capital assures the maximization of gross profit and market value of the firm -Secondly, to use maximum return rate of equity to determine the optimal ratio of debt to equity.	Maximization (pursued by investment plan): - Maximum return rate on capital -Maximum return rate on equity	To indicate what the primary goal for a business was in making a financial plan for investment, using a mathematical Model based on optimal control theory and derived from comparison study about maximization	The results of this study found that investment plan pursued maximum return rate on capital and maximum return rate on equity simultaneously due to the findings: (1) Maximum return rate on capital was the primary goal for firms because maximum return rate on capital guaranteed efficiency. Thus, maximum profit, maximum market value of the firm, maximum value of equity and maximum return rate on equity were inappropriate to be the primary goal. (2) Because gross profit was independent of capital structure, capital structure just distributed return on capital into equity and debt (i.e., maximum return rate on equity determined capital structure). So the maximum return rate on equity was the secondary goal that the firm pursued.



Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
16. Joshua Livnat and Dan Segal (2016)	The Calculation of Earnings Per Share and Market Value of Equity: Should Common Stock Equivalents Be Included?	96 industrial firms extracted from the COMPUSTAT Annual Industrial and Research Files for the years 1986-1996.	Secondary data (financial report)	Common stock equivalents (CSE): -convertible bonds -convertible preferred stocks -stock options and warrants -contingent shares -etc.	Market value of equity	Estimation analysis by using Ohlson's (1995) valuation model (Examination of the convergence of market value of equity and accounting common stock equivalents [CSE])	(3) That is, this study stated clearly about how to make a financial plan or investment plan: firstly, to determine the optimal amount of capital (i.e., optimal size of the firm) to make maximum return rate on capital assure maximum gross profit and maximum market value of the firm, resulting in efficiency; secondly, to use maximum return rate of equity to determine the maximum ratio of debt to equity. The market value of equity and the accounting CSE converged for firms with high levels of potential dilution due to CSE, but not for low levels of potential dilution (below 5-6%).

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
17. Kennedy Okiro, Josiah Aduda and Nixon Omoro (2015)	The effect of Corporate Governance and Capital Structure on Performance of Firms Listed at The East African Community Securities Exchange	56 companies (out of 98) listed at the East African Securities Exchange (Nairobi Securities Exchange, Uganda Securities Exchange, Dar es Salaam Stock Exchange and Rawanda Stock Exchange) and having full financial statements from 2009 to 2013	secondary data (financial statements--a census survey using CGI index and using survey questions constructed using information obtained from the best code of practice of CG from the regulatory authorities in the EAC exchange)	CG: -Board structure and composition -Ownership and Shareholding -Transparency, Disclosures and Auditing -Board remuneration -Corporate ethics Intervening Variable, capital structure: -Firm Leverage	Firm Performance: -ROA Book values	-Descriptive statistics (mean, standard deviation, skewness, kurtosis, minimum and maximum) -Multiple regression analyses	-There was a significant positive relationship between corporate governance and firm performance. -There was a positive significant intervening effect of capital structure (leverage) on the relationship between corporate governance and firm performance. In sum, from a theoretical perspective, the findings of this study not only explained how corporate governance affected firm performance, but also uncovered the importance of capital structure (leverage) in corporate governance system.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
18. Monther Soliman Jaradat (2015)	Corporate Governance Practices and Capital Structure: A study with Special Reference to Board size, Board gender, Outside Director and CEO Duality	129 Jordanian firms (out of 645 firms) except the financial sector listed on an Amman stock exchange during the period 2009-2013	Secondary data (Yearly annual reports downloaded from Amman stock exchange of the sampled firms included the financial and nonfinancial reports.)	CG: -board size -board gender -outside director -CEO duality Control variables: - Managerial ownership -firm size -profitability -tangibility -returns on assets	Capital structure (measured by the leverage)	Analysis: -Descriptive statistical analysis -Multiple regression analysis (Ordinary Least Square, OLS regression)	-Board size, board diversity and outside directors were positively related to the leverage, while CEO duality had no significant relationship with leverage. -The control variables like Managerial ownership, Profitability and return on Asset were negatively and significantly related to leverage, while firm size was positively related to the leverage.
19. Rajendran Kajanathan (2012)	Effect of Corporate Governance on Capital Structure: Case of the Srilankan Listed Manufacturing Companies	28 manufacturing companies listed in the Colombo Stock Exchange for the period 2009 and 2010	Secondary data From: -websites, -annual reports -Colombo Stock Exchange publication	Board structure (as CG): -leadership style -board committee -board size -board meeting -board composition	Capital structure (indicating the efficiency of financial decisions): -Debt ratio	Analysis: -Cross sectional analysis -Descriptive statistics -Regression analysis	-Corporate governance practices had 34% impact on capital structure -Among the corporate governance variables board committee had a significant effect on firms' capital structure. *The researcher recommended that further studies be able to consider other corporate governance variables and be conducted in both mature and emerging markets to be helpful in terms of international comparability.


Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
20. Hsien-Chang Kuo, Lie-Huey Wang and Hui-Wen Liu (2012)	Corporate Governance and Capital Structure: Evidence from Taiwan SMEs	145 small and medium-sized enterprises (SMEs) listed on the Taiwan Stock Exchange in the manufacturing, construction, mining, or extractive industries and with a staff of less than 200 people over the period 2000-2007.	Secondary data From: -Taiwan Economic Journal Database (TEJ)	Internal CG variables: Divergence ratio: (the degree of divergence between -(family) earning, -(family) shareholdings, -(family) director seats, -ownership structure -the board of director structure -the pledged shares ratio of directors or supervisors. Control variables (firm characteristic variables): - firm size - industry categories	Board capital structure: -debt ratio -long-term debt ratio -short- term debt ratio	Analysis: -Descriptive Statistics analysis -Panel data regression analysis	-When there was a high divergence between shareholding and director seats, conventional industries preferred to use long-term debt financing, while high-tech industries preferred the opposite -For large firms, block-holders and independent directors preferred lower long-term debt financing, but family shareholders and managerial directors preferred lower short-term debt financing -Family shareholding ratio and family directors were the two important factors affecting the SMEs' debt ratio; that is, the higher the family shareholding ratio was, the more short-term debt financing would be. (However, family director could reduce the incidence of using short-term debt to support long-term financing needs.) * Further research could include other director characteristic variables, such as education and experience of directors and their social and economic status to test their influences on the firm capital structure.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

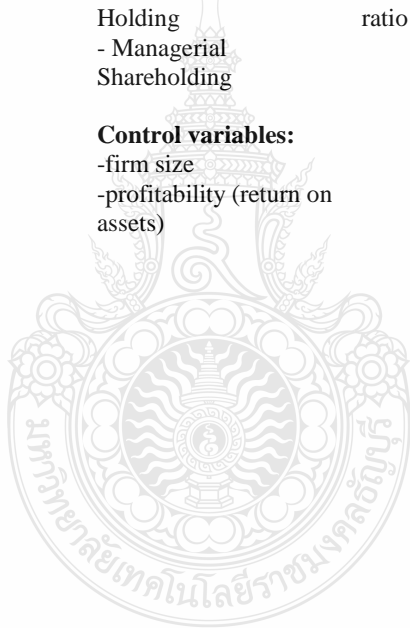
Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
21. Noriza Mohd Saad (2010)	Corporate Governance Compliance and the Effects to Capital Structure in Malaysia	126 (out of 556) listed public companies on the Main Board of the Bursa Malaysia in consumer, industrial, trading/ services, and plantations over a period of 1998 to 2006	Secondary data (a survey on the analysis of companies' annual report and Thompson DataStream)	Corporate Governance (CG): -Dual Leadership -Board Size -Board Meeting.	Capital structure: -debt ratio (DR) -debt to equity (D/E) -interest coverage (IC)	Multiple regression analysis	Most of the companies complied well with the code: -There was a significant association of CG to the firm's capital structure. -Several companies did not disclose their number of directors and board meeting in their annual as reports to comply with the Malaysian Code on Corporate
22. A.Ajanthan (2013)	Impact of Corporate Governance Practices on Firm Capital Structure and Profitability: A Study of Selected Hotels and Restaurant Companies in Sri Lanka	18 companies of listed Hotels & Restaurant companies in Colombo Stock Exchange (CSE) during the 2007-2012	Secondary data (income statements, financial position, scholarly articles from academic journals and relevant textbooks)	CG: -Board Size (BS) -Board Composition (BC) -CEO Duality (CEOD)	Capital structure ratios: -Debt-to-Equity (DER) -Debt Ratio (DR) Profitability: -Return on Equity (ROE) -Return on Assets (ROA)	Correlation and multiple regression analysis with SPSS 16.0 Version.	Overall, there was a mix relationship (positive and negative) among corporate governance practices, firm profitability and capital structure. Besides, none of variables had a significant relationship with capital structure and profitability. In detail: -There was a positive relationship between BS, BC, CEOD, ROE, ROA and DER, whereas a negative relationship between BS, BID and DR. - Besides, CEOD had a positive relationship with DR.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
23. Hamid Reza Vakilifard, Mahdi Safari Gerayli, Abolfazl Momeni Yanesari and Ali Reza Ma'atoofi (2011)	Effect of Corporate Governance on Capital Structure: Case of the Iranian Listed Firms	110 non-financial firms (out of 660 qualified ones) listed on Tehran's stock exchange during the period of 2005 until 2010	Secondary data	CG: -Board size, -CEO duality -Proportion of outside directors	Capital Structure: -Debt ratio	Analysis: -Descriptive statistical analysis -A linear-multiple regression analysis	-There was a significantly negative relationship between board size and debt ratio, indicating that firms having smaller board size due to weaker corporate governance had to use more amount of debt to reduce agency problems. -There was a significant and positive relationship between CEO duality and capital structure, indicating that firms in which the duties of chairman of the board and CEO were very well separated from each other because of having a higher level of corporate governance and less amount of agency problems, the amount of using debt decreased. -However, no significant relationship was found between 'proportion of outside directors and "capital structure"'. 

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
24. Arshad Hasan and Safdar Ali Butt (2009)	Impact of Ownership Structure and Corporate Governance on Capital Structure of Pakistani Listed Companies	59 (out of 177) randomly selected Pakistani non-financial companies listed on Karachi Stock Exchange for the period 7/2002 to 6/2005 which started just after the promulgation of Code of Corporate Governance in Pakistan,	Secondary data	CG: - Board size - Board composition - CEO/Chair Duality - Institutional Share Holding - Managerial Shareholding Control variables: -firm size -profitability (return on assets)	capital structure (Leverage preferred in this study): - debt to equity ratio	Multivariate regression analysis under fixed effect model approach	-Board size and managerial shareholding was significantly negatively correlated with debt to equity ratio; however, corporate's financial behavior was not found significantly influenced by CEO/Chair duality and the presence of non-executive directors on the board. However, CEO/Chair duality and manager ownership were negatively correlated with profitability
25. Jeffery Heinfeldt and Richard Curcio (1997) --USA (Hilbert College; Ken State University							The degree of women's advancement, either in the aggregate or for specific industries, seemed to have no significant effect on wealth enhancement. -In total, low and average degrees of minority advancement tended to have a significant, positive impact on shareholder value. -Pension expense as a percentage of net income had no significant effect net income had no significant effect on financial performance in aggregate.



Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
26. Charles W.L. Hill and Thomas M. Jones (1992)— University of Washington	Stakeholder-Agency Theory	Constructing a paradigm, based on literature for agency theory and stakeholder theory	Secondary on constructing the paradigm	Resultant paradigm based on agency-stakeholder theory	To explain the following: (1) Certain aspects of a firm’s strategic behavior (2) Structure of management-stakeholder contracts (3) Form taken by the institutional structures monitoring and enforcing contracts between managers and other stakeholders	Doing so in 3 steps: (1) Taking agency and stakeholder perspective theory (2) Drawing on the literature of business and society, economic, finance, and organizational theory (3) Joining together notions of power and efficiency within the same framework so as to increase the predictive power of the paradigm when compared to earlier “theories of the firm”	-Unlike earlier theories, the paradigm explicitly focused on the causes of conflict between manager and stakeholders following the emergence of disequilibrium conditions. -Besides, stakeholder-agency theory also pointed the way towards a theory of the adjustment mechanisms that realigned management and stakeholder interests following disruption.

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
27. Kathleen M. Eisenhardt (1989)Stanford University	Agency Theory: An Assessment and Review	Assessment and review agency theory	Secondary data	To review agency theory, its contributions to organization theory, and the extant empirical work	(4) Evolutionary process shaping both management-stakeholder contracts and the institutional structures policing those contracts	Offered Unique insight into Principal-agent issues facing Firm: - Beginning with two extreme positions on agency theory,	-Unlike earlier theories, the paradigm explicitly focused on the causes of conflict between manager and stakeholders following the emergence of disequilibrium conditions. -Besides, stakeholder-agency theory also pointed the way towards a theory of the adjustment mechanisms that realigned management and stakeholder interests following disruption -This study concluded that agency theory offered unique insight into information systems, outcome uncertainty, incentives, and risk and that agency theory was an empirically valid perspective,

Appendix 1 Summary of scholarly research related to corporate (Cont.)

Author(s) and year	Topic	Data and sample	Method (s)	Independent Variable (s)	dependent Variable (s)	Statistics	Results
						<p>concluding that agency theory is an important, yet controversial, theory. -Reviewing to clarify some of the confusion surrounding agency theory and to lead organizational scholars to use agency theory in their study of the broad range of principal-agent issues facing firms. Unique insight into information systems, outcome uncertainty, incentives, and risk An empirically valid perspective, particularly when coupled with complementary perspectives.</p>	<p>particularly when coupled with complementary perspectives. -To incorporate an agency perspective in studies of the many problems having a cooperative structure was recommended by this study.</p>



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Declaration

I hereby declare that this work is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another party in fulfilment, partial or otherwise, of any other degree or diploma at another university or institute, except where such acknowledgement is made in the text.

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Siriwan Wongcharoen

