VALUE RELEVANCE OF CORPORATE GOVERNANCE ON FIRM VALUE IN THE COMPREHENSIVE INCOME CONTEXT

WAEWDAO PROMSEN

A DISSERTATION SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION

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ABSTRACT

This study explored the value relevance of corporate governance (CG) mechanisms on firm value as representative of emerging market corporate governance standards. Unlike previous studies that devised their own criteria measuring CG mechanisms, this study successfully introduced corporate governance proxies that were publicly available as corporate governance proxies. Also, this study extended prior studies by introducing the new context of comprehensive income.

This study further introduced hierarchical regression analysis to investigate the significant impact of corporate governance on firm value. Using an emerging market – the Stock Exchange of Thailand dataset during 2011-2012 the analysis shows that corporate governance significantly impacts firm value. It was found that in both firms with and without other comprehensive income (OCI), and the control variables including total assets, leverage ratio and earnings before interest and tax were significantly associated with firm value. For corporate governance mechanisms, the right of shareholders in terms of cash dividend payments has the most statistical significance on firm value.

In addition, the right of shareholders in terms of shareholder participation in Annual General Meetings (AGM) and the equitable treatment of shareholders in terms of voting rights were more likely to add firm value than other corporate governance proxies. Finally, this study could not find any evidence that firms use other comprehensive income to increase their firm value.

Keywords: Tobin's Q, CG, OCI, dividend payment, Annual General Meeting

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CHAPTER 1
INTRODUCTION

1.1 Background and Statement of the Problem

The ultimate goal of an organization is to create firm value with a firm taking into account the long-term impact of managerial decisions on profits. Bay (2006) reviewed prior studies and concluded that this value depends on various factors such as size, financial operation results, and the economy among others. As a result, firms have tended to look for vehicles to increase their value in various ways. Over the past two decades, corporate governance has been under greater focus of attention in terms of increasing firm value. Recent research (i.e. Samaha, et al. 2012 and Chou, et al. 2013) continues to underline good corporate governance as guaranteeing firm success and economic growth, lowering costs of capital, and impacting positively on share prices. Furthermore, corporate governance can minimize wastage, corruption, risk and mismanagement. However, apart from increasing firm value, when corporate governance fails, it can lead to the manipulation of corporate financial statements. Prior studies showed that one of the most important functions of corporate governance is to ensure the quality of the financial reporting processes (Cohen et al. 2004). Further to this, Bushman and Smith (2001) suggested that, in addition to financial information, firms should help instill confidence among investors by presenting control mechanisms using corporate governance themes and also alleviate the agency problem.

However, rather than using gradual mechanisms like corporate governance mechanisms to create firm value, firms tend to manipulate their financial reporting using what is termed “short-cut methods”. One area used to “cook the books” is that of other comprehensive income in the statement of comprehensive income. Comprehensive income is the change in equity (net assets) of a firm pending a period from transactions and other events and situations arising from non-owner sources. It contains all the changes in equity during a given period, except those resulting from investments by owners and distributions to owners. In addition, it is the sum of the net income and other items that are often adjusted in the income statement because they have not been realized, including items like unrealized holding gain or loss from available for sale securities, foreign currency translation adjustment, and pension liability in the excess of unrecognized prior service

costs (Dhaliwal et al. 1999). Hoogervorst (2012) argued that the difference between the net result and the comprehensive result through the notion "other comprehensive income items" is not yet clearly defined. The calculation of comprehensive income in compliance with the requirements of IAS 1 Presentation of Financial Statements is difficult, exposing the financial statements to possible manipulation. Moreover, the concept of comprehensive income does not eliminate the concept of net result taking into account that "other comprehensive income items" are reclassified or recycled in the profit and loss account profit as they are realized at a later date (Firescu, 2015). As a result, this study aims to investigate the value relevance of corporate governance mechanism on firm value. In addition, this study extends upon previous studies by comparing firms in different contexts: with comprehensive income and firms with other comprehensive income. It aims to investigate which firms could create higher firm value using corporate governance or other comprehensive income in an emerging market, with the Stock Exchange of Thailand as the dataset.

1.2 Objectives of the Study

1. To scrutinize the relationship between corporate governance mechanisms and firm value of listed companies with other comprehensive income.

2. To scrutinize the relationship between corporate governance mechanisms and firm value of listed companies without other comprehensive income.

1.3 Research Questions and Hypotheses

The development of research questions and the subsequent research hypotheses of this paper are as follows:

Research Question 1: In firms with other comprehensive income, what are the corporate governance mechanisms most related to firm value? From this, the following hypotheses will be tested:

Research Hypotheses:

H_1: Firms with control variables (SIZE, LEV, EBIT) are related to firm value.

H_2: Firms with specific rights of shareholders are related to firm value.

H_3: Firms with specific equitable treatment of shareholders are related to firm value.

H_4: Firms with specific roles of stakeholders are related to firm value.

H_5: Firms with specific disclosure and transparency are related to firm value.

H_6: Firms with specific responsibilities of the board are related to firm value.

Research Question 2: In firms without other comprehensive income, what are the corporate governance mechanisms that most relate to firm value? From this, the following hypotheses will be tested:

Research Hypotheses:

H_7: Firms with control variables (SIZE, LEV, EBIT) are related to firm value.

H_8: Firms with specific rights of shareholders are related to firm value.

H_9: Firms with specific equitable treatment of shareholders are related to firm value.

H_{10}: Firms with specific role of stakeholders are related to firm value.

H_{11}: Firms with specific disclosure and transparency are related to firm value.

H_{12}: Firms with specific responsibilities of the board are related to firm value.

1.4 Conceptual Framework

The conceptual framework in this study is presented in Figure 1.1:

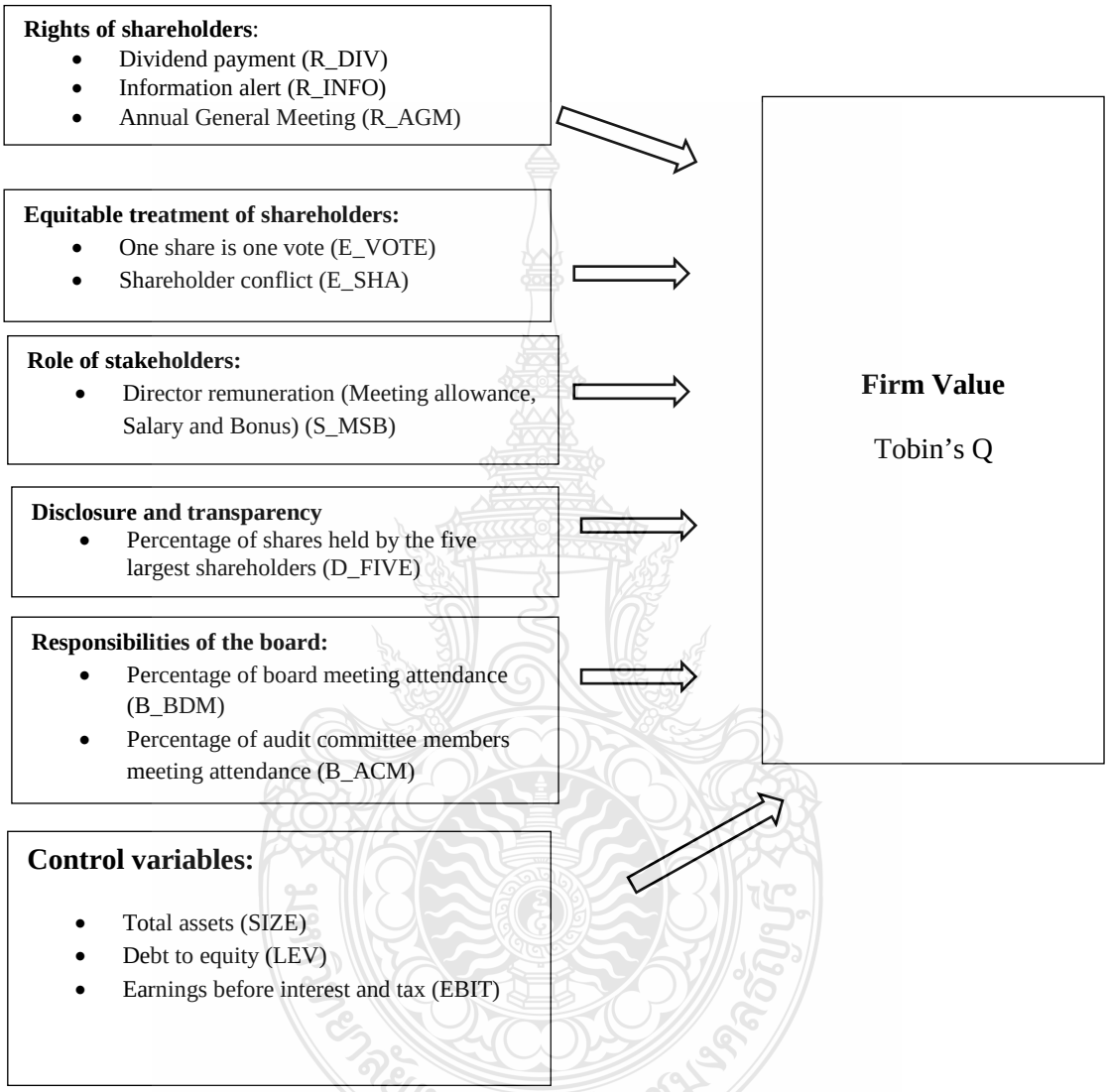


Figure 1.1 Conceptual Framework

1.5 Definition of Terms

1. Value relevance refers to the ability of financial statement information to capture and summarize information that determines the firm's value.

2. Corporate governance is defined by the Organization for Economic Cooperation and Development (OECD) as a system with the processes and structure of relationships between the board of directors of a company, its management team, its shareholders and other stakeholders in leading the company's direction, competitiveness, sustained growth and high enterprise valuation over the long term for stakeholders. The Stock Exchange of Thailand (SET) has more recently adopted the whole idea of OECD for Thai listed companies. The components of corporate governance are as follows:

2.1 The rights of shareholders: Shareholders own the company, controlling it by appointing the board of directors to act as their representatives. Shareholders are eligible to make decisions on any significant corporate changes. Therefore, the company should encourage shareholders to exercise their rights.

2.2 The equitable treatment of shareholders: All shareholders, including those with management positions, non-executive shareholders and foreign shareholders should be treated fairly and equally. The rights of minority shareholders which have been violated should be redressed. Votes should be cast by custodians or nominees in a manner agreed upon with the beneficial owner of the shares. Impediments to cross-border voting should be eliminated. Insider trading and abusive self-dealing should be prohibited. Members of the board and key executives should be required to disclose to the board whether they, directly, indirectly or on behalf of third parties, have a material interest in any transaction or matter directly affecting the corporation.

2.3 The role of stakeholders: The corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises. The rights of stakeholders that are established by law or through mutual agreements are to be respected. Where stakeholder interests are protected by law, stakeholders should have

the opportunity to obtain effective redress for any violation of their rights. Performance-enhancing mechanisms for employee participation should be permitted to develop. Where stakeholders participate in the corporate governance process, they should have access to relevant, sufficient and reliable information on a timely and regular basis. Stakeholders, consisting of individual employees and their representative bodies, should be able to freely communicate their concerns about illegal or unethical practices to the board and their rights should not be compromised in doing so. In addition, the corporate governance framework should be complemented by an effective and efficient insolvency framework and by effective enforcement of creditor rights**.**

2.4 Disclosure and transparency: The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company. Disclosure should include, but not be limited to, material information on: 1) the financial and operating results of the company, 2) company objectives, 3) major share ownership and voting rights, 4) a remuneration policy for members of the board and key executives, and information about board members, including their qualifications, the selection process, other company directorships and whether they are regarded as independent by the board, 5) issues regarding employees and other stakeholders, and 6) governance structure and policies, in particular, the content of any corporate governance code or policy and the process by which it is implemented. Furthermore, the corporate governance framework should be complemented by an effective approach that addresses and promotes the provision of analysis or advice by analysts, brokers, rating agencies and others that is relevant to decisions by investors, free from material conflicts of interest that might compromise the integrity of their analysis or advice.

2.5 The responsibilities of the board: The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders. Board members should act on a fully informed basis, in good faith, with due diligence and care, and in the best interests of the company and the shareholders. Where board decisions may affect different shareholder groups differently, the board

should treat all shareholders fairly. The board should consider assigning a sufficient number of non-executive board members capable of exercising independent judgment to tasks where there is a potential for a conflict of interest, and should be able to commit themselves effectively to their responsibilities.

3. Firm value refers to the value that would have been, when a firm wants to exchange assets or merger and acquisition, and the result of firm performance. In this study firm value is measured using Tobin's Q model.

4. Statement of Comprehensive Income refers to a financial reporting pattern that shows the results of the operation of business issue by TAS 1.

5. Thai Accounting Standards refers to a principle that guides and standardizes Thai accounting practice.

6. International Financial Reporting Standards refers to a set of accounting standards, used worldwide, for how different kinds of transactions should be recorded in balance sheets and general ledgers. The Accounting Standards Board publishes and updates International Financial Reporting Standards in an effort to standardize accepted accounting practices across international boundaries.

1.6 Limitations of the Study

This study aims to analyze the firm value of firms with and without comprehensive income by focusing on listed companies on the Stock Exchange of Thailand throughout their corporate governance during the financial years of 2011-2012. These years may not represent the firm characteristics regarding their environment. In addition, proxies representing the corporate governance mechanism may vary depending on the firms' environment during those years.

1.7 Contributions of the Study

First, this study attempts to introduce all five possible proxies representing the corporate governance mechanisms as recommended by OECD principles. In addition, rather than using a judgmental checklist measurement, only publicly available data were

used as corporate governance proxies. This was to reduce the subjectivity of data collection.

Secondly, this study investigates corporate governance in the comprehensive income context. By classifying firms with other comprehensive income and firms without comprehensive income, the study initially introduced a new data environment. It is believed that corporate governance mechanisms in these firms are somewhat different because there are substantial differences among them in applying corporate governance mechanisms. However, the results are insignificantly different among firms with other comprehensive income and firms without comprehensive income.

Thirdly, this study successfully introduces the new context of comprehensive income. The most influential factor in the effect of the corporate governance mechanism upon firm value was cash dividend payment both in firms with other comprehensive income and firms without other comprehensive income.

Lastly, the analysis compares the results of software packages between STATA and SPSS for multiple regression analysis. The difference among the results of the analysis was found to be insignificant.

1.8 Research Methodology

The study examines the association between corporate governance mechanisms and the firm value of Thai listed companies during 2011-2012. The study begins with the research design, population and sample, data collection, variables, and analytical measurement. The analytical measurement is divided into the statistical procedures of descriptive statistic and hierarchical multiple regression analyses. Also, the analysis attempts to compare the outcomes of two software packages: STATA and SPSS.

1.9 Chapters in this Study

Chapter 1: Introduction

Chapter 2: Literature review

Chapter 3: Research methodology

Chapter 4: Research results

Chapter 5: Discussion and recommendations

CHAPTER 2
LITERATURE REVIEW

The main objective of this research is to investigate the relationship between corporate governance mechanisms and the firm value of listed companies by comparing firms with other comprehensive income and firms without other comprehensive income within the emerging market of the Stock Exchange of Thailand. This chapter defines terms and provides an overview of prior literature. It explains the related topics including comprehensive income, firm value, corporate governance, and value relevance of financial information (i.e. the control variables) in this study. In the first section, comprehensive income is defined as well as prior research. In the second section, firm value is specified, followed by types of firm value as well as prior studies. The third section includes the definition of corporate governance, the components of corporate governance, corporate governance mechanisms, as well as prior research. Lastly, the value relevance of financial information is defined as well as prior studies. In the final section, the conclusion of this study will be provided.

2.1 Comprehensive Income

In financial reporting, income is divided in a multitude of ways, and firms have some leeway on when to recognize and report their earnings. However, accounting standards setters give a broad view of present income covering comprehensive income and other comprehensive income. Yen et al. (2007) stated that comprehensive income is used to measure the change in an owner's interest in a business. This is done by charting the change in a company's net assets from non-owner sources, including all income and expenses that usually bypass the income statement because they have not yet been realized. Comprehensive income is normally listed in a separate statement than income, which does include changes in owner equity. Comprehensive income is calculated by adding net income, the sum of recognized revenues minus the sum of recognized expenses, to other comprehensive income. Other comprehensive income is a catch-all for all of the items that cannot be included in typical profit and loss

calculations. Examples of the types of changes captured by other comprehensive income include:

- Changes in revaluation surplus where the revaluation method is used under IAS 16 *Property, Plant and Equipment* and IAS 38 *Intangible Assets.*
- Re-measurements of a net defined benefit liability or asset recognized in accordance with IAS 19 *Employee Benefits.* (2011)
- Exchange differences from translating functional currencies into presentation currency in accordance with IAS 21 *The Effects of Changes in Foreign Exchange Rates.*
- Gains and losses on re-measuring available-for-sale financial assets in accordance with IAS 39 *Financial Instruments: Recognition and Measurement.*
- The effective portion of gains and losses on hedging instruments in a cash flow hedge under IAS 39 or IFRS 9 *Financial Instruments.*
- Gains and losses on re-measuring an investment in equity instruments where the entity has elected to present them in other comprehensive income in accordance with IFRS 9.
- The effects of changes in the credit risk of a financial liability designated as at fair value through profit and loss under IFRS 9.

Prior research on comprehensive income has been explored for quite some time. Initially, from the point of view of economic research, the format of the presentation of accounting information is irrelevant as long as the same items are included. Prior accounting research does show that the presentation format might influence investor decisions (Hirst and Hopkins, 1999; Maines and McDaniel 2000). Later, studies were carried out to prove that comprehensive income increases the value relevance of financial information. However, prior research provides mixed evidence of the value relevance of other comprehensive income. The results of previous research can be divided into two groups. The first group found very little evidence supporting

the value relevance or incremental usefulness of comprehensive income over other measures of net income and operating income (Dhaliwal et al. 1999; Cahan et al. 2000; Bamber et al. 2007; Goncharov and Hodgson, 2008). Dhaliwal et al. (1999) suggested that among the components of other comprehensive income, only the marketable securities adjustment improves the association between income and returns. Cahan et al. (2000) reached similar conclusions from their study on the value relevance of comprehensive income in New Zealand during 1992-1997. Bamber et al. (2007) argued that managers believe reporting comprehensive income in the more salient performance statement will lead to financial statement users perceiving the firm's performance as more volatile and therefore have a negative impact on stock prices and evaluations of managerial performance. The results show that when CEOs have more powerful equity-based incentives or less secure positions, the firm is less likely to report comprehensive income in the more salient performance statement and is more likely to relegate it to the statement of changes in equity. Furthermore, managers with less job security on average act in their own interests when making reporting choices to reduce transparency. Equity-based compensation increases incentives for earnings management as equity incentives affect other accounting choices and the decision to disclose comprehensive income in a more or less salient location. Managers stated concerns that investors may overact to other comprehensive income items that are saliently reported. Goncharov and Hodgson (2008) also found that net income is better than comprehensive income in terms of value relevance and ability to predict the future cash flows from operations of firms from 16 European countries.

The second group of researchers found that other comprehensive income is value relevant (Choi and Zang, 2006; Mitra and Hossian, 2009; Jones and Smith, 2011; Lee and Park, 2013; YousfiNejd et al. 2014). Choi and Zang (2006) examined the association of comprehensive income with subsequent period net income as well as earnings forecasts. The results show that comprehensive income is incrementally useful in predicting subsequent period changes in net income. Comprehensive income is associated with analysts' earnings forecast revisions and forecast errors. Other comprehensive income components are associated with the forecast revisions and forecast errors of subsequent periods. When net income is greater than comprehensive

income, analysts face greater difficulty in predicting future earnings. An asymmetry exists among the analysts as to using comprehensive income more in the presence of unrecognized losses, yet the revised forecasts are still related to errors in the forecasts. Mitra and Hossian (2009) examined the value relevance of pension transition adjustments and other comprehensive income components in the initial adoption year of the Statement of Financial Accounting Standards (SFAS) 158 (Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans). The results indicate that there is a negative relationship between both the level and change in stock returns and the magnitude of pension transition adjustments. Also, earning measures and some other comprehensive income components were found to be significantly associated with stock returns. Jones and Smith's (2011) empirical study compared other comprehensive income and special items gains and losses using a model that jointly estimated value relevance, predictive value and persistence. The results revealed that both special items and other comprehensive income gains and losses are value relevant, but special items gains and losses exhibit zero persistence (i.e., are transitory), while the other comprehensive income gains and losses exhibit negative persistence (i.e., partially reverse over time). Furthermore, special gains and losses have strong predictive value for the forecasting of future net income and future cash flows, whereas other comprehensive income gains and losses have weaker predictive value. Lee and Park (2013) further investigated the value relevance of other comprehensive income by examining the role of audit quality. They investigated whether the other comprehensive income of the Big 4 clients is more value-relevant than that of non-Big 4 clients. The results showed that other comprehensive income audited by a Big 4 auditor has more incremental information content over earnings compared to other comprehensive income audited by a non-Big 4 auditor. The results indicate that the difference is stronger for other comprehensive income components of a more subjective nature. YousfiNejd et al. (2014) examined the association between share price and changes in the fair value components of other comprehensive income in Malaysia. The results provided support that changes in the fair value components of other comprehensive income are value relevant.

Previous studies seemed to have not paid attention to observing corporate governance in the comprehensive income context. This study aims to investigate this research gap by analyzing the relationship between the corporate governance mechanisms and firm value of listed companies by comparing firms with other comprehensive income and firms without other comprehensive income using an emerging market – that of the Stock Exchange of Thailand.

2.2 Firm Value

Studies have investigated firm value for quite some time. In general, firm value is a measure of the actual economic value of a company at any given moment. Firm value measures what it would actually cost to purchase the entire company. Many investors use the current value of all of a company's outstanding shares as a proxy for its economic value. In other words, firm value is an economic measure reflecting the market value of a whole business. It is the sum of the claims of all claimants such as creditors (secured and unsecured) and equity holders (preferred and common). Firm value is used as an alternative to straightforward market capitalization. It is calculated as market cap plus debt, minority interest and preferred shares minus total cash and cash equivalents (Investopedia, 2013). On the other hand, firm value is the present value of the firm's current and future profits and linked to profit maximization. A firm looking to maximize their profits is actually concerned with maximized value over the long term (Bay and Michel, 2006).

As in the previous definition, firm value is defined according to the financial perspective. From an accounting perspective, firm value refers to the firm's fair value. In accounting, fair value is used as a certainty of the market value of an asset for which a market price cannot be determined. Accounting standard setters define fair value in the context as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (Earnt & Young, 2011). In summary, firm value or fair value was the value when a firm wants to exchange assets or was involved in merger and acquisition. Furthermore, it is a result of firm performance. An investor can evaluate and use it for decision making in terms of investment.

2.2.1 Types of Firm Values

The objective in corporate finance is the maximization of firm value and this is present in the relationship between financial decision, corporate strategy and firm value. Firm value has a direct effect on a decision-making financial assessment situation and the dividend policy. Firm value measurement has used a wide range of models in practice. These models often produce very different assumptions about value, but they do share some common characteristics and can be classified in broader terms and depending on the users. In general terms, there are three approaches to value (Domodaran, 1996:9). First, discounted cash flow valuation was relating the value of the assets to the present value of expected future cash flows on assets. Second, contingent claim valuation uses option pricing models to measure the value of assets that share option characteristics. Third, relative valuation estimates the value of assets by looking at the pricing of comparable assets relative to common variables like earnings, cash flows, book value, and sales. The following sections are an overview of these three types of firm valuation methods.

2.2.1.1 Discounted Cash Flow Valuation

This approach has its grounding in the present value rule, where the value of any asset is the present value of expected future cash flows (Domodaran, 1996). The formula for this approach is as follows:

$$Value = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t}$$

Where n=life of the asset

CF $_t$= cash flow in period t

r = discount rate reflecting the riskiness of the estimated cash flows.

To apply this approach, there are two paths to discount cash flow valuation. The first valuation is to value just the equity stake in the business. The second is to value the entire firm, which includes, besides equity, the other claimholders in the firm. Although both approaches discount expected cash flows, the relevant cash flows and discount rates differ under each method (Domodaran, 1996). The value of equity is achieved by discounting expected cash flows to equity like the residual cash flows after

meeting all expenses, tax obligations, and interest and principal payments, at the cost of equity, that is, the rate of return required by equity investors in the firm. This method is used to compute the cost of equity as the denominator. The formula for this approach is as follows:

$$Value\ of\ Equity = \sum_{t=1}^{t=\infty} \frac{CF\ to\ Firm_t}{(1+k_e)^t}$$

Where CF to Equity $_t$ = expected cash flow to equity in period t

K_e = cost of equity

The value of the firm is obtained by discounting expected cash flows to the firm like the residual cash flows after meeting all operating expenses and taxes but prior to debt payments, at the weighted average cost of capital, which is the cost of the different components of financing used by the firm, weighted by their market value dimensions. The formula for this approach is as follows:

$$Value\ of\ Firm = \sum_{t=1}^{t=\infty} \frac{CF\ to\ Firm_t}{(1+WACC\ )^t}$$

Where CF to Equity$_t$ = expected cash flow to equity in period t

WACC = Weighted average cost of capital

The two approaches use different meanings of cash flow and discount rates. They yield compatible estimates of value as long as the same set of assumptions is used for both. The key error to avoid is mismatching cash flows and discount rates, since discount cash flows to equity at the weighted average cost of capital will lead to an upwardly biased evaluation of the value of equity, while discounting cash flows to the firm at the cost of equity will yield a downwardly biased estimate of the value of the firm.

The applicability of the approach is as follows. The discounted cash flow valuation is based on expected future cash flows and discount rate. The information required for this approach can be used for assets whose cash flow is currently positive and which can be estimated with some reliability for future periods, and where a proxy for risk that can be used to obtain the discount rate is available. The errors that may

occur in computing discounted cash flow valuation include the following. A distressed firm generally has loss and cash flow currently and expects to lose money for some time in the future. This firm cannot estimate future cash flow as there is a substantial probability of failure. When a firm is expected to fail, discounted cash flow valuation does not work very well, since it considers the firm as a going concern providing positive cash flows to its investors. Furthermore, for a firm that is expected to survive cash flows will have to be estimated until they become positive, since receiving a present value of negative cash flows will yield a negative value for equity or the firm.

In addition, the earnings and cash flows of the business cycle depend on the economic growth during economic booms and decline during recessions. If discounted cash flow valuation is applied to these firms, expected future cash flow is usually smoothed out, except for when the analyst wants to undertake the difficult task of predicting the timing and duration of economic recessions and recoveries. The estimation of future cash flows becomes entangled with analyst predictions about the economy turning and how strong growth will be, with more optimistic analysts arriving at higher estimates of value. This is unavoidable, but the economic biases of the analyst have to be taken into account before using the valuations.

Firms with unutilized assets also face obstacles. Discounted cash flow valuation reflects the value of all assets that produce cash flow. When a firm has assets that are underemployed, the value of assets will not be reflected in the value obtained from discounting expected future cash flows. Similar caution applies to a lesser degree to underutilized assets when their value will be understated in discounted cash flow valuation. The value of assets can always be calculated externally and added on to the value obtained for discounted cash flow valuation.

Firms involved in acquisitions also have issues. In mergers and acquisitions a firm can not estimate future cash flows and the discount rate in the discounted cash flow valuation model, because of the different firm values before and after acquisitions.

Lastly, a private firm also faces a particular difficulty. The problem of private firms in using discounted cash flow valuation models is the measurement of risk, as most risk/return models require that risk parameters be estimated from the historical prices of the assets being analyzed. When securities in private firms are not traded

2.2.1.2 Contingent Claim Valuation

Contingent claim valuation uses the option pricing model to evaluate the value of total assets. The results of assets differ significantly from the measurement of the value of total assets because the different types of assets have effect on the depreciation calculation. The Black-Scholes option pricing model (Black and Scholes, 1972) is used to calculate the theoretical price of European put and call options, ignoring any dividends paid during the option's lifetime. The original Black-Sholes model does not take into consideration the effects of dividends paid during the lifetime of the option; however, the model can be adapted to account for dividends by determining the ex-dividend date value of the underlying stock. The model makes certain assumptions including the following: the options are European and can only be exercised at expiration; no dividends are paid out during the life of the option; the markets are efficient (i.e., market movements cannot be predicted); there are no commissions; the risk-free rate and volatility of the underlying stock are known and constant; a lognormal distribution is followed, that is, returns on the underlying stock are normally distributed (Investopedia, 2013). The binomial option pricing model is an options valuation method developed by Cox et al. in 1979. This model uses an iterative procedure, allowing for the specification of nodes, or points in time, during the time span between the valuation date and the option's expiration date.

The limitation of the option pricing model is that of valuing long-term options on non-traded assets. The assumptions made about constant variance and dividend yields are not seriously contested for short-term options but are more difficult to defend when options have long lifetimes. When the underlying asset is not traded, the inputs for the value of the underlying asset and the variance in that value cannot be extracted from financial markets and have to be estimated. In summary, the final values obtained from these applications of option pricing models have much more estimation error associated with them than do the values obtained in their more standard application.

2.2.1.3 Relative Valuation

Relative valuation is the asset value from price comparisons by the value of the asset being derived from the pricing of "comparable" assets. The value of assets in the relative valuation method is the pricing of comparable assets and standardized using a common variable such as profit, cash flow, book value, or revenue. An instance of this approach is the use of an industry-average price/earnings ratio to value a firm, the assumption being that the other firms in the industry are comparable to the firm being valued and that the market, on average, the price these firms correctly. In addition, one multiple in wide use is the price/book value ratio, with firms selling at a discount on book value relative to comparable firms being considered undervalued. The price/sales ratio is also used to value firms, with the average price/sales ratios of firms with similar characteristics being used for comparison. These three multiples are among the most widely used, but there are other ratios that also play roles in analysis of price/cash flows, price/dividends, and Tobin's Q (Damodaran, 1996).The relative value comprises at least two components through which an analyst can derive the appropriate multiple for use in valuing a firm: fundamentals and comparables.

1. Using fundamentals involves the valuation measurement from growth rates in earnings and cash flows, payout ratios, and risk. The approach to estimating multiples is equivalent to using a discounted cash flow model requiring the same information and yielding the same results. The advantage is that the relationship between the multiple firm characteristics is shown and this allows us to explore how the multiples change as these characteristics change.

2. In using comparables, the key issue is the definition of a comparable firm. In theory, the analyst should control for all the variables that can influence the multiple. In practice, controlling for the variables can range from using the industry average to the multivariate regression models where the relevant variables are identified and controlled. The advantage of the relative valuation method is that it is simple and easy to relate, it can be used to obtain estimates of value quickly for firms and assets – this is particularly useful when there are a multitude of comparable firms being traded on financial markets. However, it is easy to abuse and manipulate when comparable firms are used. While no two firms are exactly similar in terms of risk and growth, the

definition of a comparable firm is a subjective one. Furthermore, a biased analyst can choose a group of comparable firms to confirm from them a firm's value. This potential for bias exists with the discounted cash flow valuation forced to be a lot more explicit about the assumptions which determine the final value.

Addressing the limitations of the various methods mentioned above, investors alternatively used the Q-theory introduced in 1968 by Nobel laureates James Tobin and William Brainard of Yale University. Q-theory is the theory of investment behavior and commonly referred to as Tobin's Q. The formula purports to relate the firm value of shares issued by a company to the replacement cost associated with the company's assets. In an ideal situation the firm value and the replacement cost would be more or less equal, creating a state of equilibrium. The Q ratio when equal to one or more than one indicates that additional investment is recommended since the profits generated are higher than the cost of utilizing the assets of firm. On the other hand, when the Q ratio is less than one this indicates that the assets utilized by the company are not being compensated. Furthermore, the firm may want to consider selling off some assets when they are not being utilized to the greatest advantage.

Prior research has linked corporate governance to firm valuation using Tobin's Q as a proxy for firm valuation (Brown and Caylor, 2006; Amman et al., 2011; Cheung et al., 2010; Connelly et al., 2012). Tobin's Q is the ratio between the market value and replacement value of the identical asset. When introduced it was believed that the Q ratio had considerable macroeconomic significance and usefulness in relating financial markets and markets for goods and services. Measurement of Tobin's Q is as follows:

1) A single company is calculated by dividing the market value of a company by the replacement value of the book equity:

$$Tobin's\ \ Q = \frac{(Equity\ Market\ Value + Liabilities\ Market\ value)}{(Equity\ Book\ Value + Liabilities\ Book\ value)}$$

2) Aggregate corporations are determined using the value of the whole market in ratio to aggregate corporate assets. The formula for this is:

$$Q = \frac{value\ of\ stock\ market}{corporate\ net\ worth}$$

In 1997 Kaplan and Zingales measured Tobin's Q as the market value of assets divided by the book value of assets where the market value of assets equals the book value of assets plus the market value of common equity less the sum of the book value of common equity and balance sheet deferred taxes. This is common in the law, finance and economics literature (Gompers et al., 2003; Bebchuck and Cohen, 2005; Brown and Caylor, 2006).

Tobin's Q is defined as follows:

$$Q = \frac{(Total\ Assets\ + (\ Market\ Value\ of\ Equity * \ Commons\ Shares\ Outstanding) - \ Total\ Common\ Equity\ - \ Diferred\ Tax}{Total\ Assets}$$

Tobin's Q would be 1.0 if the market value returned exclusively the recorded assets of a company. When Tobin's Q is greater than 1.0, this means the market value is greater than the value of the company's recorded assets. This suggests that the market value reflects some unmeasured or unrecorded assets of the company. High Tobin's Q values embolden companies to invest more in capital because they are "worth" more than the price they paid for them.

In this study, the measurement of firm value represented Tobin's Q of Kaplan and Zingales (1997). This is mainly because it is difficult to estimate future cash flow as well as the rates of return or marginal costs. However, Tobin's Q represents firm value in both the current prices of firm and also the accounting book value.

2.2.2 Prior Research on Firm Value

Empirical research on firm value has a long history. Jensen and Meckling (1976) examined the relationship between firm value and insider equity ownership in the agency theory context and contended that agency costs decline as insider ownership rises since the financial interests of corporate insiders and shareholders increasingly converge. Consequently, with higher insider equity ownership, the value of a firm should increase. The implication of their model is that the relationship between insider equity ownership and firm value is positive.

Lasfer (2002) examines the association between board structure and firm value in the UK and finds that this relationship is a function of a firm's growth opportunities. He finds that while low growth firms are less likely to have an independent board, their

value is positively related to these board structure variables. In contrast, for high growth firms, the relationship between board structure and firm value is weak, suggesting that board structure does not always mitigate agency conflicts for these firms. He concludes that imposing the same board structures for all firms is likely to reduce the value of firms that are forced to depart from their optimal board structures.

LaPorta et al. (2002) examine firm value using Tobin's Q and industry-adjusted Tobin's Q. They identified industry-adjusted growth in sales for a company as the difference between its own sales growth and the world median sales growth in each industry using all World scope firms in the sample countries. The different industries might be at different stages of maturity and growth, which thus determines their valuations. In addition, the difference in consolidation rules in financial statements among countries, can, in principle, distort the measures of Tobin's Q. Thus, accounting procedures can result in the excessive consolidation of both sales and balance sheet items when partially owned subsidiaries are treated as if they are fully owned. To address this problem, they collect data on the consolidation procedures used by sample firms for their subsidiaries with asset values of at least U.S. $10 million. They also collect data on the equity value of excessively consolidated subsidiaries using market values for publicly traded subsidiaries and book values for privately held ones. The correlation between the adjusted and the unadjusted Tobin's Q is equal to 0.8279; accordingly, they only report the results using unadjusted Tobin's Q. Also, when they test the hypothesis the results show that Tobin's Q can measure higher cash-flow ownership by the controlling entrepreneur and for the quadratic cost-of-theft function and the effect of the entrepreneur's cash-flow ownership on valuation, the adjusted R^2 is equal to 0.0801 and 0.0815, respectively.

Miguel et al. (2004) examined several countries (the US, UK, Australia, Japan, Germany and Spain) with diverse corporate governance systems and concluded that the prevailing governance system has a significant impact on the relationship between the ownership of managers and firm value.

Bebchuk et al. (2005) created an entrenchment index based on six factors underlying G-index, and documented that their parsimonious index fully drives the Gompers et al. (2003) valuation results, include: staggered board, limits to shareholder

bylaw amendments, supermajority requirement for mergers, supermajority requirements for charter amendments, poison pills, and golden parachutes. They used the definition of Tobin's Q in accordance with Kapland and Zingales (1997) to measure firm value. The results show that six entrenching provisions negatively correlated with firm value, as measured by Tobin's Q with stock returns during the 1990-2003 period.

Bebchuk and Cohen (2005) employed the definition of Tobin's Q by Kapland and Zingales (1997) and that subsequently by Gompers et al. (2003). Q is equal to the market value of assets divided by the book value of assets, where the market value of assets is computed as the book value of assets plus the market value of common stock less the sum of the book value of common stock and balance sheet deferred taxes. Industry-adjusted Tobin's Q is a firm's Q minus the median Q in the firm's industry in the observation year, and in accordance with Fama and French (1997) for the firm's industry by the firm's 2-digit primary SIC code.

Brown and Caylor (2006) developed a parsimonious index based on seven factors (Gov-7) and showed that it fully drives the relationship between Gov-Score and firm value. They show that Gov-Score minus their modified version of the entrenchment index provides incremental explanatory power for firm valuation over and above the modified version of the entrenchment index, indicating that Gov-Score includes important governance measures for firm valuation that IRRC data ignores.

Ammann et al. (2011) investigated the relationship between firm-level corporate governance and firm value based on a large and previously unused data set from Governance metrics international (GMI). They found a strong and positive relationship between firm-level corporate governance and firm valuation and between a company's social behavior and firm value.

Connelly et al. (2012) found that firms with high family ownership are associated with lower values of Tobin's Q. In particular, these high family ownership firms have an average Q value that is lower than the mean Q for low family ownership firms. A positive association between CGI and Q is driven by family firms without pyramidal ownership structures.

Bebchuk et al. (2013) also used Kapland and Zingales (1997) definition of Tobin's Q in, and used the log of industry-median-adjusted Tobin's Q as the dependent

variable, with the log of a firm's Q divided by the industry's median Q as defined by Fama-French's forty-eight industry definitions. The advantage of using industry-adjusted Tobin's Q is that it neutralizes the effect of specific industries on Tobin's Q (Jo and Harjoto, 2011).

Table 2.2 summarizes previous studies on Tobin's Q. The above review has shown that Tobin's Q is widely employed and recognized method continuously used to measure firm value. As a result, in this present study Tobin's Q was adopted to measure firm value in the analysis.

Table 2.1 Summary of Variables in Firm Value

Independent variable	**Dependent variable (Firm Value)**	**Authors**
Board structure	Tobin's Q	Lasfer (2002)
Sales growth	Tobin's Q	LaPorta et al. (2002)
Ownership structure	Market value of equity	Miguel et al. (2004)
Staggered boards	Tobin's Q	Bebchuk et al. (2005)
Corporate governance (Gov-7)	Tobin's Q	Brown and Caylor (2006)
Firm level of corporate governance	Tobin's Q	Amman et al. (2011)
Corporate governance index	Tobin's Q	Connelly et al. (2012)
Governance indices	Tobin's Q, ROA, Excess returns	Gompers et al. (2003), Bebchuk et al. (2013)

2.3 Corporate Governance

The degree to which corporations observe the basic principles of good corporate governance is an increasingly important factor for investment decisions (OECD, 2004). Good corporate governance practices help enhance the reliance of an investor, demote the cost of capital, underpin the good functioning of the financial markets, and ultimately influence more stable sources of financing. Employees and other stakeholders play an important role in contributing to the long-term success and performance of the corporation. In the academic world, interest in corporate governance has been truly interdisciplinary, with much work being undertaken by

researchers not only in economics and finance but also in law, management and accounting (Bebchuk and Weisbach, 2010).

The definition of corporate governance differs depending on one's view of the world (Gillan, 2006). Shleifer and Vishny (1997) determine corporate governance as the ways in which suppliers of finance to corporations reassure themselves of getting a return on their investment. Zingales (1998) views governance systems as a complicated set of constraints that shape the ex post bargaining over the quasi-rents generated by the firm. In 1999, the Organization for Economic Co-operation and Development (OECD) defined corporate governance in the Principles of Corporate Governance as follows: "Corporate governance is the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among directors, managers, shareholders and other stakeholders and spells out the rules and procedures for making decisions on corporate affairs. By doing this it provides the structure through which the company objectives are set, and the means of attaining those objectives are set, and the means of attaining those objectives and monitoring performance (OECD, 1999:2)". The OECD further introduced the following broader definition in 2001: "Corporate governance refers to the private the public institution, including laws, regulations and accepted business practices, which together govern the relation, in a market economy, between corporate managers and entrepreneurs on one hand, and those who invest resource in corporation, on the other". Corporate governance is the relationship among stakeholders used to determine and control the strategic direction and performance of organizations, concerned with making strategic decisions more effectively, used to establish order between a firm's owners and its top-level managers whose interests may be in conflict (Middlemist, 2004).

As the previous definition good corporate governance corporate governance is refers to corporation governed. This practice consists of the techniques in which a firm was are directed and managed, the actual conduct by the board of directors and the committees concerned with the company's stakeholder's benefit, and all about the equilibrium of individual social goals. Good corporate governance can assist the board of control and the management to act on objectives that are in the best interests of both the company and the shareholders. The shareholders also have greater security

regarding the investments they have made because of the transparency and access to investment details. They are better informed on all the important decisions of management, such as the sale of assets and amendments to articles. Furthermore, corporate governance provides access to outside capital that the business can use to fund its projects. Since corporate governance contains major shareholders, it attaches investors to the business itself, and these investors use their resources and contacts to sustain the company monetarily. Due to these close connections, capital also tends to be less expensive to finance with a strong corporate governance system.

2.3.1. OECD's Corporate Governance

It is somewhat difficult to justify which index should be used to measure corporate governance of firms. The OECD Principles of Corporate Governance have established internal benchmarks for policy makers, investors, corporations and other stakeholders worldwide. Its guidelines on corporate governance provide specific guidance for policymakers, regulators and market participants in improving the legal, institutional and regulatory framework that underpins corporate governance, with the focus on publicly traded companies, while also providing practical suggestions for stock exchanges, investors, corporations and other parties that have a role in the process of developing good corporate governance. In addition, the principles are recognized by the Financial Stability Board as one of the twelve key standards for international financial stability and form the basis of the corporate governance component of the World Bank Report on the Observance of Standards and Codes (OECD, 2004). The OECD principles were initially issued in 1999 and have since become the international benchmark for corporate governance, forming the basis for a number of initiatives, both for government and private sector. The principles were revised in 2003 to take into account developments since 1999, and agreed upon by OECD governments in April 2004. The principles cover the following six key areas of corporate governance: 1) Ensuring the basis for an effective corporate governance framework; 2) the rights of shareholders and key ownership functions; 3) the equitable treatment of shareholders; 4) the role of stakeholders; 5) disclosure and transparency; and 6) the responsibilities of the board. The Stock Exchange of Thailand (SET) has adopted the OECD principles (2004) for the principle of good corporate governance for listed companies and

determines corporate governance as the set of structures and processes of the relationship between a company's board of directors, its management and its shareholders to encourage the company's competitiveness, growth and long-term shareholder value, taking into account the interests of other company stakeholders. The principles do not contain issues concerning corporate governance already specified in laws and regulations. The principles and the recommended best practices cover five categories: the rights of shareholders, the equitable treatment of shareholders, the role of stakeholders, disclosure and transparency, and the responsibilities of the board. This principle covers all important issues concerning good corporate governance, whilst the content in the recommended best practices offers supplementary descriptions or means to enable companies to implement the principles. The following detail corporate governance as recommended by OECD.

2.3.1.1 Rights of Shareholders

The corporate governance framework should protect and facilitate the exercising of shareholders' rights. Equity investors have certain property rights. For example, an equity share in a publicly traded company can bought, sold, or transferred. Also, equity share also entitles the investor to participate in the profits of the corporation, with liability limited to the amount of the investment. In addition, ownership of an equity share comes with the right to information about the corporation and the right to influence the corporation, primarily by participation in general shareholder meetings and by voting. The practice of shareholder rights was includes the following:

1. Basic shareholder rights should include the rights to: secure methods of ownership registration, convey or transfer shares, obtain relevant and material information on the corporation on a timely and regular basis, participate and vote in general shareholder meetings, elect and remove members of the board, and share in the profits of the corporation.

2. Shareholders should have the right to participate in, and to be sufficiently informed on, decisions concerning fundamental corporate changes such as amendments to the statutes, or articles of incorporation or similar governing documents of the company, the authorization of additional shares, and extraordinary transactions,

including the transfer of all or substantially all assets, that in effect result in the sale of the company.

3. The opportunity to participate effectively and vote in general shareholder meetings and to be informed of the rules, including voting procedures that govern general shareholder meetings: Shareholders should be furnished with sufficient and timely information concerning the date, location and agenda of general meetings, as well as full and timely information regarding the issues to be decided at the meeting. Furthermore, they should have the opportunity to ask questions to the board, including questions relating to the annual external audit, to place items on the agenda of general meetings, and to propose resolutions, subject to reasonable limitations. Effective shareholder participation in key corporate governance decisions, such as the nomination and election of board members, should be facilitated.

4. Capital structures and arrangements that enable certain shareholders to obtain a degree of control disproportionate to their equity ownership should be disclosed.

5. Markets for corporate control should be allowed to function in an efficient and transparent manner. The rules and procedures governing the acquisition of corporate control in the capital markets, and extraordinary transactions such as mergers, and sales of substantial portions of corporate assets, should be clearly articulated and disclosed so that investors understand their rights and recourse. Transactions should occur at transparent prices and under fair conditions that protect the rights of all shareholders according to their class. Anti-takeover devices should not be used to shield management and the board from accountability.

6. The exercise of ownership rights by all shareholders, including institutional investors, should be facilitated. Institutional investor action in a fiduciary capacity should disclose their overall corporate governance and voting policies with respect to their investments, including the procedures that they have in place for deciding on the use of their voting rights. The institutional investors acting in a fiduciary capacity should disclose how they manage material conflicts of interest that may affect the exercise of key ownership rights regarding their investments.

7. Shareholders, including institutional shareholders, should be allowed to consult with each other on issues concerning their basic shareholder rights as defined in the principles subject to exceptions to prevent abuse.

2.3.1.2 Equitable Treatment of Shareholders

The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights. Investors' confidence that the capital they provide will be protected from misuse or misappropriation by corporate managers, board members or controlling shareholders is an important factor in the capital markets. Corporate boards, managers and controlling shareholders may have the opportunity to engage in activities that may advance their own interests at the expense of non-controlling shareholders. In providing protection to investors, a distinction can be made between ex-ante and ex-post shareholder rights. Ex-ante rights include pre-emptive rights and qualified majorities for certain decisions. Ex-post rights allow the seeking of redress once rights have been violated.

1. All shareholders of the same series of a class should be treated equally. Within any series of a class, all shares should carry the same rights. All investors should be able to obtain information about the rights attached to all series and classes of shares before they purchase. Any changes in voting rights should be subject to approval by those classes of shares which are negatively affected. The minority shareholders should be protected from abusive actions by, or in the interests of, controlling shareholders acting either directly or indirectly, and should have effective means of redress. The votes should be cast by custodians or nominees in a manner agreed upon with the beneficial owner of the shares. Impediments to cross border voting should be eliminated. The process and procedures for general shareholder meetings should allow for the equitable treatment of all shareholders. Company procedures should not make it unduly difficult or expensive to cast votes.

2. Insider trading and abusive self-dealing should be prohibited. Abusive self-dealing occurs when persons having close relationships to the company, including controlling shareholders, exploit those relationships to the detriment of the company and investors. As insider trading entails manipulation of the capital markets, it is

prohibited by securities regulations, company law and/or criminal law in most OECD countries. However, not all jurisdictions prohibit such practices, and in some cases enforcement is not vigorous. These practices can be seen as constituting a breach of good corporate governance inasmuch as they violate the principle of equitable treatment of shareholders. The principles reaffirm that it is reasonable for investors to expect that the abuse of insider power be prohibited. In cases where such abuses are not specifically forbidden by legislation or where enforcement is not effective, it will be important for governments to take measures to remove any such gaps.

3. Members of the board and key executives should be required to disclose to the board whether they, directly, indirectly or on behalf of third parties, have a material interest in any transaction or matter directly affecting the corporation. Members of the board and key executives have an obligation to inform the board where they have a business, family or other special relationship outside of the company that could affect their judgment with respect to a particular transaction or matter affecting the company. Such special relationships include situations where executives and board members have a relationship with the company via their association with a shareholder who is in a position to exercise control. Where a material interest has been declared, it is good practice for that person to not be involved in any decision involving the transaction or matter.

2.3.1.3 Role of Stakeholders

The corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises. A key aspect of corporate governance is concerned with ensuring the flow of external capital to companies both in the form of equity and credit. Corporate governance is also concerned with finding ways to encourage the various stakeholders in the firm to undertake economically optimal levels of investment in firm-specific human and physical capital. The competitiveness and ultimate success of a corporation is the result of teamwork that embodies contributions from a range of different resource providers including investors, employees, creditors, and suppliers. Corporations should recognize that the contributions of stakeholders

constitute a valuable resource for building competitive and profitable companies. It is, therefore, in the long-term interests of corporations to foster wealth-creating co-operation among stakeholders. The governance framework should recognize that the interests of the corporation are served by recognizing the interests of stakeholders and their contribution to the long-term success of the corporation.

1. The rights of stakeholders that are established by law or through mutual agreements are to be respected.

2. Where stakeholder interests are protected by law, stakeholders should have the opportunity to obtain effective redress for violation of their rights. The legal framework and process should be transparent and not impede the ability of stakeholders to communicate and to obtain redress for the violation of rights.

3. Performance-enhancing mechanisms for employee participation should be permitted to develop. The degree to which employees participate in corporate governance depends on national laws and practices, and may vary from company to company as well. In the context of corporate governance, performance enhancing mechanisms for participation may benefit companies directly as well as indirectly through the readiness by employees to invest in firm specific skills. Examples of mechanisms for employee participation include employee representation on boards; and governance processes such as works councils that consider employee viewpoints in certain key decisions. With respect to performance enhancing mechanisms, employee stock ownership plans or other profit sharing mechanisms are to be found in many countries. Pension commitments are also often an element of the relationship between the company and its past and present employees. Where such commitments involve establishing an independent fund, its trustees should be independent of the company's management and manage the fund for all beneficiaries.

4. Where stakeholders participate in the corporate governance process, they should have access to relevant, sufficient and reliable information on a timely and regular basis. Where laws and practice for corporate governance systems provide for participation by stakeholders, it is important that stakeholders have access to the information necessary to fulfill their responsibilities.

5. Stakeholders, including individual employees and their representative bodies, should be able to freely communicate their concerns about illegal or unethical practices to the board and their rights should not be compromised to do so.

6. The corporate governance framework should be complemented by an effective, efficient insolvency framework and by effective enforcement of creditor rights. Especially in emerging markets, creditors are a key stakeholder and the terms, volume and type of credit extended to firms will depend importantly on their rights and on their enforceability. Companies with a good corporate governance record are often able to borrow larger sums and on more favorable terms than those with poor records or which operate in non-transparent markets. Creditor rights vary, ranging from secured bond holders to unsecured creditor. Insolvency procedures usually require efficient mechanisms for reconciling the interests of different classes of creditors. In any jurisdiction provision is made for special rights such as through “debtor in possession” financing which provides incentives/protection for new funds made available to an enterprise in bankruptcy proceedings.

2.3.1.4 Disclosure and Transparency

The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company. A strong disclosure regime that promotes real transparency is a pivotal feature of the market-based monitoring of companies and is central to shareholders’ ability to exercise their ownership rights on an informed basis. This can help to attract capital and maintain confidence in the capital markets. By contrast, weak disclosure and non-transparent practices can contribute to unethical behavior and to a loss of market integrity at great cost, not just to the company and its shareholders but also to the economy as a whole. Shareholders and potential investors require access to regular, real and comparable information in sufficient detail for them to assess to stewardship of management, and make informed decisions about the valuation, ownership and voting of shares. Insufficient or unclear information may hamper the ability of the markets to function, increase the cost of capital and result in poor allocation of resources. Furthermore, it helps improve public understanding of the structure and activities of enterprises,

corporate policies and performance with respect to environmental and ethical standards, and companies' relationships with the communities in which they operate. The OECD guidelines for multinational enterprises are relevant in this context. Disclosure requirements are not expected to place unreasonable administrative or cost burdens on enterprises. Nor are companies expected to disclose information that may endanger their competitive position unless disclosure is necessary to fully inform the investment decision and to avoid misleading the investor. In order to determine what information should be disclosed at a minimum, many countries apply the concept of materiality. Material information can be defined as information whose omission or misstatement could influence the economic decisions taken by users of information. The principles support timely disclosure of all material developments that arise between regular reports. They also support simultaneous reporting of information to all shareholders in order to ensure their equitable treatment. In maintaining close relations with investors and market participants, companies must be careful not to violate this fundamental principle of equitable treatment.

1. Disclosure should include, but not be limited to, material information on: the financial and operating results of the company, company objectives, major share ownership and voting rights, remuneration policy for members of the board and key executives, and information about board members, including their qualifications, the selection process, other company directorships and whether they are regarded as independent by the board, related party transactions, foreseeable risk factors, issues regarding employees and other stakeholders, governance structures and policies, in particular, the content of any corporate governance code or policy and the process by which it is implemented.

2. Information should be prepared and disclosed in accordance with high quality standards of accounting and financial and non-financial disclosure. The application of high quality standards is expected to significantly improve the ability of investors to monitor the company by providing an increased reliability and comparability of reporting, and improved insight into company performance. The quality of information substantially depends on the standards under which it is compiled and disclosed. The principles support the development of high quality internationally

recognized standards, which can serve to improve transparency and the comparability of financial statements and other financial reporting between countries. Such standards should be developed through open, independent, and public process involving the private sector and other interested parties such as professional associations and independent experts. High quality domestic standards can be achieved by making them consistent with one of the internationally recognized accounting standards.

3. An annual audit should be conducted by an independent, competent and qualified auditor in order to provide an external and objective assurance to the board and shareholders that the financial statements fairly represent the financial position and performance of the company in all material respects. In addition to certifying that financial statements represent fairly the financial position of a company, the audit statement should also include an opinion on the way in which financial statements have been prepared and presented. This should contribute to an improved control environment in the company.

4. External auditors should be accountable to the shareholders and owe a duty to the company to exercise due professional care in the conduct of the audit. The practice of external auditors being recommended by an independent audit committee of the board or an equivalent body and the external auditor being appointed either by that committee/body or by the shareholders' meeting directly can be regarded as good practice since it clarifies that the external auditor should be accountable to the shareholders. It also underlines that the external auditor owes a duty of due professional care to the company rather than any individual or group of corporate managers that they may interact with for the purpose of their work.

5. Channels for disseminating information should provide for equal, timely and cost-efficient access to relevant information by users. Channels for the dissemination of information can be as important as the content of the information itself. While the disclosure of information is often provided by legislation, filing and access to information can be cumbersome and costly.

6. The corporate governance framework should be complemented by an effective approach that addresses and promotes the provision of analysis or advice by analysts, brokers, rating agencies and others, that is relevant to decisions by investors,

and free from material conflicts of interest that might compromise the integrity of their analysis or advice.

2.3.1.5 Responsibilities of the Board

The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders. Together with guiding corporate strategy, the board is chiefly responsible for monitoring managerial performance and achieving an adequate return for shareholders, while preventing conflicts of interest and balancing competing demands on the corporation. In order for boards to effectively fulfill their responsibilities they must be able to exercise objective and independent judgment. Another important board responsibility is to oversee systems designed to ensure that the corporation obeys applicable laws, including tax, competition, labor, environmental, equal opportunity, and health and safety laws. The board is not only accountable to the company and its shareholders but it also has the duty to act in their best interests. In addition, boards are expected to take due regard of, and deal fairly with, other stakeholder interests including those of employees, creditors, customers, suppliers and local communities. Observance of environmental and social standards is relevant in this context.

1. Board members should act on a fully informed basis, in good faith, with due diligence and care, and in the best interests of the company and the shareholders. This principle states the two key elements of the fiduciary duty of board members: the duty of care and the duty of loyalty. The duty of care requires board members to act on a fully informed basis, in good faith, with due diligence and care. In some jurisdictions there is a standard of reference which is the behavior that a reasonably prudent person should exercise in similar circumstances. In nearly all jurisdictions, the duty of care does not extend to errors of business judgment so long as board members are not grossly negligent and a decision is made with due diligence, etc. The principle calls for board members to act on a fully informed basis. Good practice take this to mean that they should be satisfied that key corporate information and compliance systems are fundamentally sound and underpin the key monitoring role of the board advocated by the principles.

2. Where board decisions may affect different shareholder groups differently, the board should treat all shareholders fairly. In carrying out its duties, the board should not be viewed, or act, as an assembly of individual representatives for various constituencies. While specific board members may indeed be nominated or elected by certain shareholders, it is an important feature of the board's work that board members when they assume their responsibilities carry out their duties in an even-handed manner with respect to all shareholders. This principle is particularly important to establish in the presence of controlling shareholders that de facto may be able to select all board members.

3. The board should apply high ethical standards. It should take into account the interests of stakeholders. The board has a key role in setting the ethical tone of a company, not only by its own actions, but also in appointing and overseeing key executives and consequently the management in general. High ethical standards are in the long-term interest of the company as a means to make it credible and trustworthy, not only in day-to-day operations but also with respect to longer-term commitments. To make the objectives of the board clear and operational many companies have found it useful to develop company codes of conduct.

4. The board should fulfill certain key functions, including: 1) reviewing and guiding corporate strategy, major plans of action, risk policy, annual budgets and business plans, setting performance objectives, monitoring implementation and corporate performance, and overseeing major capital expenditures, acquisitions and divestitures. 2) Monitoring the effectiveness of the company's governance practices and making changes as needed. 3) Selecting, compensating, monitoring and, when necessary, replacing key executives and overseeing succession planning. 4) Aligning key executive and board remuneration with the longer-term interests of the company and its shareholders. 5) Ensuring a formal and transparent board nomination and election process. 6) Monitoring and managing potential conflicts of interest of management, board members and shareholders, including misuse of corporate assets and abuse in related party transactions. 7) Ensuring the integrity of the corporation's accounting and financial reporting systems, including the independent audit, and that appropriate systems of control are in place, in particular, systems for risk management,

financial and operational control, and compliance with the law and relevant standards. 8) Overseeing the process of disclosure and communications.

5. The board should be able to exercise objective independent judgment on corporate affairs. Boards should consider assigning a sufficient number of non-executive board members capable of exercising independent judgment to tasks where there is a potential for conflict of interest. Examples of such key responsibilities are ensuring the integrity of financial and non-financial reporting, the review of related party transactions, nomination of board members and key executives, and board remuneration. When committees of the board are established, their mandate, composition and working procedures should be well defined and disclosed by the board. Furthermore, board members should be able to commit themselves effectively to their responsibilities.

6. In order to fulfill their responsibilities, board members should have access to accurate, relevant and timely information. Board members require relevant information on a timely basis in order to support their decision-making. Non-executive board members do not typically have the same access to information as key managers within the company. The contributions of non-executive board members to the company can be enhanced by providing access to certain key managers within the company such as, for example, the company secretary and the internal auditor, and recourses to independent external advice at the expense of the company. In order to fulfill their responsibilities, board members should ensure that they obtain accurate, relevant and timely information.

2.3.2 Prior Research in Corporate Governance

This section reviews prior studies in corporate governance using the OECD corporate governance mechanism as follows: the rights of shareholders, the equitable treatment of shareholders, the roles of stakeholders, disclosure and transparency, and the board of directors.

2.3.2.1 Rights of Shareholders

The rights of shareholders, both major and minority shareholders, are equal. The rights of shareholders include basic rights and management rights. The basic rights are to secure methods of ownership registration, transfer shares, obtain relevant and

material information on the corporation on a timely and the regular basis, participate and vote in general shareholder meetings, elect and remove members of the board, and share in the profit of the corporation.

Management rights include the right to participate in management and to be sufficiently informed and make decisions concerning fundamental corporate change, the opportunity to participate effectively and vote in general shareholder meetings and in the form of the rules, including voting procedures that govern general shareholder meetings. OECD (2004) suggests the rights in general shareholder meetings should allow the shareholder to: 1) be furnished with sufficient and timely information concerning the date, location and agenda of general meetings; 2) have the opportunity to ask questions to the board, including questions relating to the annual external audit to place items on the agenda of general meetings, and to propose resolutions subject to reasonable limitations; 3) participate effectively in key corporate governance decisions; 4) have a vote in person or in absentia, and equal effect should be given to the vote whether cast in person or in absentia.

An important mechanism that facilitates good corporate governance is the practice of the shareholder exercising their rights in inquiring, monitoring and voting in the shareholders' meeting to ensure that management act in the best interests of the firm. To accommodate shareholders' rights to participate in making important business decisions, the Public Company Act requires the company to convene an Annual General Meeting (AGM). An effective Annual General Meeting arrangement will come from both sides the company and shareholders – who are aware of the importance of a good Annual General Meeting. The Annual General Meeting is a two-way communication for shareholders in discussing significant issues. Shareholders should attend the shareholders' meeting or appoint a person to vote on their behalf to protect their rights. Furthermore, the corporation should facilitate all shareholders to vote on important matters and provide sufficient and timely information prior to the meeting for proxy solicitation from other shareholders. Gompers, Ishii and Metrick (2003) examined shareholder rights by constructing a firm-level governance index – G-Index – which equals the number of governance provisions a firm has. More governance provisions indicate more restricted shareholder rights. GIM provide empirical evidence that cross-

sectional, firm value is higher when shareholder rights are strong. They divide them into five groups: (1) the delay group comprises four provisions designed to slow down a hostile bidder; (2) the voting group contains six provisions, all related to shareholders' rights in elections or charter/bylaw amendments; (3) the protection group contains six provisions designed to insure officers and directors against job-related liability or to compensate them following a termination; (4) the other group includes the six remaining firm-level provisions; and 5) the state group is the state takeover laws. Chi (2005) explores the relationships between firm value and shareholders' rights based on the G-index. The result showed that the change in G is negatively related to future change in firm value, but unrelated to past change in firm value. He concluded that it was unlikely that firm value affects the G-Index, but more likely that the G-Index affects firm value. Using fixed effects models, Chi showed that when a firm increases its G-Index, this places more restrictions on its shareholder rights and its firm value decreases. Jiraporn et al. (2006) measured the strength of shareholder rights. The results indicate that the estimated coefficient for the governance index is negative and significant. This negative finding suggests that weak shareholder rights may, possibly, aggravate the agency problem and its association with reduced value. Chong et al. (2009) used a firm-level G-index on the Mexican Stock Exchange. They found a positive relationship between this index and the market-to-book ratio and Tobin's Q, but the index showed no relationship to measures of firm performance such as return on assets and return on equity. Faleye (2007) estimated separate regressions for the 1,156 firms using the G-index (excluding classified boards) as a control variable. Ding (2009) investigated the interaction between the G-index and executive ownership. The results show both substitution and a complementary relationship between the G-index and executive ownership, while the G-index had a negative effect on firm performance. Bowen et al. (2010) tested the relationship between the index of accounting discretion and proxies for efficient contracting and governance variables by G-index. They found associations between poor governance quality and accounting discretion. Cheung et al. (2010) and Connelly et al. (2012) both measured the rights of shareholders from the two perspectives of shareholder rights disclosed and shareholder participation in Annual General Meetings (AGMs). First, they looked at the quality of the notice to call the

shareholders' meeting (appointment of directors, auditors dividend policy amount and explanation for payment), the voting method and, the vote counting system declared before the AGM begins to measure the shareholder rights disclosed. Second, they measured shareholder participation in AGMs by attendance by the chairman of the board, and other committee members in the company. This study follows the works OECD (2004), Cheung et al. (2010), and Connelly et al. (2012) in measuring the rights of shareholders as follows:

1. Dividend policy: Agency problems between bondholders and shareholders or between managers and shareholders also can affect, in theory, a firm's dividend policy. The payment of dividends forces managers to obtain funds from the financial market in order to adhere to the investment policy (Lambert et al.1989). Lambert et al. (1989) further examined the association between the introduction of executive stock option plans and changes in the corporate dividend policy. The results showed that the degree to which changes in dividend policy are influenced by cross-sectional difference in the individual characteristics of stock option plans. LaPorta et al. (2000) found that the outcome hypothesis explains the empirical linkages between the agency costs of equity, minority shareholder rights, and observed dividend payouts. Trung and Heaney (2007) examined cross-sectional variations in dividend policy, and the impact of largest shareholder on policy choice. They identified firms as being more likely to pay dividends when profits are high, debt is low or where investment opportunities are low. A comparison of OECD (2004), Cheung et al. (2008), Connelly et al. (2012), and the Stock Exchange of Thailand and Thai Institute of Directors (2012) reveals that they all used dividend policy as a measurement. Adjaoud and Ben-Amar (2010) investigated the relationship between corporate governance quality and dividend policy in Canada. Their results revealed firm size and the level of free cash flows to be positively associated with dividend payouts. Thanatawee (2013) used dividend payout ratio to examine the relationship between ownership structure and dividend policy. The results showed that firms with higher ownership concentration and institutions, compared with an individual as the largest shareholder are more likely to pay dividends and that the largest shareholder's holding is positively related to dividend payouts. Thus, this study measures dividend policy from the dividend payouts ratio.

2. Shareholder participation in the AGM: Management rights relate to voting and meeting in general meetings. This can be measured from the Annual General Meeting Assessment Project.

The Annual General Meeting building on the World Bank's observation in the Corporate Governance Assessment Report on the Observance of Standards and Codes (CG-ROSC) for Thailand in late 2005. The Securities and Exchange Commission Thailand (SEC) has led a cooperative effort with the Thai Investors Association (TIA) and Thai Listed Companies Association (TLCA) in launching the Annual General Meeting Assessment Project (AGM) since 2006 to raise corporate governance awareness in the area of shareholder participation and protection. With an AGM evaluation checklist, the Thai Investors Association sent qualified volunteers to attend all listed companies' AGMs and grade their function efficiency and shareholder rights protection (Securities and Exchange Commission Thailand, 2006). The efficiency of the AGM will be of advantage not only to listed companies in reaching international standards but also investors in evaluating the listed firm's corporate governance based on their protection of shareholder rights. The score for the AGM is as follows:

Score range	**Result**
100	Excellent plus
90-99	Excellent
80-89	Very good
70-79	Good
60-69	Rather
≤59	Need to improve

The results of the AGM (RAGM) evaluated by the ASEAN Capital Market Forum and the Asian Development Bank (2013) show that Thailand follow good practice in allowing shareholders to elect the director individually, disclosing the outcome of the AGM by the next working day, disclosing the voting results including approving, dissenting, and abstaining votes for each agenda term, providing the

rationale and explanation for each agenda item in the notice of the AGM, and oganizing the AGM in an easy-to-reach location.

Hodges et al. (2004) investigated the attendance and procedures at the AGMs of National Health Service (NHS) Trusts. They discovered that attendance at was low with, on average, more employees than external stakeholders at the meeting. The absence of any decision-making authority at the AGM was explained by the existence of other mechanisms of governance and control in the trusts' regulatory space. Apostolides (2007) explored the role of the AGM in the mediations between the board of directors of a company and its shareholders, to assess whether directors at any particular AGM appeared to be making the meeting inclusive for the shareholders.

This study used the results of the AGM to measure shareholder rights and adjust their results on a rating scale divided into five level as follows: Outstanding (excellent and serves as an example)= 6, excellent = 5, very good = 4, good = 3, rather = 2, and need to improve = 1.

3. Information alert: The Stock Exchange of Thailand and Thai Institute of Directors (2012) researched information alerts for shareholders from the number of days in advance the company sent out the notice of the general shareholder meetings. This study used numbers of days in advance for the notice of general shareholder meetings from the following three channels: direct shareholders, websites, and newspapers.

In addition to the above studies, there have been some other reviews. Shareholder rights reflect the balance of power between the manager and the shareholder, a weak shareholder rights regime, strong restriction are placed on shareholders' ability to place manager and directors (Cheng 2006). Most prior studies examining the relationship between corporate governance and firm value used the Gompers model (2003). They obtained a corporate governance index score and analysis of 24 distinct corporate governance provisions from the Investor Responsibility Research Center. The results revealed that a lower G-score was associated with positive abnormal returns, higher firm values, higher profits, higher sales growth, lower capital expenditures, few corporation acquisitions and stringer corporate governance mechanisms (Cheng, 2006). They suggest that strong shareholder rights management and limitations on managerial power are effective corporate governance mechanisms

that improve shareholder wealth. Cremers and Nair (2005) utilized the G-score of Gompers et al. (2003) to measure the effect of interaction between shareholder rights and large shareholders on stock returns. The results confirmed the complementary relationship between strong shareholder rights and the presence of large shareholders using Tobin's Q and accounting performance (net profit margin, return on assets and return on equity). Ashbaugh et al. (2004) used governance score as a proxy for shareholder rights when testing the effect of corporate governance on the bond rating. They found that firms with weak shareholder rights have higher bond ratings. Cheung et al. (2005) examined the effect of shareholder rights on the cost of equity capital. The results showed weak firm-level shareholder rights to be harmful to firm value and to charge significantly higher costs of equity capital. The market responds to the change in firm-level shareholder rights by adjusting the required rate of return. Jiraporn et al. (2006) investigated the impact of shareholder rights on firm value. They employed the governance index developed by Gompers et al. (2003) to represent the strength of shareholder rights. Their findings revealed that when shareholder rights are more restricted, the firm is more likely to be diversified. They argued that weak shareholder rights allow management to diversify the firm impulsively, resulting in a decline in value. Choi et al. (2008) compared the market reaction of the firm with weak and strong protection of shareholder rights to the passage of Sarbanes-Oxley (SOX). They used the G-index for shareholder rights proxy and found that firms with strong shareholder rights did not experience a significant positive market reaction. Its shareholder protection decreased after SOX, while firms with weak shareholder rights did not change significantly from their pre-SOX protection level. Autore et al. (2009) examined whether the market efficiently priced shareholder rights by examining the recommendations of sell-side security analysts. They discovered that firms associated with strong shareholder rights received more favorable recommendations, but only in the subsample of firms for which strong external governance appeared to be warranted.

2.3.2.2 Equitable Treatment of Shareholders

The OECD principles document that the corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign

shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.

The equitable treatment of shareholders should measure the contact information for shareholders, AGM, and prevent insider trading by stakeholders. ASEAN Capital Market Forum and Asian Development Bank (2013) found that most Thai listed companies issue the notice of the shareholders' meeting with full details of the auditor and dividend agenda, without the bundling of several items onto the same agenda, and also have a policy on insider trading. This study uses insider trading in accordance with ASEAN Capital Market Forum and Asian Development Bank (2013) as an independent variable. Connelly et al. (2012) measured the treatment of shareholders from the voting rights for shares, shareholder conflict, proxy voting and information alerts for shareholders.

Voting rights of shareholders: All shareholders carry equal voting rights in the meeting in accordance with the amount of the shareholding. One share is equal to one vote. Bethel and Gillan (2002) explored the impact on shareholder voting and proposal passage of certain features of firms' institutional and regulatory environment. They discovered that in a number of instances, state and federal securities law and the rules of the securities exchange that govern the voting for shares held by brokers in street name affected shareholder voting and proposal passage. Romano (2003) examined the impact of the adoption of confidential corporate proxy voting on proposal outcomes through a panel data set of shareholders and management proposals submitted for firms that adopted confidential voting. The results showed that confidential voting had no significant effect on voting outcome. Connelly et al. (2012) measured the voting rights of shareholder by one share, one vote in a dummy variable. Furthermore, Stock Exchange of Thailand and Thai Institute of Directors (2012) assessed the equitable treatment of shareholders from the company offering one-share, one-vote. In accordance with Connelly et al. (2012), this study gives a score of one if the firm used a one share, one vote policy in the shareholder meeting, and zero otherwise. Bebchuk, Cohen and Ferrell (2004) investigated corporate governance database which provisions, surrounded by a set of twenty-four governance provisions followed by IRCC. E-Index recognizes two types of provisions. The first provisions are constitutional limitations on

shareholder voting power. Structural provisions constraining the ability of the majority of the shareholders are an important factor in the fundamental allocation of power between management and shareholders. They identified four such constitutional limitations on shareholder voting power: staggered boards, limits and amended bylaws, limits and amended charter, and supermajority requirements for mergers and charter amendments. The second provisions are the key hostile takeover readiness measures. These two provisions best reflect management's defensive posture and its inclination to protect it from a hostile bid or its consequences: poison pill and golden parachutes are measures that the board has the power to approve at any time with no need for a shareholder vote of approval. The results show that increases in the level of this index are monotonically assorted with economically significant reductions in firm valuation, as measured by Tobin's Q.

1. Voting rights of share: All shareholders carry equal voting rights in the meeting in accordance with the amount of the shareholding. One share is equal to one vote. Bethel and Gillan (2002) explored the impact on shareholder voting and proposal passage of certain features of firms' institutional and regulatory environment. They found that in a number of instances, state and federal securities law and the rules of the securities exchange that govern the voting of shares held by brokers in street name affected shareholder voting and proposal passage. Romano (2003) examined the impact of the adoption of confidential corporate proxy voting on proposal outcomes through a panel data set of shareholder and management proposals submitted by firms that adopted confidential voting. The results showed that confidential voting had no significant effect on voting outcome. Connelly et al. (2012) measured the voting rights of shareholders by one share, one vote in a dummy variable. Furthermore, the Stock Exchange of Thailand and Thai Institute of Directors (2012) measured the equitable treatment of shareholders in companies offering one-share, one-vote. Similar to Connelly et al. (2012), this study measures by scoring one if the firm used a one share, one vote policy in the shareholder meeting, and zero otherwise.

2. Shareholder conflict: Connelly et al. (2012) focused on two measures of shareholder conflict. First, they used the system established to prevent the use of material inside information and to inform all employees, managers, and board members

(the SET issues the same corporate governance guidelines as Connelly et al., 2012). Second, the rationale/explanation offered for related party transaction. Many firms set regulations to prevent insider trading by a member of the executive committee and staff with access to information. The company prohibits such persons from buying or selling the company's securities during the period prior to the disclosure of the financial statement and the annual financial statement. Thus, this study measures shareholder conflict using insider trading: the prohibitions concerning the blackout period and the presentation of the related party transaction in the annual report.

2.3.2.3 Roles of Stakeholders

The OECD documents that the company should recognize the rights of stakeholder established law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises. The types of stakeholder can be divided into internal stakeholders (shareholders, employees) and external stakeholders (customers, employees, creditors, business partners, competitors, environment and society). Stakeholders are affected by the decisions and actions that the firms make and as such the companies should behave ethically and in a socially responsible manner and the company must fulfill its social responsibilities by enhancing the well-being of various stakeholders (Stock Exchange of Thailand and Thai Institute of Directors, 2012). The Stock Exchange of Thailand and Thai Institute of Directors (2012) measure the role of shareholders from the company policy for employee compensation and welfare benefits. ASEAN Capital Market forum and Asian Development Bank (2013) present the strengths in the role of stakeholder category. Most Thai listed companies have set a policy on the treatment of stakeholders and a spate of corporate responsibility sections in their annual reports. In this study, the role of stakeholder is measured from the remuneration of boards (The Stock Exchange of Thailand and Thai Institute of Directors, 2012).

The remuneration of the board comprises the following: 1) meeting allowance and gratuities, and 2) salary and bonus. The pay-performance link is important because it measures the extent to which the CEO's remuneration is tied to changes in firm performance, and therefore the extent to which management and shareholder incentives

are aligned via performance pay (Clarkson et al. 2011). Defranco et al. (2010) suggested that a strong pay-performance association in the post-reform period suggests that the regulatory changes have improved the board's ability to evaluate and reward management effectiveness, and confirms the agency theory prediction that disclosure leads to better monitoring. Haye (1997) studied the remuneration in small and medium-size banks to holding companies located throughout the United States, accounting for all executives within the senior hierarchy. The dependent variables included the following: total compensation received by the executive, salary compensation or base pay received by the executive, bonus payment received by the executive, and profit-sharing payments received by the executive. The results showed that for the category of expenses and executive compensation, the senior executives of banking companies located in concentrated deposit markets received more incentive compensation and less salary than executives in more competitive markets. Furthermore, they discovered incentive compensation may be helpful in providing discipline to an important and visible category of ban overhead, executive remuneration, and may promote increased executive compliance with regard to other aspects of bank behavior. Clarkson et al. (2011) studied the effect of increased shareholder oversight and disclosure about executive remuneration on the pay-performance relationship, controlling for contemporaneous changes in corporate governance practice. The results predicted a general strengthening of the pay-performance relationship over the study period, with the increased sensitivity of reported CEO remuneration to firm performance being primarily related to enhanced remuneration disclosure and a non-binding shareholder vote on the remuneration reported. This study measured the remuneration of the board from meeting allowance and gratuities, salary and bonus as disclosed in the annual report.

2.3.2.4 Disclosure and Transparency

Cheung et al. (2010) improved a transparency index to measure the quality of disclosure of the corporate governance practices of Chinese listed companies for examining the relationship between company disclosure and market valuation. The transparency index is based on the five OECD Principles of Corporate Governance (OECD, 2004).

These are: the rights of shareholders, the equitable treatment of shareholders, the role of stakeholders, disclosure and transparency, and board responsibilities and composition. In the Corporate Governance Index, there are 56 criteria related to information disclosure. The index used a quantitative dimension to the measure of closure. Companies that omit or do not comply with a specific scoring criterion receive a 'poor' score (score = 1). Meeting the minimum compliance standard earns a firm a score of 'fair' (score = 2). A firm that exceeds the minimum requirements and/or meets international standards receives a higher score (score = 3). The transparency index then calculated the equally weighted score of all 56 criteria. Firms with a better quality of disclosure practice had higher scores. Tobin's Q and market-to-book ratio (MTBV) were used as proxies for firm value. The transparency index established a positive and significant relationship between company transparency and market value. Sammaha et al. (2012) evaluated the extent of corporate governance voluntary disclosure and the impact of a comprehensive set of corporate governance attributes as follows: board composition, board size, CEO duality, director ownership, blockholder ownership and the existence of audit committees of corporate governance voluntary disclosure in Egypt. The measurement of disclosure was based on published data created from a checklist developed by the United Nations, by contain analysis technique. The results showed that firms with a higher number of shares, large number of independent directors on boards and firms of a large size are more likely to provide higher levels of corporate governance voluntary disclosures. Firms with large blockholder ownership and role duality were more likely to provide less corporate governance voluntary disclosures. Also, leverage was not statistically significant in any of the corporate governance disclosure model.

Yu (2010) examined the effects of corporate governance disclosures using a cross-section regression model with forecast accuracy, forecast dispersion, and number of analysts following as the dependent variables and the transparency and disclosure raking score (T&D) as the independent variable of primary interests. Yu used the list of questions regarding 98 disclosure items classified into three aspects of corporate governance practices: ownership structure and investor rights, financial transparency and information disclosure, and board structure and process. The results suggested that

greater disclosure of corporate governance information, measured by a higher T&D score, significantly increases the accuracy of analyst annual earnings forecasts. Analyst forecast accuracy is positively related to the quantity of governance disclosures at the firm level and forecast dispersion is negatively related to it. A limitation of the studies is that the S&P transparency and disclosure score is a measure of the quantity of governance disclosures, not a measure of disclosure quality. Yu used a quantitative dimension to measure disclosure. Companies that omit or do not comply with a specific scoring criterion received a 'poor' score (score = 1) Meeting the minimum compliance standard earned a firm a score of 'fair' (score = 2). A firm that exceeded the minimum requirements and/or meet international standards received a higher score (score = 3). The transparency index was calculated as the equally weighted score of all 56 criteria. Firms with a better quality of disclosure practice had higher scores. Tobin's Q and market-to-book ratio (MTBV) were used as proxies for firm value. The results showed that the transparency index had a positive and significant relationship between company transparency and market value. Eng and Mak (2003) examined the impact of ownership structure and board composition on voluntary disclosure. Ownership structure proxy was characterized by managerial ownership, blockholder ownership and government ownership, and board composition. Voluntary disclosure is proxy by an aggregated disclosure score of non-mandatory strategic, non-financial and financial information. They found lower managerial ownership and significant government ownership to be associated with increased disclosure. Larger firms and firms with lower debt had greater disclosure but blockholder ownership was not related to disclosure. Bhagat and Bolton (2008) examined corporate governance, capital structure, ownership structure and firm value from the Investor Responsibility Research Center (IRRC). They showed that the stock ownership of board members, and CEO-Chair separation was significantly positively correlated with better contemporaneous and subsequent operating performance. Dittmar and Smith (2007) used complicated measures of internal and external corporate governance comprising the degree of managerial entrenchment due to take over defense and the presence of large shareholder monitoring. They identified firms with poor corporate governance as dissipating cash quickly in ways that significantly reduced operating performance.

Chi (2009) used the Information Transparency and Disclosure Ranking System developed by Taiwan Stock Exchange Corporation(TSEC) and The Gre Tai Securities Market (GTSM) to evaluate the degree to which corporate transparency and information disclosure of corporate governance practices helps to explain the firm performance of companies in Taiwan. Chang and Sun (2010) examined whether the SOX's mandated disclosure of corporate governance structures affected the market valuation of earnings surprises for US firms. They used the relationship between discretionary accruals and firms' corporate governance structures to measure the effectiveness of corporate governance in monitoring earnings management. The results revealed that the market valuation of earnings surprises was significantly higher for firms which disclosed stronger corporate governance functions. In addition, they found thatidentified the effectiveness of corporate governance in monitoring earnings management as being improved after the mandated disclosure. Ștefănanesu (2011) compared the empirical findings related to the level of disclosure ensured by corporate governance codes in force in 27 European Union member states, by referring to the OECD principles, with prior related research results. The results indicated that the common law regime ensures the highest level of transparency through the corporate governance requirement, and the compliance of corporate governance codes with OECD principles is consistent with disclosure considering the codes' issuer type and country's legal regime.

The disclosure and transparency category contains a corporate governance assessment pertaining to the disclosure of mandated and voluntary corporate information through a variety of channels to reach all interested and relevant parties in a timely manner (Stock Exchange of Thailand and Thai Institute of Directors, 2012). The OECD requires that timely and accurate disclosure is made on all material matters regarding the corporation including the financial situation, performance, ownership, and governance of the company. This study measures disclosure and transparency from disclosures of material information, the quality of the annual report, external disclosure, multiple channels used to provide access to information, and investor relations activities. ASEAN Capital Market Forum and Asian Development Bank (2013) found that Thai listed companies disclosure or policy and details of related-party transactions,

disclosure of audit and non-audit fees, affirmation of the annual financial statement by the board of directors, and disclosure of contact details of investor relations. This study followed Stock Exchange of Thailand and Thai Institute of Directors (2012) and ASEAN Capital Market Forum and Asian Development Bank (2013) as concerns the disclosure and transparency proxy in the disclosure of the audit and non-audit fee issue because the OECD framework measures a different issue.

Material information: The fraction of shares owned by the five largest shareholding interests is more likely to be representative of the ability of shareholders, and to control professional management than the fraction of shares owned by management is to be representative of the ability of professional management to ignore shareholders (Demsetz and Villalonga, 2001). Claessens et al. (2002) investigated the valuation of publicly traded East Asian corporations relative to their ownership structure. They divided the owner type by the percentage of the largest shareholder and included the following: a ten percent cutoff for the effective control of the largest shareholder, twenty percent for the effective control of the largest shareholder, and a forty percent cutoff for the effective control for the largest shareholder. Connelly et al. (2012) measured the disclosure of material information from transparency of the ownership structure, directors' shareholdings, and management shareholding measured in a dummy variable. Annual reports of Thai listed companies present the ownership structure in the "List of top ten largest shareholders". This can be measured in more concretely than by the method of Connelly et al. (2012). Thanatawee (2013) measured the ownership structure of Thai firms from the percentage of shares held by: the largest shareholder, the five largest shareholders, institutional shareholders, domestic institutional shareholders, foreign institutional shareholders, individual shareholders, domestic individual shareholders, foreign individual shareholders and foreign shareholders. Mitton (2002) investigated cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. The results showed that divergences in cash flow/voting rights had negative impact on firm value. Large non-management bolckholders improved firm value, especially during a crisis. Lins (2003) found large non-management control rights blockholdings to be positively related to firm value by examining the relationship between equity ownership and firm value in emerging

markets. The deviation of cash flow rights from voting rights by management shareholdings lowered firm value. Claessens et al. (2002) found firm value to be higher when the largest owner's equity stake is larger, but lower when the wedge between the largest owner's control and equity stake is larger. Douma et al. (2006) compared foreign and domestic ownership by business groups and firm performance in Indian companies. The results showed that foreign ownership both by institutions and corporations improved Tobin's Q. The group membership had a substantially negative impact on both ROA. Bae et al. (2007) established a link between corporate governance and firm value after investigating controlling shareholders' expropriation incentives. During the 1997 crisis, firms with weak corporate governance experienced a larger drip in the value of their equity, but during the post crisis recovery period such firms experienced a larger rebound in their share values. Cueto (2007) examined the relationship between corporate governance and ownership structure in listed companies from Brazil, Chile, Colombia, Peru and Venezuela. The results showed that higher ratios of cash flow rights to voting rights held by the dominant shareholder are significantly associated with higher Q values. Greater voting rights held by the dominant shareholder was associated with lower Tobin's Q. Lei and Song (2008) devised a corporate governance index covering the areas of board structure, ownership structure, compensation, and transparency. They found that family-based and small firms have poor internal corporate governance mechanisms and tend to pay themselves slightly higher and firms with better corporate governance ratings have higher firm value. This study measures the ownership structure from the percentages of the five largest shareholders.

2.3.2.5 Responsibility of the Board

Prior studies often used the board of director proxy to measure the effect between firm value and market value. Peng (2004) found affiliated outside directors to have a positively significant impact on sales growth after examining the relationship between the proportion of affiliated and nonaffiliated outside directors and ROE and growth in sales. Mak and Kusnadi (2005) investigated the relationship between the proportion of independent directors and firm value in Malaysia and Singapore. The results showed that independent directors were not significantly associated with firm

value. Choi, Park and Yoo (2007) studied the value of an outside director and firm value in Korea. They found a positively significant relationship for the proportion of independent directors but not for the proportion of outside directors. Dahya et al. (2008) revealed that the proportion of outside directors had a positively significant relationship with Tobin's Q from 22 countries including seven emerging markets in 2002. Cayler (2006) identified seven governance measures as key drivers of this link: (1) board members are elected annually; (2) the company either has no poison pill or one approved by shareholders; (3) option re-pricing did not occur within the last three years; (4) average options granted in the past three years as a percentage of basic shares outstanding did not exceed 3%; (5) all directors attended at least 75% of board meetings or had a valid excuse for non-attendance; (6) board guidelines are in each proxy statement; (7) directors are subject to stock ownership guidelines. The other five are internal governance factors, none of which have been considered by prior literature linking governance to firm value.

The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders (OECD, 2004). Basic board responsibilities are to create and review a statement of vision and mission that articulates the organization's goals and primary constituents, participate in an overall planning process and assist in implementing and monitoring the plan, secure adequate financial resources for the organization to fulfill its mission, assist in developing the annual budget and ensuring that proper financial controls are in place, articulate prerequisites for director candidates, orient new board members, and periodically and comprehensively evaluate their own performance, adhere to legal norms and high ethical standards, undertake a careful search to find the most qualified chief executives, and support and evaluate the chief executives, among others (Stock Exchange of Thailand and Thai Institute of Directors, 2012). The company must have its own written corporate governance rules describing the value system and board responsibility (Cheung, 2010; Connelly et al. 2012). Firms with busy boards, those in which a majority of outside directors hold three or more directorships, are associated with weak corporate governance (Fich and Shivdasani, 2006). Connelly et al. (2012) measured

board responsibilities from an index of board monitoring/control efforts (board member training, board meeting frequency, attendance of board members, and risk management policy). ASEAN Capital Market Forum and Asian Development Bank (2013) identified the following clear roles and responsibilities of the board: disclosure of the company's corporate governance policy and conduct, spate roles of the chair and the chief executive officer, chair as an independent director, good structure of board committees, scheduling board meetings before or at the beginning of the year, board meetings held at least six times per year, and board establishment and review of the internal control and risk management system. The variables of board responsibility include:

1. Board members: Jensen (1993) suggested that for boards with more than approximately eight members decision making was more likely to be controlled by the CEO. Yermack (1996) confirmed this with the finding that large boards are associated with lower firm value. Mak and Kusnadi (2005) examined the impact of the corporate governance mechanism on the firm value of Singaporean and Malaysian firms. The board variables that they used were as follows: board size, proportion of executive and independent directors, audit committee, and proportion of executive and independent directors, and measurement in a dummy variable. However, this study measured the board members through the following: board of directors, audit committee, remuneration committee, independent directors, and nominating committee.

2. Board meeting attendance (meeting time and attendance time at meetings): Vafeas (1999) examined the association between board activity, measured by frequency of board meetings, and corporate performance. The results showed board meeting frequency to be related to corporate governance and ownership characteristics in a manner consistent with contracting and agency theory and with the annual number of board meetings inversely related to firm value. Brick and Chidambaran (2010) focused on the determinants of board monitoring activity and its impact on firm value for the board panel of the firm. They found that board activity had a positive impact on firm value. Balasubramanian et al. (2010) used board composition and independence, board practice process: time spent in board meetings per year to study the relationship between firm level corporate governance and market value in India. Chou et al. (2013) investigated board meeting attendance and its effects on the performance of Taiwanese

listed corporations. They found that the ownership of the largest shareholders of a company also had a positive effect on a director's own meeting attendance. In addition, high meeting attendance by directors themselves can enhance a firm's performance but high attendance by their representatives has an adverse effect, while independence of directors or a board is positively associated with firm performance. In this study board meeting attendance was measured from the percentage of board meeting attendance.

Table 2.2 summarizes the dependent variables in prior research relating to the five mechanisms.

Table 2.2 Summary of Prior Research on Corporate Governance Proxy

OECD Principles	**Independent Variables**	**Dependent Variables**	**Authors**	**Proxy**	**Expecte sign**
1. Right of Shareholders					
1.1Basic rights	Dividend policy	Stock Option	Lambert et al., (1989)	Dividend payment	+
	Dividend policy	Growth	LaPorta et al., (2000)	Dividend payment	+
	Dividend policy	Dividend payer	Trung and Heaney (2007)	1) Total cash dividends paid to common shares 2) Ratio of total dividends to net earnings after tax before extraordinary items 3) Ratio of total dividends to net sales	+
	Dividend policy	Firm value	Cheung et al.(2010) Connelly et al.(2012)	Dividend policy, providing the amount and explanation for payment	+
	Dividend policy	Firm value	Stock Exchange of Thailand and Thai Institute of Directors (2012)	Dividend policy, providing the amount and explanation	+
	Ownership structure	Dividend policy	Thanatawee (2013)	Dividend payout ratio: dividends/net income	+
1.2 Right to participate	Attendance and procedures at the AGM	Trusts	Hodges et al. (2004)	Questionnaire from the AGMs of UK National Health Service Trusts.	+
	The role of the AGM	Board of directors	Apostolides (2010)	AGM score card: Evaluation of 22 AGMs in terms of corporate governance were used to assess the level of accountability at the AGMs observed with a score assigned to the scorecard	+

Table 2.2 Summary of Prior Research on Corporate Governance Proxy (Cont.)

OECD Principles	Independent Variables	Dependent Variables	Authors	Proxy	Expected sign
1.3 Opportunity to participate effectively and vote	Information alert for shareholders from the numbers of days in advance the company sent out the notices of general shareholders' meetings	Firm value	Stock Exchange of Thailand and Thai Institute of Directors (2012)	1)How many days in advance does the company send out the notice to call the general shareholders' meeting? 2)Did the company post the notice to call the shareholders' meeting more than 30 days in advance on its website?	+
2. Equitable Treatment of Shareholders					
2.1 Treat equally	Institutional Regulator	Shareholder voting	Bethel and Billan (2002)	Vote results of shareholders at companies' annual meetings and at special shareholder meetings	+
	Voting rights of shareholders by one share, one vote	Firm value	Connelly et al.(2012)	Only one class of share with one-share, one-vote	+
2.2 Insider trading	Shareholder conflict	Firm value	Connelly et al. (2012)	Is there a system established to prevent the use of material inside information and inform all employees, managers, and board members?	+
2.3 Opportunity to participate effectively and vote	Information alert for shareholders from the days in advance the company sent out the notices of general shareholders' meetings	Firm value	Stock Exchange of Thailand and Thai Institute of Directors (2012)	1)How many days in advance does the company send out the notice to call general shareholders' meetings? 2)Did the company post the notice to call the shareholders' meeting more than 30 days in advance on its website	+
3. Role of stakeholders in corporate governance					
3.1 Right of stakeholders	Disclosure of individual directors' remuneration and board meeting attendance of individual directors	Firm value	Stock Exchange of Thailand and Thai Institute of Directors (2012)	Does the company disclose its remuneration (fees, allowances, benefit-in-kind and other emoluments) for its executive directors and CEO?	+

Table 2.2 Summary of Prior Research on Corporate Governance Proxy (Cont.)

OECD Principles	Independent Variables	Dependent Variables	Authors	Proxy	Expected sign
4. Disclosure and transparency					
Disclosure	Percentage of shareholder ownership	Voting right Cash flow right	LaPorta et al (1999)	1) Aggregate market value of common equity of firms controlled by widely held financial firms divided by the aggregate market value of common equity of the 20 largest firms in a given country.	+
	Shares owned by the five largest shareholders	Performance	Demsetz and Villagonga (2001)	1) Percentage of shares owned by management 2)Percentage of shares owned by the five largest shareholders	+
	Owner type	Firm value	Claessens et al.(2002)	Percentage of firms with dispersed control	+
	Ownership variables	Dividend policy	Thanatawee (2013)	Percentage of shares held by the five largest shareholders	+
5. Responsibilities of the board					
5.1Board members	Board variable	Firm value	Kusnadi (2005)	A board size is defined as the number of directors on each firm's board	+
Board responsibility	Board meeting attendance	Firm value	Stock Exchange of Thailand and Thai Institute of Directors (2012)	Is the attendance of members at the Nomination Committee, Remuneration Committee, and Audit Committee meeting disclosed?	+
		Firm value	Connelly et al., 2012	Board meeting frequency 1)Met more than four times during the past 12 months. Board attendance greater than 80 percent average attendance during the past 12 months.	+

2.3.3 Corporate Governance in Thailand

Corporate governance in Thailand was introduced by SET and has continuously helped Thai listed companies to abide by good corporate governance since 1995 before the financial crisis, when the roles of the audit committee come under greater scrutiny. In 1998, SET issued a listing requirement indicating that effective form 1999 onwards, all listed companies have and an audit committee and also issued guidelines in the "Code of Best Practices for Directors of Listed Companies". In 2001, the good corporate governance committee, consisting of representatives from a variety of professional organizations, circulated a report on corporate governance. The report set a framework for use by organizations in the Thai capital market for developing good corporate governance systems and practices. The Thai government provided its own guidelines in 2002 through the "Compass for Good Corporate Governance" and set up the National Corporate Governance Committee (NCGC). Besides, the Exchange also proposed fifteen principles of good corporate governance for listed companies to implement. These covered the following five areas: 1) Rights, and equitable treatment of shareholders and various groups of the stakeholders, 2) Board, and equitable treatment of shareholders and various groups of stakeholders, 3) Disclosure and transparency, 4) Internal control and risk management, and 5) Business ethics. Beginning from the accounting period ending December 31, 2002 listed companies are required to demonstrate, in their annual registration statement (Form 56-1) and annual reports, how they apply the fifteen principles. If they choose not to apply any principle, they are required to provide justification.

In July 2002, the SET established the Corporate Governance Center to help listed companies develop their corporate governance system. The Center provides consulting services to and the exchange of ideas about corporate governance practices with directors and executives of listed companies, as well as those of firms preparing to become listed companies (SET, 2013).

2.4 Value Relevance

The definition of value relevance conforms to the statement of the importance of the value relevance of accounting information in the Framework for the preparation and Presentation of Financial Statements (IASC, 1989). Barth et al. (2001) determined value relevance as an empirical operationalization of the criteria of the relevance and reliability of accounting numbers as reflected in the equity value. Francis et al. (2004) documented value relevance as a more important attribute of accounting quality than conservatism or timeliness and one of the most important attributes of accounting quality. Beisland (2009) defined value relevance as the ability of financial statement information to capture and summarize information that determines the firm's value. Suadiye (2012) view value relevance as the ability of information presented in financial statements to capture and summarize firm value and which can be measured by the statistical relations between the information present and stock market values or returns (Suadiye, 2012). In summary, value relevance is an empirical operationalization of relevance and reliability from accounting information represented by financial statements to capture and summarize firm value.

Studies on the value relevance of accounting information have been carried out in several dimensions. The components of financial reporting have been selected and put into the analysis to observe incremental information. These included total assets (i.e. firm size), total liabilities, earnings, and disclosure in notes to financial reporting, among other components.

Prior studies by Brown et al. (1999), Clarkson et al. (2011) and AL. Hares et al. (2012) found that both book value and earnings had value relevance, while Cheng (2005) identified earnings as having more value relevance than book value. Brown et al. (1999) documented the increase in the value relevance of accounting as being attributable to an increase in the coefficient of the variation of the scale factor. They showed that the R^2 in the regression of price on earnings per share (EPS) and book value per share (BVPS) positively correlated with the cross-sectional variation in the coefficient of the scale factor. They recommend that the researcher control for the difference of scale effects between samples by including a proxy for the coefficient of the variation of scale, or by deflating individual observations by a proxy for scale.

Cheng (2005) examined the value relevance of reported earnings and book value under pooling-of-interest and purchase accounting, and measured the relationship between post-manager earnings and book value from share prices and used Ohlson's valuation model (1995).They found that earnings under pooling had more value relevance than book value.AL. Hares et al. (2012) examined the value relevance of book value, earnings and dividends for a sample of all non-financial firms listed on the Kuwait Stock Exchange (KSE). The results showed the value relevance of accounting information as not being driven by industry effects in the KSE. The information content of accounting information was significantly higher for large firms than for small firms. They indicated that dividend policies do matter in the KSE and dividends in Kuwait are used to boost investor confidence and support share prices, noticeably during the global financial crisis period. Clarkson et al. (2011) studied the impact of IFRS adoption in Europe and Australia on the value relevance of book value and earnings for equity valuation. They used a linear valuation model to evaluate the improvement in fit for equity valuation as the GAAP regime changes. They suggested that the adoption of IFRS has greater impact on the financial statements of Code Law versus Common Law countries by the mean percentage change in both earnings per share and book value per share and is larger for firms from Code Law countries. The valuation test and linear pricing models in the adoption of IFRS increased absolute pricing errors for Common Law countries, on average, relative to Code Law countries.

Prior studies have also investigated the effects of earnings to independent variables. Goodwin and Ahmed (2006) examined the value relevance of earnings and intangible assets in Australia. They studied the longitudinal returns-earnings and price-earnings-book value relations over the 25-year period of 1975-1999. Based on the earnings and earnings change model, the results suggest that earnings value relevance has declined over the period as measured by R^2 and earnings response coefficient. Filip and Raffournier (2010) investigated the value relevance of earnings on the Bucharest Stock Exchange in Romania. The results indicated that the association between accounting earnings and stock returns is comparable to the levels reported by studies conducted on more mature markets, and that it is higher for securities issued by small companies. The regression coefficient of earnings changes is negative and they provide

evidence consistent with the hypothesis that it is a consequence of the relative inefficiency of the market. Akbar (2011) focused on whether various partitions of earnings involving combinations of a cash flow measure or performance and measures of current accruals and non-current accruals improve the ability to explain market values in the UK relative to using earnings. The results suggest strong support for the assertion that cash flows can have incremental value relevance relative to either earnings or fund flows. Their findings support the assertion that cash flows can have incremental value relevance relative to either earnings or fund flows. The implication is that cash flows can have spate value relevance from total and current accruals.

Based on previous studies, the most popular components of financial reporting used to observe the value relevance of financial information include various items. In this study, the control variables representing the value relevance of financial information are firm size, leverage, and earnings before interest and tax (EBIT) as briefly explained below:

Firm size

To control the effect on Tobin's Q, firm size is employed. Firm size can be computed by total assets, market value of equity, book value of assets, and sales. This study computes firm size from total assets as this is popularly used to examine corporate governance and firm value, and follows the method of Brow and Caylor (2006) and Connelly et al. (2012). The natural log of the firm's net sales, the log of total capital or the market value of equity as alternative measures of firm size yield similar results (Daines, 2001)

Leverage

Cheng et al. (2006) examined the relationship between shareholder rights and cost of equity, suggesting that most prior studies used some measure of firm leverage as a control variable in generally documenting a positive association (Botosan,1997; Botosan and Plumell, 2002; Gebhardt et al., 2001; Gode and Mohanram, 2003; Eston,2004).

Firms with higher leverage ratio have greater incentives to conduct earnings in order to avoid convent violation and/or to prevent adverse effects on their debt ratings (The

presence of agency cost in such firms gives rise to a demand for monitoring, and the quality of governance may be used to mitigate agency cost) (DeFond and Jiambalvo, 1994; Watts and Zimmerman, 1990). Higher leverage suggests greater credit risk (Cheung, 2005). Furthermore, Dey (2008) expected a positive association between governance quality and reporting credibility. In addition, Cheung et al. (2008) documented firm leverage and liquidity as being able to affect corporate governance. They used the debt-to-equity ratio as the control variable for the risk factors of a firm. The coefficient for the debt-to-equity ratio has a statistically significantly positive relationship to market valuation. This study computes leverage from total long-term debt at the end of the fiscal year divided by the market value of common equity at the fourth month after the end of the firm's fiscal year.

EBIT

Earnings before interest and tax (EBIT) measure a firm's profit that includes all expenses except interest and income tax expense. Myers (1984) suggests that managers have a pecking order in which retained earnings represent the first choice, followed by debt and equity financing. Firms with greater non-debt tax shields would be expected to have lower levels of debt (Jiraporn et al., (2012), Dittmar (2000) and Jiraporn (2005) used EBIT to control for profitability).

2.5 Conclusion

Prior studies have been conducted on how to sustain firm valuation in the long term. In the past two decades corporate governance mechanisms have been used to increase firm value. However, the results have been unclear. Therefore, this study aims to clarify the effects of corporate governance mechanisms on firm value and also introduces a new context in the analysis. This study fills a research gap by introducing a new context of comprehensive income to analyze which corporate governance mechanisms provide information content relevant to firm value. Prior studies measured corporate governance using checklists and/or coding corporate governance scores. This has provoked much concern. This study introduces a corporate governance index which is publicly available. The study uses the corporate governance mechanisms recommended by OECD in the analysis. These components include the rights of

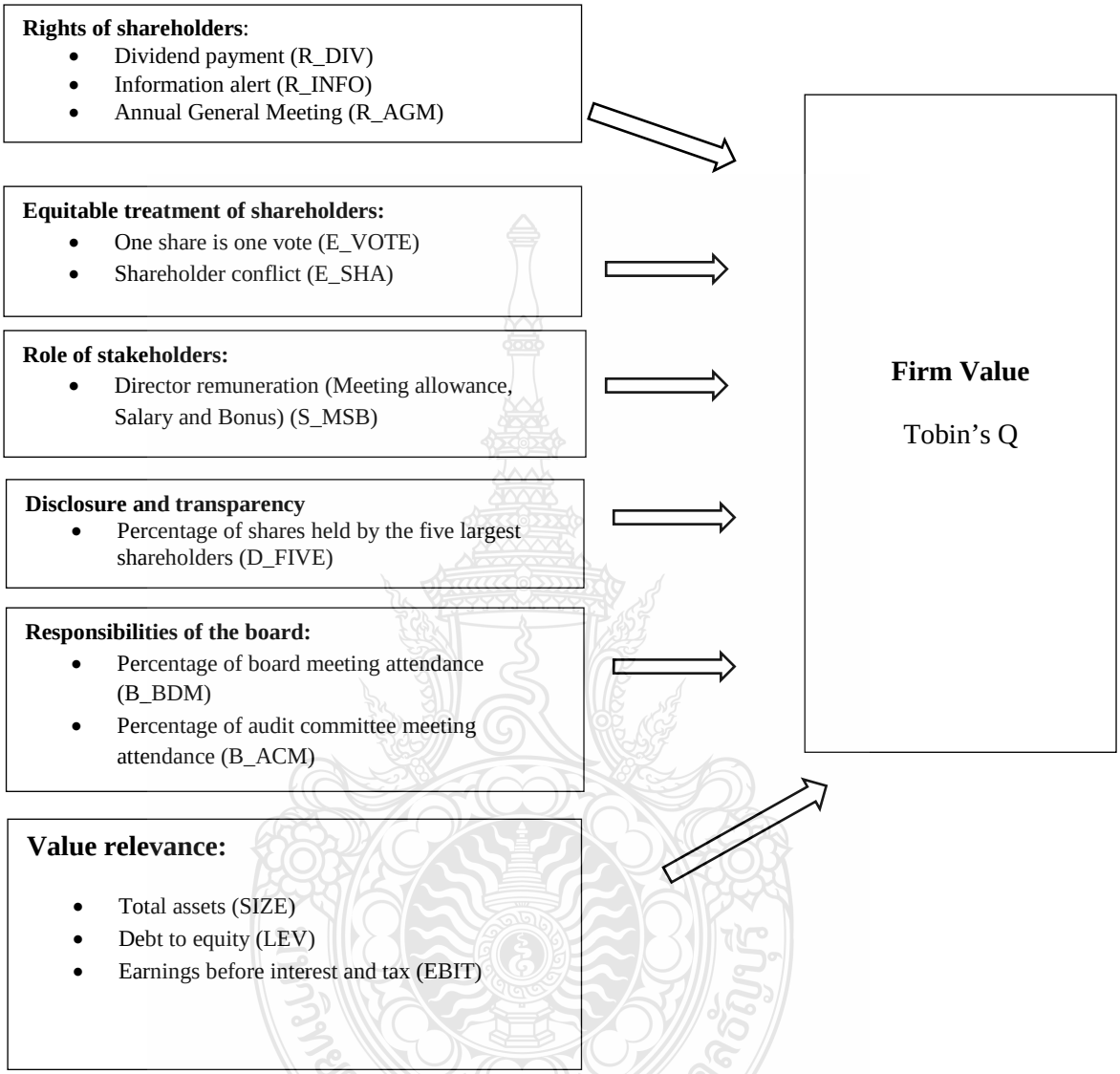
shareholder, equitable treatment of shareholders, the role of shareholders, disclosure and transparency, and board responsibility and composition. Proxies representing corporate governance mechanisms are newly introduced and also the most successful variables are employed in the analysis. Tobin's Q is used to measure firm value because prior research has indicated that it successfully reflects firm value in the long-term perspective. In summary, the study successfully reviews prior literature in various dimensions and is strong enough to support the research methodology and findings in the following chapters.

CHAPTER 3
RESEARCH METHODOLOGY

This paper is an empirical study that intends to examine the relationship between corporate governance as recommended by OECD (including the rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency, and board responsibility) on firm value in the comprehensive income context. Listed companies on the Stock Exchange of Thailand were selected for observing this relationship. This chapter discusses the research methodology and variables employed in the study. It begins with the conceptual framework, population and samples, data collection and procedures, variables, and statistical analysis. The analysis is divided into descriptive statistics and multiple regressions.

3.1 Conceptual Framework

The conceptual framework in this study is given below:



3.2 Population and Sample

An empirical research method based on secondary data was applied in this study. The population used in this study comprised all listed companies traded on the Stock Exchange of Thailand (SET) during 2011-2012. The main reason for choosing this period was because The Federation of Accounting Professions in Thailand adopted TAS 1, effective on 1 January 2011. The listed companies owned by the property fund were excluded from the data set because of different corporate governance (Pithan et al. 2008; Issanawornrawanich and Jaikengkit, 2011). Also, missing data and a fiscal year not ending on 31 December were not included in the dataset. Data collection relating to corporate governance mechanisms are publicly available in annual reports, company websites and Aannual General Meeting assessments (AGM) from the Thai Investors Association. In addition, data on net income and comprehensive income were retrieved from SETSMART (SET Market Analysis and Reporting Tool). The dataset was divided into two sets: firms with other comprehensive income and firms without other comprehensive income. A total sample covered 756 observations over two years: a sample of 378 in 2011 of which 152 firms provided other comprehensive income and a sample of 378 in 2012 of which 178 firms provided other comprehensive income. Table 3.1 presents the types of other comprehensive income of Thai listed companies in the dataset.

Table 3.1 Types of Other Comprehensive Income of Thai Listed Companies

Items	**2011**	**2012**
Exchange differences in translating foreign operations	7	6
Gains (losses) on cash flow hedges	5	4
Actuarial gains (losses) on employee benefit plans	15	68
Unrealized gains (losses) on available-for-sale financial assets	123	84
Income tax relating to components of other comprehensive income	11	19
Changes in assets revaluation surplus	24	17
Share of other comprehensive income of associates	2	2
Others	21	24

Note: It is noted that t the above cannot be totaled because a firm may incur more than one type of other comprehensive income.

3.3 Data

A quantitative research method based on secondary data was applied in this study. The data relating to corporate governance are publicly available in annual reports, company websites and AGM assessments from the Thai Investors Association. In addition, the data on net income and comprehensive income were retrieved form SETSMART (SET Market Analysis and Reporting Tool).

After data collection was completed, multiple regressions were used to analyze the data. All five assumptions of multiple regressions had been tested including error or residual to identify whether they were normally distributed. If the analysis found that multicolinearity was an issue, natural log (ln) was employed to transform the data. The test results showed that tolerance was of low value or toward or near 0, and also VIF was not higher than 10. Therefore, the dependent variables should not have multicolinearity concerns. Hierarchical multiple regressions were used to test the statistical significance of the association between the dependent variable and the independent variables. The study also attempted to compare the results using two statistical software packages: SPSS and STATA, with the analysis coming out similarly. The statistical results shown in Chapter 4 represent the STATA outputs. On the other hand, SPSS outputs are included in the appendix.

3.4 Model Development

Prior studies (Shleifer and Vishny, 1997; John and Senbet, 1998; Hermalin and Weisbach, 2003; Gompers et al., 2003; Cremers and Nair, 2005; Bebchuk and Cohen, 2005 Brown and Caylor, 2006, Bebchuk et al. 2009; Connelly et al. 2012) examined the effects of corporate governance variables on firm valuation using Tobin's Q as a proxy for firm valuation through the following regression model:

$$Tobins\ Q = a_t + b_t X_{it} + c_t W_{it} + e_{it},$$

Q'_{it}= industry-adjusted Q (firm Q minus industry-median Q)

X_{it}= Corporate governance variables

W_{it}= Selected financial ratios.

Prior studies (Bebchuk and Cohen, 2005; Brown and Caylor,2006; Bebchuk et al. 2009; Connelly et al. 2012) examined the association between corporate governance variable and firm value through the following regression model:

$$Q_{i,t} = \beta_0 + \beta_1 CG\ Variable_{i,t} + \sum_{k=1}^{k} \eta k\ Control_{k,i,t} + \varepsilon_{i,t}$$

This study investigates relationship between the corporate governance proxy from OECD principles and firm value through the following hierarchical regression model:

3.4.1 Model test: relationship association between control variables and firm value.

$$Q_{i,t} = \beta_0 + \beta_1 SIZE + \beta_2 LEVERAGE + \beta_3 EBIT + \varepsilon_{i,t} \qquad (Model\ 1)$$

3.4.2 Model test: association between rights of shareholders and firm value.

$$Q_{i,t} = \beta_0 + \beta_1 R\_DIVIDEND + \beta_2 R\_INFO + \beta_3 R\_AGM + \beta_4 SIZE + \beta_5 LEVERAGE + \beta_6 EBIT + \varepsilon_{i,t} \qquad (Model\ 2)$$

3.4.3 Model test: relationship between equitable treatment of shareholders and firm value.

$$Q_{i,t} = \beta_0 + \beta_1 R\_DIV + \beta_2 R\_INFO + \beta_3 R\_AGM + \beta_4 E\_VOTE + \beta_5 E\_SHA + \beta_6 SIZE + \beta_7 LEV + \beta_8 EBIT + \varepsilon_{i,t} \quad (Model\ 3)$$

3.4.4 Model test: relationship between role of stakeholders and firm value.

$$Q_{i,t} = \beta_0 + \beta_1 R\_DIV + \beta_2 R\_INFO + \beta_3 R\_AGM + \beta_4 E\_VOTE + \beta_5 E\_SHA + \beta_6 S\_MSB + \beta_7 SIZE + \beta_8 LEV + \beta_9 EBIT + \varepsilon_{i,t} \quad (Model\ 4)$$

3.4.5 Model test: relationship between disclosure and transparency and firm value.

$$Q_{i,t} = \beta_0 + \beta_1 R\_DIV + \beta_2 R\_INFO + \beta_3 R\_AGM + \beta_4 E\_VOTE + \beta_5 E\_SHA + \beta_6 S\_MSB + \beta_7 D\_FIVE + \beta_8 SIZE + \beta_9 LEV + \beta_{10} EBIT + \varepsilon_{i,t} \quad (Model\ 5)$$

3.4.6 Model test: relationship between responsibilities of the board and firm value.

$$Q_{i,t} = \beta_0 + \beta_1 R\_DIV + \beta_2 R\_INFO + \beta_3 R\_AGM + \beta_4 E\_VOTE + \beta_5 E\_SHA + \beta_6 S\_MSB + \beta_7 D\_FIVE + \beta_8 B\_BDM + \beta_9 B\_ACM + \beta_{10} SIZE + \beta_{11} LEV + \beta_{12} EBIT + \varepsilon_{i,t} \quad (Model\ 6)$$

3.5 Hypothesis Development

This research intends to provide empirical evidence concerning the relationship between corporate governance and firm value in the comprehensive income context of Thai listed companies. The research hypothesis and development of this study is as follows:

Initailly, prior studies indicated that the value relevance of financial information tends to highly increase firm value. Therefore, the analysis considers financial information as the first hierarchy. Also, the study intends to compare incremental information of corporate governance mechanisms between firms with other comprehensive income and firms without other comprehensive icome. Based on

discussion in the previous chapter, the study employs total assets (firm size), debt to equity and earnings before interest and tax representing control variables. Therefore, the hypotheses of the analyis are as follows:

H_1: Firms with control variables are related to firm value. (firms with other comprehensive income)

H_7: Firms with control variables are related to with firm value. (firms without other comprehensive income)

For the second hierarchy, prior studies showed that the rights of shareholder related to firm value. Based on the discussion in the previous chapter, the proxies representing the right of shareholders comprise dividend payment, information alert, and annual general meetings. The following is the research hypothesis for the rights of the shareholder:

H_2: Firms with specific rights of shareholders are related to firm value. (firms with other comprehensive income)

H_8: Firms with specific rights of shareholders are related to firm value. (firms without other comprehensive income)

For the third hierarchy, prior studies showed that the equitable treatment of shareholders related to firm value. Based on the discussion in the previous chapter, proxies representing the equitable treatment of shareholders include one share, one vote and shareholder conflict. The following is the research hypothesis for the equitable treatment of shareholders:

H_3: Firms with specific equitable treatment of shareholders are related to firm value. (firms with other comprehensive income)

H_9: Firms with specific equitable treatment of shareholders are related to firm value. (firms without other comprehensive income)

For the fourth hierarchy, prior studies showed that the roles of stakeholders related to firm value. Based on the discussion in the previous chapter, proxies representing the role of stakeholders include director remuneration. The following is the research hypothesis for the right of the roles of stakeholders:

H_4: Firms with specific roles of stakeholders are related to firm value. (firms with other comprehensive income)

H_{10}: Firms with specific roles of stakeholders are related to firm value. (firms without other comprehensive income)

For the fifth hierarchy, prior studies showed that disclosure and transparency related to firm value. Based on discussion in the previous chapter, proxies representing the disclosure and transparency included the percentage of shares held by the first largest shareholder. The following is the research hypothesis for disclosure and transparency:

H_5: Firms with specific disclosure and transparency are related to firm value. (firms with other comprehensive income)

H_{11}: Firms with specific disclosure and transparency related to firm value. (firms without other comprehensive income)

For the sixth hierarchy, prior studies showed that the responsibility of boards related to firm value. Based on the discussion in the previous chapter, proxies representing the responsibilities of the board include the percentage of board meeting attendance and percentage of audit committee meeting. The following is the research hypothesis for the responsibilities of the board:

H_6: Firms with specific responsibilities of boards are related to firm value. (firms with other comprehensive income)

H_{12}: Firms with specific responsibilities of the boards are related to firm value. (firms without other comprehensive income)

3.6 Descriptive Statistics

Descriptive statistics describe the main features of a collection of data quantitatively. Descriptive statistics are distinguished from inferential statistics (or inductive statistics) in that descriptive statistics aim to summarize a data set quantitatively without employing a probabilistic formulation, rather than use the data to make inferences about the population that the data are thought to represent. Even when a data analysis draws its main conclusions using inferential statistics, descriptive statistics are generally also presented. Examples of descriptive statistics are as follows:

1. Mean or average is probably the most commonly used method of describing the central tendency. To compute the mean all you do is add up all the values and divide by the number of values.

2. Median is the score found at the exact middle of the set of values. One way to compute the median is to list all scores in numerical order, and then locate the score in the center of the sample.

3. Standard Deviation is a more accurate and detailed estimate of dispersion because an outlier can greatly exaggerate the range. In statistics and probability theory, the standard deviation (SD) (represented by the Greek letter sigma, σ) measures the amount of variation or dispersion from the average. A low standard deviation indicates that the data points tend to be very close to the mean (also called expected value); a high standard deviation indicates that the data points are spread out over a large range of values. The standard deviation of a random variable, statistical population, data set, or probability distribution is the square root of its variance. It is algebraically simpler though in practice less robust than the average absolute deviation. A useful property of the standard deviation is that, unlike the variance, it is expressed in the same units as the data. Note, however, that for measurements with percentage as the unit, the standard deviation will have percentage points as the unit. In addition to expressing the variability of a population, the standard deviation is commonly used to measure confidence in statistical conclusions.

3.7 Multiple Regressions

Multiple regressions is the appropriate method of analysis for when the research problem involves a single metric dependent variable presumed to be related to two or more metric independent variables (Hair et al., 2010). The objective of multiple regression analysis is to predict the changes in the dependent variables in response to changes in the independent variables, and it is most often achieved through the statistical rule of least squares. Multiple regression analysis is concerned with predicting the mean value of a dependent variable Y from the known values of more independent variables X_i. The model can be written as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots \beta_k X_k + \varepsilon$$

Where:

Y = Firm value

$X_i - X_i$ = independent variables

β_0 = the Y-intercept, the value of Y when all the X's are zero.

$\beta_1 - \beta_i$ = the net change in for each unit change in X_i, holding all other X's constant.

β = the residual term.

The values of $\beta_1 - \beta_i$ are called the regression coefficients. They indicate the change in the estimated value of the dependent variable for a unit change in one of the independent variables when the other independent variables are held constant.

From estimated value β_i with b_i and estimated valve β_0 with a, multiple regression will be as follows:

$$\hat{Y} = a + b_1X_1 + b_2X_2 + ... + b_kX_k$$

Where:

$\hat{Y}$ = estimated value or predict value of Y variable

$e = Y - \hat{Y}$ = error value or the residual term or differented value between real value and estimated value β_i with b_i and estimated value β_0 with a. Then, using the least square method to find out a, b_1,... b_k which make

3.8 Testing of Multiple Regression Assumptions

Hair et al. (2010) identified some assumptions of multiple regression tailored toward the practicing researcher. These assumptions to be examined are in four areas:

1. Linearity of the phenomenon measured

The linearity of the relationship between dependent and independent variables represents the degree to which the change in the dependent variable is associated with the independent variable. The most common way to assess linearity is to examine scatterplots of the variables and to identify any nonlinear patterns in data. An implicit assumption of multiple regressions is linearity because correlations represent only the

linear association between variables, and nonlinear effects will not be presented in the correlation value. If a nonlinear relationship is detected, the most direct approach is to transform one or both variables to achieve linearity (Hair et al., 2010).

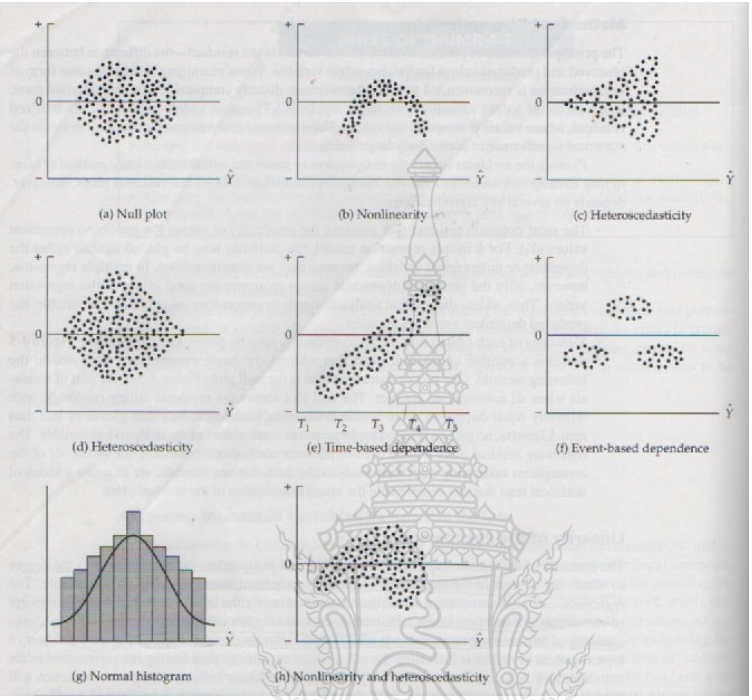


Figure 3.1 Graphical Analysis of Residuals Source: Hair et al. (2010): p. 184

2. Constant variance of the error terms

The presence of unequal variance (heteroscedasticity) is one of the most common assumption violations. That mean error terms do not have constant variance. Diagnosis is made with residual plots, boxplot or a simple statistical test. Plotting the residuals against the predicted dependent values and comparing them to the null plot (Figure 3.1a) shows a consistent pattern if the variance is not constant. The most common pattern is triangle-shaped in either direction (Figure 3.1c). The diamond-shaped pattern (Figure 3.1d) can be expected in the case of percentages where more variation is expected in the midrange than at the tails.

3. Independence of the error terms

In regression each predicted value is independent, which means that the predicted value is not related to any other prediction. They are not sequenced by any

variable. To check the independence of the error terms by plotting the residuals, if the residuals are independent, the pattern should appear random and similar to the null plot of residuals. Infraction will be identified by a consistent pattern in the residuals. For a residual plot that exhibits an association between the residuals and time, the common sequencing variable is shown in Figure 3.1e. Furthermore, the pattern in Figure 3.1f shows that basic model conditions change but are not included in the model.

4. Normality of the error term distributions

Normal distribution is the benchmark for statistical methods. If the variation from the normal distribution is sufficiently large, all result in statistical tests are invalid, because normality is required to use the *F* and *t – statistic* (Hair et al. 2010). The shape of any distribution can be described by kurtosis and skewness. Kurtosis refers to the "peakedness" or "flatness" of the distribution compared with normal distribution. Skewness is used to describe the balance of the distribution.

The original data file should be screened for normality (Balcaen and Ooghe, 2006; Howell, 2007; Hair et al., 2010, Kline, 2011). Normal distribution can be described by the two measures of kurtosis and skewness. Kurtosis refers to the peak or flat of the distribution compared with the normal distribution. Skewness is used to describe the balance of normal distribution. A positive skew denotes a distribution shifted to the left, whereas a negative skewness reflects a shift to the right. The skewness and kurtosis of a normal distribution are given values of zero. Thus, the value of the kurtosis and skewness in a normal distribution are equal to zero, otherwise its signs indicate the type of kurtosis as positive or negative. Kline (2011) suggested that an absolute value of the skew index greater than 3.0 be described as "extremely" skewed. A conservative rule of thumb is that the absolute values in the kurtosis index of greater than 10.0 may suggest a problem, and a value greater than 20 may indicate an even bigger one.

5. Multicollinearity

Multicollinearity is the correlation among the independent variables. The two most common measures for assessing both pair-wise and multiple-variable collinearity are tolerance and its inverse, the variance inflation factor (VIF) (Hair et sl., 2010). The effects of multicollinearity are impacts on the estimation of the predictive ability of the

regression model, the estimation of the regression coefficients and their statistical significance test. Also, impacts on the explanation of a larger portion of shared variance and lower levels of unique variance have effect on the individual independent variables, which become less distinguishable. Tolerance is a direct measure of multicollinearity and defined as the amount of the variability of the selected independent variable not explained by the other independent variable. A high tolerance value indicates little collinearity, and a tolerance value approaching zero indicates that the variable is almost totally accounted for by the other variables. This strongly suggests that the researcher should always specify the allowable tolerance value in regression programs, because of the default value of excluding the collinear variables allowed and the extremely high degree of collinearity. The variance inflation factor (VIF) is calculated simply as the inverse of the tolerance value, the small VIF values as indicative of low correlation among variables. If any of the VIF values exceed 10, this implies that the associated regression coefficients are poorly estimated because of multicollinearity (Montgomery, 2001). Furthermore, Kline (2011) recommended that a tolerance value less than 0.10 or VIF greater than 10.0 may indicate extreme multicollinearity. Figure 3.2 below presents the flow of data testing required by multiple regression assumptions.

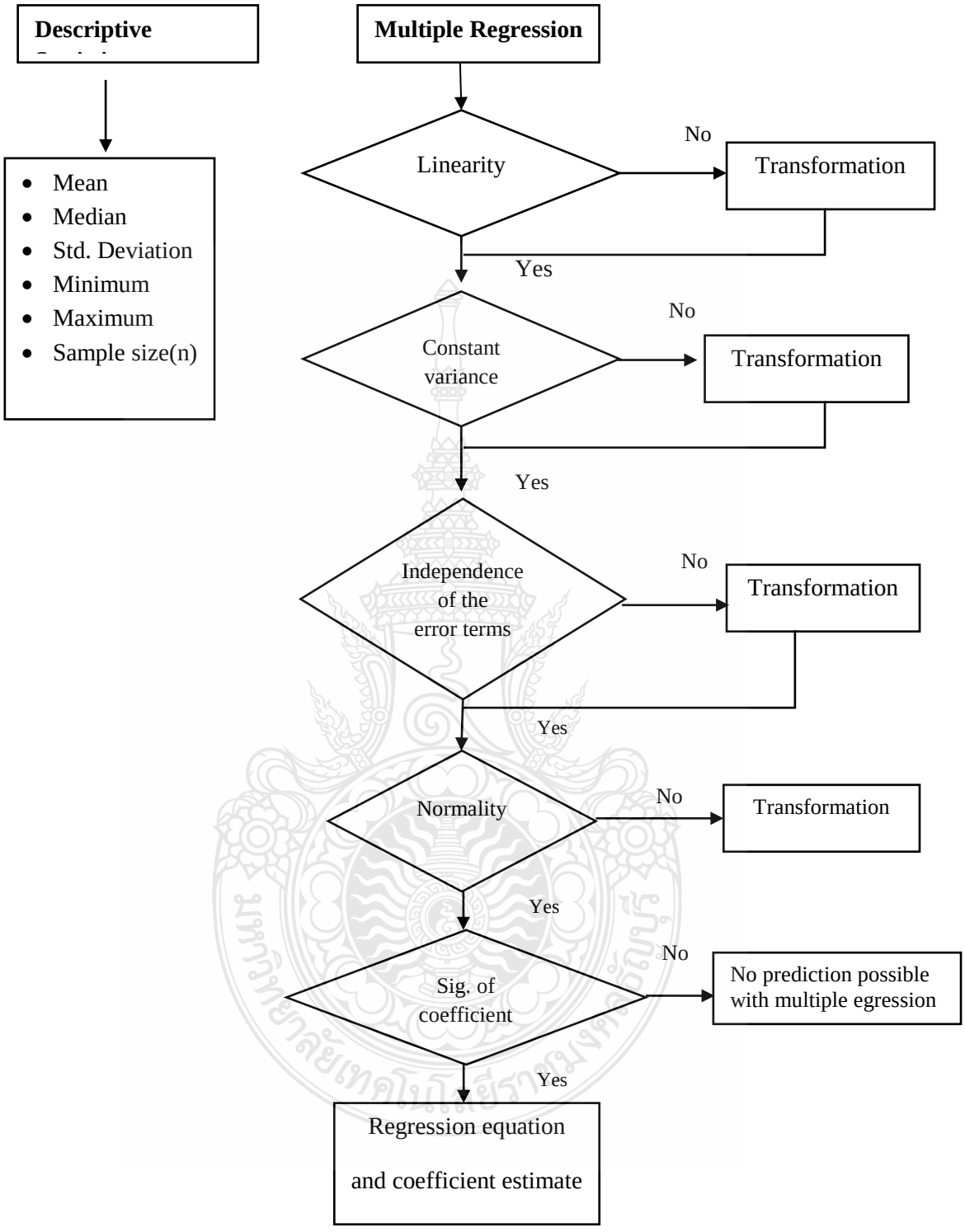


Figure 3.2 The Flow of Data testing Required by Multiple Regression Assumptions

After collecting data from listed companies on the SET, hierarchical multiple regressions analysis was used to investigate the association between corporate governance mechanisms and the firm value of listed companies with comprehensive income and without comprehensive income context. Hierarchical multiple regressions are used to test statistical significance and substantive significance of the association between the dependent variable and the independent variables. The study of the correlation of corporate governance and firm value comprises six models classified into three steps. First, the correlation between control variables, corporate governance mechanisms and firm value of comprehensive income context are tested to find what are the corporate governance mechanisms most related to firm value in the comprehensive income context, and to answer Research Question 1. Second, the correlation between the control variable, corporate governance mechanism and firm value is tested in the comprehensive income context for different shareholders to identify the corporate governance mechanisms most associated with firm value for different shareholders to answer Research Question 2. Third, the correlation between the control variable, corporate governance mechanism and firm value of non-comprehensive income to find which corporate governance mechanisms are most associated with firm value in the non-comprehensive income context to answer Research Question 3. Finally, the correlation between the control variable, corporate governance mechanism and firm value in the non-comprehensive income context for different shareholders was tested to ascertain which corporate governance mechanisms is most associated with firm value for different shareholders to answer Research Question 4.

To establish the association among the predictor and outcome variables for each research question, the researcher used hierarchical linear regression. This is a statistical method that determines the strength of the relationship between a criterion variable and several predictor variables. This type of regression means that the predictor variables are not entered into the regression analysis simultaneously, but in steps. Therefore, in this study, to examine the relationship with each outcome variable, six separate hierarchical regressions were calculated. Tobin's Q is the dependent variable, and then the predictor variables that were added into corporate governance component

consisted of right of shareholders, equitable treatment, role of stakeholders, disclosure and transparency, and responsibilities of the board.

Hierarchical multiple regression was performed to investigate the correlation of the corporate governance component and firm value after controlling for financial factors such as total assets (SIZE), debt to equity (LEV), and earnings before interest and tax (EBIT). Preliminary analyses were conducted to ensure no violation of the assumption of normality, linearity and homoscedasticity. Additionally, the correlations amongst the predictor variables (rights of shareholders, equitable treatment, role of stakeholders, disclosure and transparency, and responsibilities of the board) included in the study were examined and these are presented in Tables 4.3 and 4.6.

A six stage hierarchical multiple regression was conducted with satisfaction as the dependent variable. Total assets (SIZE), debt to equity (LEV), and earnings before interest and tax (EBIT) were entered at stage one for the regression to control for the financial factor. This was followed by the rights of shareholders variables (R_DIV, R_AGM, R_INFO) at stage two, equitable treatment (E_VOTE, E_SHA) at stage three, role of stakeholders (S_MSB) at stage four, disclosure and transparency (D_FIVE) at stage five and responsibilities of the board (B_BDM, B_ACM) at stage six.

Table 3.2 Summary of Hierarchical Multiple Regression

Stage	**Variables**	**Model1**	**Model2**	**Model3**	**Model4**	**Model5**	**Model6**
1	SIZE	✓	✓	✓	✓	✓	✓
	LEVERAGE	✓	✓	✓	✓	✓	✓
	EBIT	✓	✓	✓	✓	✓	✓
2	R_DIVIDEND		✓	✓	✓	✓	✓
	R_AGM		✓	✓	✓	✓	✓
	R_INFO		✓	✓	✓	✓	✓
3	E_PROXY			✓	✓	✓	✓
	E_SHARE			✓	✓	✓	✓
4	S_MBS				✓	✓	✓
5	D_FIVE					✓	✓
6	B_BD_M						✓
	B_AC_M						✓

3.9 Summary of Variables

Based on the literature review in Chapter 2 and the newly introduced variable in this present study, Table 3.3 summarizes all variables in this present study

Table 3.3 Summary Definition of Variables in this Study

Variable	Definition
Q	Tobin's Q
SIZE	Total assets
LEV	Debt to equity
EBIT	Earnings before interest and tax
R_DIV	Dividend payout selected from statement of cash flow
R_AGM	Rating of shareholder participation in Annual General Meeting (AGM); Outstanding=6, Excellent=5, Very good=4, Good=3, Rather=2, Need to improve=1
R_INFO	Number of days in advance the company sent out the notification of the general shareholders meeting directly to the shareholders and website notification
E_VOTE	Voting rights of share by one share, one vote. If the firm has a policy of one-share, one-vote for the shareholders rights = 1; otherwise = 0.
E_SHA	Number of days for the blackout period (the company prohibits the members of the executive committee and staff with access to information to buy or sell the company's securities prior to the disclosure of the financial statements)
S_MSB	Director remunerations (meeting allowance, salary and bonus)
D_FIVE	Percentage of shares held by the five largest shareholders
B_BDM	Percentage of board of director meeting attendance
B_ACM	Percentage of audit committee meeting attendance

3.10 Conclusion

The purpose of this chapter was to describe the research methodology approaches on which this study is designed and developed. Initially, the conceptual framework was presented. The population and samples were then identified. The population used in this study comprised all listed companies traded on the Stock Exchange of Thailand (SET) during 2011-2012. The data collection relating to the corporate governance mechanisms is publicly available in annual reports, and company websites and AGM assessment from the Thai Investors Association. In addition, the data on net income and comprehensive income were retrieved form SETSMART (SET Market Analysis and Reporting Tool). After the data were collected, the data analysis was conducted in order to address any potential multicolinearity concerns. Hierarchical multiple regressions were used to test the statistical significance of the association between the dependent variable and the independent variables. The study also attempted to compare the results using two statistical software packages: SPSS and STATA, with the analysis coming out similarly. Development of the hypotheses was also then presented.

CHAPTER 4
RESEARCH RESULTS

This chapter aims to statistically analyze the association between the corporate governance mechanisms of the rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency and responsibilities of the board, and firm value. The dataset represented listed companies for the financial years of 2011 and 2012 further categorized into firms with other comprehensive income and firms without comprehensive income. This section reports the outputs of descriptive statistics and multiple regression results. As mentioned earlier, the purposes of the study are as follows:

1. To scrutinize the relationship between corporate governance mechanisms and the firm value of listed companies with other comprehensive income.

2. To scrutinize the relationship between corporate governance mechanisms and the firm value of listed companies without other comprehensive income.

4.1 Research Questions and Hypotheses

The study intends to investigate the factors influencing firm value by using corporate governance as the variables of interest. The analysis classifies the dataset into two categories: firms with other comprehensive income and firms without other comprehensive income. The study narrowed the research questions into the following hypotheses:

Research Question 1: In firms with other comprehensive income, what are the corporate governance mechanisms most related to firm value? From this, the following hypotheses will be tested:

Research Hypotheses:

H_1: Firms with control variables are related to firm value. (Model 1)

H_2: Firms with specific rights of shareholders are related to firm value. (Model 2)

H_3: Firms with specific equitable treatment of shareholders are related to firm value. (Model 3)

H_4: Firms with specific roles of stakeholders are related to firm value. (Model 4)

H_5: Firms with specific disclosure and transparency are related to firm value. (Model 5)

H_6: Firms with specific responsibilities of the board are related to firm value. (Model 6)

Research Question 2: In firms without other comprehensive income, what are the corporate governance mechanisms that most relate to firm value? From this, the following hypotheses will be tested:

Research Hypothesis:

H_7: Firms with control variables are related to firm value. (Model 7)

H_8: Firms with specific rights of shareholders are related to firm value. (Model 8)

H_9: Firms with specific equitable treatment of shareholders are related to firm value. (Model 9)

H_{10}: Firms with specific role of stakeholders are related to firm value. (Model 10)

H_{11}: Firms with specific disclosure and transparency are related to firm value. (Model 11)

H_{12}: Firms with specific responsibilities of the board are related to firm value. (Model 12)

The research hypotheses were tested using hierarchical multiple regression analysis. Prior to running the hierarchical multiple regressions, the assumptions of multiple regressions were checked to avoid the problems of multicollinearity. In addition, scatter plots were examined to assess any violations of assumptions. A significant multiple R value underwent further assessment by examining the beta weights associated with each variable for their relative contribution to the prediction equation. Then, hierarchical multiple regression was used to analyze the data. This technique has the advantage of statistically explaining the variance in an outcome variable due to a set of predictor variables. This does not attribute cause yet the technique is powerful since it can ascribe what portion of the variance in and out is due to a set of predictors (Jaccard et al., 1999). Statistical inference allows the researcher to

generalize findings from the sample to populations (Balnaves and Caputi, 2001). To establish the association among the predictor and outcome variables for each research question, the researcher uses hierarchical linear regression. This is a statistical method that determines the strength of the relationship between a criterion variable and several predictor variables. This type of regression means that the predictor variables are not entered into the regression analysis simultaneously, but in steps. Therefore, in this study, to examine the relationship with each outcome variable, six separate hierarchical regressions were calculated. Tobin's Q is the dependent variable, and then the predictor variables that were added into the corporate governance component consisting of the rights of shareholders, equitable treatment, role of stakeholders, disclosure and transparency, and responsibilities of the board. The overall analysis comprises 12 models to investigate the relationship of corporate governance mechanisms and firm value using other comprehensive income as the dataset.

4.2 Descriptive Statistics Results

Tables 4.1 and 4.2 present the descriptive statistics consisting of maximum, minimum, mean, and standard deviation of all observations in 2011 and 2012. The firms are divided into firms with other comprehensive income and firms without other comprehensive income for all variables. The analysis of the relationship comparing firms with other comprehensive income and firms without other comprehensive income is also provided in the tables. It is to be noted that if the analysis identified multicollinearity problems, a natural log (ln) was employed to solve the problem. The significant findings of the descriptive statistics over the two-year period are as follows:

Table 4.1 shows the descriptive results in 2011. The average of the Tobin's Q of firms with other comprehensive income was equal to 1.81 (SD = 2.81), while the average of the Tobin's Q of firms without other comprehensive income was equal to 1.99 (SD = 5.50). This difference is statistically significant at the level of 0.05. The average total assets (SIZE) of the firm with other comprehensive income was equal to 20,311 million baht (SD = 73,055), while the average total assets (SIZE) of firms without other comprehensive income was equal to 7,290 million baht (SD = 21,804). The average debt to equity (LEV) of firms with other comprehensive income was equal

to 0.75 (SD = 1.95), while the average for firms without other comprehensive income was equal to 2.02 (SD = 10.18). The average earnings before interest and tax (EBIT) of firms with other comprehensive income was equal to 3,637 million baht (SD = 17,444), while the average of firms without other comprehensive income was equal to 865 million baht (SD = 3,351).

For the corporate governance mechanism the descriptive statistics cover the following: rights of shareholder, equitable treatment, role of stakeholders, disclosure and transparency and responsibilities of the board.

As concerns the rights of shareholders in terms of cash dividend payments (R_DIV) the average for firms with other comprehensive income was equal to 1,163 million baht (SD = 3,917), while the average of firms without other comprehensive income was equal to 566 million baht (SD = 2,089). The rating of shareholder participation in the AGMs (R_AGM) of firms with other comprehensive income was equal to 3.67 (SD = 1.91), while the average of firms without other comprehensive income was equal to 3.23 (SD = 1.95). As regards the number of days in advance the company sent out the notification of the general shareholders meeting (R_INFO), the average for firms with comprehensive income this was equal to 22.26 (SD = 12.74), while that for firms without other comprehensive income was equal to 18.7 (SD = 11.55).

Regarding equitable treatment in terms of the voting rights of shares by one share, one vote (E_VOTE) the average of firms with other comprehensive income was equal 0.79 (SD = 0.41), while the average of firm without other comprehensive income was equal to 0.80 (SD = 0.40). In terms of the number of days for the blackout period (the company prohibiting the members of the executive committee and staff with access to the information from buying or selling the company's securities prior to the disclosure of the financial statements (E_SHA) of firms with other comprehensive income was equal to 29.1 (SD = 5.21), while the average of firms without other comprehensive income was equal to 28.7 (SD = 5.73).

Regarding the role of stakeholders in terms of director remuneration (S_MSB), the average of firms with other comprehensive income was equal to 198 million baht (SD = 1,792), while the average of firms without other comprehensive income was

equal to 31 million baht (SD = 32). For disclosure and transparency in terms of the percentage of shares held by the five largest shareholders (D_FIVE) of firms with other comprehensive income, this was equal to 61.27 (SD = 17.06), while the average of firms without other comprehensive income was equal to 61.69 (SD = 19.11). Regarding the responsibilities of the board in terms of the percentage of the board of directors meeting attendance (B_BDM), the average of firms with other comprehensive income was equal to 91.81 (SD = 8.02), while the average of firms without other comprehensive income was equal to 90.27 (SD = 9.14). Finally, in terms of the percentage of the audit committee meeting attendance (BACM) of firms with other comprehensive income, the average was equal to 94.81 (SD = 8.22).

Table 4.1 Descriptive Statistics in 2011

Variables	Firms with other comprehensive income				Firms without other comprehensive income				t-stat	p-value
	Min	Max	Mean	SD.	Min	Max	Mean	SD.		
Q	-23.20	15.80	1.81	2.81	-6.83	1.80	1.99	5.50	1.94	0.05
lnQ	-0.80	2.76	0.55	0.53	-2.81	4.40	0.43	0.65		
SIZE (mb)	147	820,000	20,311	73,055	48	270,000	7,290	21,804	3.71	0.01
lnSIZE	11.90	20.52	15.24	1.61	10.79	19.43	14.68	1.33		
LEV (times)	0.01	5.72	0.75	1.95	0.01	122.83	2.02	10.18	-5.98	0.55
EBIT (Baht)	-2,300	190,000	3,637	17,444	2,300	38,000	865	3,351	3.03	0.03
lnEBIT	7.22	19.04	13.07	1.9	8.88	17.46	12.47	1.5		
R_DIV (mb)	3	33,000	1,163	3,917	1	24,000	566	2,089	1.77	0.07
lnR_DIV	8.08	17.31	12.01	1.86	7.31	17	11.64	1.64		

Table 4.1 Descriptive Statistics in 2011 (cont.)

Variables	Firms with other comprehensive income				Firms without other comprehensive income				t-stat	p-value
	Min	Max	Mean	SD.	Min	Max	Mean	SD.		
R_AGM (times)	1	6	3.67	1.91	1	6	3.23	1.95	2.15	0.73
R_INFO (days)	7	60	22.26	12.74	7	60	18.7	11.55	2.76	0.91
E_VOTE	0	1	0.79	0.41	0	1	0.80	0.40	-0.31	0.89
E_SHA (days)	7	45	29.10	5.21	3	60	28.71	5.73	0.57	0.56
S_MSB (mb)	2	22	198	1.79	1	291	31	32	0.49	0.61
lnS_MSB	14.74	23.81	17.46	1.02	13.93	19.49	16.93	0.83		
D_FIVE (%)	21.91	100	61.27	17.06	5.68	100	61.69	19.11	-0.22	0.82
B_BDM (%)	49.21	100	91.81	8.02	55	100	90.27	9.14	1.69	0.90
B_ACM (%)	58.34	100	94.98	8.34	53.33	100	94.81	8.22	0.16	0.86

(mb = Million Baht, 33 Baht = 1 US$)

Table 4.2 shows the descriptive results in 2012. The average of the Tobin's Q (and standard deviation in parentheses) of firms with other comprehensive income was equal to 2.61 (SD = 3.55), while the average of the Tobin's Q of firms without other comprehensive income was equal to 2.01 (SD = 2.61). This difference is statistically significant at a level of 0.05. The average for the total assets (SIZE) of firms with other comprehensive income was equal to 22,029 million baht (SD = 81,259), while the average of total assets (SIZE) of firms without other comprehensive income was equal to 7,417 million baht (SD = 42,392). The average debt to equity (LEV) of firms with other comprehensive income was equal to 0.74 (SD = 1.97), while the average of firms without other comprehensive income was equal to 1.16 (SD = 2.12). The average of earnings before interest and tax (EBIT) of firms with other comprehensive income was equal to 3,633 million baht (SD = 17,152), while the average of firms without other comprehensive income was equal to 734 million baht (SD = 2,242).

For corporate governance mechanisms the descriptive statistics covered the following: the rights of shareholders, equitable treatment, role of stakeholders, disclosure and transparency and the responsibilities of the board.

As regards the right of the shareholders in terms of cash dividend payments (R_DIV), the average of firms with other comprehensive income was equal to 1,284 million baht (SD = 4,528), while the average of firms without other comprehensive income was equal to 705 million baht (SD = 4,268). In terms of the rating of shareholder participation in AGMs (R_AGM) of firms with other comprehensive income, the average was equal to 3.94 (SD = 1.14), while that of firms without other comprehensive income was equal to 3.71 (SD = 1.76). In terms of the number of days in advance the company sent out the notification of the general shareholders meeting (R_INFO), the average for firms with comprehensive income was equal to 22.38 (SD = 12.51), while that of firms without other comprehensive income was equal to 17.76 (SD = 11.67).

As concerns the equitable treatment in terms of the voting rights of shares by one share, one vote (E_VOTE), the average of firms with other comprehensive income was equal to 0.85 (SD = 0.36), while the average of firms without other comprehensive income was equal to 0.88 (SD = 0.36). In terms of the number of days for the blackout period (E_SHA) of firms with other comprehensive income, this was equal to 29.14 (SD = 5.96), while the average of firms without other comprehensive income was equal to 28.27 (SD = 5.87).

The role of stakeholders in terms of director remuneration (S_MSB), the average for firms with other comprehensive income was equal to 50 million baht (SD = 45), while the average of firms without other comprehensive income was equal to 32 million baht (SD = 39). Disclosure and transparency in terms of the percentage of shares held by the five largest shareholders (D_FIVE) for firms with other comprehensive income was equal to 62.16 (SD = 17.75) on average, while for firms without other comprehensive income this was equal to 59.55 (SD = 19.74). The responsibilities of the board in terms of the percentage of the board of directors meeting attendance (B_BDM) for firms with other comprehensive income was equal to 91.68% (SD = 8.32), while the average of firms without other comprehensive income was equal

to 90.81% (SD = 9.38). Finally, in terms of the percentage of audit committee meeting attendance (B_ACM), the average for firms with other comprehensive income was equal to 94.48% (SD = 10.45), while that for firms without other comprehensive income was equal to 93.81% (SD = 8.59).

Table 4.2 Descriptive Statistics in 2012

Variables	Firms with other comprehensive income				Firms without other comprehensive income				t-stat	p-value
	Min	Max	Mean	SD.	Min	Max	Mean	SD.		
Q	-0.43	21.59	2.61	3.55	-7.84	14.22	2.01	2.61	3.308	0.01
lnQ	-0.76	3.07	0.79	0.63	-0.94	3.29	0.58	0.56		
SIZE (mb)	305	970,000	22,029	81,259	44	330,000	7,417	24,392	4.926	0.01
lnSIZE	12.63	20.70	15.39	1.55	10.71	19.52	14.65	1.34		
LEV (times)	0.01	10.47	0.74	1.97	0.01	17.08	1.16	2.12	0.96	0.63
EBIT (Baht)	-13,000	190,000	3,633	17,152	-7,300	16,000	734	2,242	4.48	0.01
lnEBIT	9.58	19.07	13.35	1.72	8.34	16.58	12.56	1.47		
R_DIV (mb)	0.5	34,000	1,284	4,528	0.2	50,000	705	4,268	3.18	0.01
lnR_DIV	6.13	17.35	12.01	1.91	5.59	17.72	11.32	1.78		
R_AGM (times)	1	6	3.94	1.74	1	6	3.71	1.76	1.27	0.90
R_INFO (days)	0	60	22.38	12.51	0	60	17.76	11.67	3.72	0.83
E_VOTE	0	1	0.85	0.36	0	1	0.85	0.36	0.11	0.91
E_SHA (days)	3	60	29.14	5.96	3	30	28.27	5.87	1.25	0.20
S_MSB (mb)	2	250	50	45	1	431	32	39	4.92	0.71
lnS_MSB	14.82	19.34	17.38	0.90	13.96	19.88	16.93	0.85		
D_FIVE (%)	16.59	100	62.16	17.75	0.93	98.14	59.55	19.74	1.349	0.17
B_BDM (%)	53.97	100	91.68	8.32	55.10	100	90.81	9.38	0.959	0.33
B_ACM (%)	33.33	100	94.48	10.45	62.5	100	93.81	8.59	0.584	0.56

(mb = Million Baht, 33 Baht = 1 US$)

The overall results for the two years of descriptive statistics highlighted the fact that firms with and without other comprehensive income provide different firm value and corporate governance mechanisms. At a significant level of less than 0.05, the descriptive variables that were statistically significant in their difference included firm value (Tobin's Q), total assets (size), earnings before interest and tax (EBIT), and cash dividend payment (R_DIV). The multiple regression results are presented in the next sections.

4.3 Five Assumptions of Multiple Regression Testing

The study tested the dataset as to whether it warranted any concern as required by multiple regression assumptions. Initially, when performing analysis, it was found that some problems were found relating multiple regression assumptions, natural log was used. After applying this technique, the results revealed there to be no serious concerns. The details of the testing are shown in the appendix and the summaries are given in Tables 4.3-4.6. Also, the Pearson correlation results are presented in Table 4.7-4.10 to ensure that the dataset is ready to analyze.

Table 4.3 Summary of Multiple Regression Assumption Testing of Firms with Other Comprehensive Income in 2011

	Model					
	1	**2**	**3**	**4**	**5**	**6**
1. Linearity						
Residual plots	✓	✓	✓	✓	✓	✓
2. Constant variance of error term						
Residual plots	✓	✓	✓	✓	✓	✓
3. Dependent of the error term						
Residual plots	✓	✓	✓	✓	✓	✓
4. Normality						
Histrogram	✓	✓	✓	✓	✓	✓
Skewness	✓	✓	✓	✓	✓	✓
Kurtosis	✓	✓	✓	✓	✓	✓
5. Multicollinearity						
Tolerance	0.248-0.885	0.193-0.887	0.187-0.938	0.183-0.920	0.183-0.906	0.181-0.901
VIF	1.130-4.038	1.206-5.176	1.066-5.358	1.087-5.451	1.148-5.459	1.110-5.531
Eigen value	3.274	5.956	7.747	8.735	9.661	11.638

Table 4.4 Summary of Multiple Regression Assumption Testing of Firms with Other Comprehensive Income in 2012

	Model					
	1	**2**	**3**	**4**	**5**	**6**
4. Linearity						
Residual plots	✓	✓	✓	✓	✓	✓
5. Constant variance of error term						
Residual plots	✓	✓	✓	✓	✓	✓
6. Dependent of the error term						
Residual plots	✓	✓	✓	✓	✓	✓
4. Normality						
Histrogram	✓	✓	✓	✓	✓	✓
Skewness	✓	✓	✓	✓	✓	✓
Kurtosis	✓	✓	✓	✓	✓	✓
5. Multicollinearity						
Tolerance	0.187-0.758	0.171-0.866	0.167-0.903	0.158-0.902	0.158-0.886	0.154-0.881
VIF	1.319-4.740	1.155-5.831	1.108-6.002	1.108-6.324	1.128-6.326	1.136-6.507
Eigen value	3.132	5.819	7.677	8.665	9.582	11.548

Table 4.5 Summary of Multiple Regression Assumption Testing of Firms without Other Comprehensive Income in 2011

	Model					
	1	**2**	**3**	**4**	**5**	**6**
1. Linearity						
Residual plots	✓	✓	✓	✓	✓	✓
2. Constant variance of error term						
Residual plots	✓	✓	✓	✓	✓	✓
3. Dependent of the error term						
Residual plots	✓	✓	✓	✓	✓	✓
4. Normality						
Histrogram	✓	✓	✓	✓	✓	✓
Skewness	✓	✓	✓	✓	✓	✓
Kurtosis	✓	✓	✓	✓	✓	✓
5. Multicollinearity						
Tolerance	0.223-0.850	0.197-0.762	0.217-0.939	0.183-0.936	0.183-0.909	0.182-0.872
VIF	1.176-4.487	1.313-5.083	1.065-5.245	1.065-5.457	1.100-5.461	1.277-5.506
Eigen value	3.214	5.907	7.067	8.589	9.514	11.483

Table 4.6 Summary of Multiple Regression Assumption Testing of Firms without Other Comprehensive Income in 2012

	Model					
	1	**2**	**3**	**4**	**5**	**6**
1. Linearity						
Residual plots	✓	✓	✓	✓	✓	✓
2. Constant variance of error term						
Residual plots	✓	✓	✓	✓	✓	✓
3. Dependent of the error term						
Residual plots	✓	✓	✓	✓	✓	✓
4. Normality						
Histrogram	✓	✓	✓	✓	✓	✓
Skewness	✓	✓	✓	✓	✓	✓
Kurtosis	✓	✓	✓	✓	✓	✓
5. Multicollinearity						
Tolerance	0.196-0.841	0.103-0.776	0.102-0.949	0.101-0.946	0.101-0.912	0.100-0.917
VIF	1.190-5.095	1.154-9.690	1.054-9.772	1.057-9.881	1.096-9.881	1.091-9.974
Eigen value	3.294	5.994	7.885	8.877	9.818	11.971

In Table 4.3, the relationships were computed among Tobin's Q, control variables (SIZE, LEV, EBIT), and corporate governance mechanisms consisting of: the rights of shareholders (R_DIV, R_AGM, R_INFO), equitable treatment (E_VOTE, E_SHA), role of stakeholders (S_MSB), disclosure and transparency (D_FIVE), responsibilities of the board (B_BD_M, B_AC_M) scales on data for 152 firms with other comprehensive income. The results suggest that 12 of 78 relationships were statistically significant being greater or equal to $r = -0.221$, $p<0.01$, two tailed and 11 of 78 relationships were statistically significant being greater or equal to $r = -0.211$, $p < 0.05$, two tailed. Firms with other comprehensive income correlated with equitable treatment (E_VOTE, E_SHA), role of stakeholders (S_MSB), disclosure transparency (D_FIVE), and responsibilities of the board (B_AC_M). In general, the results suggest that Tobin's Q of firms with other comprehensive income correlates with the control variables (SIZE, EBIT, LEV), right of shareholders (R_DIVIDEND, R_INFO, R_AGM), and responsibilities of the board (B_BD_M).

Table 4.4 presents the relationships computed among Tobin's Q, control variables (SIZE, LEV, EBIT), and the corporate governance mechanisms consisting of the right of shareholders (R_DIV, R_AGM, R_INFO), equitable treatment (E_VOTE, E_SHA), role of stakeholders (S_MSB), disclosure and transparency (D_FIVE),

responsibilities of the board (B_BD_M, B_AC_M) scales on data for 226 firms without other comprehensive income. The results suggest that out 12 of 78 relationships were statistically significant being greater or equal to r = 0.185, p<0.01, two tailed and 7 of 78 relationships were statistically significant being greater or equal to r = -0.154, p < 0.05, two tailed. The relationships of firms with other comprehensive income with control variables (LEV), equitable treatment (E_VOTE, E_SHA), role of stakeholders (S_MSB), and disclosure transparency (D_FIVE) were not significant. In general, the results suggest that the Tobin's Q of firms without other comprehensive income correlate with control variables (SIZE, EBIT), the rights of shareholders (R_DIV, R_INFO, R_AGM), and responsibilities of the board (B_BD_M, B_AC_M).

In Table 4.5 the relationships were computed among Tobin's Q, control variables (SIZE, LEV, EBIT), and corporate governance mechanisms consisting of the right of shareholders (R_DIV, R_AGM, R_INFO), equitable treatment (E_VOTE, E_SHA), role of stakeholders (S_MSB), disclosure and transparency (D_FIVE), responsibilities of the board (B_BD_M, B_AC_M) scales on data for 178 firms with other comprehensive income. The results suggest that 15 of 78 relationships were statistically significant being greater or equal to r = -0.195, p<0.01, two tailed and 6 of 78 relationships were statistically significant being greater or equal to r = -0.217, p < 0.05, two tailed. Firms with other comprehensive income firm correlate with role of stakeholders (S_MSB), disclosure transparency (D_FIVE), and responsibilities of the board (B_AC_M). In general, the results suggest that Tobin's Q of firms with other comprehensive income correlate with control variables (SIZE, EBIT, and LEV), the rights of shareholders (R_DIVIDEND, R_INFO, R_AGM), equitable treatment (E_VOTE, E_SHA) and responsibilities of the board (B_BD_M)

Table 4.6 presents the relationships computed among Tobin's Q, control variables (SIZE, LEV, EBIT), and corporate governance mechanisms consisting of: the rights of shareholders (R_DIV, R_AGM, R_INFO), equitable treatment (E_VOTE, E_SHA), role of stakeholders (S_MSB), disclosure and transparency (D_FIVE), responsibilities of the board (B_BD_M, B_AC_M) scales on data for 200 firms without other comprehensive income. The results suggest that out 16 of 78 relationships were statistically significant being greater or equal to r = 0.332, p<0.01, two tailed and 6 of

78 relationships were statistically significant being greater or equal to r = -0.142, p < 0.05, two tailed. The relationships of firms with other comprehensive income with the control variable (LEV), equitable treatment (E_VOTE, E_SHA) and role of stakeholders (S_MSB) were not significant. In general, the results suggest that the Tobin's Q of firms without other comprehensive income correlate with control variable (SIZE, EBIT), the rights of shareholders (R_DIV, R_INFO, R_AGM), disclosure and transparency (D_FIVE), and responsibilities of the board (B_BD_M, B_AC_M).

Tables 4.7 to 4.10 show the Pearson correlation among the variables to evaluate multicolinerity among firm value, total assets, debt to equity, earnings before interest and tax, and corporate governance mechanisms of firms with other comprehensive income and without other comprehensive income in 2011 and 2012. The overall conclusion reveal that the variables have no serious concerns regarding multicolinerity.

Table 4.7 Correlation of the Variables of Firms with Other Comprehensive Income in 2011

	Q	SIZE	LEV	EBIT	R_DIV	R_INFO	R_AGM	E_SHA	S_MSB	D_FIVE	B_BDM	B_ACM
Q	1											
SIZE	0.158	1										
LEV	-0.150	0.295	1									
EBIT	0.405**	0.860**	0.290**	1								
R_DIV	0.428**	0.822**	0.146	0.826**	1							
R_AGM	0.198	0.297	0.062	0.251	0.299	1						
R_INFO	0.108	0.305	-0.075	0.246	0.347	0.326	1					
E_SHA	-0.100	0.036	0.144	-0.018	0.024	0.071	-0.047	1				
S_MSB	0.157	0.553	0.286	0.628	0.540	0.223	0.141	-0.059	1			
D_FIVE	0.231	-0.065	-0.188	-0.042	0.003	0.058	0.078	-0.080	-0.148	1		
B_BDM	0.107	0.043	-0.022	0.141	0.060	0.043	0.151	0.022	-0.050	0.019	1	
B_ACM	0.097	0.095	-0.035	0.113	0.021	0.114	0.042	-0.058	-0.005	-0.046	0.280	1

The definition of the variables are given in Table 3.4
*. Relationship is significant at the 0.05 level (2-tailed). ** Relationship is significant at the 0.01 level (2-tailed).

Table 4.8 Correlation of the Variables of Firms without Other Comprehensive Income in 2011

	Q	SIZE	LEV	EBIT	R_ DIV	R_ AGM	R_ INFO	E_ SHARE	S_MSB	D_FIVE	B_BDM	B_ACM
Q	1											
SIZE	0.114**	1										
LEV	-0.200	0.238	1									
EBIT	0.465**	0.817**	0.053**	1								
R_DIV	0.511**	0.724**	0.151**	0.755**	1							
R_AGM	0.139	0.301	-0.070	0.286	0.296	1						
R_INFO	0.256	0.220	-0.158	0.260	0.247	0.466	1					
E_SHA	-0.119	-0.025	-0.056	-0.092	-0.088	-0.066	-0.180*	1				
S_MSB	0.168	0.483	0.079	0.488	0.411	0.219	0.188	-0.030	1			
D_FIVE	0.096	0.054	-0.093	0.005	-0.028	0.008	0.027	-0.006	0.059	1		
B_BD_M	0.074	0.128	-0.009	-0.114	-0.117	0.011	0.072	-0.029	-0.087	-0.125	1	
B_AC_M	-0.004	0.156	0.135	0.149	0.148	0.093	0.131	0.018	0.147	-0.022	0.224	1

The definition of the variables are given in Table 3.4
*. Relationship is significant at the 0.05 level (2-tailed). ** Relationship is significant at the 0.01 level (2-tailed).

Table 4.9 Correlation of the Variables of Firms with Other Comprehensive Income in 2012

	Q	SIZE	LEV	EBIT	R_DIV	R _INFO	R_ AGM	E_ SHA	S_MSB	D_ FIVE	B_BDM	B_AC _M
Q	1											
SIZE	0.034	1										
LEV	-0.255**	0.321**	1									
EBIT	0.300**	0.875**	0.276**	1								
R_DIV	0.353**	0.719**	0.164*	0.847**	1							
R_AGM	-0.03	0.352**	0.158*	0.307**	0.292**	1						
R_INFO	0.128	0.309**	-0.083	0.352**	0.358**	0.390**	1					
E_SHA	-0.017	0.019	0.133	0.046	0.007	-0.038	-0.083	1				
S_MSB	0.192*	0.645**	0.253**	0.617**	0.535**	0.311**	0.287**	-0.088	1			
D_FIVE	0.271**	-0.072	-0.241**	-0.033	0.062	-0.014	0.057	-0.171*	-0.021	1		
B_BD_M	0.046	-0.019	0.034	0.036	0.062	0.083	0.145	-0.013	-0.109	0.093	1	
B_AC_M	0.069	0.117	0.154	0.106	0.058	0.072	0.097	-0.018	0.092	-0.005	0.454**	1

The definition of the variables are given in Table 3.4

*. Relationship is significant at the 0.05 level (2-tailed). ** Relationship is significant at the 0.01 level (2-tailed).

Table 4.10 Correlation of the Variables of Firms without Other Comprehensive Income in 2012

	Q	SIZE	LEV	EBIT	R_ DIV	R_ AGM	R_ INFO	E_ SHA	S_MSB	D_ FIVE	B_BD _M	B_AC _M
Q	1											
SIZE	-0.034	1										
LEV	-0.244**	0.294**	1									
EBIT	0.227**	0.780**	0.130	1								
R_DIV	0.329**	0.552**	0.007	0.645**	1							
R_AGM	0.045	0.334**	0.048	0.216**	0.086	1						
R_INFO	0.116	0.266**	0.009	0.199*	0.112	0.370**	1					
E_SHA	-0.174*	-0.071	-0.041	-0.076	-0.082	-0.132	-0.257**	1				
S_MSB	0.060	0.484**	0.113	0.445**	0.277//	0.177*	0.217**	-0.074	1			
D_FIVE	0.053	0.117	-0.065	-0.055	-0.093	0.107	0.050	-0.017	-0.007	1		
B_BD_M	-0.120	-0.192**	-0.011	-0.270**	-0.189*	0.038	0.025	-0.019	-0.074	0.026	1	
B_AC_M	0.007	0.171*	0.038	-0.009	0.078	0.161	0.178*	-0.099	0.210*	0.219**	0.372**	1

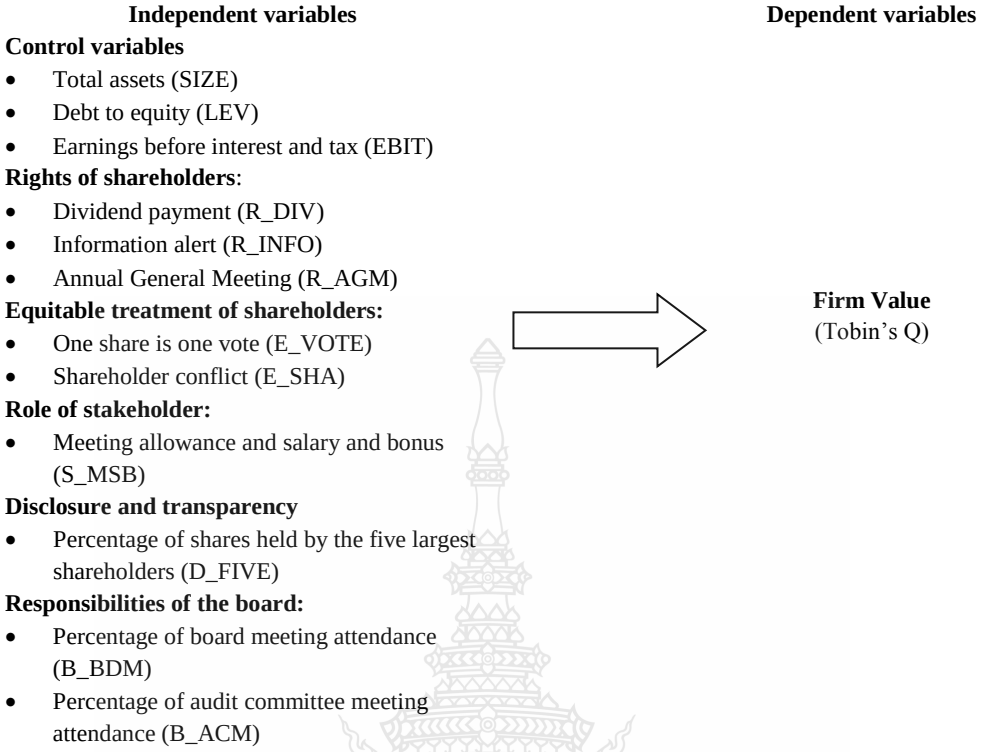
The definition of the variables are given in Table 3.4

*. Relationship is significant at the 0.05 level (2-tailed). ** Relationship is significant at the 0.01 level (2-tailed)

4.4 Hierarchical Multiple Regression Results

4.4.1 Corporate Governance, Control Variables and Tobin's Q of Firms with Other Comprehensive Income

In this section, the study analyzed the influence of all control variables and corporate governance mechanisms towards firm value as measured by Tobin's Q. The framework below represents the analysis results. Table 4.11 shows the hierarchical multiple regression results (STATA) of firms with other comprehensive income.



Year 2011

Model 1 = Control Variables (H_1)

Table 4.11 shows that for STATA results in 2011, the first hierarchical multiple regressions of firms with other comprehensive income, all the control variables of SIZE, LEV, EBIT were entered: This model was statistically significant, F= 17.28; p< 0.000 and explained 43.6% (R^2) of variance in firm value.

Model 2 = Model 1 + the right of shareholders (H_2)

After entering the rights of shareholders proxies (R_DIV, R_AGM, R_INFO) in step two, the total variance explained by the model as a whole was 58.0%, F = 14.74, p <0.000. The rights of shareholders could explain an additional 14.4% in firm value ($\Delta R^2 = 0.144$).

Model 3 = Model 2 + the equitable treatment proxies (H_3)

After entering the equitable treatment proxies (E_VOTE, E_SHA) in step three, the total variance explained by the model as a whole was 58.4%, F=10.90, p

<0.00. The equitable treatment could explain an additional 0.4% in firm value (ΔR^2 = 0.004).

Model 4 = Model 3 + the role of stakeholders proxy (H_4)

After entering the role of a stakeholder proxy (S_MSB) in step four, the total variance explained by the model was 58.4%, F=9.53, p<0.000. However, the role of stakeholders in comprehensive income firms could not explain any additional firm value.

Model 5 = Model 4 + the disclosure and transparency proxy (H_5)

After entering the disclosure and transparency proxy (D_FIVE) at Step five the total variance explained by the model was 59.5%, F=8.83, p < 0.000). Disclosure and transparency could explain an additional 1.1% in firm value (ΔR^2 = 0.011).

Model 6 = Model 5 + the responsibilities of the board (H_6)

In the final model, after entering the responsibilities of the board (B_DBM, B_ACM), the total variance explained by the model as 60.3%, F=7.34, p<0.000. The responsibilities of the board could explain an additional 0.7% in firm value (ΔR^2 = 0.007)

Year 2012

Model 1 = Control Variables (H_1)

Table 4.11 also shows the STATA results in 2012. In the first step of the hierarchical multiple regression of firms with other comprehensive income, all control variables were entered: SIZE, LEV and EBIT. This model was statistically significant: F= 38.14; p< 0.000 and explained 57.7 % of variance in firm value.

Model 2 = Model 1 + the rights of shareholders (H_2)

After entering the rights of shareholders proxies (R_DIV, R_AGM, R_INFO) in step two, the total variance explained by the model as a whole was 64.5%, F = 24.57, p <0.000. The rights of shareholders explained an additional 6.9% in firm value (ΔR^2 = 0.069).

Model 3 = Model 2 + the equitable treatment proxies (H_3)

After entering the equitable treatment proxies (E_VOTE, E_SHA) in step three, the total variance explained by the model as a whole was 65.2%, F=18.52, p <0.000. The equitable treatment explained an additional 0.7% in firm value (ΔR^2 = 0.007).

Model 4 = Model 3 + the role of stakeholders proxy (H_4)

After entering the role of stakeholders variable (S_MSB) in step four, the total variance explained by the model was 68.2%, F=18.60, p<0.000. The role of stakeholders in comprehensive income firms could explain an additional 3% in firm value (ΔR^2 = 0.030).

Model 5 = Model 4 + the disclosure and transparency proxy (H_5)

After entering the disclosure and transparency proxy (D_FIVE) in step five, the total variance explained by the model was 68.3%, F=16.55, p < 0.000). Disclosure and transparency could explain an additional 0.1% in firm value (ΔR^2 = 0.001).

Model 6 = Model 5 + the responsibilities of the board (H_6)

In the final model, after entering the responsibilities of the board proxies (B_DBM, B_ACM) the total variance explained by the model was 68.4%, F=13.51, p<0.000. The responsibilities of the board could explain an additional 0.1% in firm value (ΔR^2 = 0.001)

In conclusion, the study found the relationship between control variables, corporate governance mechanisms and firm value of firms with other comprehensive income in both years using hierarchical multiple regressions. It was also found that control variables, EBIT and corporate governance mechanisms, positively related to firm value. When considering the most powerful predictor variable, it was found that EBIT affects Tobin's Q to the highest degree in both years (2011: β = 1.194, 0.784, 0.762, 0.759, 0.750, 0.753; 2012: β = 1.573, 1.002, 1.013, 0.956, 0.956, 0.949), followed by dividend cash payment (R_DIV) (2011: β = 0.747, 0.753, 0.752, 0.725, 0.730; 2012: β = 0.566, 0.558, 0.546, 0.541, 0.544). However, SIZE negatively relates to Tobin's Q in all models for both years (2011: β =-0.784, 0.762, 0.759, 0.750, 0.753; 2012: β = 1.573, 1.002, 1.013, 0.956, 0.956, 0.949).

Table 4.11 Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firms with Other Comprehensive Income

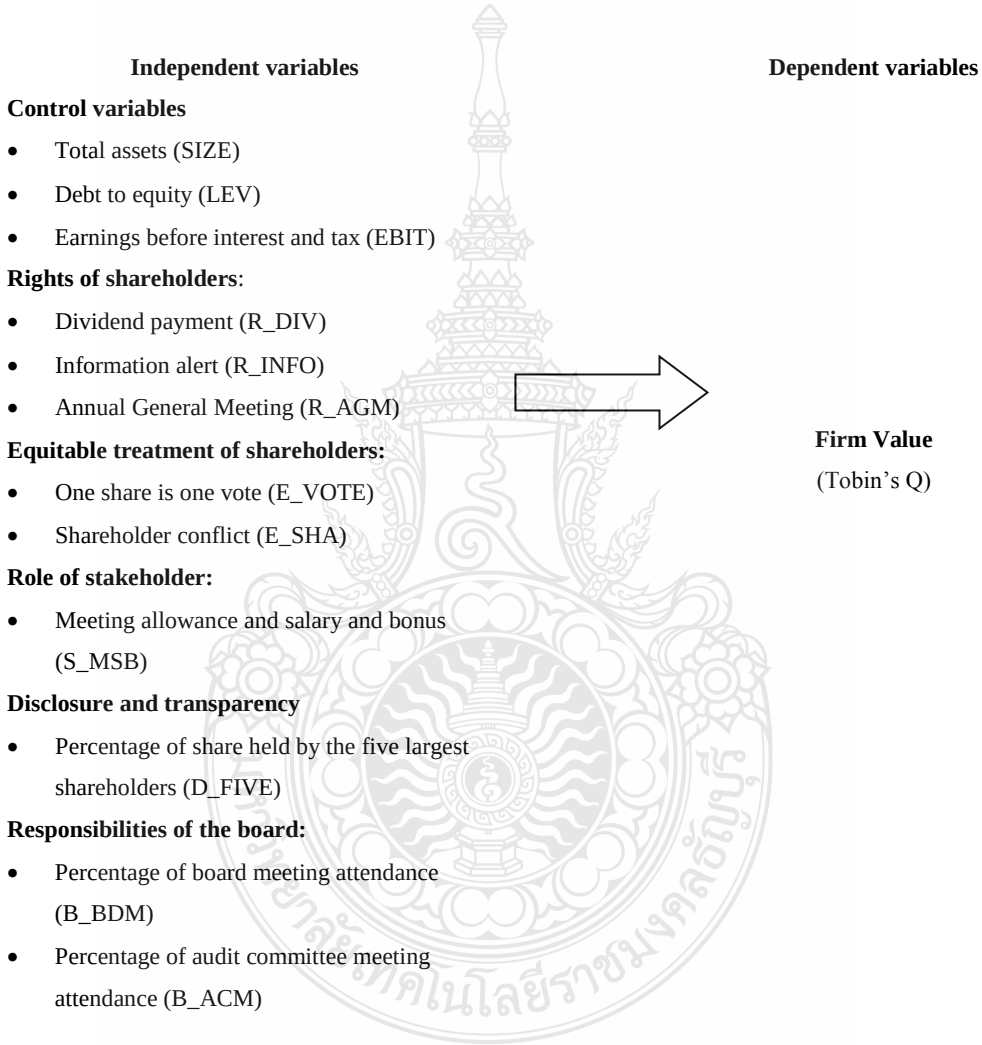
Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 1 :Model 1							
Constant	+	0.775	1.605	0.113	1.502	3.430	0.001
SIZE	-	**-0.908**	**-4.972**	**0.000**	**-1.408**	**-8.786**	**0.000**
LEV	-	-0.140	-1.435	0.156	-0.139	-1.791	0.077
EBIT		**1.194**	**6.685**	**0.000**	**1.573**	**10.184**	**0.000**
F-stat, F-stat Sig.			17.285, 0.000			38.141, 0.000	
ΔF-stat, ΔF-stat Sig,			17.285, 0.000			38.141, 0.000	
R^2, ΔR^2			0.436, 0.436			0.577, 0.577	
Adj. R^2			0.411			0.562	
Step 2: Model 2							
Constant		0.845	1.950	0.056	1.546	3.731	0.000
SIZE	-	**-1.176**	**-6.650**	**0.000**	**-1.365**	**-9.065**	**0.000**
LEV	-	-0.182	-2.046	0.054	-0.073	-0.973	0.334
EBIT	+	**0.784**	**4.257**	**0.000**	**1.022**	**4.960**	**0.000**
R_DIV	+	**0.747**	**4.414**	**0.000**	**0.566**	**3.809**	**0.000**
R_AGM	+	0.125	1.453	0.151	-0.068	-0.951	0.344
R_INFO		-0.061	-0.671	0.505	0.024	0.338	0.737
F-stat, F-stat			14.739, 0.000			24.565, 0.000	
ΔF-stat, ΔF-stat Sig,			7.309, 0.000			5.229, 0.002	
R^2, ΔR^2			0.580, 0.144			0.645, 0.069	
Adj. R^2			0.541			0.619	
Step 3: Model 3							
Constant		0.946	1.919	0.060	1.551	3.428	0.001
SIZE	-	**-1.152**	**-6.324**	**0.000**	**-1.331**	**-8.635**	**0.000**
LEV	-	-0.176	-1.939	0.075	-0.081	-1.063	0.291
EBIT	+	**0.762**	**4.018**	**0.000**	**1.013**	**4.883**	**0.000**
R_DIV	+	**0.753**	**4.390**	**0.000**	**0.558**	**3.727**	**0.000**
R_AGM	+	0.128	1.454	0.151	-0.081	-1.126	0.264
R_INFO	+	-0.063	-0.672	0.504	0.043	0.586	0.560
E_VOTE	+	0.019	0.218	0.828	-0.083	-1.161	0.249
E_SHA		-0.064	-0.755	0.453	0.026	0.378	0.706
F-stat, F-stat			10.898, 0.000			18.521, 0.000	
ΔF-stat, ΔF-stat Sig,			0.317, 0.730			0.783, 0.046	
R^2, ΔR^2			0.584, 0.004			0.652, 0.007	
Adj. R^2			0.531			0.617	
Step 4: Model 4							
Constant		0.842	0.727	0.470	-0.540	0.608	0.545
SIZE	-	**-1.156**	**-6.143**	**0.000**	**-1.419**	**-9.341**	**0.000**
LEV	-	-0.177	-1.926	0.059	-0.086	-1.165	0.248
EBIT	+	**0.759**	**3.939**	**0.000**	**0.956**	**4.762**	**0.000**
R_DIV	+	**0.752**	**4.343**	**0.000**	**0.546**	**3.787**	**0.000**
R_AGM	+	0.127	1.396	0.168	-0.089	-1.279	0.205
R_INFO	+	-0.063	-0.667	0.507	0.010	0.133	0.895
E_VOTE	+	0.019	0.213	0.832	-0.117	-1.667	0.100
E_SHA	+	-0.063	-0.728	0.470	0.036	0.545	0.587
S_MSB		0.11	0.100	0.921	0.248	2.700	0.580
F-stat, F-stat Sig.			9.533, 0.000			18.585, 0.000	
ΔF-stat, ΔF-stat Sig,			0.010, 0.921			7.291, 0.008	
R^2, ΔR^2			0.584. 0.000			0.682, 0.030	
Adj. R^2			0.523			0.645	

Table 4.11 Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firms with Other Comprehensive Income (Cont.)

Independent Variables	Exp. Sign	2011 β	2011 t-stat	2011 p-value	2012 β	2012 t-stat	2012 p-value
Step 5: Model 5							
Constant		0.331	0.271	0.787	-0.616	-0.672	0.504
SIZE	-	**-1.126**	**-5.968**	**0.000**	**-1.417**	**-9.269**	**0.000**
LEV	-	-0.179	-1.954	0.055	-0.084	-1.130	0.262
EBIT	+	**0.750**	**3.908**	**0.000**	**0.956**	**4.734**	**0.000**
R_DIV	+	**0.725**	**4.181**	**0.000**	**0.541**	**3.717**	**0.000**
R_AGM	+	0.111	1.217	0.228	-0.091	-1.295	0.199
R_INFO	+	-0.063	-0.669	0.506	0.009	0.121	0.904
E_VOTE	+	0.045	0.497	0.621	-0.115	-1.626	0.108
E_SHA	+	-0.049	-0.569	0.571	0.040	0.602	0.549
S_MSB	+	0.030	0.259	0.796	0.249	2.698	0.090
D_FIVE	+	0.112	1.279	0.206	0.024	0.366	0.715
F-stat, F-stat Sig.			8.833, 0.000			16.554, 0.000	
ΔF-stat, ΔF-stat Sig,			1.635, 0.206			0.134, 0.715	
R^2, ΔR^2			0.595, 0.001			0.683, 0.001	
Adj. R^2			0.528			0.641	
Step 6: Model 6							
Constant		-0.302	-0.206	0.838	-0.918	-0.690	0.492
SIZE	-	**-1.145**	**-5.967**	**0.000**	**-1.418**	**-9.160**	**0.000**
LEV	-	-0.170	-1.840	0.071	-0.086	-1.141	0.257
EBIT	+	**0.753**	**3.868**	**0.000**	**0.949**	**4.625**	**0.000**
R_DIV	+	**0.730**	**4.171**	**0.000**	**0.544**	**3.688**	**0.000**
R_INFO	+	0.113	1.220	0.227	-0.090	-1.258	0.212
R_AGM	+	-0.063	-0.663	0.510	0.004	0.056	0.955
E_VOTE	+	0.045	0.495	0.623	-0.114	-1.548	0.126
E_SHA	+	-0.056	-0.640	0.524	0.042	0.613	0.542
S_MSB	+	0.023	0.189	0.851	0.257	2.578	0.580
D_FIVE	+	0.103	1.149	0.255	0.027	0.400	0.690
B_BDM	+	0.036	0.390	0.698	0.005	0.063	0.950
B_ACM	+	0.073	0.826	0.412	0.032	0.420	0.676
F-stat, F-stat Sig.			7.336, 0.000			13.507, 0.000	
ΔF-stat, ΔF-stat Sig,			0.537, 0.587			0.134, 0.875	
R^2, ΔR^2			0.603, 0.007			0.684, 0.001	
Adj. R^2			0.521			0.633	

4.4.2 Corporate Governance, Control Variables and Tobin's Q of Firms without Other Comprehensive Income

In this section, the study analyzed the influence of all control variables and corporate governance mechanisms towards firm value as measured by Tobin's Q. The framework below presents the analysis results. Table 4.12 shows the hierarchical multiple regression results (STATA) of firms without other comprehensive income.



Year 2011

Model 1 = Control Variables (H_7)

Table 4.8 shows the SPSS results in 2011. In the first step of hierarchical multiple regression of firms without other comprehensive income, three control variables were entered: SIZE, LEV and EBIT. This model was statistically significant: F= 18.68; p< 0.000 and explained 40.3 % of variance in firm value.

Model 2 = Model 1 + the rights of shareholders (H_8)

After entering the rights of shareholders proxies (R_DIV, R_AGM, R_INFO) in step two, the total variance explained by the model as a whole was 47.8%, F = 12.22, p <0.000. The right of shareholders explained an additional 7.5% in firm value (ΔR^2 = 0.075).

Model 3 = Model 2 + the equitable treatment proxies (H_9)

After entering equitable treatment proxies (E_VOTE, E_SHA) in step three, the total variance explained by the model as a whole was 48%, F=8.99, p <0.000. The equitable treatment explained an additional 0.1% in firm value (ΔR^2 = 0.001).

Model 4 = Model 3 + the role of stakeholders proxy (H_{10})

After entering the role of stakeholders variable (S_MSB) in step four, the total variance explained by the model was 48%, F=7.89, p<0.000. The role of stakeholders in comprehensive income firms could not explain any additional firm value (ΔR^2 = 0.000).

Model 5 = Model 4 + the disclosure and transparency proxy (H_{11})

After entering the disclosure and transparency proxy (D_FIVE) in step five the total variance explained by the model was 41.8%, F=7.17, p < 0.000). Disclosure and transparency could explain an additional 0.6% in firm value (ΔR^2 = 0.006).

Model 6 = Model 5 + the responsibilities of the board (H_{12})

In the final model, after entering the responsibilities of the board proxies (B_DBM, B_ACM) the total variance explained by the model was 48.6%, F=5.84, p<0.000. The responsibilities of the board could explain an additional 0.1% in firm value (ΔR^2 = 0.001).

Year 2012

Model 1 = Control Variables (H_7)

Regarding the STATA results in 2012, for the first step in hierarchical multiple regression of firms with other comprehensive income, all control variables were entered (SIZE, LEV and EBIT). This model was statistically significant: F= 12.67; p< 0.000 and explained 31.3 % of variance in firm value.

Model 2 = Model 1 + the right of shareholders (H_8)

After entering the rights of shareholders proxies (R_DIV, R_AGM, R_INFO) in sat Step two, the total variance explained by the model as a whole was 39.8%, F = 9.49, p <0.000. The right of shareholders explained an additional 10.6% in firm value ($\Delta R^2 = 0.106$).

Model 3 = Model 2 + the equitable treatment proxies (H_9)

After entering equitable treatment proxies (E_VOTE, E_SHA) in step three, the total variance explained by the model as a whole was 47.7%, F=9.79, p <0.000. Equitable treatment explained an additional 8.7% in firm value ($\Delta R^2 = 0.087$).

Model 4 = Model 3 + the role of stakeholders proxy (H_{10})

After entering the role of stakeholders proxy (S_MSB) in step four, the total variance explained by the model was 47.2%, F=8.64, p<0.000. The role of stakeholders of comprehensive income firms could explain an additional 0.2% in firm value ($\Delta R^2 = 0.002$).

Model 5 = Model 4 + the disclosure and transparency proxy (H_{11})

After entering the disclosure and transparency proxy (D_FIVE) in step five, the total variance explained by the model was 48.9%, F=8.36, p < 0.000). Disclosure and transparency could explain an additional 2.1% in firm value ($\Delta R^2 = 0.021$).

Model 6 = Model 5 + the responsibilities of the board (H_{12})

In the final model, after entering the responsibilities of the board proxies (B_DBM, B_ACM), the total variance explained by the model was 48.3%, F=7.00, p<0.000. The responsibilities of the board could explain an additional 0.9% in firm value ($\Delta R^2 = 0.009$)

In conclusion, the study found relationships between control variables, corporate governance mechanism and firm value using hierarchical multiple regressions in all models of the firm without other comprehensive income in both years. It was also found that the control variable (EBIT) and corporate governance mechanisms positively relate to firm value. As regards the most predictor variable, it was found that EBIT most affected Tobin's Q in both years (2011: β = 1.040, 0.922, 0.931, 0.928, 0.931, 0.933; 2012: β = 0.843, 0.381, 0.409, 0.402, 0.407, 0.373), followed by dividend cash payment (R_DIV) (2011: β = 0.368, 0.372, 0.373, 0.370, 0.372; 2012: β = 0.381, 0.356, 0.356, 0.367, 0.372). In addition, SIZE negatively relates to Tobin's Q in all models in both years (2011: β = -0.562, -0.734, -0.739, -0.745, -0.741, -0.739; 2012: β = -0.511, -0.519, -0.369, -0.332,-0.340, -0.347).

Table 4.12 Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firms without Other Comprehensive Income

Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 1 :Model1							
Constant		-0.220	-0.492	0.624	0.022	0.042	0.967
SIZE	-	**-0.562**	**-3.130**	**0.002**	**-0.511**	**-2.338**	**0.022**
LEV	-	-0.079	-0.861	0.391	-0.296	-2.726	0.211
EBIT	+	**1.040**	**6.009**	**0.000**	**0.843**	**4.097**	**0.000**
F-stat, F-stat Sig.			18.679, 0.000			12.674, 0.000	
ΔF-stat, ΔF-stat Sig,			18.679, 0.000			12.674, 0.000	
R^2, ΔR^2			0.403, 0.403			0.339, 0.339	
Adj. R^2			0.381			0.313	
Step 2: Model 2							
Constant		-0.049	-0.111	0.912	0.046	0.091	0.928
SIZE	-	**-0.734**	**-4.033**	**0.000**	**-0.519**	**-2.524**	**0.014**
LEV	-	-0.021	-0.222	0.825	-0.242	-2.337	0.185
EBIT	+	**0.922**	**5.417**	**0.000**	**0.531**	**2.487**	**0.015**
R_DIV	+	**0.368**	**2.930**	**0.004**	**0.381**	**2.984**	**0.004**
R_AGM	+	-0.092	-0.997	0.322	0.186	1.916	0.095
R_INFO	+	0.131	1.417	0.160	-0.091	-0.955	0.343
F-stat, F-stat Sig.			12.217, 0.000			9.493, 0.000	
ΔF-stat, ΔF-stat Sig,			3.838, 0.013			4.509, 0.006	
R^2, ΔR^2			0.478, 0.075			0.445, 0.106	
Adj. R^2			0.439			0.398	
Step 3: Model 3							
Constant		-0.095	-0.200	0.842	0.477	0.984	0.328
SIZE	-	**-0.739**	**-3.949**	**0.000**	**-0.369**	**-1.884**	**0.033**
LEV	-	-0.025	-0.248	0.805	-0.304	-3.098	0.064
EBIT	+	**0.931**	**5.306**	**0.000**	**0.409**	**2.028**	**0.040**
R_DIV	+	**0.372**	**2.920**	**0.005**	**0.356**	**2.987**	**0.004**
R_AGM	+	-0.091	-0.962	0.339	0.237	2.567	0.062
R_INFO	+	0.130	1.345	0.182	-0.122	-1.346	0.183
E_VOTE	+	0.039	0.469	0.641	-0.235	-2.712	0.080
E_SHA	+	-0.003	-0.031	0.975	-0.159	-1.827	0.072
F-stat, F-stat			8.986, 0.000			9.793, 0.000	
ΔF-stat, ΔF-stat Sig,			0.110, 0.896			6.378, 0.003	
R^2, ΔR^2			0.480, 0.001			0.532, 0.087	
Adj. R^2			0.426			0.477	
Step 4: Model 4							
Constant		-0.201	0.256	0.799	0.817	1.000	0.321
SIZE	-	**-0.745**	**-3.881**	**0.000**	**-0.332**	**-1.605**	**0.003**
LEV	-	0.024	-0.234	0.815	-0.317	-3.118	0.113
EBIT	+	**0.928**	**5.228**	**0.000**	**0.402**	**1.979**	**0.025**
R_DIV	+	**0.373**	**2.906**	**0.005**	**0.356**	**2.971**	**0.004**
R_AGM	+	-0.089	-0.936	0.352	0.234	2.526	0.074
R_INFO	+	0.130	1.340	0.184	-0.122	-1.339	0.185
E_VOTE	+	0.010	0.466	0.642	-0.234	-2.683	0.090
E_SHA	+	-0.005	-0.052	0.959	-0.162	-1.851	0.069
S_MSB	+	0.016	0.170	0.865	0.050	-0.518	0.606
F-stat, F-stat Sig.			7.892, 0.000			8.642, 0.000	
ΔF-stat, ΔF-stat Sig,			0.029, 0.865			0.268, 0.606	
R^2, ΔR^2			0.480, 0.000			0.534, 0.002	
Adj. R^2			0.419			0.472	

Table 4.12 Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firms without Other Comprehensive Income (Cont.)

Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 5: Model 5							
Constant		-0.365	-0.452	0.652	0.603	0.743	0.460
SIZE	-	**-0.741**	**-3.852**	**0.000**	**-0.340**	**-1.658**	**0.002**
LEV	-	-0.013	-0.131	0.896	-0.295	-2.930	0.105
EBIT	+	**0.931**	**5.242**	**0.000**	**0.407**	**2.035**	**0.040**
R_DIV	+	**0.370**	**2.884**	**0.005**	**0.367**	**3.110**	**0.003**
R_AGM	+	-0.085	-0.889	0.377	0.243	2.658	0.060
R_INFO	+	0.150	1.506	0.136	-0.88	-0.956	0.074
E_VOTE	+	0.054	0.623	0.535	-0.275	-3.095	0.090
E_SHA	+	-.009	-0.101	0.920	-0.148	-1.714	0.091
S_MSB	+	0.014	0.150	0.881	-0.055	-0.576	0.567
D_FIVE	+	0.081	0.926	0.357	0.157	1.798	0.077
F-stat, F-stat Sig.			7.175, 0.000			8.357, 0.000	
ΔF-stat, ΔF-stat Sig,			0.857, 0.357			3.233, 0.007	
R^2, ΔR^2			0.486, 0.006			0.555, 0.021	
Adj.R^2			0.418			0.489	
Step 6: Model 6							
Constant		-0.323	-0.329	0.743	1.294	1.241	0.219
SIZE	-	**-0.739**	**-3.77**	**0.000**	**-0.347**	**-1.659**	**0.002**
LEV	-	-0.001	-0.108	0.914	-0.300	-2.898	0.105
EBIT	+	0.933	5.181	0.000	0.373	1.834	0.017
R_DIV	+	**0.372**	**2.856**	**0.006**	**0.372**	**3.127**	**0.003**
R_AGM	+	-0.086	-0.888	0.378	0.234	2.525	0.074
R_INFO	+	0.153	1.491	0.140	-0.070	-0.741	0.462
E_VOTE	+	0.049	0.553	0.582	0.272	-3.048	0.083
E_SHA	+	-0.004	-0.047	0.962	-0.146	-1.669	0.100
S_MSB	+	0.018	0.181	0.857	-0.063	-0.649	0.519
D_FIVE	+	0.084	0.920	0.361	0.152	1.724	0.089
B_BD_M	+	0.013	0.130	0.897	-0.101	-1.059	0.293
B_AC_M	+	-0.026	-0.279	0.781	-0.009	-0.095	0.924
F-stat, F-stat Sig.			5.835, 0.000			7.004, 0.000	
ΔF-stat, ΔF-stat Sig,			0.040, 0.961			0.661, 0.520	
R^2, ΔR^2			0.486, 0.001			0.564, 0.009	
Adj.R^2			0.403			0.483	

4.5 Conclusion

This chapter presents the analysis results of the association between corporate governance mechanisms and firm value using Tobin's Q. Using Thai Listed companies during 2011-2012, the descriptive statistics showed that firms with and without other comprehensive income differ in firm value and corporate governance mechanisms. At a significant level of less than 0.05, the descriptive variables that were statistically significant in their difference included firm value (Tobin's Q), total assets (size), earnings before interest and tax (EBIT), cash dividend payment (R_DIV), rating of shareholder participation in AGMs (R_AGM), numbers of days in advance the company sent out the notification of the general shareholders meeting (R_INFO) and director remunerations (meeting allowance, salary and bonus) (S_MSB). After transforming the data to meet the requirements of multiple regression assumptions, the analysis showed the results of both SPSS and STATA indifferently. Hierarchical multiple regressions demonstrated that for firms with other comprehensive income and firms without comprehensive income, total assets (SIZE) had a negatively significant effect and earnings before interest and tax (EBIT) had a positively significant effect on firm value. Furthermore, corporate governance mechanisms overall and the rights of shareholders (R_DIV) had a greater positively significant effect on firm value than other corporate governance proxies. In summary, the significant influence of corporate governance mechanisms of both firms with and without comprehensive income represented cash dividend policy.

CHAPTER 5

DISCUSSION AND REOMMENDATIONS

This final chapter restates the research purposes and reviews the methods used in the study as well as the summary of significant findings. Furthermore, the study pinpoints the implications and contributions of this present study. Lastly, limitations of the study and future research also are offered.

The objectives of this study consist of:

1. To scrutinize the relationship between corporate governance mechanisms and the firm value of listed companies with other comprehensive income.

2. To scrutinize the relationship between corporate governance mechanisms and the firm value of listed companies without other comprehensive income.

Quantitative research was used in this study to analyze the relationship between two explanatory variable groups: 1) Corporate governance components (containing of five independent variables, namely rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency, and responsibility of board) and 2) Control variables (containing of three independent variables, namely size, leverage, and earnings before interest and tax; EBIT); and a dependent variable as firm value by using Tobin's Q as a proxy variable. The dataset was composed of all Thai listed companies classified by firms with and without other comprehensive incomes, which included 330 with other comprehensive income and 426 without other comprehensive income companies respectively. Data were collected from financial statements and annual reports of each listed companies during 2011 – 2012. Hierarchical multiple regressions were used to test the statistical significance of the association between the dependent variable and the independent variables. The study also employed two statistical software packages; STATA and SPSS; for data analysis and finally they both reported similar results.

5.1 Summary of Findings

The following summarizes the research results of this study. The findings show all 12 models response to the 12 hypotheses. The first six hypotheses were analyzed for the firms with other comprehensive incomes, while the last six models were analyzed for the firms without other comprehensive incomes. The details of each research results are shown as below:

5.1.1 The Results of the Firms with Other Comprehensive Income

H_1: Firms with control variables are related to firm value.

Model 1:

The association of control variables and firm value in 2011

$$Q = 0.775 - 0.908*SIZE + 1.194*EBIT$$

The association of control variables and firm value in 2012

$$Q = 1.502 - 1.408 * SIZE + 1.573 * EBIT$$

For Model 1, two control variables, SIZE and EBIT, significantly related to firm value in 2011 and 2012. However, SIZE provided a reverse direction; while EBIT showed a positive direction. As a result, this study supports H_1.

H_2: Firms with specific rights of shareholders are related to firm value.

Model 2:

The association of the rights of shareholders and control variables with firm value in 2011

$$Q = 0.845 - 1.176*SIZE + 0.784*EBIT + 0.747 * R\_DIV$$

The association of the rights of shareholders and control variables with firm value in 2012

$$Q = 1.546 - 1.365*SIZE + 1.022*EBIT + 0.566*R\_DIV$$

For Model 2, after adding control variables and the rights of shareholders; SIZE, EBIT and R_DIV remained providing significantly relationship with firm value in a negative manner for SIZE and in a positive manner for EBIT. Significantly, the rights of shareholders were also positively related to firm value. Thus, this study supports H_2.

H_3: Firms with specific equitable treatment of shareholders were related to firm value.

Model 3:

The association of equitable treatment of shareholders and control variables with firm value in 2011

Q = 0.946 - 1.152*SIZE + 0.762*EBIT + 0.753*R_DIV

The association of equitable treatment of shareholders and control variables with firm value in 2012

Q = 1.551 - 1.331*SIZE + 1.013*EBIT + 0.558*R_DIV

Model 3 showed that equitable treatment of shareholders variable did not significantly related to firm value. However, there were two control variables related to firm value. SIZE was negatively related to firm value, while EBIT and R_DIV had a positive relationship. Thus this study does not support H_3.

H_4: Firms with specific roles of stakeholders are related to firm value.

Model 4:

The association of role of stakeholders and control variables with firm value in 2011

Q = 0.842 - 1.156*SIZE + 0.759*EBIT + 0.752*R_DIV

The association of role of stakeholders and control variables with firm value in 2012

Q = 0.540 - 1.419*SIZE + 0.956*EBIT + 0.546*R_DIV

Similar to Model 3, Model 4 showed that role of shareholders variable was not significantly associated with firm value. As a result, two control variables were related to firm value. SIZE was negatively related to firm value, while EBIT and R_DIV had a positively relationship. Thus, this study does not support H_4.

H_5: Firms with specific disclosure and transparency are related to firm value.

Model 5:

The association of disclosure and transparency and control variables with firm value in 2011

Q = 0.331 - 1.126*SIZE + 0.750*EBIT + 0.725*R_DIV

The association of disclosure and transparency and control variables with firm value in 2012

Q = -0.616 - 1.417*SIZE + 0.956*EBIT + 0.541*R_DIV

Model 5 presented that disclosure and transparency variable was not ignificantly related to firm value, while the other variables kept remains as shown in Model 4. Thus, this study does not support H_5.

H_6: Firms with specific responsibilities of the board are related to firm value.

Model 6:

The association of responsibilities of the board and control variables with firm value in 2011

Q = -0.302 - 1.145*SIZE + 0.753*EBIT + 0.730*R_DIV

The association of responsibilities of the board and control variables with firm value in 2012

Q = -0.198 - 1.418*SIZE + 0.949*EBIT + 0.544*R_DIV

The same as Model 5, Model 6 showed that responsibilities of the board variable did not significantly associated with firm value. However, there were two control variables related to firm value. SIZE was negatively related, while EBIT and R_DIV, was positively related. Thus, this study does not support H_6.

5.1.2 The Results of the Firms without Other Comprehensive Income

H_7: Firms with control variables are related to firm value.

Model 1:

The association of control variables and firm value in 2011

Q = -0.220 - 0.562*SIZE + 1.040*EBIT

The association of control variables and firm value in 2012

Q = 0.022 - 0.511*SIZE + 0.843*EBIT

For Model 1, the results showed that control variables significantly related to firm value but providing opposite direction; which were a negative sign for SIZE, and a positive sign for EBIT. As a result, this study supports H_7

H_8: Firms with specific rights of shareholders are related to firm value.

Model 2:

The association of rights of shareholders and control variables with firm value in 2011

Q = -0.049 - 0.734*SIZE + 0.922*EBIT + 0.368*R_DIV

The association of rights of shareholders and control variables with firm value in 2012

Q = 0.046 - 0.519*SIZE + 0.531*EBIT + 0.381*R_DIV

Model 2 showed that, the control variables significantly related to firm value were SIZE in a negative manner, while EBIT had a positive relationship. Furthermore, R_DIV from the rights of shareholders had a positive relationship to firm value. Thus, this study supports $H_{8.}$

H_9: Firms with specific equitable treatment of shareholders are related to firm value.

Model 3:

The association of equitable treatment of shareholders and control variables with firm value in 2011

Q =-0.095 - 0.739*SIZE + 0.931*EBIT + 0.372*R_DIV

The association of equitable treatment of shareholders and control variables with firm value in 2012

Q = 0.477 - 0.369*SIZE + 0.409*EBIT + 0.356*R_DIV

The Model 3 results showed that equitable treatment of shareholders variable did not significantly related to firm value. However, the control variables significantly related to firm value were SIZE in a negative manner, while EBIT and R_DIV had a positive relationship. Thus, this study does not support $H_{9.}$

H_{10}: Firms with specific roles of stakeholders are related to firm value.

Model 4:

The association of role of stakeholders and control variables with firm value in 2011

Q =-0.201 - 0.745*SIZE + 0.928*EBIT + 0.373*R_DIV

The association of role of stakeholders and control variables with firm value in 2012

Q = 0.817 - 0.332*SIZE + 0.402*EBIT + 0.356*R_DIV

Model 4 showed that there were no significant relationship between the role of shareholders and firm value. However, there were two control variables significantly related to firm value; SIZE providing a negative direction, while EBIT and R_DIV showing positive directions. Thus, this study does not support H_{10}.

H_{11}: Firms with specific disclosure and transparency are related to firm value.

Model 5:

The association of disclosure and transparency and control variables with firm value in 2011

Q = -0.365 - 0.741*SIZE + 0.931*EBIT + 0.370*R_DIV

The association of disclosure and transparency and control variables with firm value in 2012

Q = 0.603 - 0.340*SIZE + 0.407*EBIT + 0.367*R_DIV

Model 5 presented that the disclosure and transparency variable was not significantly related to firm value; however, there were two control variables related to firm value. SIZE was negatively related, while EBIT and R_DIV were positively related. Thus, this study does not support H_{11}.

H_{12}: Firms with specific responsibilities of board are related to firm value.

Model 6:

The association of responsibilities of board and control variables with firm value in 2011

Q = -0.323 - 0.739*SIZE + 0.933*EBIT + 0.372*R_DIV

The association of responsibilities of board and control variables with firm value in 2012

Q = 1.294 - 0.347*SIZE + 0.373*EBIT + 0.372*R_DIV

The same as Model 5, Model 6 showed that responsibilities of the board variable did not related to firm value. However, two control variables were related to firm value including SIZE and EBIT. Regarding the relationship with firm value, SIZE

provided reverse direction, while EBIT and R_DIV were presented positive direction. Thus, this study does not support H_{12}. Tables 5.1 and 5.2 summarize all the results of this study.

Table 5.1 Summary of Hypothesis Testing, Significant Variables and R^2 Change

Firms with Other Comprehensive Income					**Firms without Other Comprehensive Income**				
Hyp.	**Model**	**Significant Variables**	**2011 Adj. R^2**	**2012 Adj. R^2**	**Hyp.**	**Model**	**Significant Variables**	**2011 Adj. R^2**	**2012 Adj. R^2**
H_1	1	SIZE, EBIT	0.411	0.562	H_7	7	SIZE, EBIT	0.381	0.313
H_2	2	SIZE, EBIT, R_DIV	0.541	0.619	H_8	8	SIZE, EBIT, R_DIV	0.439	0.398
H_3	3	SIZE, EBIT, R_DIV	0.531	0.617	H_9	9	SIZE, EBIT, R_DIV	0.426	0.477
H_4	4	SIZE, EBIT, R_DIV	0.532	0.645	H_{10}	10	SIZE, EBIT, R_DIV	0.419	0.472
H_5	5	SIZE, EBIT, R_DIV	0.528	0.641	H_{11}	11	SIZE, EBIT, R_DIV	0.418	0.489
H_6	6	SIZE, EBIT, R_DIV	0.521	0.633	H_{12}	12	SIZE, EBIT, R_DIV	0.403	0.483

5.2 Discussion of Findings

The study investigated the relationship between corporate governance and firm value of the Thai listed firms with and without other comprehensive income. Five corporate governance proxies recommended by OECD consisting of the rights of shareholders, equitable treatment, roles of shareholders, disclosure and transparency and responsibilities of board were used in the analysis. Additionally, two success factors employed in prior studies; total assets (SIZE) and earnings before interest and tax (EBIT) were included in this study.

5.2.1 Corporate Governance in Firms with Other Comprehensive Income

Based on adjusted R^2, the results of this study for 2011 showed that the rights of the shareholders and dividend payment (54.1%) had the most influence on firm value, followed by the role of stakeholders (53.2%), equitable treatment (53.1%), disclosure and transparency (52.8%), and responsibilities of the board (52.1%). Similarly, the results of this study in 2012 showed that the role of stakeholders and director remuneration (64.5%) provided the most impact on firm value, followed by disclosure and transparency (64.1%), responsibilities of board (63.3%), rights of shareholders, dividend payment (61.9%) and equitable treatment (63.3%) respectively.

These results were in line with Cheug et al. (2005) that the firms with weak shareholder rights were harmful to firm value and charge significantly higher costs of equity capital. Cheng (2006) found that disclosure level and strength of shareholder rights significantly interacted in reducing the cost of capital. Jiraporn et al. (2006) stated that weak shareholder rights allowed management to diversify the firm impulsively, resulting in a decline in firm value. Choi et al. (2008) asserted that firms with strong shareholder rights did not experience a significant positive market reaction. Conelly et al. (2012) found that rights of shareholders are statistically indistinguishable among family ownership companies. Also, Core et al. (1999) identified larger firms and firms with higher investment opportunities as paying higher CEO compensation.

5.2.2 Corporate Governance in Firms without Other Comprehensive Income

Corporate governance appeared similar in firms with and without other comprehensive income. Based on adjusted R^2, the results showed the sequence of explanatory power of corporate governance mechanisms were as follows: rights of shareholders, dividend payment, equitable treatment, roles of stakeholders, disclosure and transparency, and responsibilities of the board respectively. The results of this study agreed with Cheug et al. (2005) who identified weak firm-level shareholder rights as harmful to the firm value and charged significantly higher costs of equity capital. Cheng (2006) found that disclosure level and strength of shareholder rights significantly interact in reducing the cost of capital. Choi et al. (2008) found that firms with strong shareholder rights did not experience a significant positive market reaction. Conelly et al. (2012) found that the rights of shareholders are statistically indistinguishable from

family ownership companies. Jiraporn et al. (2006) stated that weak shareholder rights allow management to diversify the firm impulsively, resulting in a decline in value.

For both sample firm groups consisting of with and without comprehensive incomes, the evidences showed that dividend payment would increase firm value to the highest degree. This result is consistent with Easterbrook (1984) who asserted that that dividends may help reduce the agency cost related to the separation of ownership and control. Dividend payments force managers to raise funds in the financial markets more frequently than they would with paying dividends. The dividends subject managers to frequent scrutiny by outside professionals such as investment bankers, lawyers and public accountants. Dividend changes may not only transfer value to the exclusive ownership for the shareholders, but also convey information about the value of the firm (Lease et al. 1992). Lang and Litzenberger (1989) compared investor reaction to dividend changes by managers suspected of over- and under-investing firms. They found that the reaction to dividend changes of firms with a low Q ratio was approximately four times of firms with a high Q ratio. In line with their conclusion, this evidence supports the argument that dividends may constrain the management's ability to invest beyond the levels that shareholders desire. Lease et al. (1992) suggested that shareholders should use dividend policy to encourage managers to acknowledge their owners' the best interests; higher dividend payouts, which is more monitored by the capital markets and managerial discipline. Roos (1997) provided evidence on the value relevance of dividends, capital structure and capital expenditures of the UK industrial and commercial firms. The results showed that firms increasing dividend payouts signaled that the expectation of firms' future cash flows might be sufficient and meet dividend payments without the increase in the probability of bankruptcy. Dyl and Weigand (1998) hypothesized that the initiation of cash dividends coincides with a reduction in the operational risk of a firm presenting in earnings and cash flow. Domodaran's (1999) urged that firm value must be linked to investment, financing and dividend decisions if firm's objective is to maximize value. Han et al. (1999) empirically examined the relationship between institutional ownership and corporate dividend policy and reported that dividend payout is positively related to institutional ownership. Tewld N.Y (2005) examined the impact of dividend policy, capital structure

and investment decision on firm value. The results showed that higher correlation among dividends, investment, debt, retained earnings and total capital indicates that the dividends distributed have a direct impact on capital structure and on the value of the firm to outside investors and owners.

Manos (2012) suggested in dividend signaling theory that the cost of using dividend policy to signal quality and transparency might force the firm to obtain investment funds from the capital market. However, raising external equity funds sends negative signals for the firm value; thus, firms with high external funds prefer to use other alternatives for the dividend signal. In the other words, it is that low/no dividend is a signal of growth opportunities. Agency theory suggests that when the level of information asymmetry is high, firms increase their dividend payments to reduce free cash flow and to force managers to raise funds from the capital market and finally exposing the firm to market discipline. Ting Kou (2013) indicated that cash dividends decreased firm value through taxation and increased firm value through signaling and the mitigation of agency problems.

5.2.3 Value Relevance of Financial Reporting (Control Variables)

When considering only control variables, it was noted that the control variables had more influence on firm value in term of adjusted R^2 of 2011 and 2012, equal to 41.1% and 51.2% respectively. However, this study confirms the previous studies that corporate governance mechanisms providing information content had lower effects on firm value compared with financial information. This indicates that accounting information is still considered useful for firm value. Financial statement users should consider financial reporting together with corporate governance mechanisms. This study recommends that the right of shareholders (dividend payment) is useful information for considering firm value.

5.3 Implications

This study makes vital contributions to the academic literature. The implications and contributions are classified according to investors and creditors, regulators, and management and boards of directors as follows:

For Investors and Creditors

Empirical evidence has shown that management intends to increase its long-term firm value and/or increase its stock price by paying high dividends to shareholders. However, it is clear that investors –shareholders or lenders – finance a company with a return in mind. Investors and creditors often require the repayment of capital with an interest element attached. Investors may not supply a company with much needed finance because of concerns relating to the company's ability to pay dividends and loans. It should be noted that a cash flows of company must cover operating costs and other liabilities before distributing a free cash flow as dividend payments to its shareholders. As a result, investors and creditors should pay attention to the dividend policies of firms. This is to observe how well a company enables to manage its liquidity.

For Regulators

As already noted, a company intends to pay high dividends to maintain its firm value and stock price. Regulators such as a stock exchange commission should pay attention to a company's dividend policy. Since regulated entities have regulators who monitor and scrutinize the financial activities of the company and report to the public including market participants, company executives may play a reduced role in determining dividend policy. It appears then that the regulatory environment enhances, rather than mitigates, the importance of the executive's role for utilities. Where the company provides regulated and non-regulated services, corporate structural separation (i.e., through a holding company structure) is a means of segregating risks between regulated utility operations and a company's unregulated activities. In this regard, while regulators can offer input as to the appropriate direction, company management has the ultimate say in how best to structure its operations. It is not being suggested here that regulators should regulate a utility's dividend policy as this is a risky step. The ability of

investors to rely on a utility management's expected dividend policy is at the center of investment strategy within the utility sector. To leave this issue up to review, analysis, and approval by regulators would likely increase investor concerns and thus reduce a utility's value in their eyes. Indeed, the uncertainty that would accompany such interference would likely render the maintenance of a certain equity level a much more difficult task. Utility regulators tend to be mindful of putting policies in place today that may limit managerial discretion in the future, instead preferring to monitor the payment of dividends and other discretionary cash flows. This was the case in recent studies that the high dividend payout ratio reflected in the high firm value may not be prudent. Therefore, utility regulators should monitor a company's dividend policy, not to pay dividend in a destructive rate.

For Management and Board of Directors

As this study found that cash dividend payment (i.e. one of the rights of shareholders in corporate governance mechanisms) was a vital factor in increasing firm value, a firm manager is encouraged to pay high cash dividends to its shareholders. However dividend payment decision is not an easy duty because when a company earns operational profits, manager has to make decision between to reinvest them with the high expectation of greater profits and further stock appreciation, and to distribute to shareholders in terms of dividends, which supported by agency theory. Agency theory assumes that large-scale retention of earnings encourages a manager's behavior does not maximize shareholder value. Dividends, then, are a valuable financial tool for the firms to avoid asset/capital structures that give managers wide discretion in making value-reducing investments. The evidence presented in this paper uniformly and strongly supports this view of dividend policy.

This view also makes sense when one considers the rationale behind agency theory. Managers control over corporate resources either from outside contributions of debt or equity capital, or from earnings retentions. Earned equity is not subject to the same ongoing, stringent discipline. Accordingly, potential agency problems are higher when a firm's capital is largely earned, since the more a firm's internal funds through retained earnings are employed, the less the ongoing discipline of capital markets a firm has. However, management should seriously concern to balance either paying cash

dividend or retaining profit to reinvest in future projects. Therefore, the dividend policy decision depends on the preferences of investors and potential investors. This is because dividends may affect capital structure since retaining earnings increases common equity relative to debt financing. Capital structure refers to the permanent long-term financing of a company including long-term debt and equity. Certainly, retained earnings had lower cost than issuing new common equity. This issue confirms that a major task of manager might balance between dividend payment and reinvestment in other projects.

5.4 Contributions of the Study

This study provided four major contributions as follows.

Firstly, this study introduced all five possible proxies representing corporate governance mechanisms as recommended by OECD principles. In addition, rather than using a checklist measurement, only publicly available data were used as corporate governance proxies. This was to reduce the subjectivity of data collection.

Secondly, this study investigated corporate governance from the comprehensive income context and compared between firms with and without other comprehensive incomes. The study initially introduced a new data environment. It is believed that corporate governance mechanisms in these firms are somewhat different because these firms are substantially different in applying corporate governance mechanisms. However, the results are similar for both firms with other comprehensive income and firms without comprehensive income.

Thirdly, this study successfully introduced the new context of comprehensive income. The most influential factors of corporate governance mechanisms on firm value represented cash dividend payments both in firms with and without other comprehensive income.

Lastly, the study compares the results analyzed by two software packages, namely STATA and SPSS, in term of multiple regression analysis. Both research results are likely to be significant similarity.

5.5 Limitations of Study

For this study, there are three major limitations as below.

Firstly, the accounting standards for comprehensive income were first introduced to Thai listed companies in 2011 and the dataset in this study covered 2011-2012. Therefore, comprehensive income seemed not to have been adopted by Thai listed companies. Further research should introduce more years of dataset in the analysis, which the results might be more convincing than limited years.

Secondly, this study showed a link between corporate governance mechanisms and firm value, but the results cannot be interpreted a definitively showing causality.

Lastly, this study was an empirical study using archival data. Different research methodologies might reveal other trends. A qualitative method such as in-depth interview research approach should be a new alternative. This is to observe practical corporate governance mechanisms to create firm value.

5.6 Recommendation of Future Research

There are four recommendations of future research as following:

First, **t**his study served to answer that some of the corporate governance mechanisms (rights of shareholders, equitable treatment of shareholders, the role of stakeholders in corporate governance, disclosure and transparency, and board responsibilities), net income and comprehensive income relate to firm value. It is recommended that further research might capture other dependent variables such as excess value and enterprise value.

Secondly, the two-year period in this study may not be long enough to analyze the results. It is necessary to exercise caution when deriving inference from the results of this study.

Thirdly, it would be interesting to examine the stock market reaction to the aggregated and different types of corporate governance disclosures.

Lastly, non-listed companies might be data sample for future research. Additional research that utilized different samples would validate that the results found in this study could be generalized to all Thai companies.

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APPENDICES

APPENDIX A

Data Screen and Transformation

Data Screen and Transformation

Data screen of this study are used statistical test of normality consist of skewness and kurtosis. And transform data for multiple regression assumption follow suggested by Tabachnick and Fidell (2007) and Howell (2007) the following guide lines should be used when transforming data.

Data distribution	Transformation method.
Moderately positive skewness	Square-Root [newX = SQRT(X)]
Substantially positive skewness (with zero values)	Logarithmic (Log10) [NEWX = LG10(x)]
Moderately negative skewness	Square-Root [NewX =LG10(X + C)
Moderately negative skewness	Square-Root [NEWX = SQRT(k-x)]
Substantially negative skewness	Logarithmic (Log10) [NEWX = LG10(K-X]

C is a constant added to each score so that the smallest score is 1.
K is a constant from which each scorer is subtracted so that the smallest score is 1; usually equal to the larges score +1

Table 1 Data Screen of Firm with Comprehensive Income from Descriptive Statistic

Variables	2011 (N=152)					2012 (N=178)				
	Mean	Median	SD.	Skewness	Kurtosis	Mean	Median	SD.	Skewness	Kurtosis
Q	1.81	1.54	2.81	-3.12	47.44	2.61	1.93	3.55	-1.17	30.97
lnQ	0.55	0.46	0.53	1.29	3.55	0.79	0.68	0.63	1.00	1.51
SIZE (mb)	20,311	3,300	73,055	9.14	96.79	22,029	3,650	81,259	9.59	107.02
lnSIZE	15.24	15.01	1.61	0.67	0.04	15.39	15.11	1.55	0.69	0.18
LEV (times)	0.75	0.77	1.95	-7.05	72.74	0.74	0.68	1.97	-4.22	39.16
EBIT (Baht)	3,637	316	17,444	8.95	90	3,633	474	17,152	8.83	87.36
lnEBIT	13.07	12.85	1.9	0.32	0.91	13.35	13.25	1.72	0.53	0.50
R_DIV (mb)	1,163	135	3,917	6.02	41.97	1,284	151	4,528	5.50	32.37
lnR_DIV	12.01	11.81	1.86	0.43	0.16	12.01	11.93	1.91	0.17	1.01
R_AGM (times)	3.67	4	1.91	-0.50	-1.40	3.94	5	1.74	-0.66	0.95
R_INFO (days)	22.26	30	12.74	0.46	0.22	22.38	30	12.51	0.13	0.01
E_VOTE	0.79	1	0.41	-1.48	0.21	0.85	1	0.36	0.02	2.11
E_SHA (days)	29.10	30	5.21	-1.57	7.21	29.14	30	5.96	-0.52	10.22
S_MSB (mb)	198	35,000	1.79	2.01	4.68	50	34	45	1.79	3.63
lnS_MSB	17.46	17.38	1.02	1.39	9.43	17.38	17.34	0.90	-0.24	-0.08
D_FIVE (%)	61.27	61.42	17.06	0.02	-0.67	62.16	61.50	17.75	0.06	-0.49
B_BDM (%)	91.81	93.63	8.02	-2.02	6.77	91.68	93.75	8.32	-1.83	4.60
B_ACM (%)	94.98	100	8.34	-2.18	5.33	94.48	100	10.45	-3.02	11.23

Table 2 Data Screen of Firm without Comprehensive from Descriptive Statistic

Variables	2011 (N=226)					2012 (N=200)				
	Mean	Median	SD.	Skewness	Kurtosis	Mean	Median	SD.	Skewness	Kurtosis
Q	1.99	1.43	5.50	13.66	198.90	2.01	1.62	2.61	4.83	44.59
lnQ	0.43	.38	0.65	0.12	10.77	0.58	0.49	0.56	1.20	3.91
SIZE (mb)	7,290	1,900	21,804	8.72	0.53	7,417	1,900	24,392	9.35	105.89
lnSIZE	14.68	14.45	1.33	0.53	1.04	14.65	14.45	1.34	0.47	1.38
LEV (times)	2.02	0.71	10.18	1.27	2.35	1.16	0.76	2.12	3.90	23.83
EBIT (Baht)	865	152	3,351	7.72	73.61	734	196	2,242	4.21	23.77
lnEBIT	12.47	12.30	1.5	0.57	0.87	12.56	12.50	1.47	0.33	0.59
R_DIV (mb)	566	108.5	2,089	90.08	97.14	705	60	4,268	11.18	129.53
lnR_DIV	11.64	11.59	1.64	0.43	0.38	11.32	12.50	1.78	0.33	0.59
R_AGM (times)	3.23	4	1.95	-0.10	-1.76	3.71	5	1.76	-0.42	-1.28
R_INFO (days)	18.7	14	11.55	0.54	-0.35	17.76	14	11.67	0.45	-0.76
E_VOTE	0.80	1	0.40	-1.48	0.20	0.85	1	0.36	-1.92	1.71
E_SHA (days)	28.71	30	5.73	-2.03	14.21	28.27	30	5.87	-3.43	10.71
S_MSB (mb)	31	23	32	3.69	21.12	32	23	39	6.23	54.78
lnS_MSB	16.93	16.96	0.83	-0.21	1.13	16.93	16.98	0.85	-0.30	1.59
D_FIVE (%)	61.69	65.55	19.11	-0.33	-0.43	59.55	62.67	19.74	-0.37	-0.38
B_BDM (%)	90.27	92.41	9.14	-1.43	2.26	90.81	93.33	9.38	-1.37	1.78
B_ACM (%)	94.81	100	8.22	-2.31	7.20	93.81	100	8.59	-1.52	2.04

APPENDIX B

Multiple Regression Assumption

Multiple regression assumption

Multiple regression assumption test show in Figure 1, 2 and Table 3 to Table 5

1. Linearity test by scatter plots
2. Constant variance of error term test by residual plot
3. Dependent of the error term test by residual plot
4. Normality test by scatter plot, histogram, skewness, kurtosis
5. Multicollinearity test by Tolerance, VIF, Eigen value, Condition index

Hierarchical multiple regression results of SPSS

Hierarchical multiple regression results of SPSS Show in Table 6 and 7

Figure 1: Show Normal p-p plot, Residual plot, and Histogram of Firm with comprehensive income

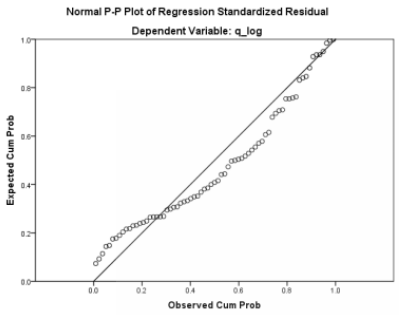
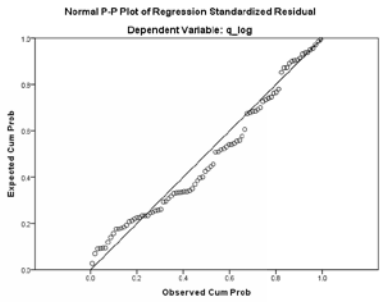
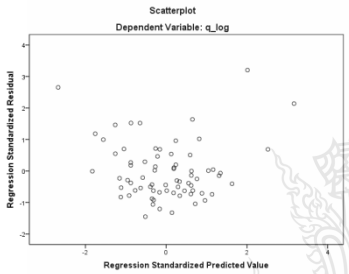
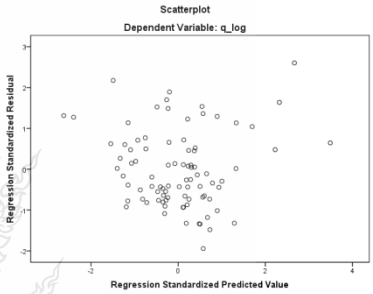
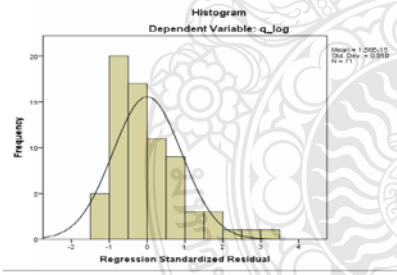
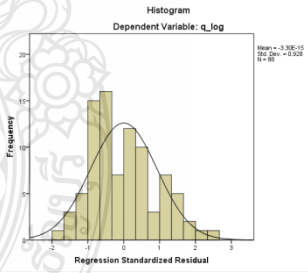
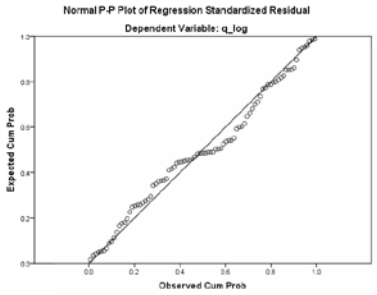
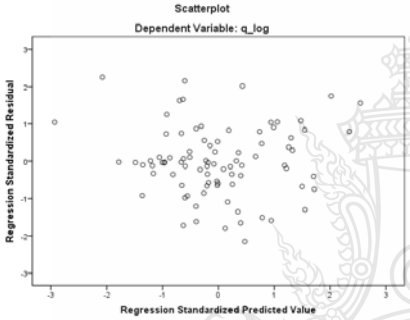
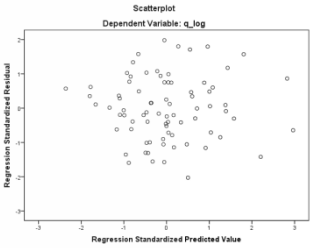
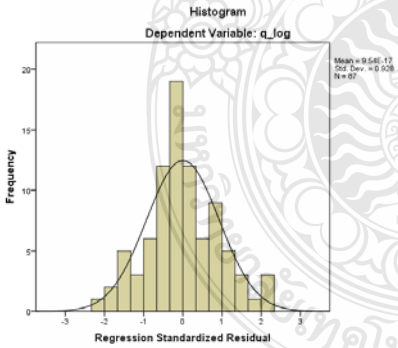
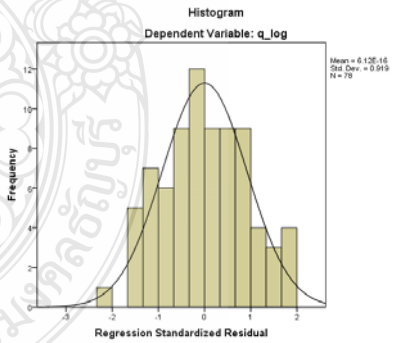
2011	2012
Normal p-p plot	**Normal p-p plot**
	
Residual plot	**Residual plot**
	
Histogram	**Histogram**
	

Figure 2: Show Normal p-p plot, Residual plot, and Histogram of Firm without Comprehensive income

2011	2012
Normal p-p plot	**Normal p-p plot**
	
Residual plot	**Residual plot**
	
Histogram	**Histogram**
	

6. Multicollinearity test with Tolerance, VIF, Eigen Value, Condition Index Show in Table 3 to Table 5

Table 3: Show Tolerance, VIF, Eigenvalue and Condition Index of Firm with Comprehensive Income

Variable	2011				2012			
	Tolerance	**VIF**	**Eigen value**	**Condition index**	**Tolerance**	**VIF**	**Eigen value**	**Condition index**
Model 1			3.274	1.000			3.294	1.000
SIZE	0.248	4.038	0.713	2.142	0.196	5.095	0.697	2.175
LEV	0.885	1.130	0.011	17.412	0.841	1.190	0.008	2.698
EBIT	0.264	3.789	0.002	40.927	0.211	4.733	0.001	49.614
Model 2			5.956	1.000			5.994	1.000
SIZE	0.210	4.787	0.763	2.794	0.193	5.181	0.756	2.815
LEV	0.829	1.206	0.148	6.350	0.776	1.289	0.127	6.881
EBIT	0.193	5.176	0.115	7.184	0.103	9.690	0.108	7.434
R_DIV	0.229	4.364	0.013	21.447	0.199	5.036	0.011	23.824
R_AGM	0.887	1.127	0.003	41.813	0.867	1.154	0.003	46.029
R_INFO	0.787	1.270	0.002	56.894	0.858	1.165	0.001	77.338
Model 3			7.747	1.000			7885	1.000
SIZE	0.202	4.948	0.772	3.169	0.185	5.401	0.761	3.219
LEV	0.809	1.236	0.179	6.573	0.754	1.327	0.140	7.496
EBIT	0.187	5.358	0.152	7.128	0.102	9.772	0.118	8.159
R_DIV	0.228	4.383	0.100	8.801	0.197	5.088	0.049	12.622
R_AGM	0.860	1.163	0.036	14.734	0.841	1.189	0.033	15.371
R_INFO	0.759	1.318	0.008	30.419	0.819	1.221	0.009	30.198
E_VOTE	0.873	1.145	0.003	47.866	0.856	1.168	0.003	53.581
E_SHA	0.938	1.066	0.002	65.553	0.949	1.054	0.001	89.356
Model 4			8.735	1.00			8.877	1.000
SIZE	0.192	5.198	0.774	3.359	0.177	5.658	0.762	3.414
LEV	0.807	1.239	0.180	6.974	0.753	1.327	0.144	7.849
EBIT	0.183	5.451	0.157	7.455	0.101	9.881	0.118	8.656
R_DIV	0.227	4.397	0.101	9.286	0.196	5.093	0.049	13.392
R_AGM	0.827	1.209	0.036	15.632	0.840	1.191	0.034	16.178
R_INFO	0.758	1.318	0.012	27.632	0.795	1.258	0.011	28.008
E_VOTE	0.872	1.147	0.003	27.424	0.829	1.206	0.003	56.408
E_SHA	0.920	1.087	0.002	50.779	0.946	1.057	0.001	94.578
S_MSB	0.517	1.933	0.001	69.203	0.483	2.071	0.001	112.760

Table 3: Show Tolerance, VIF, Eigenvalue and Condition Index of Firm with Comprehensive Income (cont.)

Variable	2011				2012			
	Tolerance	**VIF**	**Eigen value**	**Condition index**	**Tolerance**	**VIF**	**Eigen value**	**Condition index**
Model 5			9.661	1.000			9.818	1.000
SIZE	0.189	5.279	0.777	3.527	0.176	5.666	0.762	3.590
LEV	0.807	1.239	0.183	7.274	0.750	1.334	0.146	8.191
EBIT	0.183	5.459	0.167	7.602	0.101	9.881	0.119	9.070
R_DIV	0.224	4.461	0.103	9.680	0.195	5.135	0.060	12.819
R_AGM	0.812	1.231	0.058	12.940	0.836	1.197	0.049	14.101
R_INFO	0.758	1.318	0.036	16.463	0.794	1.259	0.030	17.996
E_VOTE	0.828	1.208	0.010	30.879	0.825	1.213	0.010	36.765
E_SHA	0.906	1.103	0.003	53.195	0.912	1.096	0.003	60.037
S_MSB	0.509	1.963	0.002	73.725	0.482	2.074	0.001	99.471
D_FIVE	0.871	1.148	0.001	128.585	0.925	1.081	0.001	119.394
Model 6			11.638	1.000			11.791	1.000
SIZE	0.186	5.373	0.778	3.868	0.176	5.681	0.762	3.933
LEV	0.799	1.251	0.183	7.976	0.744	1.344	0.153	8.792
EBIT	0.181	5.531	0.175	8.166	0.100	9.974	0.119	9.942
R_DIV	0.224	4.469	0.105	10.549	0.194	5.165	0.060	14.036
R_AGM	0.805	1.243	0.058	14.176	0.815	1.228	0.050	15.415
R_INFO	0.753	1.329	0.036	18.019	0.782	1.279	0.031	19.642
E_VOTE	0.826	1.211	0.016	27.016	0.774	1.292	0.022	23.030
E_SHA	0.901	1.110	0.004	51.812	0.911	1.098	0.005	46.544
S_MSB	0.447	2.235	0.003	58.613	0.423	2.365	0.003	59.922
D_FIVE	0.860	1.163	0.003	65.590	0.917	1.091	0.002	73.520
B_BDM	0.794	1.260	0.002	81.107	0.647	1.545	0.001	109.109
B_ACM	0.876	1.142	0.000	156.49	0.735	1.360	0.000	162.830

Table 4: Show Tolerance, VIF, Eigenvalue and Condition Index of Firm without Comprehensive Income

Variable	2011				2012			
	Tolerance	**VIF**	**Eigen value**	**Condition index**	**Tolerance**	**VIF**	**Eigen value**	**Condition index**
Model 1			3.214	1.000			3.132	1.000
SIZE	0.223	4.487	0.777	2.033	0.187	5.343	0.859	1.909
LEV	0.850	1.176	0.008	20.178	0.758	1.319	0.008	20.202
EBIT	0.240	4.168	0.001	52.739	0.211	4.740	0.001	53.764
Model 2			5.907	1.000			5.819	1.000
SIZE	0.197	5.083	0.797	2.722	0.185	5.401	0.882	2.569
LEV	0.751	1.332	0.164	5.998	0.727	1.375	0.193	5.495
EBIT	0.225	4.436	0.114	7.196	0.171	5.831	0.085	8.271
R_DIV	0.413	2.419	0.001	22.673	0.479	2.089	0.015	19.419
R_AGM	0.759	1.318	0.005	34.361	0.830	1.205	0.005	33.924
R_INFO	0.762	1.313	0.001	73.280	0.866	1.155	0.001	73.935
Model 3			7.607	1.000			7.677	1.000
SIZE	0.191	5.245	0.815	3.055	0.177	5.661	0.883	2.949
LEV	0.668	1.497	0.260	5.407	0.703	1.422	0.223	5.872
EBIT	0.217	4.613	0.156	6.988	0.167	6.002	0.092	9.140
R_DIV	0.412	2.430	0.114	8.178	0.477	2.096	0.060	11.325
R_AGM	0.747	1.339	0.034	14.924	0.799	1.251	0.048	12.684
R_INFO	0.715	1.398	03.009	29.685	0.827	1.209	0.012	25.032
E_VOTE	0.939	1.065	0.005	40.453	0.903	1.108	0.005	39.536
E_SHA	0.853	1.172	0.001	83.790	0.898	1.113	0.001	88.182
Model 4			8.589	1.000			8.665	1.000
SIZE	0.183	5.457	0.821	3.235	0.158	6.234	0.884	3.132
LEV	0.665	1.504	0.261	5.742	0.665	1.503	0.226	6.277
EBIT	0.215	4.661	0.163	7.254	0.166	6.029	0.093	9.995
R_DIV	0.411	2.435	0.114	8.665	0.477	2.096	0.062	11.553
R_AGM	0.741	1.350	0.034	15.838	0.798	1.254	0.048	12.513
R_INFO	0.715	1.399	0.011	27.862	0.827	1.209	0.016	15.329
E_VOTE	0.939	1.065	0.005	41.805	0.902	1.108	0.005	25.965
E_SHA	0.839	1.191	0.001	87.853	0.893	1.119	0.001	42.411
S_MSB	0.748	1.338	0.001	95.979	0.727	1.375	0.001	91.857

Table 4: Show Tolerance, VIF, Eigenvalue and Condition Index of Firm without Comprehensive Income (Cont.)

Variable	2011				2012			
	Tolerance	**VIF**	**Eigen value**	**Condition index**	**Tolerance**	**VIF**	**Eigen value**	**Condition index**
Model 5			9.514	1.000			9.582	1.000
SIZE	0.183	5.461	0.822	3.401	0.158	6.326	0.884	3.293
LEV	0.657	1.522	0.262	6.023	0.656	1.525	0.243	6.277
EBIT	0.214	4.663	0.190	7.083	0.166	6.030	0.096	9.995
R_DIV	0.411	2.436	0.114	9.118	0.476	2.102	0.072	11.553
R_AGM	0.739	1.354	0.046	14.404	0.795	1.257	0.061	12.513
R_INFO	0.682	1.466	0.034	16.688	0.791	1.264	0.041	15.329
E_VOTE	0.909	1.100	0.010	30.853	0.844	1.185	0.014	25.965
E_SHA	0.837	1.195	0.005	44.666	0.886	1.128	0.005	42.411
S_MSB	0.747	1.338	0.001	92.494	0.727	1.376	0.001	91.857
D_FIVE	0.884	1.131	0.001	101.517	0.867	1.153	0.001	101.956
Model 6			11.483	1.000			11.548	1.000
SIZE	0.182	5.506	0.829	3.723	0.154	6.507	0.884	3.614
LEV	0.651	1.536	0.263	6.609	0.627	1.594	0.247	6.835
EBIT	0.214	4.668	0.193	7.709	0.162	6.180	0.099	10.806
R_DIV	0.409	2.448	0.116	9.965	0.474	2.112	0.073	12.553
R_AGM	0.735	1.361	0.047	15.655	0.784	1.276	0.063	13.552
R_INFO	0.662	1.510	0.034	18.329	0.762	1.313	0.041	16.800
E_VOTE	0.872	1.147	0.020	24.147	0.841	1.189	0.027	20.599
E_SHA	0.810	1.234	0.007	41.291	0.881	1.136	0.009	36.204
S_MSB	0.734	1.362	0.004	53.968	0.719	1.390	0.004	53.194
D_FIVE	0.840	1.190	0.003	62.146	0.865	1.157	0.003	62.599
B_BDM	0.740	1.351	0.001	101.761	0.735	1.361	0.001	106.083
B_ACM	0.783	1.277	0.001	199.867	0.830	1.205	0.001	117.557

Table 5: Show R^2, Adjusted R^2, F – Statistic, and P - value

Variables	Firm with Comprehensive Income				Firm without Comprehensive Income			
	R^2	Adj. R^2	F-test	p-value	R^2	Adj. R^2	F-test	p-value
2011								
Model 1	0.436	0.411	17.285	0.000	0.403	0.381	18.679	0.000
Model 2	0.580	0.541	14.739	0.000	0.478	0.439	12.217	0.000
Model 3	0.584	0.531	10.898	0.000	0.480	0.426	8.986	0.000
Model 4	0.584	0.523	9.533	0.000	0.480	0.419	7.892	0.000
Model 5	0.595	0.528	8.833	0.000	0.486	0.418	7.175	0.000
Model 6	0.603	0.521	7.336	0.000	0.486	0.403	0.5835	0.000
2012								
Model 1	0.577	0.562	38.141	0.000	0.339	0.313	12.674	0.000
Model 2	0.645	0.619	24.565	0.000	0.445	0.398	9.493	0.000
Model 3	0.652	0.617	18.521	0.000	0.532	0.477	9.793	0.000
Model 4	0.682	0.645	18.528	0.000	0.534	0.472	8.642	0.000
Model 5	0.683	0.641	16.554	0.000	0.555	0.489	8.357	0.000
Model 6	0.684	0.633	13.507	0.000	0.564	0.483	7.004	0.000

6. Hierarchical Multiple Regression Results of SPSS Show in Table 6 and Table 7

Table 6: Show Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firm with Other Comprehensive Income of SPSS

Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 1 :Model 1							
Constant	+	0.775	1.605	0.113	1.502	3.430	0.001
SIZE	-	-0.908	-4.972	0.000	-1.408	-8.786	0.000
LEV	-	-0.140	-1.435	0.156	-0.139	-1.791	0.077
EBIT		1.194	6.685	0.000	1.573	10.184	0.000
F-stat, F-stat Sig.			17.285, 0.000			38.141, 0.000	
ΔF-stat, ΔF-stat Sig,			17.285, 0.000			38.141, 0.000	
R^2, ΔR^2			0.436, 0.436			0.577, 0.577	
Adj. R^2			0.411			0.562	
Step 2: Model 2							
Constant		0.845	1.950	0.056	1.546	3.731	0.000
SIZE	-	-1.176	-6.650	0.000	-1.365	-9.065	0.000
LEV	-	-0.182	-2.046	0.054	-0.073	-0.973	0.334
EBIT	+	0.784	4.257	0.000	1.022	4.960	0.000
R_DIV	+	0.747	4.414	0.000	0.566	3.809	0.000
R_AGM	+	0.125	1.453	0.151	-0.068	-0.951	0.344
R_INFO		-0.061	-0.671	0.505	0.024	0.338	0.737
F-stat, F-stat			14.739, 0.000			24.565, 0.000	
ΔF-stat, ΔF-stat Sig,			7.309, 0.000			5.229, 0.002	
R^2, ΔR^2			0.580, 0.144			0.645, 0.069	
Adj. R^2			0.541			0.619	
Step 3: Model 3							
Constant		0.946	1.919	0.060	1.551	3.428	0.001
SIZE	-	-1.152	-6.324	0.000	-1.331	-8.635	0.000
LEV	-	-0.176	-1.939	0.057	-0.081	-1.063	0.291
EBIT	+	0.762	4.018	0.000	1.013	4.883	0.000
R_DIV	+	0.753	4.390	0.000	0.558	3.727	0.000
R_AGM	+	0.128	1.454	0.151	-0.081	-1.126	0.264
R_INFO	+	-0.063	-0.672	0.504	0.043	0.586	0.560
E_VOTE	+	0.019	0.218	0.828	-0.083	-1.161	0.249
E_SHA		-0.064	-0.755	0.453	0.026	0.378	0.706
F-stat, F-stat			10.898, 0.000			18.521, 0.000	
ΔF-stat, ΔF-stat Sig,			0.317, 0.730			0.783, 0.046	
R^2, ΔR^2			0.584, 0.004			0.652, 0.007	
Adj. R^2			0.531			0.617	
Step 4: Model 4							
Constant		0.842	0.727	0.470	-0.540	0.608	0.545
SIZE	-	-1.156	-6.143	0.000	-1.419	-9.341	0.000
LEV	-	-0.177	-1.926	0.059	-0.086	-1.165	0.248
EBIT	+	0.759	3.939	0.000	0.956	4.762	0.000
R_DIV	+	0.752	4.343	0.000	0.546	3.787	0.000
R_AGM	+	0.127	1.396	0.168	-0.089	-1.279	0.205
R_INFO	+	-0.063	-0.667	0.507	0.010	0.133	0.895
E_VOTE	+	0.019	0.213	0.832	-0.117	-1.667	0.100
E_SHA	+	-0.063	-0.728	0.470	0.036	0.545	0.587
S_MSB		0.11	0.100	0.921	0.248	2.700	0.580
F-stat, F-stat Sig.			9.533, 0.000			18.585, 0.000	
ΔF-stat, ΔF-stat Sig,			0.010, 0.921			7.291, 0.008	
R^2, ΔR^2			0.584. 0.000			0.682, 0.030	
Adj. R^2			0.523			0.645	

ΔR^2 = change in R^2, ΔF = change in F

Table 6: Show Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firm with Other Comprehensive Income of SPSS (Cont.)

Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 5: Model 5							
Constant		0.331	0.271	0.787	-0.616	-0.672	0.504
SIZE	-	-1.126	-5.968	0.000	-1.417	-9.269	0.000
LEV	-	-0.179	-1.954	0.055	-0.084	-1.130	0.262
EBIT	+	0.750	3.908	0.000	0.956	4.734	0.000
R_DIV	+	0.725	4.181	0.000	0.541	3.717	0.000
R_AGM	+	0.111	1.217	0.228	-0.091	-1.295	0.199
R_INFO	+	-0.063	-0.669	0.506	0.009	0.121	0.904
E_VOTE	+	0.045	0.497	0.621	-0.115	-1.626	0.108
E_SHA	+	-0.049	-0.569	0.571	0.040	0.602	0.549
S_MSB	+	0.030	0.259	0.796	0.249	2.698	0.090
D_FIVE	+	0.112	1.279	0.206	0.024	0.366	0.715
F-stat, F-stat Sig.			8.833, 0.000			16.554, 0.000	
ΔF-stat, ΔF-stat Sig,			1.635, 0.206			0.134, 0.715	
R^2, ΔR^2			0.595, 0.001			0.683, 0.001	
Adj. R^2			0.528			0.641	
Step 6: Model 6							
Constant		-0.302	-0.206	0.838	-0.918	-0.690	0.492
SIZE	-	-1.145	-5.967	0.000	-1.418	-9.160	0.000
LEV	-	-0.170	-1.840	0.071	-0.086	-1.141	0.257
EBIT	+	0.753	3.868	0.000	0.949	4.625	0.000
R_DIV	+	0.730	4.171	0.000	0.544	3.688	0.000
R_INFO	+	0.113	1.220	0.227	-0.090	-1.258	0.212
R_AGM	+	-0.063	-0.663	0.510	0.004	0.056	0.955
E_VOTE	+	0.045	0.495	0.623	-0.114	-1.548	0.126
E_SHA	+	-0.056	-0.640	0.524	0.042	0.613	0.542
S_MSB	+	0.023	0.189	0.851	0.257	2.578	0.580
D_FIVE	+	0.103	1.149	0.255	0.027	0.400	0.690
B_BDM	+	0.036	0.390	0.698	0.005	0.063	0.950
B_ACM	+	0.073	0.826	0.412	0.032	0.420	0.676
F-stat, F-stat Sig.			7.336, 0.000			13.507, 0.000	
ΔF-stat, ΔF-stat Sig,			0.537, 0.587			0.134, 0.875	
R^2, ΔR^2			0.603, 0.007			0.684, 0.001	
Adj. R^2			0.521			0.633	

ΔR^2 = change in R^2, ΔF = change in F

Table 7: Show Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firm without Other Comprehensive Income of SPSS

Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 1 :Model 1							
Constant	+	1.502	3.430	0.001	0.022	0.042	0.967
SIZE	-	-1.408	-8.783	0.000	-0.511	-2.338	0.022
LEV	-	-0.139	-1.791	0.077	-0.296	-2.726	0.008
EBIT		1.573	10.184	0.000	0.843	4.097	0.000
F-stat, F-stat Sig.			38.141, 0.000			12.674, 0.000	
ΔF-stat, ΔF-stat Sig,			38.141, 0.000			12.674, 0.000	
R^2, ΔR^2			0.577, 0.577			0.339, 0.339	
Adj. R^2			0.562			0.313	
Step 2: Model 2							
Constant		1.546	3.731	0.000	0.046	0.091	0.928
SIZE	-	-1.365	-9.065	0.000	-0.519	-2.524	0.014
LEV	-	-0.073	-0.973	0.334	-0.242	-2.337	0.022
EBIT	+	1.022	4.960	0.000	0.531	2.487	0.015
R_DIV	+	0.566	3.809	0.000	0.381	2.984	0.004
R_AGM	+	-0.068	-0.951	0.344	0.186	1.916	0.059
R_INFO		0.024	0.338	0.737	-0.091	-0.955	0.343
F-stat, F-stat			24.565, 0.000			9.493, 0.000	
ΔF-stat, ΔF-stat Sig,			5.229, 0.002			4.509, 0.006	
R^2, ΔR^2			0.645, 0.069			0.445, 0.106	
Adj. R^2			0.619			0.398	
Step 3: Model 3							
Constant		1.551	3.428	0.001	0.477	0.984	0.328
SIZE	-	-1.331	-8.635	0.000	-0.369	-1.884	0.064
LEV	-	-0.081	-1.063	0.291	-0.304	-3.098	0.003
EBIT	+	1.013	4.883	0.000	0.409	2.028	0.046
R_DIV	+	0.558	3.727	0.000	0.356	2.987	0.004
R_AGM	+	-0.081	-1.126	0.264	0.237	2.567	0.012
R_INFO	+	0.043	0.586	0.560	-0.122	-1.346	0.183
E_VOTE	+	-0.083	-1.161	0.249	-0.235	-2.712	0.008
E_SHA		0.026	0.378	0.706	-0.159	-1.827	0.072
F-stat, F-stat			18.521, 0.000			9.793, 0.000	
ΔF-stat, ΔF-stat Sig,			0.783, 0.460			6.378, 0.003	
R^2, ΔR^2			0.652, 0.007			0.532, 0.087	
Adj. R^2			0.617			0.477	
Step 4: Model 4							
Constant		-0.540	-0.608	0.545	0.817	1.000	0.321
SIZE	-	-1.419	-9.341	0.000	-0.334	-1.605	0.113
LEV	-	-0.086	-1.165	0.248	-0.317	-3.118	0.003
EBIT	+	0.956	4.762	0.000	0.402	1.979	0.025
R_DIV	+	0.546	3.787	0.000	0.356	2.971	0.004
R_AGM	+	-0.089	-1.279	0.205	0.234	2.526	0.014
R_INFO	+	0.010	0.133	0.895	-0.122	-1.339	0.185
E_VOTE	+	-0.117	-1.667	0.100	-0.234	-2.683	0.009
E_SHA	+	0.036	0.545	0.587	-0.162	-1.851	0.069
S_MSB		0.248	2.700	0.008	-0.050	-0.518	0.606
F-stat, F-stat Sig.			18.585, 0.000			8.642, 0.000	
ΔF-stat, ΔF-stat Sig,			7.291, 0.008			0.268, 0.606	
R^2, ΔR^2			0.682, 0.030			0.534, 0.002	
Adj. R^2			0.645			0.472	

ΔR^2 = change in R^2, ΔF = change in F

Table 7: Show Hierarchical Multiple Regression Results for Corporate Governance Mechanisms, Control Variables, and Tobin's Q of Firm without Other Comprehensive Income of SPSS (Cont.)

Independent Variables	Exp. Sign	2011			2012		
		β	t-stat	p-value	β	t-stat	p-value
Step 5: Model 5							
Constant		-0.616	-0.672	0.504	0.603	0.743	0.460
SIZE	-	-1.417	-9.269	0.000	-0.340	-1.658	0.102
LEV	-	-0.084	-1.130	0.262	-0.295	-2.930	0.005
EBIT	+	0.956	4.734	0.000	0.407	2.035	0.046
R_DIV	+	0.541	3.717	0.000	0.367	3.110	0.003
R_AGM	+	-0.091	-1.295	0.199	0.243	2.658	0.010
R_INFO	+	0.009	0.121	0.904	-0.088	-0.956	0.342
E_VOTE	+	-0.115	-1.626	0.108	-0.275	-3.095	0.003
E_SHA	+	0.040	0.602	0.549	-0.148	-1.714	0.091
S_MSB	+	0.249	2.698	0.009	-0.055	-0.576	0.567
D_FIVE	+	0.024	0.366	0.715	0.157	1.798	0.077
F-stat, F-stat Sig.			16.554, 0.000			8.357, 0.000	
ΔF-stat, ΔF-stat Sig,			0.134, 0.715			3.233, 0.007	
R^2, ΔR^2			0.683, 0.001			0.555, 0.021	
Adj. R^2			0.641			0.489	
Step 6: Model 6							
Constant		-0.198	-0.690	0.492	1.294	1.241	0.219
SIZE	-	-1.418	-9.160	0.000	-0.347	-1.659	0.102
LEV	-	-0.086	-1.141	0.257	-0.300	-2.898	0.005
EBIT	+	0.949	4.625	0.000	0.373	1.834	0.071
R_DIV	+	0.544	3.688	0.000	0.372	3.127	0.003
R_INFO	+	-0.090	-1.258	0.212	0.234	2.525	0.014
R_AGM	+	0.004	0.056	0.955	-0.070	-0.741	0.462
E_VOTE	+	-0.114	-1.548	0.126	-0.272	-3.048	0.003
E_SHA	+	0.042	0.613	0.542	-0.146	-1.669	0.100
S_MSB	+	0.257	2.578	0.012	-0.063	-0.649	0.519
D_FIVE	+	0.027	0.400	0.690	0.152	1.724	0.089
B_BDM	+	0.005	0.063	0.950	-0.101	-1.059	0.293
B_ACM	+	0.032	0.420	0.676	-0.009	-0.095	0.924
F-stat, F-stat Sig.			13.507, 0.000			7.004, 0.000	
ΔF-stat, ΔF-stat Sig,			0.134, 0.875			0.661, 0.520	
R^2, ΔR^2			0.684, 0.001			0.564, 0.009	
Adj. R^2			0.633			0.483	

ΔR^2 = change in R^2, ΔF = change in F

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Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and beliefs, contains on material previously published or written by another person, except where due reference has been made in the text.

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