THE MEDIATING EFFECT OF DIVIDEND PAYMENT LINKING CORPORATE GOVERNANCE AND EARNINGS QUALITY: EMPIRICAL EVIDENCE FROM THAI LISTED COMPANIES

SUKRITTA BURINWATTANA

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

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Name – Surname	Mrs. Sukritta Burinwattana
Program	Business Administration
Dissertation Advisor	Assistant Professor Supa Tongkong, Ph.D.
Dissertation Co-advisor	Assistant Professor Sungworn Ngudgratoke, Ph.D.
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……. Committee
(Assistant Professor Supa Tongkong, Ph.D.)

Approved by the Faculty of Business Administration Rajamangala University of Technology Thanyaburi in Partial Fulfillment of the Requirments for the Degree of Doctor of Philosophy

……..…… Dean of Faculty of Business Administration
(Assistant Professor Nartraphee Chaimongkol, Ph.D.)
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ABSTRACT

This research studied the mediating effects of dividend payment linking corporate governance and earnings quality. Specifically, this study has the following four main objectives as follows: (1) to investigate the effects of corporate governance on earnings quality, (2) to explore the effects of corporate governance on dividend payment, (3) to determine the effect of dividend payment on earnings quality, and (4) to examine the effects of corporate governance on earnings quality through dividend payment. Corporate governance was measured by board structure including board size, CEO duality, and audit committee meeting; ownership structure; and executive compensation whereas earnings quality was quantified by Sloan (1996).

The samples consisted of listed companies on the Stock Exchange of Thailand (SET) in the year 2015. All samples were from industrial groups except companies in financial industry, companies under rehabilitation, and companies with incomplete financial data. The secondary data obtained from 267 companies were analyzed by Structural Equation Modeling (SEM) to investigate the relationships within the full model using a three-stage analysis process with the statistical significant level of 0.05.

The findings revealed that the board size, frequency of audit committee meeting, institutional ownership, executive compensation, and dividend payment had affected positively on earnings quality. Institutional ownership had a moderate negative effect on dividend payment while executive compensation had a highly positive effect on dividend payment. The study also found that the relationship between institutional ownership and earnings quality was partial mediate by dividend payment. The implication of these findings is that corporate governance does influence earnings quality, suggesting that firms with good corporate governance might have good earnings quality.

Keywords: corporate governance**,** earnings quality, dividend payment

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Sukritta Burinwattana

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CHAPTER 1
INTRODUCTION

This study investigated the effect of corporate governance on earnings quality through dividend payment using evidences from Thai listed companies. The first chapter of the study the following: background and statement of the problem, purpose of the study, research questions and hypotheses, theoretical perspectives, definition of terms, delimitation and limitation of the study, and the significance of the study.

1.1 Background and Statement of the Problem

This study was to investigate the relationship among corporate governance, earnings quality, and dividend payment. Corporate governance may be briefly defined as the set of institutional and legal structures, principles, and practices which govern the firm's activities (Mallin, 2016). Corporate governance is essentially the function of the firm's board of directors, who hold oversight power and accountability for the firm (Mallin, 2016). Under agency theory, corporate governance is an implementation of a monitoring mechanism, designed to ensure that the firm's managers are appropriately incentivized to act in the interests of the firm's owners (its shareholders) and are suitably monitored to ensure that they do so (Mallin, 2016; Jensen & Meckling, 1976). To that end, the board of directors typically includes experts in finance, accounting, and political and legal concerns of the firm, as well as top managers of the firm even though the mix of independent and internal board members varies (Mallin, 2016). Corporate governance can also be considered to be a moral obligation, with the board of directors acting to ensure that the benefits of the firm's operations are distributed to not only the owners but also the society as a whole (Sison, 2008). The actual practices involved in corporate governance are diverse and vary depending on the institutional and legal requirements for the firm, the firm's origins and ownership structure, and other factors (Mallin, 2016; Sison, 2008). However, general principles of good corporate governance consist of transparency, accountability, responsibility, and fairness (Gregory & Simms, 1999). Common practices associated with good corporate governance include financial

reporting in line with legal requirements, use of voluntary disclosures, corporate social responsibility practices and reporting, financial auditing, and executive compensation practices (Mallin, 2016; Sison, 2008). Corporate governance can therefore be observed in factors such as board size and composition, audit committee characteristics, CEO compensation policy, and ownership structure.

Good corporate governance practice has a number of observable effects on financial outcomes of the firm. First of all, corporate governance policies are strongly linked to earnings quality or the extent to which the firm's disclosed economic performance reflects its true performance (Alzoubi & Selamat, 2012; Baxter & Cotter, 2009; Bergstresser & Philippon, 2006; Chang & Sun, 2008; Cheng & Reitenga, 2009; Cornett, Marcus, & Tehranian, 2008; Cornett et al., 2009; Desender, 2009; Dhaliwal et al., 2006; Gulzar & Wang, 2011; Harford & Li, 2007; Harris & Bromiley, 2007; Hashim & Davis, 2007; Ismail et al., 2009; Lin et al., 2006; Moradi & Nezami, 2011; Murhadi, 2009). Strong corporate governance, according to these studies, makes earnings reports more correct and informative, which increases earnings quality as a result.

One of the corporate governance policies that may influence the firm's operations is its choice of dividend policy or the decision of how much of the firm's earnings should be redistributed to shareholders (Baker, 2009). The firm's dividend policy is a strategic decision which determines shareholder benefits and the firm's availability of funds for continuing operations and, as a result, could be a significant mediator of the firm's performance. There is a link between corporate governance and dividend policies, which are the extent to which the firm returns cash to investors in the from of dividends and stock repurchases (Abdelsalam, El-Masry, & Elsegini, 2008; Ada, 2013; Ahmad & Javid, 2010; Al-Gharaibeh, Zurigat, & Al-Harahsheh, 2013; Bhattacharyya, Mawani, & Morrill, 2008; Chang & Dutta, 2012; Dandago, Farouk, & Muhibudeen, 2015; Jiraporn & Kim, 2011; Kumar, 2006; Leng, 2007; Minnick & Rosenthal, 2014; Nimer, Badran, & Warrad, 2012; Sawicki, 2009). Nevertheless, this relationship is not typically positive. Instead, higher rates of dividend payments are associated with weaker corporate governance indicators such as CEO duality, poor CEO incentive alignment, or larger boards.

The problem of this study came mainly from the literature on the relationship between earnings quality and dividend payment. Specifically, the bulk of the literature on this topic finds that firms which pay dividends, or which pay a higher rate of dividends than similar firms, have higher levels of earnings quality (Arif, Abrar, Khan, Kayani, & Ali Shah, 2011; Balachandran, Krishnamurthi, Theobald, & Vidanapathirana, 2012; Daniels, Denis, & Naveen, 2008; Hussainey & Walker, 2009; Skinner & Soltes, 2011). This relationship has increasingly been pronounced over the past 30 years as payment of dividends has become less common as a general practice and been supplanted by stock repurchases (Skinner & Soltes, 2011). Thus, this raises a dilemma: if corporate governance and earnings quality are positively related, and corporate governance and dividend payment are negatively related, how can dividend payment and earnings quality be positively related? Due to this problem, this study will explore analysis of mediating effect of dividend payment linking corporate governance and earnings quality.

1.2 Purpose of the Study

The purposes of this study were as follows:

1.2.1 To investigate the effects of corporate governance (board structure, ownership structure, and executive compensation) on earnings quality;

1.2.2 To investigate the effects of corporate governance (board structure, ownership structure, and executive compensation) on dividend payment;

1.2.3 To investigate the effects of dividend payment on earnings quality; and

1.2.4 To investigate the effect of corporate governance on earnings quality through dividend payment.

1.3 Research Questions and Research Hypotheses

Previous studies have established two keys sets of relationships. To begin with there are a number of corporate governance characteristics that are known to have the effects on earnings quality of the firm (Dechow et al., 2010; Perotti & Wagenhofer, 2014). This relationship emerges according to the role of corporate governance policies in monitoring the firm's financial structure and reporting which if conducted effectively

creates conditions for high information content of earnings (Mallin, 2016). The second key relationship that has been studied in the literature is that of dividends and earnings quality. As previous research has shown, the firm's dividend payment is typically related to higher earnings quality (Skinner & Soltes, 2011). Thus, both corporate governance and dividends are related to higher earnings quality.

What is less clear from the existing research is whether dividends play a mediating role in the relationship between corporate governance and earnings quality. This supposition arises because, as explained in the literature review, many corporate governance factors have a different relationship to dividend payment as to earnings quality. This raises the question of whether dividends are an intervening factor in the relationship between corporate governance and earnings quality.

1.3.1 Research Questions

The research questions were conducted as shown below.

1.3.1.1 Does corporate governance (board size, CEO duality, audit committee meeting, institutional ownership, and CEO compensation) affect earnings quality?

1.3.1.2 Does corporate governance (board size, CEO duality, audit committee meeting, institutional ownership, and CEO compensation) affect dividend payment?

1.3.1.3 Does dividend payment affect earnings quality?

1.3.1.4 Does dividend payment mediate the effects of corporate governance factors (board size, CEO duality, audit committee meeting, institutional ownership, and CEO compensation) on earnings quality?

1.3.2 Research Hypotheses

According to the conceptual framework from the empirical study, the research hypotheses of the study were then conducted as follows.

Hypothesis 1: Board size has a positive effect on earnings quality.

Hypothesis 2: CEO duality has a positive effect on earnings quality.

Hypothesis 3: Audit committee meeting has a positive effect on earnings quality.

Hypothesis 4: Institutional ownership has a positive effect on earnings quality.

Hypothesis 5: CEO compensation has a positive effect on earnings quality.

Hypothesis 6: Board size has a positive effect on dividend payment.

Hypothesis 7: CEO duality has a positive effect on dividend payment.

Hypothesis 8: Audit committee meeting has a positive effect on dividend payment.

Hypothesis 9: Institutional ownership has a positive effect on dividend payment.

Hypothesis 10: CEO compensation has a positive effect on dividend payment.

Hypothesis 11: Dividend payment has a positive effect on earnings quality.

Hypothesis 12: Board size has a positive effect on earnings quality through dividend payment.

Hypothesis 13: CEO duality has a positive effect on earnings quality through dividend payment.

Hypothesis 14: Audit committee meeting has a positive effect on earnings quality through dividend payment.

Hypothesis 15: Institutional ownership has a positive effect on earnings quality through dividend payment.

Hypothesis 16: CEO compensation has a positive effect on earnings quality through dividend payment.

1.4 Conceptual Framework

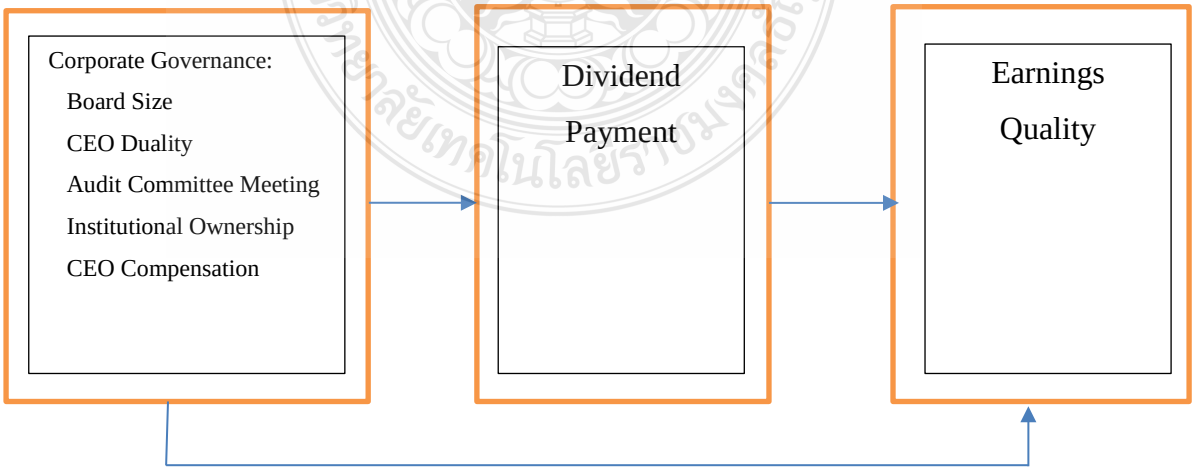

Figure 1.1 Conceptual Framework of the Study

1.5 Definition of Terms

Corporate governance in this study included only responsibilities of the board measured by the following terms:

1.5.1 Board size is defined as total size of the board of directors measured by number of members sitting on the board in a given year.

1.5.2 CEO duality is defined as whether or not the same person holds the CEO and chairman positions in the firms. It is a dummy coded where 0 means the CEO and chairman positions are held by the same person, and 1 means the CEO and chairman are different people.

1.5.3 Audit committee meeting is defined as the frequency of meeting of the audit committee measured by number of meetings held in a given year.

1.5.4 Institutional ownership is defined as percentage of common shares held by institutional investors.

1.5.5 CEO compensations is defined as the price sensitive compensation assigned to the CEO, including salary and benefits.

1.5.6 Earnings quality is defined good quality as ability of reported earnings (income) to predict a firm's future earnings, with higher earnings quality is a sign of high quality.

1.5.7 Dividend payment is defined as ratio of dividends paid to the net profit of the firms.

1.6 Delimitation and Limitation of the Study

This study used the secondary data consisting of firm-level data of non-financial companies listed on the Stock Exchange of Thailand in 2015. The board structure, ownership structure, and executive compensation data were available in the database (www.setsmart.com) while other data were obtained from the company's own website. The sample of this study comprised non-financial companies on the Stock Exchange of Thailand excluding delisting companies, companies with incomplete data, companies suspended from trading by the SET, as well as companies under bankruptcy proceedings. While there are five dimensions of corporate governance based on the

framework used by the Stock Exchange of Thailand (2012), this study focused on the responsibilities of the board only.

1.7 Contribution of the Study

The main contribution to academic research was the examination of dividend payment as a potential mediating variable between corporate governance and earnings quality. This relationship has been proposed due to the intriguing observation that although both corporate governance factors and dividend payments are associated with earnings quality, there are conflicting relationships of specific corporate governance factors between their effects on dividend payments and earnings quality. Furthermore, the literature was inconsistent in the direction and scope of many of the relationships studied in the research framework. Skinner (2008) suggested that these relationships may have actually changed over time, which further complicates the question. At the same time, there have been no studies of dividend payouts as an intervening variable between corporate governance and earnings quality. Thus, this study would contribute to the literature by not only studying the main relationships between corporate governance and earnings quality but also exploring the possible intervening variable of dividend payments.

This study may also have a secondary contribution to financial analysis practice. If the mediating role of dividend payment is identified, this would contribute a new analysis insight to financial analysts' and investment managers' assessment of firms. This would be expected to be a preliminary insight that should be confirmed with robust analyses of different markets and time periods. However, it could prove a useful insight, especially for analysts who are working with firms that do not meet expected patterns of relationships between corporate governance and earnings quality.

CHAPTER 2
LITERATURE REVIEW

This chapter provided the academic and theoretical background for the research, leading to formation of research hypotheses. The review was based on a variety of sources including academic books and textbooks, peer-reviewed journals, research reports, and other reliable sources of information. There were three keys theoretical perspectives used in the study. The first was agency theory, based on Jensen and Meckling's (1976) theory of the firm. Agency theory is the underlying principle for the discussion of corporate governance. The second key theory was the efficient market hypothesis (EMH), first proposed by Fama, Fisher, Jensen, and Roll (1969). The EMH is the underlying principle for discussion of earnings quality. Next, the third theory was dividend payment based on Reilly and Brown (2012). This chapter was divided into several key sections. Besides, these sections examined the concepts and theories of corporate governance (section 2.1), the concepts and theories of dividend payment (section 2.2), the concepts and theories of earnings quality (section 2.3), the relationship between corporate governance and earnings quality (section 2.4), the relationship between dividend payment and earnings quality (section 2.5), the relationship between dividend payment and earnings quality (section 2.6), the mediating role of dividend payment between corporate governance and earnings quality (section 2.7), and control variables (section 2.8).

2.1 The Concepts and Theories of Corporate Governance

2.1.1 Agency theory

Agency theory is a foundational theory of economics and business, which explains the relationship between principals (economic beneficiaries of the business) and agents (decision makers)(Eisenhardt, 2009). In this situation, the agent is hired by the principal to conduct some forms of managerial activity on his or her behalf, and managerial control of the entity is given over to the agent. Commonly, agency relationships involve shareholders (the principals of the business) and the company's managers (agents). Agency theory is based on the principal-agent problem or the

problem of differing interests and goals and different risk tolerances between the principals and agents in the business. In addition, agency theory implies that the principal accrues two types of costs to avoid problems of misalignment including bonding costs in order to appropriately align the interests of the agents to the principal and monitoring costs in order to ensure the agent is acting in the principal's best interest.

One of the key problems in agency theory is the problem of conflict between the interests and incentives of the principal and the agent (Eisenhardt, 2009; Tapiero, 2004). This problem can occur because the interests of the principal and the agent are not properly aligned. For example, the shareholders of a business may be incentivized to take short-term actions that increase immediate earnings whereas the managers prefer taking a longer-term action that had neutral or even negative short-term effects but better long-term returns such as international expansion. Another common scenario is that managers of the firm may be incentivized to take actions which promote short-term earnings to benefit personally such as through stock options, even if this does not deliver the best long-term benefit. This problem can be exacerbated by information asymmetries, where the principal does not have access to information which the agent uses to make decisions.

A further key problem in agency theory is the differences in risk tolerance and responsibility for failure between the principal and the agent (Eisenhardt, 2009; Tapiero, 2004). In a principal-agent relationship, the agent makes investment decisions, but these decisions are made with the resources of the principal, and the agent typically incurs the cost of failed decisions. This introduces a moral hazard or the situation where the agent will not bear responsibility for failed decisions. Besides, this can result in increased levels of risk tolerance, leading to agents making decisions which are too risky for the decision context or riskier than the principal would prefer. Another problem is that because agents do not accrue benefits from effective safeguarding of the principals' resources, they may be less interested in their effective use.

The theory of the firm used in this study was based on agency theory. Jensen and Meckling (1976) developed a theory of the firm which is associated the aspects of financial ownership and managerial control and agency theory in order to explain

management decisions that take place within the firm. Agency theory is based on assumptions that humans are self-interested and risk-averse and act under bounded rationality (Eisenhardt, 1989). It also assumes that the goals of resource use in the organization include efficiency and utility maximization, and the organization involves an information asymmetry (Eisenhardt, 1989; Shapiro, 2005). Key agency problems include risk sharing, moral hazard, and adverse selection (Eisenhardt, 1989; Shapiro, 2005). Agency theory is commonplace within the social sciences although it is most often used in more quantitative social sciences such as sociology, economics, and management and organizational theory (Shapiro, 2005).

The central aspect of this theory is the agency relationship (Jensen & Meckling, 1976). The agency relationship, or principal-agent relationship, exists in a situation when one party (the principal) retains financial control of an asset such as a firm whereas another (the agent) is responsible for its management. This is commonly termed the separation of ownership and control (Jensen & Meckling, 1976). As the researchers explained, these parties have different interests. Thus, if both engage in utility maximization with the resources of the firm, there will be situations where the agent does not work in the interests of the principal (Jensen & Meckling, 1976). For example, the manager of a firm could make a short-term deal that benefits his own compensation but is ultimately detrimental to the interests of the firm's owner. The principal cannot control this activity directly because there is an information asymmetry. In other words, the manager of the firm knows more about the firm than the owner. However, the principal can use different strategies to remain in control. For instance, the principal can use incentives to align the interests of the principal with their own, apply resources or bonding costs to prevent the agent from acting against the principal's interests, or engage in monitoring of the agent's actions (Jensen & Meckling, 1976). These activities incur *agency costs*, or costs associated with ensuring the agent's interests are aligned. Agency costs consist of monitoring costs, bonding costs, and residual losses from the remaining unaligned behavior (Jensen & Meckling, 1976). The researchers proposed that firm financial decisions – in their analysis, choice of debt or equity funding – could be analyzed from the perspective of the agency problem. In their

view, the firm was composed of a legal fiction designed to structure the contractual agreements and relationships (Jensen & Meckling, 1976).

A number of other researchers have further developed the agency theory of the firm. One important early development was the introduction of competition or market forces into firm decision-making (Fama, 1980). Fama (1980) argued that *ownership* as a concept within the firm was irrelevant. Instead, the financial owners of the firm could be repositioned as *risk bearers*, one of the roles within the set of contracts within the firm. He argued that separation of ownership (risk bearing) and control (management), which is conceived as a problem resulting in conflicting interests by Jensen and Meckling (1976), was actually an economically efficient distribution of responsibilities and ownership. Furthermore, management decisions are not made in a vacuum; instead, managers are responding to market conditions when making decisions rather than solely acting in their self-interest (Fama, 1980). In a situation with diffuse ownership like publicly traded companies, management decision-making is the most efficient approach (Fama, 1980). Other researchers applied agency theory to different business situations such as transfer pricing, commission, and executive compensation, as well as organizational and contractual relationships (Shapiro, 2005).

A summary of early research identified two streams of agency theory, including a positivist stream and principal agent stream (Eisenhardt, 1989). While some empirical supports for agency theory in these two streams were identified, Eisenhardt, (1989) also poined to a failure to develop agency theory in rich contexts with most research coming from large corporations and public organizations (Eisenhardt, 1989). More recent critiques continue to point to continuing gaps in the research on agency theory, especially in regard to affective and normative aspects of contractual relationships. For instance, one researcher elaborates agency theory with the idea of bounded self-interest, which is tempered by norms of reciprocity and fairness (Bosse & Phillips, 2016). The researchers therefore demonstrate that decisions made by the firm's managers can actually have a broader benefit as it has been empirically observed (Bosse & Phillips, 2016). Another researcher notes that agency theory is highly inflexible, ignoring empirically observable phenomena like honesty and loyalty (Cuevas-Rodríguez, Gomez-Mejia, & Wiseman, 2012). For example, this has resulted in

spiraling executive compensation to align agent interests, which has ignored intrinsic agent values and has importantly not resulted in improved performance (Cuevas-Rodrígeuez et al., 2012). Furthermore, agency theory largely ignores principal-principal problems such as conflict between majority and minority shareholders, which are relevant in developing economies though less common in the west (Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Consequently, agency theory is *not* a perfect theory of the firm, and it is particularly bounded by its insistence on rational self-interest and utility maximization. Nonetheless, agency theory is an appropriate underlying theory for this study since it is the dominant paradigm of corporate governance principles and practices (Raelin & Bondy, 2013).

2.1.2 The Concept of Corporate Governance

The main practice of concern for this study was corporate governance. Corporate governance can be briefly defined as the institutional and legal structures, rules, and practices which protect the firm's financial investors (Mallin, 2016). Corporate governance theory is based on agency theory although there are also other theories including stakeholder theory and stewardship theory which may be applied (Mallin, 2016). Some of the requirements of corporate governance are enforced by legal structures and institutions (i.e. corporate legislation and regulation of public firm listing), which vary somewhat between different jurisdictions (Shleifer & Vishny, 1997).

In general, corporate governance theory addresses the relationship between owners, the firm's managers, and other stakeholders such as customers and governments (Mallin, 2016). It introduces a specific *fiduciary duty* to managers and corporate boards which are tasked with overseeing managers meaning that these corporate actors have a responsibility to act in the best interests of the firm (Mallin, 2016). More generally, corporate governance introduces *accountability* into the actions of the firm's managers and board members (Huse, 2005). Accountability means that specific aspects of firm management are assigned as responsibility of specific members of the firm who must provide information about their achievement (Huse, 2005). There are a number of mechanisms which the firm may employ to ensure accountability (Brennan & Solomon, 2008). Many of these mechanisms employ *transparency*, or

disclosure of accountability information such as financial reporting and social responsibility (Brennan & Solomon, 2008). Key mechanisms of transparency are accounting, financial reporting, auditing, and voluntary disclosure (Brennan & Solomon, 2008). Other mechanisms of accountability include board structure and the use of sub-committees such as audit and compensation sub-committees (Mallin, 2016).

There were three key areas of corporate governance investigated in this study because they are most relevant to financial performance of the firm. These included board structure, ownership structure, and executive compensation.

The corporation's board of directors is the group of individuals tasked with oversight of the firm's operations (Mallin, 2016). The board of directors has a fiduciary duty to the firm's owners (Mallin, 2016). Among the board's responsibilities are selection of executives, the alignment of incentives of the firm's managers (executive compensation), and oversight of management activities and accountability mechanisms such as financial reporting, accounting, and auditing (Adams, Hermalin, & Weisbach, 2010). In other words, the board represents agency costs, especially monitoring costs and bonding costs (Mallin, 2016). There are several key aspects of board structure that may be relevant to corporate governance. For example, boards may be made up of inside directors (those who have other roles in the firm) or outside or independent directors (those unrelated to the firm) (Adams et al., 2010). Outside directors may include bankers, venture capitalists, or politically connected individuals who provide knowledge or other advantages for the firm's oversight (Adams et al., 2010). In addition, another aspect of board structure is CEO-Chairman duality, or cases where the CEO also serves as the chairman (Mallin, 2016). This can introduce a situation where the CEO has more influence on the firm even though it does not necessarily do so (Adams et al., 2010). The other aspect of board structure is the sub-committees (Mallin, 2016). Sub-committees are typically made up of a small number of board members, who are tasked with a specific aspect of oversight such as executive selection, compensation, or auditing (Adams et al., 2010). Structure of boards typically varies widely even within a single institutional regime (Mallin, 2016). Therefore, it could be one of the factors which determines the firm's performance.

Ownership structure is also a critical aspect of corporate governance of the firm. The ownership structure of the firm refers to the degree of concentration of ownership of the firm (Desender, 2009). For instance, if a firm is *closely held*, this means most or all of its ownership is concentrated in a few individuals such as a family firm or a small group of investors (Desender, 2009). In contrast, a publicly traded firm may be *widely held*, with ownership distributed among a large number of individuals (Desender, 2009). Another consideration of ownership structure is the extent of large investors or institutional investors (Shleifer & Vishny, 1997). Large investors may have substantially different interests than smaller investors, and they may also have more influence on the operation of the firm (Mallin, 2016). In some situations, multiple large investors can introduce *principal-principal conflict*, in which there is no clear single set of interests among the principals of the firm (Young et al., 2008). For example, activist investors may encourage earnings management whereas institutional investors discourage the practice (Hadani, Goanova, & Khan, 2011). Therefore, corporate governance is also an important aspect of the firm.

The third aspect of corporate governance relevant to this study was executive compensation. Executive compensation refers to the combination of salary and performance-dependent other compensation such as stock options offered to the CEO and other key executive managers of the firm (Lipman & Hall, 2008). In other words, executive compensation represents the bonding costs associated with the agency problem (Shapiro, 2005). Determination of executive compensation is one of the duties of the board (Adams et al., 2010). The goal of executive compensation is to provide incentives to the firm's managers which are aligned to the interests of the firm's owners (Mallin, 2016). However, this alignment is not always effective; for instance, misaligned compensation policies of American financial firms have been implicated as the strongest factor in the 2007-2008 subprime mortgage crisis (Bicksler, 2008). Therefore, the approach to executive compensation is both a critical aspect of corporate governance and a problematic one.

There are also other aspects of corporate governance, such as corporate governance behaviors and practices, which have been identified (Huse, 2005). One example of these practices is corporate social responsibility (CSR), which is an

assignment of some of the firm's resources to meet stakeholders' needs (Mallin, 2016). These are important aspects of the firm's management. Nevertheless, since the main emphasis of this study was financial performance of the firm under agency theory, these non-financial aspects of corporate governance have been set aside as they fall outside the scope of the study.

The relationship of corporate governance and dividend policy is not yet settled. Although there is one researcher noted that there is inadequate theorization regarding the relationship of corporate governance and dividend payment, this relationship can potentially be explained within the framework of agency theory (Adjouad & Ben-Amar, 2010). Under agency theory, "dividend policy are expected to attenuate agency costs resulting from the separation of ownership and management of publicly listed corporations (Adjouad & Ben-Amar, 2010, p. 649)." Dividend policy acts to redistribute the firm's earnings to shareholders and reduce the amount of cash available within the firm, which could help reduce opportunities for self-dealing by the firm's managers (Adjouad & Ben-Amar, 2010). Furthermore, dividend policy could increase market scrutiny of the firm. However, how dividend policy are exactly related to corporate governance is less certain. Adjouad and Ben-Amar (2010) identified two leading hypotheses for this relationship. One such model is the outcome model of dividends, which was proposed by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000). This model assumes that there is a positive relationship between corporate governance and dividend policy. This relationship occurs because higher dividends are signals of strong corporate governance, given that the firm is reducing the amount of cash available for the manager's private interests (La Porta et al., 2001, cited in Adjouad & Ben-Amar, 2010). On the other hand, the substitution model of dividends states that corporate governance is a substitute for dividend payment with firms with stronger governance having less need to pay out dividends as a means of ensuring shareholder rights (La Porta et al., 2000, cited in Adjouad & Ben-Amar, 2010). Under this hypothesis, the relationship of corporate governance and dividend policy is negative (Adjouad & Ben-Amar, 2010). While evidence for both of these hypotheses is mixed, it is possible that firm characteristics such as risk levels could be intervening factors (Bhattacharya, Li, & Rhee, 2016).

The relationship of corporate governance and earnings quality was also being interested in this study since it is more straightforward than that of corporate governance and dividend payment. Corporate governance is associated with earnings quality because corporate governance norms like transparency and accountability demand accurate financial reporting and disclosures (Cohen, Krishnamoorthy, & Wright, 2004). Thus, accuracy and completeness of financial reporting and disclosure is considered to be one of the targets of corporate governance. Under an agency theory model, corporate governance is a mechanism to reduce information asymmetries and ensure control of the firm's managers would be a reason to ensure earnings quality (Chtourou, Bedard, & Courteau, 2001). In other words, corporate governance represents the control costs associated with reduction of managerial self-dealing (Kent, Routledge, & Stewart, 2010). According to this relationship, the firms which are using adequate or good corporate governance policies should also be ensuring that their financial information released to the public is accurate (Cohen et al., 2004). Since earnings management which erodes earnings quality is often engaged in by managers further seeking for their private interests, poor earnings quality could also be indicative of poor corporate governance (Kent et al., 2010). In summary, the relationship between corporate governance and earnings quality can be explained through agency theory. Corporate governance acts as a control on the manager's ability to use private information for their own interests. Part of this control is the accurate disclosure of financial information, which is the foundation for earnings quality. Therefore, earnings quality is a signal of corporate governance. Cohen et al. (2004) and Kent et al. (2010) have noted that there is strong empirical evidence for this relationship as well.

2.1.3 The Principles of Good Corporate Governance for Listed Companies in Thailand

Adherence to principles of good corporate governance (CG) is particularly important for listed companies since the principals of the company (shareholders) have less direct control over the actions of management than those of closely held companies (Tricker, 2015). Good corporate governance principles, including efficiency, transparency, and auditability of the management practice mean that the firm's shareholders, major investors, and other stakeholders can trust the managers of the firm

to act on their behalf. This in turn increases the firm's ability to undertake sustainable growth and long-term activities, adding to value (Tricker, 2015). Good corporate governance in publicly listed companies also has the effect of protecting vulnerable investors with no direct control over the investment, such as beneficiaries of retirement funds and other investment vehicles (The World Bank, 2013).

The Stock Exchange of Thailand (SET) has had a set of voluntary principles in place since 2002 when they were introduced in the aftermath of the 1997 currency crisis and subsequent failures of listed companies (The World Bank, 2013). The initial set of 15 Principles of Good Governance was expanded in 2006 and implemented as the Principles of Good Corporate Governance (GCG). These principles were consistent with the voluntary principles of the Organisation for Economic Cooperation and Development (OECD)(2004). The Principles of GCG were evaluated by the World Bank's Report on the Observance of Standards and Codes for Corporate Governance (CG ROSC) in 2005, finding that the standards put into place met or exceeded international averages (Thailand Board of Investment, 2005). However, several key recommendations for improvement were also made at this time. These recommendations for improvement were incorporated into the revised Principles of GCG (2012), which is the current version in place today (The Stock Exchange of Thailand, 2012). These principles expect listed companies and their boards and management teams to implement corporate governance systems that are consistent with international standards and that contribute to the sustainability of the firm and the Thai economy. The 2012 revision incorporated the ASEAN CG Scorecard, which allows for international comparison between ASEAN countries, in preparation for the ASEAN Economic Community (AEC) (The Stock Exchange of Thailand, 2012).

Evaluation of the Principles of GCG has generally been good. The 2012 World Bank CG ROSC found that the principles currently in place were sound and that the Securities and Exchange Commission (SEC) and Bank of Thailand (BoT), along with the SET, played an active role in monitoring and enforcement (The World Bank, 2013). They also found that the principles including protection of shareholder rights, prohibition of insider trading and conflicts of interest, and disclosure transparency and information quality were high. Nonetheless, the World Bank (2013) did find a few

obstacles, especially the distribution of information, differences in accounting standards, notification of shareholders, auditor conflicts of interests, problems in board structure, and active joint enforcement by associated agencies. Thus, while the Principles of GCG are solid, there are still problems with enforcement in Thailand.

Presently, the Principles of GCG in Thailand incorporate five key areas. These areas include the rights of shareholders, the equitable treatment of shareholders, the role of stakeholders, disclosure and transparency, and the responsibilities of the board. These principles are summarized here.

2.1.3.1 The rights of shareholders

In a publicly listed firm, shareholders are the economic owners of the firm, represented by the elected board of directors who are tasked with monitoring the firm's managers (Tricker, 2015). In other words, the shareholders are the principals of the firm (Tapiero, 2004). Although managers of the firm make day-to-day decisions, good corporate governance require shareholders to be offered a voice in major decisions and encouraged to exercise it (Tricker, 2015). Thailand's Principles of GCG establish several basic shareholder rights that listed firms must offer their shareholders (The Stock Exchange of Thailand, 2012). These shareholder rights, which must be respected by the board of directors, include:

1. The right to buy, sell, or transfer shares at will;

2. The right to a share of the firm's profits;

3. The right to relevant, adequate, timely and regular information on the firm, especially on material aspects of the firm's operation; and

4. The right to participate in and vote at shareholder meetings on decisions including changes to composition of the board, appointment of external auditors, and material decisions comprising dividend payments, extraordinary transactions, changes to company bylaws, and changes in the firm's capital (The Stock Exchange of Thailand, 2012).

2.1.3.2 The equitable treatment of shareholders

The principle of equitable treatment of shareholders means that all shareholders must be treated equally, regardless of whether they are domestic or foreign, whether they hold management positions, or other possible differences

(McGee, 2009). Furthermore, shareholders should be offered a right of redress for unfair treatment of rights violations (Tricker, 2015). This encourages trust in the company's management and board of directors and improve organizational justice perceptions and trust (Tricker, 2015). The Principles of GCG have several requirements for equitable treatment (The Stock Exchange of Thailand, 2012). Policies, procedures, and processes must be designed to ensure equitable shareholder treatment. Moreover, minority shareholders must be able to take actions such as nominating directors and voting in elections and add agenda items for shareholder meetings. Proxy voting procedures should be in place for minority shareholders who cannot attend annual general meetings. Boards should also use procedures to prevent self-dealing, such as insider trading, related party transactions, and conflict of interest. Disclosure of conflicts of interest or potential conflicts of interest should be required for all managers and directors in order to avoid possible self-dealing problems. Directors and managers with possible conflicts should explain themselves from decision making in these areas (The Stock Exchange of Thailand, 2012).

2.1.3.3 The role of stakeholders

The stakeholders of the firm are not direct shareholders but have an interest in the actions of the firm (Tricker, 2015). Stakeholders include employees, suppliers, communities, governments, the environment, and other groups. Besides, stakeholders have a legal interest in how the firm operates and legal rights, and cooperating with stakeholders can help the firm generate long-term, sustainable economic and social performance (Tricker, 2015). Under the Principles of GCG, Thai firms are required to identify their stakeholders and establish policies for fair treatment and respect of stakeholders' legal rights and previous agreements (The Stock Exchange of Thailand, 2012). The firm should not undertake actions which violate stakeholders' legal rights, and if this does happen, there should be redress procedures in place. The firm should also ensure that stakeholders are engaged in the activities of the firm, which can improve the firm's sustainability in several areas. Stakeholders should also be able to raise issues, such as unethical and illegal practices of the firm, problems with financial reporting or internal control, inadequate disclosure, or other issues, with their rights protected. Finally, the board should establish clear corporate social responsibility

policies that address the responsibility of the firm towards society and the environment (The Stock Exchange of Thailand, 2012).

2.1.3.4 Disclosure and transparency

Requirements for disclosure and transparency are founded on the principle that shareholders and stakeholders have the right to information about the firm and its operations (Tricker, 2015). This information is used by regulators, investors, and others. Typically, these requirements focus on material information or information that would have an influence on decisions such as investment decisions even though firms may choose to disclose other information (Bloomfield, 2013). The Principles of GCG in Thailand require that disclosure of financial and non-financial information is accurate, timely, and trustworthy, and it can be accessed easily (The Stock Exchange of Thailand, 2012). Regulations of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET) regarding disclosure must be followed. Furthermore, the board of directors must ensure that disclosure of such information is accurate, for example, by appointing an external auditor to oversee financial disclosures and ensuring that information provided to the external auditor is accurate. The requirements of information which must be disclosed are not limited. Instead, firms must disclose any material information. The firm should also establish spokespersons, who are typically the CEO or chairman of the board, and an investor relations staff to communicate with shareholders, potential investors, and the public (The Stock Exchange of Thailand, 2012).

2.1.3.5 Responsibilities of the board

The board of directors is the oversight body of the firm, selected by shareholders to monitor the actions of the firm's managers and ensure alignment of the firm's management with shareholder interests (Bloomfield, 2013; Tricker, 2015). Under the Principles of GCG, the board should be independent of managers and accountable to shareholders. The board of directors is responsible for establishing the vision of the firm and separating its responsibilities from those of the management. The board should also comprise directors with characteristics useful to the firm, including skills and expertise. Directors should be nominated and elected by shareholders in a transparent way in order to ensure credibility and trust in the firm. Furthermore, board compensation should be

established in a transparent way. Special committees focusing on areas such as audit or executive compensation allow the board to clarify the focus of the board on specific management issues and responsibilities. Board members also have personal responsibilities, including due diligence and good faith, along with commitment to fulfilling their duties to the board. Moreover, board members should be provided with the most accurate, timely, and complete information to ensure that they can make the best decisions for the firm (The Stock Exchange of Thailand, 2012).

2.2 Concept and Theory of Dividend Payment

A firm's dividend payment can be measured through its dividend payout ratio, which is the percentage of the firm's net revenues (profits) redistributed to shareholders of the firm (Gibson, 2009). The dividend payout ratio is the inverse of the retained earnings ratio, which is the percentage of profits retained for further investment and operations. The augmented dividend payout ratio includes stock buybacks, which may be more representative for the firms that use stock buybacks to return value to shareholders by increasing value of existing stock (Baker, 2009). Preferred stock dividends can also be removed to accurately depict payouts to common shareholders (Baker, 2009).

The dividend payout ratio is based on financial characteristics including the profit margin, growth rates, taxes, and debt-to-equity ratio, which depicts the reliance on equity financing (Gill, Biger, & Tibrewala, 2010). In operational terms, the firm's level of maturity may influence the dividend policy. In other words, a young firm that is growing rapidly and has a high need for capital investment may have a lower dividend payout ratio, or even not pay out dividends at all, whereas an older firm may be required to pay out more in dividends to remain attractive to investors (Brav, Graham, Harvey, & Michaely, 2005). For instance, major technology firms such as Microsoft and Apple spent many years not paying out dividends at all, instead relying on stock price growth to return benefits to investors. Nevertheless, these firms eventually began to pay out dividends to investors after the firms' stock growth no longer justified their position of not paying dividends (Li, 2016). Generally, the relationship between share price growth

and dividend policy ratio is inverse; a high dividend payout implies relatively low share price growth, and vice versa (Brav et al., 2005).

The firm's dividend payout ratio in comparison to earnings can be an indicator of sustainable dividend payout (Chen, Gupta, Lee, & Lee, 2013; Gibson, 2009). A firm that is paying out more than 100% of earnings in the long term will be required to reduce the dividend payout, and thus risk reducing the benefits returned to shareholders. However, firms will often avoid lowering dividends in the short term even in cases of reduced profits in order to avoid reducing the attractiveness of the stock to shareholders. In the short term, the firm can fund dividend payouts higher than earnings from existing retained earnings, and this may be a better choice than reducing dividends in the short term. Therefore, it is important to consider forward-looking and backward-looking dividend payout ratios to understand the firm's earnings context and payout decisions. Long-term trends in the volatility of the payout ratio also provides information about the firm's performance although with a reduction in dividend payout policies in recent years this has become less informative (Amihud & Li, 2006). There is some variations of dividend payout ratio between industries due to different rules and operating conditions as well as different investor expectations (Baker, 2009).

The main strategic decision which was studied here was the dividend payout. A dividend is a cash flow from the firm to its investors (shareholders) based on the firm's profits or earnings in a given period (Baker, 2009). The dividend is typically announced following a quarterly or annual earnings announcement with the amount determined by the firm's financial performance during the period or other periods (Baker, 2009). Dividend payments, along with stock repurchases, are the main ways the firm can directly return cash to shareholders (Baker, 2009). Other benefits such as stock price changes are more dependent on the firm's market performance (Fabozzi & Drake, 2009).

Typically, investors and analysts may consider the firm's dividend payout ratio when understanding how much the firm is redistributing to its shareholders (Reilly & Brown, 2012). The dividend payout ratio may be estimated as:

$$\frac{Dividend\ per\ share}{Earnings\ per\ share}$$ (Reilly & Brown, 2012).

As this estimation is shown, the firm's dividend payout ratio represents the amount of money returned to investors compared to the amount it has earned. One of the implications of the dividend payout ratio is that cash paid out in dividends reduces the retained earnings of the firm (Reilly & Brown, 2012). This means that firms that choose to pay dividends decrease the amount of cash available for capital investment, research and development, and other long-term strategic needs (Reilly & Brown, 2012). Thus, the choice of dividend payout levels is not a neutral choice for the firm (Baker, 2009). Instead, the firm's dividend policy by which it determines the level of payouts can have a significant effect on the firm's strategy and operations, particularly if it leaves the firm short of cash for other activities. As a result, not all firms have a dividend payout policy (Baker, 2009).

2.3 The Concept of Earnings Quality

The third key concept of this research is *earnings quality*, which is based on the efficient market hypothesis (EMH).

2.3.1 The Efficient Market Hypothesis (EMH)

The efficient market hypothesis (EMH) refers to a theory which describes how stock prices are adjusted in response to new information such as company reports or other news (Fama, Fisher, Jensen, & Roll, 1969). This theory was derived from empirical examination of the stock market in the U.S. The authors began with considering the case of stock splits, or situations where at least four existing shares were exchanged for five new ones. In other words, where the number of outstanding shares increased by 25% or more. They then tested the effect of the split on returns (prices and dividends). This tended to be followed by a price increase in the stock. They found that the most of the increases in the first 30 months (the period studied) were attributable to the first month following the split. In other words, the market immediately reacted more or less to the news of the stock split (Fama et al., 1969). Furthermore, this response had a linear associated with the expected dividend increase (Fama et al., 1969). From this observation, the authors formulated the assertion that the markets were efficient. Generally, market prices of shares immediately reflect any and all information that affects their value, including their future dividend value (Fama et al., 1969).

This evidence was tested by Fama (1970) who assembled evidence for three forms of the EMH, each of which is based on a different proposition between news and stock prices. The *weak form* of the EMH states only that prices include historic, publicly available information, and specifically historic price data (Fama, 1970). The *semi-strong form* of the EMH also asserts that prices include publicly available data such as earnings announcements (Fama, 1970). Finally, the *strong form* of the EMH argues that prices also include private data such as data used by inside traders (Fama, 1970). Fama (1970) argued at the time that there was empirical evidence for these three forms of the EMH. Nonetheless, in a later reassessment of the model, the author acknowledged that empirical tests of all three forms routinely were rejected according to a range of anomalies such as calendar anomalies (Fama, 1991). The strong form of the EMH, which holds that all information is included in the price, has generally been rejected on empirical grounds since that time (Reilly & Brown, 2012). However, the assumption of semi-strong form EMH is still incorporated into event studies (for example, the analysis of the effect of financial news releases), and weak-form EMH lies at the heart of historical analysis and prediction of stock prices (Reilly & Brown, 2012). Among the principles the EMH underlies is that of earnings quality.

2.3.2 Earnings Quality

The semi-strong form of the EMH argues that useful information will be incorporated into the firm's share price immediately (Lev, 1989). One of the implications of this statement is that there must be a determination about what type of information is considered *useful* (Lev, 1989). Lev (1989) noted that earnings information was considered to be the most useful information released in the financial reports, well above supplementary information such as sales, equity, assets, or other indicators. Therefore, earnings information was considered as a primary signal for pricing. However, Lev's (1989) study revealed that research in the 1970s and 1980s actually showed poor correlations between price and earnings data. This raises the question of whether earnings *per se* can be considered a useful price signal under the semi-strong form of the EMH (Lev, 1989).

One of the ways this question has been resolved is by formulating the concept of *earnings quality.* Earnings quality may be defined qualitatively as "a measure of the

ability of reported earnings to reflect the firm's true earnings and to help predict future earnings" (Akers, Giacomino, & Bellovary, 2007, p. 65). In other words, in order to reflect earnings quality, data provided by the firm must not only be accurate and relevant but also have predictive value for future performance of the firm (Akers et al., 2007). Another definition of earnings quality is "the proportion of true economic earnings in total reported earnings" (Lee, Li, & Yue, 2006, p. 306). Under this definition, high earnings quality would come from a smaller gap between true earnings and total reported earnings (Lee et al., 2006). However, as another author points out, there is no single consensus definition for the concept of earnings quality (Li, 2010). Furthermore, there is an inherent information asymmetry in the concept of earnings quality since the true earnings of the firm is private information (Li, 2010). This introduces an observational problem for earnings quality. As a result, earnings quality is most often measured by using a series of proxy measures, which compare and manipulate publicly-released information to estimate earnings quality (Dechow, Ge, & Schrang, 2010; Perotti & Wagenhofer, 2014). Besides, many of the proxy measures used for earnings quality are not based on empirical analysis. Instead, they are based on common-sense understandings of the sources of financial data and forensic evidence such as an analysis of known cases of earnings management (Perotti & Wagenhofer, 2014). Thus, rather than a single, objective measure of earnings quality, there are multiple measures which reflect different concepts and indicators of earnings quality. Table 2.1 summarized some of the most commonly used measures of earnings quality including their operational definitions and calculation approaches. Some of these measures do have more than one calculation or definition. According to Perotti and Wagenhofer's (2014) empirical analysis of multiple classes of such measures, accruals-based measures most accurately predict absolute excess returns, making them the most effective class of earnings quality measures. The most common accrual models include the Jones (1991) model and the modified Jones (1991) model by Dechow, Sloan, and Sweeney (1995), both of which are included in table 2.1 below (García-Meca & Sánchez-Ballesta, 2009). Nevertheless, there are also other models that can be used, such as Sloan's (1996) formulation of accruals based on the firm's balance sheet fundamentals. This model was specifically developed to determine the level of

information quality about the firm's future earnings in the financial statement by focusing on the aspects which relate to future earnings (Sloan, 1996). For example, this model includes accounts receivable (AR) and accounts payable (AP), non-cash current assets and liabilities, and depreciation and amortization, all of which will affect the firm's performance in the next reporting period or periods (Sloan, 1996). The indication that the cash flows are low compared to earnings (high accruals) is associated with reduced earnings in later periods compared to other firms, sending a clear signal of earnings management (Sloan, 1996). This indicator has been used successfully in related research (Chan, Chan, Jegadeesh, & Lakonishok, 2006).

Table 2.1 Summary of common operational definitions of earnings quality

Measure	**Definition**	**Calculation**
Time series	Persistence of earnings over time	Slope coefficient β from calculation of net income before extraordinary results (NIBE): $NIBE_{i,t} = \alpha + \beta NIBE_{i,t-1} + \varepsilon_{i,t}$
	Predictability of earnings over time	R^2 from NIBE calculation (as above)
Smoothness	Smoothness of earnings	Standard deviation ratio: $\frac{\sigma(NIBE)}{\sigma(CFO}$
		Correlation $\rho(ACC, CFO)$
		CFO: Cash flow from operations (NIBE – ACC)
		ACC = Total Accruals ($ACC = \Delta CA - \Delta CL - \Delta CASH + \Delta STDEBT - DEPR$)
Accruals	Accruals	Multiple measures including:
	Abnormal accruals	$ACC = Earnings_t - CF_t$
		$ACC = \Delta(Non - cash\ working\ capital)$
		$ACC = \Delta(Net\ operating\ assets)$
		Negative absolute value of residual from

Table 2.1 Summary of common operational definitions of earnings quality (cont.)

Measure	Definition	Calculation
Accruals	Accruals quality	Negative absolute value of residual from $ACC_{i,t} = \alpha + \beta_1(\Delta REV_{i,t}) + \beta_2 PPE_{i,t} + \varepsilon_{i,t}$ (Jones, 1991 model) $ACC_{i,t} = \alpha + \beta_1(\Delta REV_{i,t} - \Delta AR_{i,t}) + \beta_2 PPE_{i,t} + \varepsilon_{i,t}$ (Modified Jones (1991) model by Dechow, et al. 1995) Negative standard deviation of residual from equation: $CACC_{i,t} = \alpha + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \varepsilon_{i,t}$ CACC: Current accruals (ACC + Depreciation) ΔREV: Change in revenue ΔAR: Change in accounts receivable Decomposed accruals model: $ACC = \Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep$, where ΔCA = change in current assets; ΔCash = change in cash/cash equivalents, ΔCL = change in current liabilities, ΔSTD = change in debt included in current liabilities, $\Delta TP =$ change in income taxes payable and Dep = depreciation and amortization expense (*Sloan (1996) model)*

Table 2.1 Summary of common operational definitions of earnings quality (cont.)

Measure	**Definition**	**Calculation**
Value relevance	Earnings response coefficient (ERC)	Slope coefficient β from calculation of 12-month stock return: $RET_{i,t} = \alpha + \frac{\beta NIBE_{i,t}}{P_{i,t}} + \varepsilon_{i,t}$
	Value relevance	R^2 from return calculation (above)
Timely loss recognition	Timely loss recognition (TLR)	β_1 from $Earnings_{t+1} = \alpha_0 + \alpha_1 D_t + \beta_0 Ret_t + \beta_1 D_1 Ret_t + \varepsilon_t$, where D = 1 if Ret < 0. Higher indicates greater TLR

Source: Dechow, et al. 2010; Perotti and Wagenhofer, 2014; Sloan, 1996

In addition to the measures listed above, there are non-quantitative measures which may also be used in investor assessment of earnings quality (Dechow et al., 2010). These non-quantitative measures include, for example, existence of financial restatements or oversight authority (such as SEC) actions or other news regarding earnings (Dechow et al., 2010). Benchmarking or mapping measures may also be used (Dechow et al., 2010). These events or indicators do provide useful information for the investor but are difficult to observe the effects or calculate on the broader scale. Thus, while these non-quantitative measures are acknowledged as potentially important for the investor decisions, they are not considered as measures here.

This study used Sloan's (1996) measure of accruals to measure earnings quality. Sloan's (1996) accruals calculation is based on the balance sheet information and does not rely on private information, and it has been used in other studies (Chan et al., 2006), making it appropriate for this study.

2.4 The Relationship between Corporate Governance and Earnings Quality

The first relationship explored in this study was the direct relationship between corporate governance and earnings quality. As noted above, financial aspects of corporate governance focuses only on the responsibilities of the board include board structure, ownership structure, and executive compensation (Mallin, 2016). In this chapter, the evidence for each of these aspects is summarized and critiqued to understand the type of relationships which may be expected. In many of these studies, *earnings management* (abnormal discretionary accruals) is the outcome variable. Earnings management is a common negative proxy for earnings management, as it represents deliberate action on the part of management to obscure the true economic outcomes of the firm (Dechow et al., 2010).

2.4.1 Board Structure

A number of studies have identified the role of board structure in earnings quality (Baxter & Cotter, 2009; Chang & Sun, 2008; Cornett, McNutt, & Tehranian, 2009; Dhaliwal, Naiker, & Navissi, 2006; Gulzar & Wang, 2011; Ismail, Dunstan, & van Zijl, 2009; Lin, Li, & Yang, 2006; Murhadi, 2009). Board structure can be said to be important for earnings quality because the board provides financial reporting

oversight and ensures transparency as well as providing technical assistance (Mallin, 2016). Three factors related to board structure which were examined in this study included board size, CEO duality, and audit committee independence. While there are other board factors which can influence earnings management such as female director (Alzoubi & Selamat, 2012), ultimately there are so many possible differences in board structure that the number of factors must be limited.

2.4.1.1 Board size and earnings quality

The first factor considered was board size, or the number of members on the board (Alzoubi & Selamat, 2012). The evidence for board size and earnings quality is conflicted. The theoretical evidence suggests a negative relationship between board size and earnings quality as larger boards are believed to develop politeness norms which prohibit effective oversight (Cornett et al., 2009). However, empirical evidence for this is weak, with two out of three empirical studies finding no relationship (Cornett et al., 2009; Gulzar & Wang, 2011). Nevertheless, one study did find a negative relationship to abnormal accruals (Ismail et al., 2009). Other studies have found a positive relationship between board size and earnings quality (Bradbury, Mak, & Tan, 2006; Byard, Li, & Weintrop, 2006). These studies have found that larger boards are associated with higher earnings quality, which could be related to a higher level of expertise on the board, especially in financial areas (Bradbury et al., 2006; Byard et al., 2006). This could be particularly important for the firms with a lower level of knowledge about financial reporting. Therefore, there is an evidence suggesting that a smaller board does improve earnings quality, but this evidence is conflicted. Consequently, the first hypothesis was established as follows:

Hypothesis 1: Board size has a positive effect on earnings quality.

2.4.1.2 CEO duality and earnings quality

Evidence is also conflicted for CEO duality, in which the same person holds the CEO and board chair positions. Theoretically, CEO duality has a negative effect on earnings management since it reduces the level of control applied by the board and thus increases the agent's power held by the CEO (Chang & Sun, 2008). Two of the studies which included CEO duality did not find an influence of this factor (Chang & Sun, 2008; Ismail et al., 2009). However, two other studies did find a positive

relationship to earnings management, as indicated by abnormal accruals (Gulzar & Wang, 2011; Murhadi, 2009). A positive relationship to earnings management implies a negative relationship to earnings quality since earnings management is one of the main mechanisms by which earnings quality is compromised (Dechow et al., 2010). Therefore, CEO duality can be expected to degrade earnings quality. Other studies have found a positive relationship between CEO duality and earnings quality even though this relationship is typically weak (Cornett, Marcus, & Tehranian, 2008). One comprehensive analysis of this relationship using a meta-analysis approach revealed that only total accruals models detected variance of earnings quality in relation to CEO duality (García-Meca & Sánchez-Ballesta, 2009). The authors noted that the level of proof indicated by the actual evidence on earnings quality did not necessarily support recommendations against CEO duality (García-Meca & Sánchez-Ballesta, 2009). This suggests that CEO duality may only influence earnings quality under the right conditions such as using a particular measurement model. Nonetheless, the relationship of CEO duality and earnings quality should be tested in any case due to the known importance of the relationship. The second hypothesis was conducted as follows:

Hypothesis 2: CEO duality has a positive effect on earnings quality.

2.4.1.3 Audit committee meeting and earnings quality

The third factor in board membership was the audit committee meeting. A range of audit committee characteristics which was studied by the authors included audit committee existence, size, independence, activity (number of meetings), and expertise. Some of the factors positively associated with earnings quality included audit committee formation (Baxter & Cotter, 2009), audit committee independence (Chang & Sun, 2008), financial and accounting expertise (Chang & Sun, 2008; Dhaliwal et al., 2006) while audit committee size was negatively associated with indicators of poor earnings quality such as restatement risk and abnormal accruals (Lin et al., 2010; Ismail, 2009). Other factors were conflicting. However, one of the most commonly found factors which influence earnings quality is audit meeting frequency (Ghosh, Marra, & Moon, 2010; Saleh, Iskandar, & Rahmat, 2007; Soliman & Ragab, 2014). The third hypothesis was then established as follows:

2.4.1.4 Summary of the effects of board structure on earnings quality

Table 2.2 summarized the studies discussed above, including the effects of board structure on earnings quality as well as their purpose and methods.

Table 2.2 Summary of studies on board structure and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Board Size and Earnings Quality	Bradbury, et al. (2006)	Studying the relationship of board characteristics and abnormal accruals.	Quantitative study of firms in Singapore and Kuala Lumpur (2000) (n = 252)	Regression	Board size was positively, though weakly, associated with higher accounting information quality.
	Byard, et al. (2006)	Studying the relationship of board characteristics and information quality.	Quantitative study of US firms	Regression	Authors found a weak relationship between board size and information quality (earnings quality) in firms.
	Cornett, et al. (2009)	Studying factors in corporate governance (CEO pay-for-performance sensitivity, board independence, board size, corporate governance, capital ratio) on earnings quality (earnings management)	Quantitative study of US banks (1994-2002) (n = 593 bank-years) using data from multiple sources	Regression	Board size was unrelated to earnings management.

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Gulwar and Wang (2011)	Examination of corporate governance characteristics (board composition, duality, board size, board meetings, sex ratio, audit committee, managerial ownership, concentrated ownership) on earnings management (discretionary accruals)	Quantitative study of firms on Shenzhen Stock Exchange (2002-2006) (n = 1009 firms) Multiple data sources	Regression	Board size was not significantly related to earnings quality
	Ismail, et al. (2009)	Studying factors in corporate governance (board of directors, shareholdings, board independence, board composition, board quality, CEO duality, audit committee size and independence, quality of external auditor) on earnings quality (unexpected accruals)	Quantitative study of Malaysian firms (2003-2007) (n = 1,625 firm-years)	Regression	Board size was negatively associated with discretionary accruals

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
CEO Duality and Earnings Quality	Chang and Sun (2008)	Comparison of relationship between corporate governance (multiple measures) and earnings quality (accruals) in pre- and post-SOX periods	Quantitative study Data extracted from multiple SEC and Compustat databases (n = 2,977)	Regression	CEO duality was not found to have a significant effect pre-SOX or post-SOX
	Cornett, et al. (2008)	Studying the effect of corporate governance in financial performance, after adjusting for earnings management	Quantitative analysis of S&P 100 firms S&P 100 index firm data extracted from S&R database (1994 to 2003) (n = 834 firm-years)	Regression	There was a slight positive significant effect of CEO duality on accruals using the Fama-Macbeth regression, which disappeared under the pooled time series regression.

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	García-Meca and Sánchez-Ballesta (2009)	Meta-analysis on corporate governance and earnings management	Quantitative meta-analysis of 35 studies	Quantitative meta analysis	CEO duality was found to have a conflicted relationship with earnings management, with total accruals model showing a positive relationship and other models showing no relationship.
	Gulwar and Wang (2011)	Examination of corporate governance characteristics (board composition, duality, board size, board meetings, sex ratio, audit committee, managerial ownership, concentrated ownership) on earnings management (discretionary accruals)	Quantitative study of firms on Shenzhen Stock Exchange (2002-2006) (n = 1009 firms) Multiple data sources	Regression	CEO duality was positively associated to abnormal accruals (negatively associated with earnings quality)

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Ismail, et al. (2009)	Studying factors in corporate governance (board of directors, shareholdings, board independence, board composition, board quality, CEO duality, audit committee size and independence, quality of external auditor) on earnings quality (unexpected accruals)	Quantitative study of Malaysian firms (2003-2007) (n = 1,625 firm-years)	Regression	CEO duality was unrelated to earnings management
	Murhadi (2009)	Examination of board factors (independent members, audit committee, CEO duality, and top shareholders) on earnings quality(earnings management or abnormal accruals)	Quantitative study of firms from the Indonesia Stock Exchange (2005-2007) (n = 384 firm-years)	Regression	CEO duality had a significant positive effect on evidence of Earnings Management (negatively associated with earnings quality)

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Baxter and Cotter (2009)	To study audit committee formation and factors (independence, expertise, activity, size) on earnings quality (accruals)	Quantitative study of Australian companies in year 2000 (n = 303)	Regression	Audit committee formation was positively associated with earnings quality. Other factors were not associated.
	Chang and Sun (2008)	Comparison of relationship between corporate governance (multiple measures) and earnings quality (accruals) in pre- and post-SOX periods	Quantitative study Data extracted from multiple SEC and Compustat databases (n = 2,977)	Regression	Audit committee independence and financial expertise had a significant positive effect on earnings quality in the post-Sox period.

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Audit Committee Meeting and Earnings Quality	Dhaliwal, et al. (2006)	To study the effect of audit committee financial expertise (accounting, financial, and supervisory) on earnings quality (accruals)	Quantitative study using Investor Responsibility Research Center (IRRC) and Compustat data (1995-1998)	Regression	Accounting expertise was negatively related to accrual residues. Financial and supervisory expertise was unrelated.
	Lin, et al. (2010)	To study audit committee characteristics (size, independence, financial expertise, activity, stock ownership) on earnings quality (restatement)	Quantitative study of American firms in 2000 (n = 267) using Compustat data	Regression	Audit committee size was negatively related to restatement risk. Other factors were unrelated.

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Gulwar and Wang (2011)	Examination of corporate governance characteristics (board composition, duality, board size, board meetings, sex ratio, audit committee, managerial ownership, concentrated ownership) on earnings management (discretionary accruals)	Quantitative study of firms on Shenzhen Stock Exchange (2002-2006) (n = 1009 firms) Multiple data sources	Regression	Audit committee existence was not associated with earnings quality
	Ismail, et al. (2009)	Studying factors in corporate governance (board of directors, shareholdings, board independence, board composition, board quality, CEO duality, audit committee size and independence, quality of external auditor) on earnings quality (unexpected accruals)	Quantitative study of Malaysian firms (2003-2007) (n = 1,625 firm-years)	Regression	Size of audit committee was negatively associated with unexpected accruals.

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	(Saleh, Iskandar, & Rahmat, 2007)	To study board characteristics and their influence on earnings management in Malaysia.	Quantitative analysis of firms in Malaysia	Regression	Factors including fully independent audit committees, more knowledgeable audit committees, and more frequent audit committee meetings were negatively associated with earnings management (therefore positively associated with earnings quality).
	(Ghosh, Marra, & Moon, 2010)	To compare pre-SOX and post-SOX influence of corporate board structure and audit committees on earnings management in the US	Quantitative study of US listed firms (1998-2005) (n = 9,290 firm-years)	Regression	The authors found that board size and audit committee size, tenure, and activity (number of board meetings per year) had a significant negative effect on earnings management. This effect was much weaker during the post-SOX period, when there were stronger disclosure and reporting controls.

Table 2.2 Summary of studies on board structure and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	(Soliman & Ragab, 2014)	Studying the effect of audit quality effectiveness on earnings management in Egypt.	Quantitative sample of firms listed on the Egyptian Stock Exchange (2007-2010) (50 firms in total)	Regression	Audit committee characteristics including committee experience, independence, number of meetings, and audit quality have a negative effect on discretionary accruals (earnings management).

2.4.2 Ownership structure

The second factor in corporate governance which could influence earnings quality is ownership structure. Ownership structure refers to characteristics of firm ownership like types of owners, such as institutional, activist investors, or individual investors, and ownership concentration (Desender, 2009). Besides, ownership structure matters for earnings quality because different types of investors have different utility maximization goals. Thus, there will be different conflicts between the firm's management and its owners. In this study, one factor which was examined was institutional ownership.

2.4.2.1 Institutional ownership and earnings quality

Institutional ownership refers to significant levels of shareholding by institutional investors, such as investment funds or foundations (Desender, 2009). Institutional ownership is relevant to earnings quality because institutional investors often take an active role in firm management, enforcing their own preferences through shareholder votes and engaging with the firm's management (Desender, 2009). Institutional investors are also associated with lower levels of information asymmetry, meaning more information is available to all investors, and by extension, the firm shows better earnings quality (Bhattacharya, Desai, & Venkataraman, 2003). Table 2.3 summarized the studies which have assessed the impact of institutional ownership on earnings quality. These studies generally supported a positive association of institutional ownership share and earnings quality (Cheng & Reitenga, 2009; Cornett, Marcus, & Tehranian, 2008; Hashim & Davis, 2007; Moradi & Nezami, 2011). Nevertheless, the study of Cheng and Reitanga (2009) showed that this effect may be weaker in some circumstances (when there is pressure to decrease earnings) than in others (when there is pressure to increase earnings). Overall, there is enough evidence to establish the fourth hypothesis as shown the following:

Hypothesis 4: Institutional ownership has a positive effect on earnings quality.

Table 2.3 Summary of studies on institutional ownership and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Institutional Ownership and Earnings Quality	Cheng and Reitenga (2009)	To study the differences in effect of non-block and institutional shareholders on earnings quality (discretionary accruals)	Quantitative study of S&P manufacturing firms (1987-1996) (n = 710 firm-years) Data from Compustat and other sources	Regression	Institutional investors were associated with lower discretionary accruals, especially in conditions with high pressure to increase earnings. In situations with pressures to decrease earnings, the effect was weaker.
	Cornett, et al. (2008)	To study the effect of governance structures (institutional ownership, independent board membership, and incentive-based compensation) on abnormal accruals	Quantitative study of S&P firms (1994-2003) (n= 834 firm-years)	Regression	Institutional ownership was negatively associated with abnormal accruals (indicating a positive relationship with earnings quality).

Table 2.3 Summary of studies on institutional ownership and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Hashim and Devi (2007)	Studying the effects of corporate governance characteristics on earnings quality in Malaysia, including ownership (manager, family, and institutional)	Quantitative study of firms listed on Malaysia's Bursa (stock market (2004) (n = 280 firms)	Regression	Family ownership and institutional ownership had a significant positive relationship to earnings quality. Traditional corporate governance characteristics did not have an effect.
	Moradi and Nezami (2011)	Studying the effects of corporate ownership (ownership corporation and institutional ownership) on earnings quality (earnings persistence)	Quantitative study of firms on Tehran Stock Exchange (2006-2010) (sample size not reported)	Regression	Ownership concentration and institutional ownership had weak positive effects on earnings quality.

2.4.3 Executive Compensation and Earnings Quality

The third characteristic studied was executive compensation. Executive compensation refers to the firm's policy for compensating the executives, including CEO and other high-level executives (Mallin, 2016). Under agency theory, executive compensation is a bonding cost, which serves to align the top management's interests with those of the firm (Shapiro, 2005). The main type of executive compensation that is a concern is CEO compensation.

2.4.3.1 CEO compensation and earnings quality

CEO compensation is a controversial area of corporate governance due to an evidence that current practices, such as use of compensation consultants and captured boards, do not succeed in aligning the firm and the manager's interests, artificially increasing CEO compensation without introducing appropriate levels of risk (Harford & Li, 2007). This can result in the use of earnings management to meet poorly aligned short-term incentives (Laux & Luax, 2009). Thus, CEO compensation is likely to be a significant factor in earnings quality. Table 2.4 summarized the studies relating CEO compensation to earnings quality. The authors typically modeled CEO compensation as the ratio of share price-dependent compensation, such as stock options and stock ownership, to total compensation (Bergstresser & Philippon, 2006; Cornett, Marcus, & Tehranian, 2008; Harris & Bromiley, 2007). All authors found that there was a positive relationship between CEO price-sensitive earnings and abnormal accruals or other earnings management behavior (Bergstresser & Philippon, 2006; Cornett et al. 2008; Harris & Bromiley, 2007). As Harris and Bromiley (2007) explained, this result occurs because managers are incentivized to avoid releasing poor information and promote the positive appearance of the firm in order to support their own position. In effect, this provides the CEO with an incentive to cheat in financial reporting (Harris & Bromiley, 2007). Under agency theory, this indicates that there is a failed bonding attempt which continues to allow misaligned incentives between the principal and agent (Jensen & Meckling, 1976). This suggests a negative relationship between CEO price-sensitive earnings share and earnings quality. Nonetheless, other studies have identified a slightly more nuanced relationship. One study found that stock option based on compensation was highly associated with earnings management designed to reduce the

price of the stock at the option date (Baker, Collins, & Reitenga, 2003). However, other forms of compensation, including at-risk compensation such as stock grants and performance bonuses, were not so directly tied to earnings management (Baker et al., 2003). It was only under some conditions that CEOs were likely to use earnings management to increase their earnings. Another author showed that CEOs of firms with higher takeover protections, or lower levels of shareholder dominance in decision making, were less likely to use earnings manipulation regardless of compensation makeup (Davila & Penalva, 2006). This finding indicates that earnings management may not be directly related to CEO compensation in all cases, and instead he firms may be trying to prevent takeovers or engage in other protective actions (Davila & Penalva, 2006). Therefore, the fifth hypothesis was established as follows:

Hypothesis 5: CEO compensation has a positive effect on earnings quality.

Table 2.4 Summary of studies on institutional ownership and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
CEO Compensation and Earnings Quality	Baker, et al. (2003)	Studiyng the effect of price-based compensation on opportunistic earnings management	Quantitative study of firms included in the Wall Street Journal pay survey (n = 350)	Regression	Authors found that use of stock-based compensation was positively associated with earnings management. However, they also found that price-sensitive compensation effects varied depending on factors like early earnings announcements and so on. Thus, only under some conditions were managers able to use earnings management.
	Bergstresser and Philippon (2006)	Studying the relationship between CEO compensation mix (Percent of compensation dependent on share price) and earnings management (abnormal accruals)	Quantitative study (unspecified sample) data from Compustat	Regression	There was a significant positive relationship between percent of compensation dependent on share price (stock options and holdings) and earnings management. This indicates a negative relationship between share price-dependent CEO compensation and earnings quality.

Table 2.4 Summary of studies on institutional ownership and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Cornett, et al. (2008)	To study the effect of governance structures (institutional ownership, independent board membership, and incentive-based compensation) on abnormal accruals	Quantitative study of S&P firms (1994-2003) (n= 834 firm-years)	Regression	Incentive-based CEO compensation (options and shares) was positively associated with abnormal accrual, indicating a negative relationship with earnings quality.
	Davila and Penalva (2006)	Studying the effects of governance structure and performance measures on CEO compensation and earnings quality	Quantitative study of US firms included in Compustat Execucomp (1993 to 2002) (n = 6,356 CEO-years)	Regression	Authors found that takeover protection and CEO compensation interacted, with firms with high takeover protections focusing on fundamental performance rather than stock performance. This reduced price-sensitive compensation, but the firms showed equal levels of earnings quality.

Table 2.4 Summary of studies on institutional ownership and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Harris and Bromiley (2007)	Studying the relationship between CEO compensation (price-sensitive compensation share) and firm financial performance on financial misrepresentation (restatements)	Quantitative study of American firms issuing financial restatements (1997-2002) (n = 919 restatements) data from GAO database	Logit regression and paired samples t-test	There was a positive relationship between CEO price-sensitive compensation share (options share) and financial restatements. This indicates a negative relationship between CEO compensation and earnings quality.

2.5 The Relationship between Corporate Governance and Dividend Payment

2.5.1 Board Structure

2.5.1.1 Board size and dividend payment

The effect of board size on dividend payment has been studied by several authors (Abdelsalam, El-Masry, & Elsegini, 2008; Abor & Fiador, 2013; González, Guzmán, Pombo, & Trujillo, 2014). These authors had mixed findings. Abdelsalam et al. (2008) did not find it significant. However, Abor and Fiador (2013) found it was positively significant in two out of three countries and negative in one while González et al. (2014) also found it to be positively significant. Thus, on the balance of the evidence, the sixth hypothesis was conducted as shown below:

Hypothesis 6: Board size has a positive effect on dividend payment.

2.5.1.2 CEO duality and dividend payment

CEO duality has also been studied in several instances (Abdelsalam et al., 2008; Abor & Fiador, 2013; González et al. 2013; Sirmans & Ghosh, 2013). Nevertheless, these studies showed mixed effects depending on the country the study took place in. For example, Abdelsalam et al. (2008) did not find it to be significant at all in Egypt while Abor and Fiador (2013) found it to have a negative relationship to dividend payout ratio in Nigeria. However, it was not significant in other studies surveyed. González et al. (2013) found a positive relationship to dividend payout ratio, but Sirmans and Ghosh (2013) found a negative relationship. This evidence supports a relationship but does not clarify a direction. Therefore, the seventh hypothesis was conducted as follows:

Hypothesis 7: CEO duality has a positive effect on dividend payment.

2.5.1.3 Audit committee and dividend payment

As with other relationships, audit committee studies varied widely in their operationalization and dimensions of the audit committee examined. For example, two authors constructed a corporate governance index that included audit committee quality in its audit characteristics (Jiraporn, Kim, & Kim, 2011; Sawicki, 2009). Another study specified the audit committee quality characteristics in which they were interested (Nimer, Warrad, & Khuraisat, 2012). Generally, the findings showed a

positive relationship between audit committee quality or overall audit quality and dividend payout ratio (Jiraporn et al., 2011; Sawicki, 2009). While Nimer et al. (2012) did not find this relationship, these authors used Tobin's Q and ROA as proxies, rather than directly calculating the dividend payout ratio. Therefore, these results may be less reliable. Overall, it can be argued by stating the eighth hypothesis as follows:

Hypothesis 8: Audit committee meeting has a positive effect on dividend payment.

2.5.1.4 Summary of the studies on board structure and dividend payment

Table 2.5 summarized the studies on board structure and dividend payment.

Table 2.5 Summary of studies on board structure and dividend payment

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Board Size and Dividend Payment	Abdelsalam, et al. (2008)	Studying the relationship of board composition, institutional ownership and dividend policy in Egypt using CASE 50 firms.	Quantitative analysis of 50 top companies (trading volume) on the Egyptian stock exchange (2003-2005)	Regression	Board size was not found to be a significant factor in Dividend Payout Ratio or Dividend Decision.
	Abor and Fiador (2013)	Studying the effect of corporate governance factors on dividend policy in Africa.	Quantitative analysis of firms from Ghana (n = 27), Nigeria (n = 177), Kenya (n = 51) and South Africa (n = 270) (1997-2006) using simultaneous panel regression	Regression	Board size was positively associated with Dividend Payout Ratio in Kenya and Ghana, but negatively associated in Nigeria.

Table 2.5 Summary of studies on board structure and dividend payment (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	González, et al. (2014)	Studying the role of family involvement on firm dividend policies in closely held firms in Colombian firms (1996-2006)	Tobit regression using data extracted from multiple databases in Colombia (n = 4,320 firm-year observations)	Regression	Board Size was included as a control variable. Authors found a significant positive relationship between Dividend Payout Ratio and Dividend Decision.
CEO Duality and Dividend Payment	Abdelsalam, et al. (2008)	Studying the relationship of board composition, institutional ownership and dividend policy in Egypt using CASE 50 firms.	Quantitative analysis of 50 top companies (trading volume) on the Egyptian stock exchange (2003-2005)	Regression	CEO Duality was not found to be significant in dividend payment outcomes.

Table 2.5 Summary of studies on board structure and dividend payment (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Abor and Fiador (2013)	Studying the effect of corporate governance factors on dividend policy in Africa.	Quantitative analysis of firms from Ghana (n = 27), Nigeria (n = 177), Kenya (n = 51) and South Africa (n = 270) (1997-2006) using simultaneous panel regression	Regression	CEO Duality was found to have a negative relationship with dividend ratio in Nigeria only.
	González, et al. (2014)	Studying the role of family involvement on firm dividend policies in closely held firms in Colombian firms (1996-2006)	Tobit regression using data extracted from multiple databases in Colombia (n = 4,320 firm-year observations)	Regression	CEO serving on the board was found to have a significant negative relationship to Dividend Payout Ratio, but an insignificant relationship to Dividend Likelihood.

Table 2.5 Summary of studies on board structure and dividend payment (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Sirmans and Ghosh (2006)	Studying the role of managerial interest in dividend policy in real estate investment trusts (REITs)	Quantitative study of REITs in the US (1999-2000) (n = 118 firms)	Regression	CEO Duality was positively associated with dividend payout ratio, but negatively associated with dividend yield.
Audit Committee and Dividend Payment	Jiraporn, et al. (2011)	Studying the relationship between corporate governance and dividend policy.	Quantitative study of firms with data included in the Institutional Shareholder Services (ISS) database (2001-2004) (n = 16,013 firm-years) using logit and OLS regression.	Regression	The Audit scale of the authors' governance index included quality of audit committee (use of independent directors). The Audit scale was significant for Dividend Payout Ratio, but not for Dividend Decision.

Table 2.5 Summary of studies on board structure and dividend payment (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Nimer, et al. (2012)	Studying the relationship between audit committee quality and dividend payout ratios.	Quantitative survey of Jordanian industrial firms listed on the Amman Stock Exchange (n = 63)	Regression	Audit committee quality characteristics (organization, independence, procedure, responsibility and compliance) were not associated with dividend payout ratio (which the authors proxied using Tobin's Q and ROA).
	Sawicki (2009)	Studying changes in the relationship between corporate governance and dividend policies before and after the 1997 Asian financial crisis.	Quantitative study of firms from five Southeast Asian countries (Hong Kong, Indonesia, Malaysia, Singapore and Thailand) (1994-2003) (20 firms from each country)	Regression	Audit Committee was measured as a combination index including existence, disclosure of meeting frequency, committee expertise, and Big Six auditor use. This dimension was included in a Governance index, which did have a positive relationship to Dividend Payout Ratio over the full period and post-1997.

2.5.2 Ownership Structure (Shareholding) and Dividend Payment

As with the dimensions of corporate governance, the evidence for institutional shareholding and its relationship to dividend payment is mixed. Abdelsalam et al. (2008) found that institutional shareholding did have a positive significant relationship to dividend payout ratio in Egypt, which was also the case in Kenya and Ghana in another study (Abor & Fiador, 2013). However, evidence from Nigeria and the second study from Ghana showed that there was either a negative or insignificant relationship between the two constructs (Abor & Fiador, 2013; Amidu & Abor, 2006). This mixed evidence, which seems to vary over time and place, suggests that there is a relationship but does not strongly assert a direction. Thus, the ninth hypothesis was stated as follows:

Hypothesis 9: Institutional ownership has a positive effect on dividend payment.

Table 2.6 summarized the studies on ownership structure and dividend payment.

Table 2.6 Summary of studies on ownership structure and dividend payment

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Institutional Ownership and Dividend Payment	Abdelsalam, et al. (2008)	Studying the relationship of board composition, institutional ownership and dividend policy in Egypt using CASE 50 firms.	Quantitative analysis of 50 top companies (trading volume) on the Egyptian stock exchange (2003-2005)	Regression	Institutional Ownership was found to be significant and positive for Dividend Payout Ratio, but not for Dividend Decision.
	Abor and Fiador (2013)	Studying the effect of corporate governance factors on dividend policy in Africa.	Quantitative analysis of firms from Ghana (n = 27), Nigeria (n = 177), Kenya (n = 51) and South Africa (n = 270) (1997-2006) using simultaneous panel regression	Regression	Institutional ownership was found to have a positive relationship with dividend payout ratio in South Africa and Kenya, but a negative relationship in Nigeria.

Table 2.6 Summary of studies on ownership structure and dividend payment (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Amidu and Abor (2006)	Identifying factors that influenced dividend payout ratios for Ghanaian listed firms.	Ghanaian listed firms (1998-2003) (n = 28 firms), with panel data regression	Regression	Institutional shareholding served as a proxy for agency costs in this study. The authors found a negative but insignificant relationship between institutional shareholding and dividend payout ratio.

2.5.3 Executive Compensation and Dividend Payment

Finally, several studies have identified a relationship between executive compensation and dividend policies (Brown, Liang, & Weisbenner, 2007; Minnick & Rosenthal, 2014; Sirmans & Ghosh, 2006). These studies have generally found that there is a positive relationship between CEO compensation, especially share-based compensation, and dividend payout ratio although there is less observable effect on dividend payment decisions. Evidence also suggests that this is particularly true when conditions are advantageous to managers, such as after a tax cut on dividends (Brown et al., 2007) or when managers are allowed to manipulate dividend policies for stealth compensation (Minnick & Rosenthal, 2014). Thus, the tenth hypothesis was established as follows:

Hypothesis 10: CEO compensation has a positive effect on dividend payment.

Table 2.7 summarized the studies on CEO compensation and dividend payment.

Table 2.7 Summary of studies on CEO compensation and dividend payment

Variables	Authors	Purpose	Methods	Analysis Tools	Results
CEO Compensation and Dividend Payment	Brown, et al. (2007)	Studying the effect of a US tax cut in 2003 (which increased executive earnings on share-based compensation) on dividend payout policies.	Quantitative study of American public firms represented in Compustat, CRSP and Execucomp (1993 to 2003) (n = 1,700)	Regression	Authors found that prior to 2003, there was no relationship between CEO Compensation and Dividend Payout Ratio. However, in 2003 and 2004, there was an increase in the dividend payout ratio. The authors indicated that this was evidence of use of private information by CEOs.
	Minnick & Rosenthal (2014)	Studying evidence for "stealth compensation" practices by company CEOs in the US.	Quantitative analysis of S&P 500 firms (2003-2007)	Regression	Authors found evidence for stealth compensation practices in more than half of firms examined each year. They found significant mean differences in compensation between stealth and non-stealth firms, indicating that firms with higher CEO compensation were more likely to allow dividend policy manipulation.

Table 2.7 Summary of studies on CEO compensation and dividend payment (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
CEO Compensation and Dividend Payment	Sirmans and Ghosh (2006)	Studying the role of managerial interest in dividend policy in real estate investment trusts (REITs)	Quantitative study of REITs in the US (1999-2000) (n = 118 firms)	Regression	CEO cash compensation (salary and bonus) was not associated with dividend payment. CEO share-based compensation was negatively associated with dividend yield, but not associated with dividend payout ratio.

2.6 The Relationship between Dividend Payment and Earnings Quality

The second relationship in which this study was interested was the relationship between the firm's dividend payment and its earnings quality. A dividend is a cash payment to shareholders, used to redistribute the firm's financial earnings to its owners (Baker, 2009). The firm's dividend policy establishes the conditions under which it will pay dividends, such as minimum profit levels and percent of earnings redistributed to shareholders (Baker, 2009). Not all firms pay dividends; for example, some firms consider their stocks to be *growth stocks* whereas shareholder value is generated through an increase in sale price (Baker, 2009). There are also other strategies that the firms use to redistribute value to shareholders, such as open-market stock repurchase (stock buybacks) (Skinner, 2008). Stock repurchases reduce the number of extant stocks in the market, thus increasing the value of the remaining stock (Baker, 2009). As Skinner (2008) has observed, the firm's strategies have changed over time in many markets, with firms increasingly likely to use stock repurchase rather than dividends to redistribute earnings. This has meant that firms which only pay dividends are increasingly rare while firms are more likely to use either a combined strategy or only make stock repurchases (Skinner, 2008). Furthermore, dividend policies have become more conservative, with dividend payouts more tightly linked to earnings (Skinner, 2008). Thus, the function of dividends appears to have changed over time.

A similar change in the relationship of dividends and earnings quality has also been observed (Skinner & Soltes, 2011). As Skinner and Soltes (2011) explained, over the past 30 years, there is evidence that dividend payments have come to have a tighter link to earnings quality than previously. Specifically, they analyzed 30 years of the U.S. firms listed on the NYSE, NASDAQ, and AMEX indices from 1974 to 2005 which had complete Compustat data. They used several measures of earnings quality, including reported losses and earnings persistence, which is the extent to which current earnings predict future earnings (Skinner & Soltes, 2011). The authors found that firms with higher dividend payouts during this period were also more likely to have lighter losses, transient losses (such as one-time charges not related to fraudulent activity), and more persistent earnings than non-paying firms, indicating higher earnings quality. Furthermore, the authors examined the same effect for stock repurchases but did not

find that it was as persistent over time (Skinner & Soltes, 2011). In summary, Skinner and Soltes (2011)'s research is important for two reasons. First, it demonstrates a link between a firm's dividend payout and its earnings quality. Second, it demonstrates that this relationship has become stronger over time as fewer firms have paid dividends. Nevertheless, other authors have complicated this question. For instance, one study found that firms which may fall short of dividend thresholds may actually be more likely to manage earnings upwards, thus degrading earnings quality (Daniels, Denis, & Naveen, 2008). Moreover, not all dividend payments have equal information value. For example, a study of Australian firms has shown that quarterly dividend payments provide less information than annual payments (Balachandran, Krishnamurthi, Theobald, & Vidanapathirana, 2012). In one study, dividend payment was not actually predictive of earnings management (Arif, Abrar, Khan, Kayani, & Ali Shah, 2011). However, it should be noted that this was a relatively small study that included only 84 firms in cross-sectional analysis. Thus, its value is lower for understanding the probable relationships than more rigorous studies such as the one conducted by Skinner and Soltes (2011). Therefore, while the evidence is not as strong as it could be, it is reasonable to state a positive hypothesis for the relationship between dividend payments and earnings quality as follows:

Hypothesis 11: Dividend payment has a positive effect on earnings quality.

Table 2.8 summarized the studies on dividend payment and earnings quality.

Table 2.8 Summary of studies on dividend policies and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Dividend Payment and Earnings Quality	Arif, et al. (2011)	Study of dividend policy (dividend payments) and earnings management (abnormal accruals) in Pakistan	Quantitative study of listed companies on Karachi Stock Exchange (n = 84 firms)	Regression	Dividend payout was not significant for earnings management.
	Balachandran, et al. (2012)	Modeling the effect of dividend reduction timing (interim/quarterly or annual, with or without share repurchase) on future earnings informativeness (future earnings reductions)	Quantitative study of Australian firms issuing dividend reductions (1995-2008)	Regression	Firms that issued annual dividend reductions without associated share repurchases were more likely to show future earnings reduction. Thus, dividend reductions are informative about the firm's earning potential.

Table 2.8 Summary of studies on dividend policies and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Daniel, et al. (2008)	Studying whether dividend thresholds influence earnings management (abnormal accruals)	Quantitative study of S&P firms (1992-2005) (n = about 1,500)	Regression	Authors found that lower thresholds for dividend payments did increase likelihood that firms would use earnings management to manage earnings upward. This was found to also have an effect on dividend cuts, with firms that used earnings management being less likely to issue a dividend cut. Thus, dividend thresholds have a significant positive influence on earnings management (implying a negative relationship on earnings quality).
	Hussainey and Walker (2009)	Studying the relationship between voluntary disclosure and dividend propensity on share price anticipation (prediction of future price from current earnings)	Quantitative study of UK listed companies with records in Dialog and Datastream databases (1996-2002) (n = 3,503 firm-years)	Regression	Dividends per share predicted share price anticipation (indicating a positive relationship with earnings quality), as did annual report disclosures. Growth rate acted as a mediating variable, with these relationships only being significant in high-growth firms.

Table 2.8 Summary of studies on dividend policies and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Skinner and Soltes (2011)	Study of dividend policies (dividend payment, stock repurchase) and earnings quality (earnings persistence and losses) in US listed firms (1975-2005)	Time series analysis using Compustat data	Regression	A positive relationship between dividend payments and earnings persistence and a negative relationship between dividends and losses was found. The same relationships were not observed for stock repurchase.

2.7 The Mediating Role of Dividend Payment in the Corporate Governance-Earnings Quality Relationship

As discussed above, there is some strong evidence that supports the relationship between corporate governance policies and earnings quality. Similarly, dividend policies have been shown to be significant for earnings quality. This raises the question of whether dividend policies play a mediating role in the relationship between corporate governance and earnings quality. However, few studies have directly assessed this causal chain using dividend payouts as an intervening factor. The relationship in this possible causal chain that has not been assessed is the relationship from corporate governance to dividends, which is the work of this section.

2.7.1 Board Structure

Board structure is once again considered as board size, CEO duality, and CEO compensation. The rationale for these factors was shown in section 2.4.1. Most studies assessed here have used the dividend payout ratio, or the percentage of net earnings paid in dividends (dividends per share/earnings per share (Baker, 2009)) as the outcome variable.

2.7.1.1 Board size, dividend payment, and earnings quality

Board size is the first factor studied here as shown in table 2.9. There are conflicting findings in the literature on board size (Abdelsalam, El-Masry, & Elsegini, 2008). While some studies suggest a larger board improves corporate governance by allowing for more specialization, others show that it has a negative effect (Abdelsalam, et al., 2008). Therefore, it was uncertain how this would be reflected in the literature. Regarding the studies reviewed, two studies supported a positive relationship of board size to dividend payout ratio (Ada, 2013; Chang & Dutta, 2012). The other study did not find a significant relationship (Abdelsalam et al., 2008). For the purposes of this study, board size was tested as a positive influence on earnings quality through dividend policies due to the main observed relationship. The hypothesis of this relationship was established as follows:

Hypothesis 12: Board size has a positive effect on earnings quality through dividend payment.

2.7.1.2 CEO duality, dividend payment, and earnings quality

Several authors examined the relationship between CEO duality and dividend payment as shown in table 2.9 (Ada, 2013; Chang & Dutta, 2012; Leng, 2007). CEO duality is viewed as an indicator of weak corporate governance, which is likely to increase dividend payments (Chang & Dutta, 2012). However, this creates a conflicting relationship since dividend policies and earnings quality are negatively related, and CEO duality and earnings quality are positively related as discussed above. The findings in the empirical literature shown in table 2.9 do indicate that the majority of studies point to a positive relationship (Ada, 2013; Chang & Dutta, 2012) even though one author disagrees (Leng, 2007). Since there is no clear agreement from the literature, the following hypothesis was proposed for testing:

Hypothesis 13: CEO duality has a positive effect on earnings quality through dividend payment.

2.7.1.3 Audit committee, dividend payment, and earnings quality

As with other factors in this category, there is conflicting evidence for the role of audit committees in dividends policy as shown in table 2.9. Two authors conducted the studies which did find that audit committee characteristics were positively associated with dividend payouts, at least to some extent (Jiraporn & Kim, 2011; Sawicki, 2009). These studies did have some weaknesses. For example, in Sawicki's (2009) study, audit committee characteristics were included in a general index of corporate governance, and it is uncertain what effect they had individually. Another study had conflicting findings in the study of Jordanian firms (Nimer, Warrad, & Khuraisat, 2012). Nonetheless, this study may be considered as lower quality because it relied on self-reported survey data rather than official disclosures. For the purposes of this study, the following hypothesis was established for testing this:

Hypothesis 14: Audit committee has a positive effect on earnings quality through dividend payment.

2.7.1.4 Summary of board structure, dividend payment, and earnings quality relationships

Table 2.9 summarized the studies which relate corporate governance issues including board size, CEO duality, and audit committee factors to dividend payment.

Table 2.9 Summary of studies on board structure, dividend payment and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Board size, dividends and earnings quality	Abdelsalam, et al., 2008	Studying the effect of board composition and institutional ownership dividend policies in an emerging market	Quantitative study of top Egyptian firms (2003-2005) (n = 50)	Regression	Board size and board independence was not found to be significant in dividend payout ratio.
	Ada (2013)	Study of corporate governance factors (board size, board composition, CEO duality, ownership, control and leverage) and dividend payouts (dividend payout ratio) in Kenya's commercial banking.	Quantitative study of dividend paying banks in Kenya (2008-2012) (n = 17 banks)	Regression	Board size was significantly positively related to dividend payout ratio
	Chang and Dutta (2012)	Studying the effect of corporate governance indicators on dividend payout ratio	Quantitative study of Canadian firms (2005-2008)		Board size was significantly positively related to dividend payout ratio

Table 2.9 Summary of studies on board structure, dividend payment and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
CEO duality, dividends and earnings quality	Ada (2013)	Study of corporate governance factors (board size, board composition, CEO duality, ownership, control and leverage) and dividend payouts (dividend payout ratio) in Kenya's commercial banking.	Quantitative study of dividend paying banks in Kenya (2008-2012) (n = 17 banks)	Regression	CEO duality was significantly positively related to dividend payments.
	Chang and Dutta (2012)	Studying the effect of corporate governance indicators on dividend payout ratio	Quantitative study of Canadian firms (2005-2008)	Regression	CEO duality was significantly positively related to dividend payout ratio, as were several other factors that indicated weak corporate governance.

Table 2.9 Summary of studies on board structure, dividend payment and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Leng (2007)	Study of governance factors (board makeup, size, gearing ratio, CEO duality) on dividend payout ratio	Quantitative study of firms listed on Kuala Lumpur Stock Exchange (1996-1999) (n = 120)	Regression	While firm size, gearing ratio, and non-executive directors had a relationship with dividend payout ratio, CEO duality was not significant.
Audit committee, dividends and earnings quality	Jiraporn, et al. (2011)	Study of corporate governance characteristics on dividend likelihood and dividend payout ratio. Audit committee characteristics included composition, ratification, consulting fees, and auditor rotation.	Quantitative study of US Firms reported in ISS and Compustat (2001-2004) (n = 4,771 observations)	Regression	Audit committee quality was not associated with likelihood of dividend payout under a logit model. However, it was positively associated with dividend payout ratio under an OLS model.

Table 2.9 Summary of studies on board structure, dividend payment and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Nimer, et al. (2009)	Studying audit committee effectiveness and dividend policies	Survey-based study of Jordanian firms (n = 63)	Regression	No significant relationship was found between audit committee effectiveness and dividend policy.
	Sawicki (2009)	Comparison of link between corporate governance and dividends pre- and post-Asian financial crisis	Quantitative study of firms in five countries (1994-2003) using a corporate governance index and dividend payout ratio	Regression	Audit committee factors included in the CG index were existence of audit committee, frequency of meeting, committee expertise, and engagement of Big Six auditor. There was a significant positive relationship between CG index (including audit factors) and dividend payouts.

2.7.2 Ownership Structure

The main factor considered in ownership structure was the share of institutional ownership.

2.7.2.1 Institutional ownership, dividend payment, and earnings quality

Dividend payment can be understood under agency theory as a way for owners to monitor and ensure distribution of earnings (Al-Gharaibeh, Zurigat, & Al-Harahsheh, 2013). As a result, firms with higher institutional ownership, which is commonly associated with high monitoring rates and active involvement in management, are also expected to have a high rate of dividend payouts (Al-Gharabeh et al., 2013). Several studies have been reviewed which support the positive relationship between institutional ownership and dividend payouts, typically measured as dividend payout to net profit ratio (Abdelsalam et al., 2008; Ahmad & Javid, 2010; Al-Gharaibeh et al., 2013; Dandago, Farouk, & Muhibudeen, 2015) Table 2.10 summarized the studies on institutional ownership, dividend payment, and earnings quality. There was one study which institutional ownership was negatively related to dividend payouts, but as the author explained, the study took place in a market with high corporate ownership and high dividend payout rates compared to the Western markets (Kumar, 2006). Thus, due to the relationships of dividend payment and earnings quality (section 2.6), it is reasonable to test the following hypothesis:

Hypothesis 15: Institutional ownership has a positive effect on earnings quality through dividend payment.

Table 2.10 Summary of studies on institutional ownership, dividend payment and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Institutional ownership, dividends and earnings quality	Ahmad and Javid (2010)	Studying ownership structure (corporate, financial, and managerial ownership) and dividend payouts	Quantitative study of Karachi Stock Exchange firms (2001-2006) (n = 50 firms)	Regression	Corporate investor ownership was positively associated with increased dividend payouts. Financial institution and director ownership was not associated with dividends.
	Abdelsalam, et al. (2008)	Studying the effect of board composition and institutional ownership dividend policies in an emerging market	Quantitative study of top Egyptian firms (2003-2005) (n = 50)	Regression	Institutional ownership was positively associated with dividend payouts.
	Al-Gharaibeh, et al. (2013)	Studying ownership structure (institutional and managerial ownership) on dividends policy	Quantitative study of firms on Amman Stock Exchange (2005-2010) (n = 35)	Regression	Institutional ownership was positively and significantly associated with dividend payouts. Managerial ownership was inconsistent between models.

Table 2.10 Summary of studies on institutional ownership, dividend payment and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
Institutional ownership, dividends and earnings quality	Dandago, et al. (2015)	Study of ownership structure (institutional, foreign, managerial and block shareholding) on dividend payout ratio	Quantitative sample of Nigerian paint and chemical firms (2008-2013) (n = 8 firms)	Regression	Authors found that managerial shareholding had a negative effect on dividend payout ratio, while institutional and foreign shareholding had a higher, significant positive effect. Other block shareholding had no effect.
	Kumar (2006)	Study of corporate governance (ownership structure, financial structure, investment opportunities) and dividends (dividend payout ratio)	Quantitative study of firms on Bombay Stock Exchange (1994-2000) (n =5,224)	Regression	Corporate and director ownership was positively associated with dividend payouts, while institutional ownership was negatively related.

2.7.3 Executive Compensation

The main factor considered in executive compensation was CEO compensation as shown in table 2.11 below.

2.7.3.1 CEO compensation, dividend payment, and earnings quality

Since CEOs are instrumental in establishing dividend policy, there is the opportunity for them as an agent to use this policy to benefit themselves (Minnick & Rosenthal, 2014). This could explain variable results since not all CEOs will have access to such opportunities. For instance, Minnick and Rosenthal (2014) found that CEOs could increase dividends to benefit their unvested restricted stock grants (stealth compensation) but only in firms that allowed this. Similarly, Chang and Dutta (2008) found that firms with poorly aligned executive compensation had higher dividend payout ratios. However, a further study found a negative effect of CEO compensation on dividend payouts (Bhattacharyya, Mawani, & Morrill, 2008). The authors proposed that this was because such firms have more skillful managers with higher compensation (Bhattacharyya et al., 2008). Therefore, evidence is mixed here. The following hypothesis was proposed for testing in this study, based on these mixed findings:

Hypothesis 16: CEO compensation has a positive effect on earnings quality through dividend payment.

Table 2.11 Summary of studies on CEO compensation, dividend payment and earnings quality

Variables	Authors	Purpose	Methods	Analysis Tools	Results
CEO compensation, dividends and earnings quality	Bhattacharyya, et al. (2008)	To study the relationship between CEO compensation and dividend policy (earnings retention, dividend payouts and dividends and stock repurchases)	Quantitative study of US firms (1992-2001)	Regression	CEO compensation is positively associated with earnings retention and negatively associated with both dividend payouts and dividend payouts plus stock repurchases.
	Chang and Dutta (2012)	Studying the effect of corporate governance indicators on dividend payout ratio	Quantitative study of Canadian firms (2005-2008)	Regression	These authors found that firms with poor CEO compensation alignment (higher levels of price-sensitive short-term options) had higher dividend payouts. This indicates a positive relationship between price-sensitive compensation and dividend payments.

Table 2.11 Summary of studies on CEO compensation, dividend payment and earnings quality (Cont.)

Variables	Authors	Purpose	Methods	Analysis Tools	Results
	Minnick and Rosenthal (2014)	To examine dividend payout policy in order to determine if CEOs seek to increase their pay using dividends or stock repurchases	Quantitative study of S&P firms (2003-2007) (n = 500)	Regression	Authors found that firms where dividends were paid on unvested restricted stock grants (stealth compensation) had significantly higher dividend payout ratios than firms that did not. This meant that CEOs with a higher percentage of such grants in such firms were influenced to increase dividends.

2.8 Proxies for Control Variables: Firm Economic Characteristics

Several control variables were also introduced for this study based on the available evidence. These control variables related to the firm's economic position and managerial decisions. Control variables included:

- Firm Age, or number of years trading on the Stock Exchange of Thailand (AGE);
- Use of Big Four Auditor (BIG4: Dummy variable, 0 if auditor is not a Big Four firm, and 1 if the auditor is a Big Four firm); and
- Firm Industry (INDUSTY).

2.8.1 Use of Large Audit Firm

Use of a large audit firm such as a Big Four was appropriate for being a control variable because it helps measure audit quality (Sawicki, 2009). Big Four audit firms include Deloitte, Price Waterhouse Coopers (PWC), Ernst & Young, and KPMG (Whittle, Mueller, & Carter, 2016). These firms operate globally and introduce global accounting norms although they are also prone to particular ethical issues (Whittle et al., 2016). This variable is coded as a dummy variable following standard practice (Baltagi, 2011), with 0 = does not use a Big Four auditor and 1 = does use a Big Four auditor.

2.8.2 Firm Age

Firm age was a common control variable in the study because it acts as an information uncertainty proxy (Perotti & Wagenhofer, 2014). Specifically, the older the firm is, the more it is known about the firm. In contrast, a younger firm is still under evaluation for performance and non-systemic risk (Connelly, Limpaphayom, & Nagarajan, 2012).

2.8.3 Firm Industry

Firm industry was selected as a control variable because it affects the expected distribution of the firm's earnings and dividend payment, reporting conventions and other factors (Baker, 2009). Differences between industry sectors could result in differences in capital expenditure, need for retained earnings, and shareholder expectations that influence financial outcomes (Baker, 2009).

CHAPTER 3
RESEARCH METHODOLOGY

The purpose of this chapter was to discuss the research methodology framework including the conceptual framework, data collection approach, measurement of the variable, data analysis and methodology, and limitations of the study and concerns.

3.1 Conceptual Framework

The conceptual framework for in this study is shown in figure 3.1

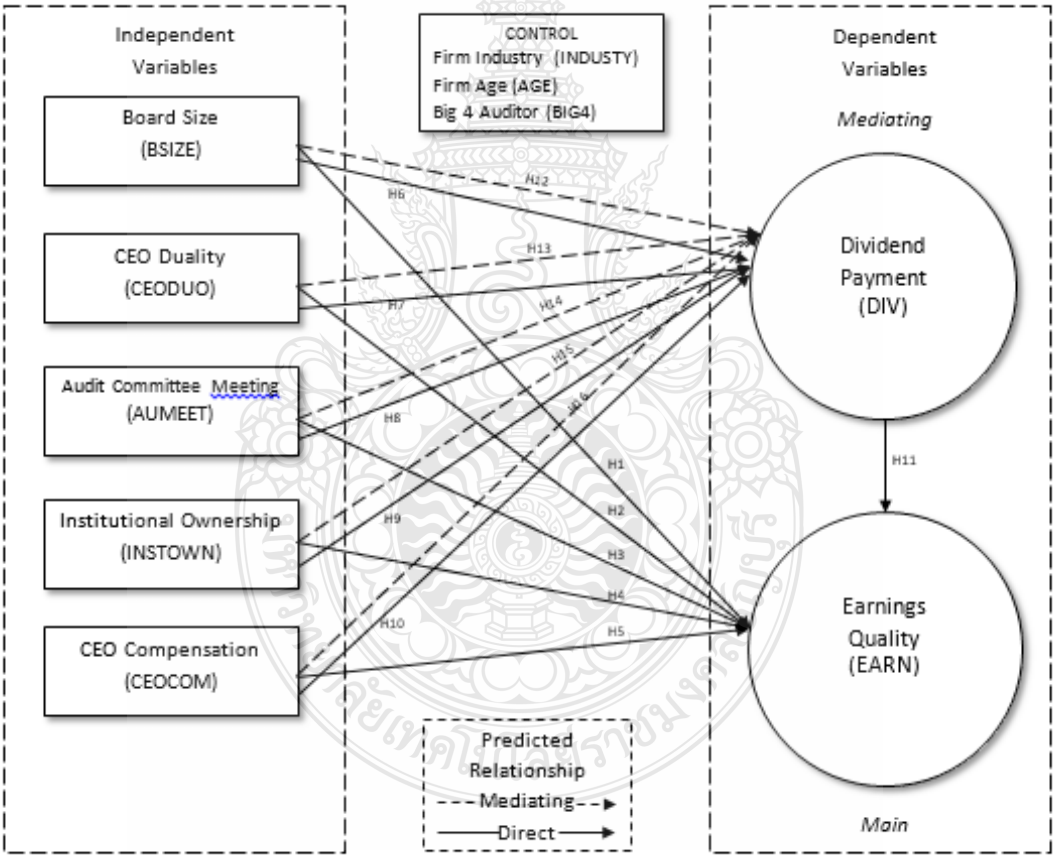

Figure 3.1 Conceptual framework of the study

The framework showed the relationship between independent and dependent variables under the control variables including firm industry, firm age, and Big 4 auditor. It showed that five independent variables, consisting of board size, CEO duality, audit commitment, institutional ownership, and CEO compensation, have a positive direct effect on earnings quality (H1 to H5) and dividend payment (H6 to H10). It also showed the effect of dividend payment on earnings quality (H11). The final set of relationship was the mediating effect of independent variables, including board size, CEO duality, audit commitment, institutional ownership, and CEO compensation, on earnings quality through dividend payment (H12 to H16).

3.2 Data Collection

This study used a cross-sectional data, meaning that all data was scrutinized as single points rather than as part of a time series (Wooldridge, 2016). The time period for data collection was in an accounting year from January 2015 to December 2015.

3.2.1 Data Sources

All data were extracted from a single source. This source was Form 56-1, which is the mandatory reporting form every publicly listed firm on the SET must file on an annual basis (SET, n.d.). As a general principle, information included in the Form 56-1 “must always be full, accurate, and timely for investor’s decision-making (SET, n.d.).” In practice, however, the filings may vary in their information quality and informativeness due to flexibility in accounting principles and possible hidden activity on the part of the firm (Fabozzi & Drake, 2009).

There are several mandatory filing situations for firms listed on the SET, including audited annual financial statements, reviewed (unaudited) quarterly statements, and significant disclosures such as change of CEO, dividend payments, or earnings restatements (SET, n.d.). The SET (n.d.) has specific requirements for timeliness of filing such disclosures. Specifically, firms must file disclosures by 9:00 AM next business day following events such as restatements or CEO changes. Furthermore, disclosures must include information that is material (or that would make a difference in an investor’s decision regarding the firm), relevant to the investors’ decision, and/or could affect the investor’s position (SET, n.d.). The SET (n.d.) retains

several supervisory rights over filing. For example, if an announcement occurs while the firm is trading, the SET may suspend trading temporarily. Moreover, if the firm does not make required filings, it may be indefinitely suspended from trading (SET, n.d.).

In addition to the regulatory requirements for filing, there are other reasons to use the Form 56-1. As these forms are readily available online in both Thai and English (SET, n.d.), it is a source that can be validated. Furthermore, the Form 56-1, as the firm's annual financial report and disclosure, has the most complete information, including financial reports, corporate governance information, and other voluntary disclosures. This form does only serve as a proxy for the firm's private information, which could still differ from the underlying economic performance and finances of the firm (Dempsey, Harrison, Luchtenberg, & Seiler, 2012). However, as it is the filing of record, it can be considered the most reliable substitute for this private information.

3.2.2 Population and Sample

The population of this study were non-financial firms listed on the SET in the 2015. Table 3.1 summarized the total number of firms as well as the exclusion criteria made based on the sampling frames. As shown in table 3.1, the total number of firms listed on the SET in 2015 were 497 firms. Of these firms, 58 firms were excluded because they are financial firms, and a further 13 firms were also excluded because they are in the property and construction sector (SET, 2016a). These industries were excluded because they have distinctly different asset management and investor preferences than other industries (Gibson, 2009). Moreover, a total of 150 firms were excluded due to incomplete information about dividend payments (146 firms) or CEO compensation (4 firms). A small group of 9 firms were also excluded since they are under rehabilitation. The final sample size for the study was 267 firms, after the exclusion of 230 firms.

Table 3.1 Summary of firms listed on the SET in 2015 by sector (all firms listed at year end) (Sources: SET, 2015)

Description	**Total**
Total companies 2015	497
Excluding	
Financial industry	58
Incomplete financial data	
N/A Dividend Payment	146
N/A CEO Compensations	4
Property and Construction	13
Companies Under Rehabilitation	9
Total firms excluded	230
Net Sample Size	267

Typically, SEM requires a larger sample size than other analysis techniques due to the complex nature of the analytical technique (Westland, 2010). There is no fixed calculation for sample size, and Westland's (2010) analysis shows that researchers have typically selected samples which are too small. Minimum sample sizes for SEM are typically set at between n = 100 and n = 200 although in practice many analyses use much larger samples (Byrne, 2016). Based on these insights, a minimum sample size of n =150 was established for this study. While a larger sample size would be preferable, the intensive nature of data collection meant that this would be impractical.

3.2.3 Data Collection Procedure

The English version of the Form 56-1 for each of the firms selected was extracted from the SETSMART database for 2015. The English version was selected to ease verification and validation of the dataset. The required data were extracted from each of the filings and input into an Excel spread sheet. A quality check selected 10% of the reports at random (30 in total), and raw data from each of these reports were double-checked against the Form 56-1 to ensure accuracy. The calculations were then performed to transform the raw data into the analysis variables where required.

Following these calculations, the dataset was imported into SPSS, and appropriate labels were applied in preparation for the analysis.

3.3 Measurement of the Variables

Operationalization and measurement of the variables was a critical aspect of the study because most of the measures do not have a single, obvious measure which could be used. In the sections below, measures for each of the variables are presented, and the calculation techniques established.

3.3.1 Independent Variables

The definitions of independent variables were summarized in table 3.2. The definitions of these variables were selected from among the most common variables used in previous research.

Table 3.2 Definition and operationalization of independent variables

Variable	Abbreviation	Definition	Measurement	Exp.Sign	Sources Supporting
Board Size	BSIZE	The total size of the board of directors.	Number of members sitting on the board in a given year.	+	Abdelsalam, et al. (2008) Ada (2013) Chang and Dutta (2012) Cornett, et al. (2009) Gulwar and Wang (2011) Ismail, et al. (2009)
CEO Duality	CEODUO	Whether the same person holds the CEO and Chairman positions in the firm.	Dummy variable: 0: If the CEO and Chairman positions are held by the same person 1: if the CEO and Chairman are different people	+	Ada (2013) Chang and Dutta (2012) Chang and Sun (2008) Gulwar and Wang (2011) Ismail, et al. (2009) Leng (2007) Murhadi (2009)
Audit Committee Meeting	AUMEET	The frequency of meeting of the audit committee.	Number of meetings held in a given year.	+	Baxter and Cotter (2009) Lin, et al. (2010) Nimer, et al. (2009) Sawicki (2009)

Table 3.2 Definition and operationalization of independent variables (Cont.)

Variable	Abbreviation	Definition	Measurement	Exp.Sign	Sources Supporting
Institutional Ownership	INSTOWN	The percent of common shares held by institutional investors.	The percent of common shares held by institutional investors.	+	Ahmad and Javid (2010) Abdelsalam, et al. (2008) Al-Gharaibeh, et al. (2013) Cheng and Reitanga (2009) Cornett, et al. (2008) Dandago, et al. (2015) Hashim and Devi (2007) Kumar (2006) Moradi and Nezami (2011)
CEO Compensation	CEOCOM	The price sensitive compensation assigned to the CEO, including salary and benefits.	The price sensitive compensation assigned to the CEO, including salary and benefits.	+	Bergstresser and Philippon (2006) Chang and Dutta (2012) Cornett, et al. (2008) Harris and Bromiley (2007) Minnick and Rosenthal (2014)

3.3.2 Mediating and dependent variables

The definitions of the mediating and dependent variables were summarized in table 3.3. The mediating variable, dividend payment, was measured using the dividend payout ratio or the percentage of the firm's net profits which are paid out in dividends (Baker, 2009). This is a standard measure of dividend payment that encapsulates (a) whether the firm pays dividends and (b) the conservatism of those payouts. For example, a firm that pays no dividends will have a dividend payout ratio of 0 while firms with more generous policies will have > 0. Earnings quality is measured using the decomposed accruals model developed by Sloan (1996).

Table 3.3 Definition and operationalization of mediating and dependent variables

Variable	Abbreviation	Definition	Measurement	Exp.Sign	Sources Supporting
Dividend Payment (Mediating variable)	DIV	Dividend payout ratio: The ratio of dividends paid to the net profit of the firm.	Dividend paid/Net profit	+	Abdelsalam, et al. 2008 Ada (2013) Baker (2008) Chang and Dutta (2012)
Earnings quality (dependent variable)	EARN	The ability of reported earnings (income) to predict a company's future earnings. , with higher earning quality is a sign of high qulity.	Accruals model: $Accruals = (\Delta CA - \Delta CASH) - (\Delta CL - \Delta STD - \Delta TP) - Dep$, where ΔCA = change in current assets; ΔCash = change in cash and cash equivalents; ΔCL = change in current liabilities; ΔSTD = change in debt included in current liabilities; ΔTP = change in income taxes payable; and Dep = depreciation and amortization expense (Sloan, 1996)	+	Sloan (1996) Chan, et al. (2006)

3.3.3 Control variables

Definitions of selected control variables were summarized in table 3.4. There were three control variables used in this study, including firm age (AGE), use of a large or Big Four auditor (BIG4), and firm industry (INDUSTY). These three control variables were selected because they are commonly used in other studies in order to control for external conditions that influence the firm's operational outcomes.

Table 3.4 Definition and operationalization of control variables

Variable	Abbreviation	Definition	Measurement	Exp.Sign	Sources Supporting
Firm Age	AGE	The number of years the firm has been listed on the SET	Age (years)	+	Connelly, et al. (2012) Perotti and Wagenhofer (2014)
Use of Big Four Audit Firm	BIG4	Whether the firm uses a large audit firm, specifically one of the Big Four audit firms (Deloitte, PWC, KPMG or Ernst & Young)	Dummy variable: 0: the firm does not use a Big Four auditor 1: the firm does use a Big Four auditor	+	Baltagi (2009) Sawicki (2009) Whittle, et al. (2016)
Firm Industry	INDUSTY	The industry sector that the firm primarily operates within, based on the SET industry classification. *Service* industries are those that primarily offer intangible benefits, while *industrial* are manufacturing, construction and other tangible industries.	Dummy variable: 0: Service 1: Industrial	+	Baker (2009)

Table 3.5 Summary Definition of Variable in this Study

Variables	**Definition**
BSIZE	The total size of the board of directors measure by number of members sitting on the board in a given year.
CEODUO	The same person holds the CEO and chairman positions in the firms. It is a dummy code. (0 means the CEO and chairman positions are held by the same person and 1 means the CEO and chairman are different people**)**
AUMEET	The frequency of meeting of the audit committee measure by number of meetings held in a given year.
INSTOWN	The percent of common shares held by institutional investors.
CEOCOM	The price sensitive compensation assigned to the CEO, including salary and benefits.
DIV	The ratio of dividends paid to the net profit of the firms.
EARN	The condition of the relevance of information in the decision in the context of the specific decision model. Earnings quality will be determined jointly by the relevance of financial performance to decision and the ability of the accounting system to measure performance, earnings quality could be assessed on any decision that depend on an informative of financial performance.
AGE	The number of years the firm has been listed on the SET
BIG4	Whether the firm uses a large audit firm, specifically one of the Big Four audit firms
INDUS	The industry sector that the firm primarily operates within, based on the SET industry classification. *Service* industries are those that primarily offer intangible benefits, while *industrial* are manufacturing, construction and other tangible industries.

3.4 Data Analysis

Data analysis was conducted in SPSS AMOS. A structural equation modeling (SEM) approach was used for the analysis. The following sections described the use of SEM and the procedures and techniques used in this paper.

3.4.1 Data Analysis Tool

The data analysis tool selected for study was SEM which is a family of regression-based statistical techniques that model an entire set of variables in order to identify relationships, uncover latent variables, and test full research models rather than individual regression relationships (Byrne, 2016). SEM may also be referred to other terms, including covariance analysis and causal analysis (Kline, 2016). SEM is a confirmatory statistical approach, or in other words, it is designed to test specific hypotheses (Byrne, 2016). As Kline (2016) pointed out, this is not a single technique, but is instead a suite of tools which can be used to establish multiple causal relationships and identify latent variables that persist underneath the observed variables.

Even though most of the studies reviewed used a single or multivariate regression analysis (please see tables 2.3 through 2.11), there are a number of advantages to using SEM rather than a simple regression process. SEM is advantageous for hypothesis testing compared to simple regression models for several reasons, according to Byrne (2016). These include that the SEM is confirmatory rather than exploratory; that it can be applied inferentially and provides a strong estimate of model fit and error which can be used to determine how well the specified model actually fits the research situation (Byrne, 2016). However, there are also some disadvantages to SEM, including that it requires very large sample sizes compared to other methods, and it can generate confirmation bias (Kline, 2016). Thus, while SEM is a valuable and increasingly common approach, it does need to be used carefully. The reason for using SEM here was to identify the most effective variables to represent the relationships, drawing on its ability to represent a holistic model rather than single relationships. The sections below explained the assessment of model fit.

3.4.1.1 Assessing model fit

Table 3.6 summarized the requirements for model fit indicators in a SEM framework which were used in this study. This is not a comprehensive list of

potential fit indicators since there are a very large number of such indicators, not all of which are equally supported empirically (Byrne, 2016). Instead, the best fit indicators were selected based on their general use and acceptance (Kline, 2016). These goodness of fit indicators are calculated along with the model.

Exact fit indicators (the model chi-square) are based on the hypothesis that there are no differences between the model's predictions and the population covariance (Kline, 2016). The most commonly used exact fit indicator is the chi-square test, which is usually assessed based on $p < 0.05$ (Kline, 2016). Nevertheless, the chi-square test is not the only factor considered because it is not expected that the model will be perfectly fitted (Byrne, 2016). In addition, chi-square outcomes can be affected by non-normal variables, internal correlations, sample size, and unique variance (Byrne, 2016; Kline, 2016). Therefore, approximate fit indicators are also used. However, one approximate fit indicator recommended by Kline (2016) – the GFI – has been rejected because it is highly sample size sensitive (Byrne, 2016). Since the small population size and limited resources of this study have limited the sample size for this study, it would not be sensible to use a goodness of fit index that would respond sharply to sample size.

Approximate fit indicators do not test against the exact fit hypothesis, but instead assess relative fit of the model (Kline, 2016). This offers a more realistic fit. However, there are still some limitations, including that they may have false precision and cannot compensate for a badly failed chi-square test (Kline, 2016). Kline (2016) suggests that these indicators should be used and considered as qualitative or informative rather than absolute proof. The chi-square indicator should be considered the leading quantitative indicator (Kline, 2016).

Table 3.6 Assessment indicators for SEM model fit and significance

Model Characteristic	**Indicator**	**Threshold Value**
Exact Fit	Model chi square (x^2)	p > 0.05
Approximate Fit	Steiger-Lind Root mean square error of approximation (RMSEA)	≤ 0.01: Excellent fit ≤ 0.05: good fit ≤ 0.08: mediocre fit > 0.08: Poor fit
	Bentler Comparative Fit Index (CFI)	≤ 0.9: Unacceptably poor model fit ≥ 0.95: Good model fit
	Normed Fit Index (NFI)	< 0.90: Poor fit 0.90 to 0.95: Marginal fit > 0.95: Good fit

(Sources: Byrne, 2013; Hu & Bentler, 1999; Kline, 2016; MacCallum, Browne & Sugawara, 1996)

3.4.1.2 Assessing hypothesis outcomes

The model was generated using a confirmatory factor analysis (CFA) framework, which assesses the relationships specified by the researcher but does not seek out additional relationships or uncover latent variables (Kline, 2016). The assessment of hypothesis outcomes is performed through the path coefficients generated within the model. Path coefficients represent the causal effect of the variables related through the path (represented visually by an arrow with the head pointing in the direction of the causal relationship) (Kline, 2016). Path coefficients are either positive or negative, and the relative scale of the coefficients indicates the strength of the relationship (Byrne, 2016). Thus, it is possible to determine whether there is a significant relationship between the variables and, if so, what magnitude this relationship has. The overall significance of the model is assessed using the model R^2, which represents the extent of predictive capability of the total model (Kline, 2016).

These assessment techniques are standard and consistent with the usual practice regarding the assessment of outcomes of SEM.

3.4.2 Data Analysis Procedure

Data analysis was conducted in SPSS AMOS. The analysis process began with data preparation, quality checking, cleaning, and data transformation. These processes were conducted in Excel due to its relative ease of use for these activities compared to SPSS. Data was then imported into SPSS, assigned labels and otherwise prepared for analysis. The procedure for analysis was conducted using reference to Byrne (2016), Kline (2016) and other tutorials and information relating to the use of SPSS AMOS for CFA-based SEM.

The analysis began with generation of descriptive statistics for all variables, including a five-figure summary (MIN, MEAN, MAX) and standard deviation for all continuous variables and frequency tables for all categorical variables (including dummy variables and industry description variables). These descriptive statistics are not inferential and do not prove hypotheses or generalize to the population (Bryman & Cramer, 2011). However, they do provide a general data check and explain what kinds of firms in terms of industry, size, age, and so on were included in the sample.

The second stage of the process was specification of the model and analysis in SPSS AMOS. The AMOS model editor is a visual editor, which the researcher selects each of the variables and inputs them into the model in the appropriate position (Byrne, 2016). The researcher specified the direct relationships of the independent variables (corporate governance) and earnings quality first and then specified the indirect relationships through the mediating variable of dividend payment. The control variables were also added to account for variations of earnings quality and dividend payment. The output of the AMOS analysis includes a series of goodness of fit checks and other model data, along with a visual representation of the model and path coefficients and significance. This output was used to assess the fit and predictive capability of the research model and assess hypothesis outcomes. Hypotheses which addressed mediation were evaluated using the Sobel (1982) test. The Sobel (1982) test is an adaptation of the standard t-test, which determines whether there is a significant reduction in the effect of the predictor variable on the outcome variable when the proposed mediator variable is

added to the regression (Hair et al., 2016). This test was used to determine whether DIV provides a significant mediating effect between corporate governance variables and earnings quality.

3.5 Methodological Limitations and Concerns

There are some methodological limitations of the study. The main limitation is that since it is a cross-sectional analysis, it will not detect seasonal effects or lagged effects (for example, if the dividend payment in one year influences the earnings quality in the next year) (Baltagi, 2011; Wooldridge, 2016). This limitation was accepted due to the time-intensive nature of data preparation along with the limits of time available for the study. Another limitation is geographic since this study only relates to Thailand. These limitations could affect the identification of effects and their generalization to other contexts.

CHAPTER 4
RESERCH RESULTS

It was explained in chapter three that the primary objective for this study was to use structural equation modeling (SEM) to analyze cross-sectional data of publicly listed firms on the Stock Exchange of Thailand (SET) in 2015 to investigate the effect of corporate governance variables on earnings quality through dividend payment. The sample included 267 firms while financial and property firms, firms with incomplete information, and firms currently under rehabilitation were excluded from the study. This chapter presented the results of the primary research and compared these results to the existing research. As the previous chapter explained, these results were derived from using a structural equation modeling (SEM) approach which was conducted in SPSS AMOS. This chapter began with a brief overview of the descriptive statistics of the variables. It then presented the SEM outcomes and final structural model, including regression and analysis of mediation and examined the outcomes of the hypothesis testing.

4.1 Descriptive Statistics

The first phase of the analysis was conducted using a descriptive analysis of the individual variables to identify distributions of these variables in preparation for SEM. Variables of the study were named as follows:

- Predictor variables:
  - INSTOWN: Institutional ownership (% of common stock)
  - CEOCOM: CEO's price-sensitive compensation
  - LOGCEOCOM: Natural log of CEO compensation.
  - BSIZE: Total number of directors on the board
  - LOGBSIZE: Natural log of board size.
  - AUDIT: Number of audit meetings in 2015
  - LOGAUMEET: Natural log of annual audit meetings
  - CEODUO: CEO duality. (Dummy variable: 0 = dual CEO/Chair; 1 = separate CEO/Chair)

- Outcome variables:
  - DIV: Dividend payment. (Dividend payout ratio %) (mediating variable)
  - EARN: Good quality as ability of reported earnings (income) to predict a firm's future earnings, with higher earnings quality is a sign of high quality.
- Control variables:
  - AGE: Age of the firm (years)
  - LOGAGE: Natural log of the firm's Age
  - INDUSTY: Industry the firm participates in. (Dummy variable: 0 = services, 1 = industrial)
  - BIG4: Whether the firm uses a Big 4 auditor. (Dummy variable: 0 = no, 1 = yes)

The log variables (LOGAGE, LOGCEOCOM, LOGBSIZE, and LOGAUMEET) were transformed within SPSS due to wide variation in the firms. Using log variables has the effect of creating a symmetric distribution and reducing the effect of outliers (Hair, Anderson, Black, & Babin, 2016), which was important for this study since SEM does rely on an assumption of normal distribution (Kline, 2016). As shown in the following discussion, this effort was not entirely successful, but the resulting distributions of the log variables were closer to symmetric than the original, un-logged variables.

4.1.1 Descriptive Statistics

Descriptive statistics, including minimum and maximum, mean, standard deviation, and skewness and kurtosis, were generated for each of the variables which were included in the model shown in table 4.1. First of all, range and central tendency and variation were discussed. BSIZE ranged from 6 to 21 members, with an average of 11 members (SD = 2.73). LOGBSIZE ranged from 0.78 to 2.05 (M = 1.038, SD = 0.124). In addition, CEODUO ranged from 0 to 1, with a mean of 0.73 (SD = 0.447), and AUDIT ranged from 1 to 25, with a mean of 6.04 (SD = 3.496). LOGAUMEET ranged from 0.301 to 1.398 (M = 0.742, SD = 0.183). INSTOWN ranged from 0% to 94.06%, with a mean of 23.65% (SD = 23.381) whereas CEOCOM ranged from 3.20 to

449.72, with a mean of 52.70 (SD = 64.422). Besides, LOGCEOCOM ranged from 0.51 to 4.68 (M = 1.314, SD = 0.464). BIG4 ranged from 0.00 to 1.00 (M = 0.71, SD = 0.46) while INDUSTY ranged from 0.00 to 1.00 (M = 0.77, SD = 0.42). AGE ranged from 1 to 40 years, with a mean of 18.25 years (SD = 9.560) while LOGAGE ranged from 0.000 to 1.60 (M = 1.1568, SD = 0.371). DIV ranged from 0.03 to 373.51, with a mean of 2.077 (SD = 22.832). Finally, EARN ranged from -8571.14 to 33,721.08, with a mean of 1,134.98 (SD = 4648.111).

Dummy variables, or binary variables indicating belonging to a given state (Kline, 2016), were used for two control variables in the study. Dummy variables could not be usefully examined for normal distribution since only two points are possible (Kline, 2016). Dummy variables (INDUSTY, BIG4, and CEODUO) could therefore only be analyzed based on their distribution between the two categories used. Descriptive statistics showed that 77% of firms in the sample (n = 206 firms) were industrial firms (INDUSTY = 1) while 23% (n = 61 firms) were service firms (INDUSTY = 0). For BIG4, 71% of firms (n = 190 firms) used Big 4 auditors (BIG4 = 1) whereas 29% of firms (n = 77 firms) did not (BIG4 = 0). Finally, for CEODUO, 73% of firms (n = 194 firms) had a separate CEO and chairman of the board (CEODUO = 1) while 27% of the firms (n = 73 firms) had a shared CEO and chairman (CEODUO = 0). This indicated that the distribution for none of the dummy variables was uniformed, but this was not expected in this instance due to varying rates of the characteristics. In general, firms can be characterized as industrial firms using Big 4 auditors but with separate CEO and chairman.

Table 4.1 Descriptive statistics of the variables of the study

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error
BSIZE	267	6.000	21.000	11.004	0.167	2.730	0.606	0.149	-0.013	0.297
LOGBSIZE	267	0.778	2.045	1.038	0.008	0.124	2.047	0.149	15.296	0.297
CEODUO	267	0.000	1.000	0.727	0.027	0.447	-1.023	0.149	-0.962	0.297
AUDIT	267	1.000	25.000	6.045	0.214	3.496	2.409	0.149	7.289	0.297
LOGAUMEET	267	0.301	1.398	0.742	0.011	0.183	1.247	0.149	1.162	0.297
INSTOWN	267	0.000	94.060	23.647	1.431	23.381	1.121	0.149	0.383	0.297
CEOCOM	267	3.200	449.720	52.696	3.943	64.422	3.424	0.149	14.156	0.297
LOGCEOCOM	267	0.506	4.685	1.314	0.028	0.464	1.864	0.149	9.923	0.297
BIG4	267	0.000	1.000	0.708	0.028	0.456	-0.919	0.149	-1.164	0.297
INDUSTY	267	0.000	1.000	0.772	0.026	0.421	-1.301	0.149	-0.310	0.297
AGE	267	1.000	40.000	18.251	0.585	9.560	0.031	0.149	-0.550	0.297
LOGAGE	267	0.000	1.602	1.157	0.023	0.371	-1.683	0.149	2.564	0.297
DIV	267	0.030	373.510	2.078	1.397	22.832	16.307	0.149	266.265	0.297
EARN	267	-8571.140	33721.080	1134.982	284.460	4648.111	4.650	0.149	25.492	0.297
Valid N (listwise)	267									

Where: BSIZE:board size, LOGBSIZE:natural log board size, CEODUO:CEO duality ,AUMEET:Audit committee meeting, LOGAUMEET:natural log audit committee meeting, INSTOWN:Institutional ownership, CEOCOM:CEO compensations, LOGCEOCOM:natural log CEO compensation, DIV:dividend payment, EARN:earning quality

Table 4.2 Correlation Matrix

	LOG BSIZE	CEODUO	LOG AUMEET	INSTOWN	LOG CEOCOM	BIG4	INDUSTY	LOGAGE	DIV	EARN
LOGBSIZE	1									
CEODUO	-.207**	1								
LOGAUMEET	.025	-.125*	1							
INSTOWN	.061	.008	.185**	1						
LOGCEOCOM	.025	.039	.119	.293**	1					
BIG4	.169**	-.006	.124*	.272**	.277**	1				
INDUSTY	-.135*	.087	-.026	.035	-.015	.141*	1			
LOGAGE	.103	-.049	.002	.063	-.036	-.085	-.061	1		
DIV	.015	.043	.071	.001	.461**	.043	.034	.040	1	
EARN	.129*	-.027	.241**	.239**	.308**	.144*	.031	.007	.244**	1

**. Correlation is significant at the 0.01 level

*. Correlation is significant at the 0.05 level

Table 4.2 showed the Pearson correlations between dependent and independent variables. The results indicated that LOGCEOCOM, LOGAUMEET, BIG4, and EARN positively correlated with INSTOWN. BIG4, DIV, and EARN positively correlated with LOGCEOCOM. BIG4 and EARN positively related to LOGBSIZE and LOGAUMEET while CEODUO and INDUSTY showed a negative relationship with LOGBSIZE. CEODUO also showed a negative relationship with LOGAUMEET. INDUSTY and EARN positively correlated with BIG4. Finally, EARN showed a positively relationship with DIV.

4.1.2 The Assessment of Normal Distribution of Variables

For numeric variables, skewness and kurtosis were used as a preliminary check of normal distribution, which is an assumption of SEM and of other linear regression models (Hair et al., 2016; Kline, 2016). Skewness is a measure of the heaviness of the distribution tails, with negative skewness indicating a heavier distribution to the left of the median and positive skewness indicating a heavier distribution to the right (Hair et al., 2016). While normal distribution is indicated by skewness = 0, and the values of skewness between -2 and 2 typically indicate an approximately normal distribution (Hair et al., 2016). Several variables did have problems in this area. CEOCOM (skewness = 3.424), AUDIT (skewness = 2.409), DIV skewness = 16.307), and EARN (skewness = 4.650) indicated possible skewness. All three of these skewnesses were positive, indicating a heavier distribution to the right of the median (Hair et al., 2016). This indicated that these variables are more likely to be higher than lower, which is consistent with what is known about the firms in the study. For some of these variables (CEOCOM and AUDIT), using the log distribution rather than the raw distribution reduced the skewness. However, this was not appropriate for the outcome variables (DIV and EARN).

Kurtosis is a measure of the height of the distribution, with a normal distribution having a kurtosis of 3 (Hair et al., 2016). A platykurtic distribution (kurtosis < 0) is flatter than the normal distribution and consequently more spread out while a leptokurtic distribution (kurtosis > 3) is taller and narrower than the normal distribution (Hair et al., 2016). Kurtosis values of -3 to 3 generally indicate a close to normal distribution. Several variables did not meet this threshold, including CEOCOM

(kurtosis = 14.156), LOGCEOCOM (kurtosis = 9.923), AUDIT (kurtosis = 7.289), DIV (kurtosis = 266.27), and EARN (kurtosis = 25.492). These distributions are leptokurtic, meaning that they are taller and narrower than the normal distribution (Hair et al., 2016). Unlike skewness, kurtosis was not resolved some variables using the log distribution (LOGCEOCOM and LOGAUMEET). Therefore, this continued to be problematic.

According to the evidence of skewness and kurtosis, there are some possible problems with the normality of distribution of some numeric variables, including AUDIT, LOGAUMEET, BSIZE, LOGBSIZE, CEOCOM, LOGCEOCOM, DIV, and EARN. Non-normal distributions of the individual variables means that multivariate normality will not be observed (Kline, 2016). This is a problem in the context of the planned analysis because SEM analysis techniques, like other regression approaches, assume a normal distribution (Byrne, 2016; Kline, 2016). Some of the possible outcomes of non-normal data with SEM include that the model χ^2 (indicating absolute goodness of fit) may not be correct, and the prediction may not be as strong (Byrne, 2016; Kline, 2016). Thus, the use of SEM with non-normal data can weaken the overall structure. Nevertheless, a large sample size could be used to offset the effects of non-normality (Hair et al., 2016). There is also evidence that non-normal distributions do not influence the results of SEM (Reinarz, Haenlein, & Henseler, 2009). This does not mean that the lack of normality in these variables is not a problem, but it does mean that this may not be as much of a concern, particularly as it is common for social and economic data to display abnormality (Barnes, Cote, Cudeck, & Malthouse, 2001). Therefore, the process of analysis was continued, with the caveat that the assumption of normality being violated could influence the outcomes. Multiple approximate fit measures were used to offset the effects of non-normal distribution on assessment of goodness of fit.

4.2 Structural Equation Modeling (SEM) Outcomes

4.2.1 Structural Model and Initial Goodness of Fit

The first stage of assessing the model was examining the structural model in figure 4.1 produced in SPSS AMOS and considering its goodness of fit, adjusting if necessary. The preliminary model in figure 4.1 did not fit empirical data and was modified slightly by allowing independent variables to be correlated in order to improve model fit indices and create the best possible model. To achieve this, the highest value of modification indices was identified, and the model was then respecified until the model provided sufficient fit statistics. The LOGAGE ←LOGAUMEET relationship was eliminated to improve the predictive model. The structural model (figure 4.2) showed the path coefficients for the proposed relationships and the goodness of fit statistics. Goodness of fit was assessed against one exact fit measure (model chi-square or χ^2), along with several approximate fit measures (including RMSEA, CFI, and NFI). Acceptance of these measures is based on standard rules of thumb for fit assessments (Byrne, 2016; Hu & Bentler, 1999; Kline, 2016; MacCallum, Browne, & Sugawara, 1996). The chi-square ($p > 0.094$) is indicative of acceptable fit based on exact fit figures. The CFI outcome (CFI = 0.966) also exceeded the threshold for good fit (CFI = 0.95). RMSEA for the model (RMSEA = 0.046) was (RMSEA ≤ 0.05 = good fit), above the cut off criterion of good fit. The NFI (NFI = 0.924) also fell into the category of marginal but not poor fit. Overall, the indicators showed that there is a moderate to good fit for this model. It was expected that the goodness of fit for the model would be negatively affected by the variance from normal distribution observed in the outcome and predictor variables (Byrne, 2016; Kline, 2016). Although it is not perfect, the goodness of fit is adequate to continue the analysis process.

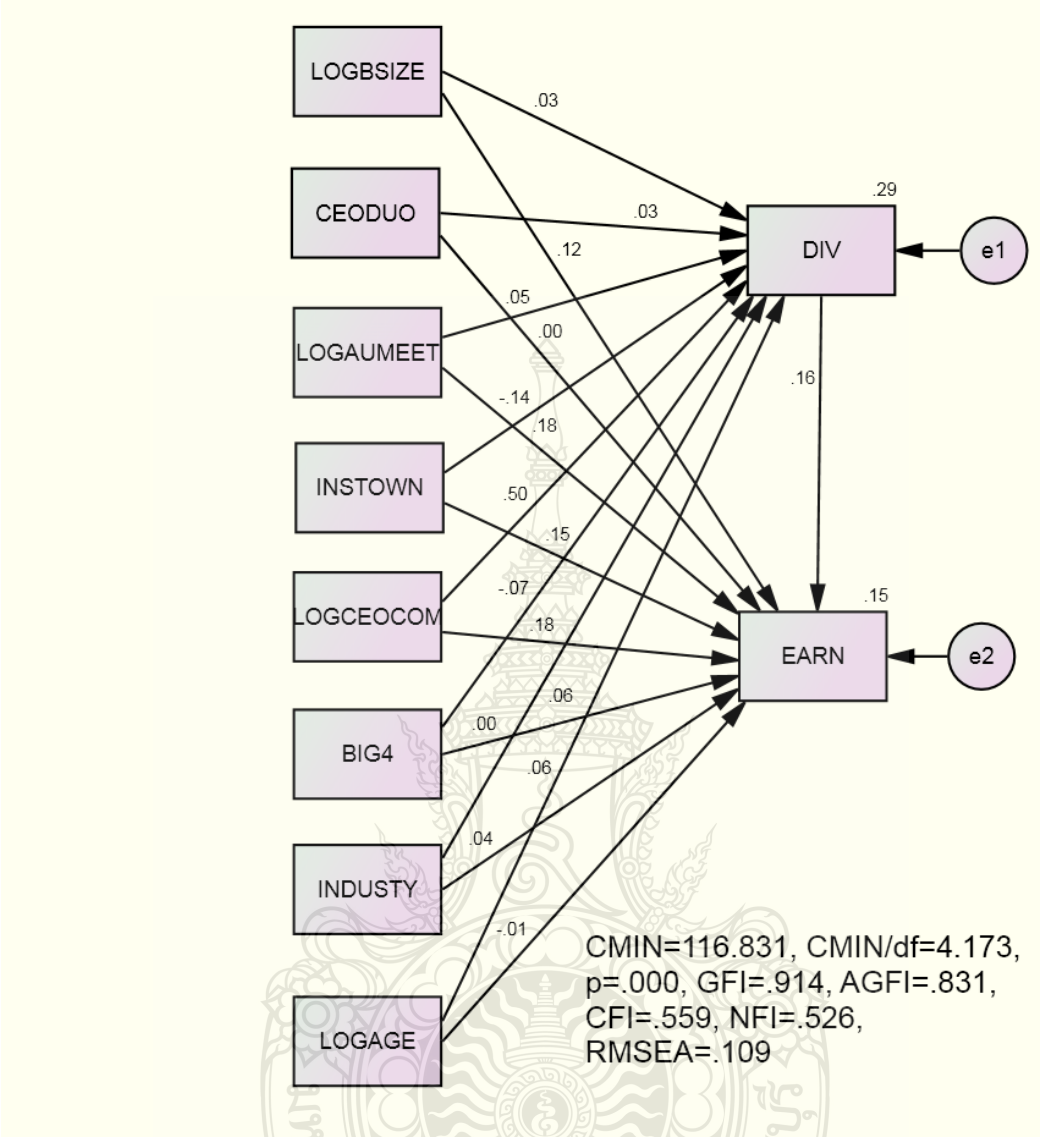

Figure 4.1 Initial Structural model

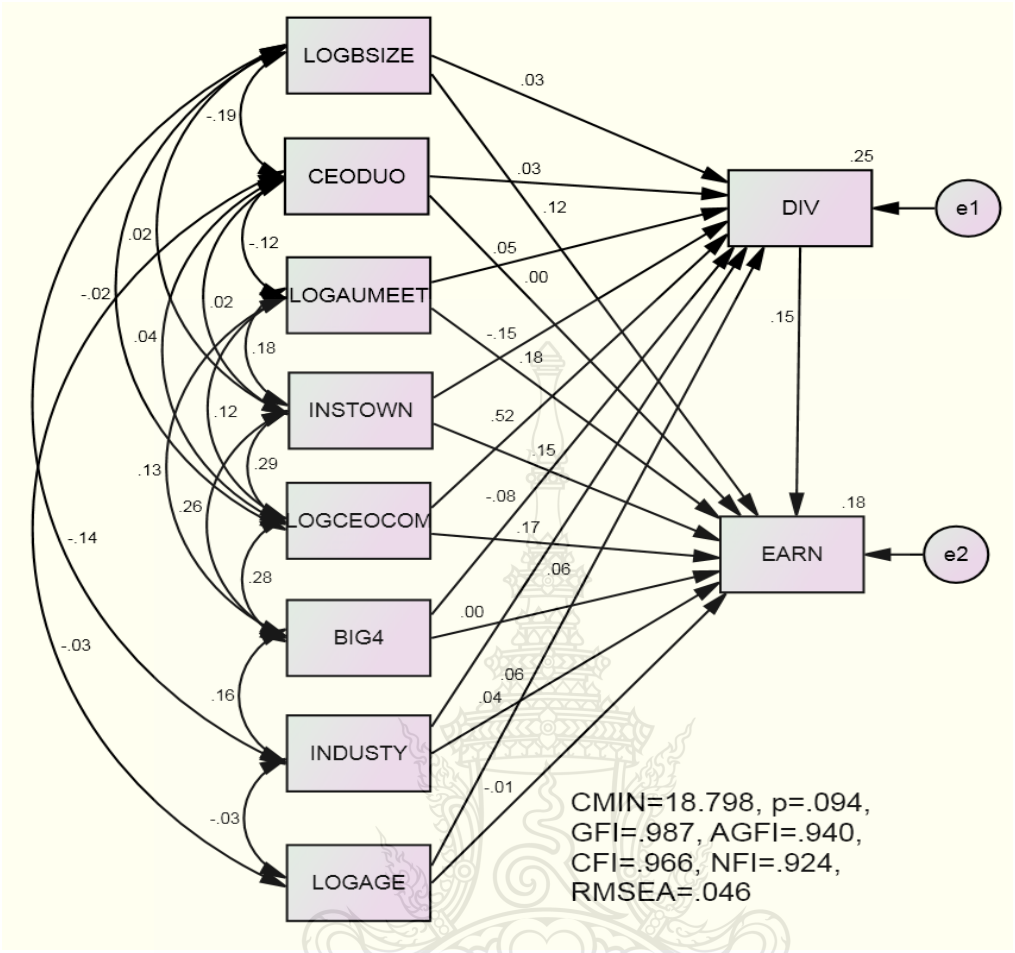

Figure 4.2 Structural model and goodness of fit statistics

4.2.2 Regression Outcomes

The third aspect of the analysis was examining the regression coefficients and significance of individual paths in the model, which helps to identify significant relationships. The regression outcomes (table 4.2) were used to identify the estimated relationships and regression equations for DIV and EARN. These outcomes were relevant to hypotheses 1 through 12. This process is in two stages, with DIV discussed first. Significance for all relationships is assessed at $p < 0.05$, in keeping with standard practice for linear regression (Hair et al., 2016).

There were eight factors tested in relationship to DIV, including five predictor variables and three control variables. Only two factors showed a significant relationship to DIV, including INSTOWN (β = -0.149, p = 0.010) and LOGCEOCOM (β = 0.520, p < 0.001). Factors including LOGBSIZE (β = 0.032, p = 0.561), CEODUO (β = 0.034, p

= 0.531), and LOGAUMEET (β = 0.051, p = 0.357), along with the control variables of BIG4 (β = -0.076, p = 0.189), INDUSTY (β = 0.065, p = 0.235), and LOGAGE (β = 0.064, p = 0.232), were not significant in their relationship to DIV. The standardized regression equation that can be derived for this relationship is:

$$Z_{DIV} = 0.032_{LOGBSIZE} + 0.034_{CEODUO} + 0.051_{LOGAUMEET} - 0.149 *_{INSTOWN} + 0.520 *_{LOGCEOCOM} - 0.076_{BIG4} + 0.065_{INDUSTY} + 0.064_{LOGAGE}$$

This equation shows that LOGCEOCOM has a stronger relationship to DIV than INSTOWN as indicated by their regression coefficients. However, none of the regression coefficients other than LOGCEOCOM indicate a very strong relationship.

The second set of factors assessed were related to EARN. This set of factors included the same predictors and control variables as DIV, and DIV itself. LOGAUMEET (β = 0.182, p = 0.002), LOGBSIZE (β = 0.116, p = 0.043), INSTOWN (β = 0.147, p = 0.015), DIV (β = 0.149, p = 0.020), and LOGCEOCOM (β = 0.173, p = 0.011) were significant in the relationship to EARN. Factors including BIG4 (β = 0.000, p = 0.996), INDUSTY (β = 0.043, p = 0.452), LOGAGE (β = -0.012, p = 0.828), and CEODUO (β = 0.001, p = 0.991) were not significant in terms of their relationship to EARN. These four variables were also not significant in their relationship to DIV, indicating that BIG4, INDUSTY, LOGAGE, and CEODUO had no significant relationship within the model on the whole. The standardized regression equation below can be compared to the relationship to DIV, demonstrating some differences in the significance of the variables. For this equation, LOGAUMEET had the highest coefficient, followed by LOGCEOCOM, DIV, INSTOWN, and LOGBSIZE. Therefore, while DIV and EARN are somewhat related, they do have different determinants.

$$Z_{EARN} = 0.116 *_{LOGBSIZE} + 0.001_{CEODUO} + 0.182 *_{LOGAUMEET} + 0.147 *_{INSTOWN} + 0.173 *_{LOGCEOCOM} + 0.149 *_{DIV} + 0.000_{BIG4} + 0.043_{INDUSTY} - 0.012_{LOGAGE}$$

Table 4.3 Regression weights of tested relationships

			Unstandardized Estimate	S.E.	Standardized Estimate	C.R.	P
DIV	<---	INSTOWN	-.145	.056	-.149	-2.592	.010*
DIV	<---	BIG4	-3.795	2.886	-.076	-1.315	.189
DIV	<---	INDUSTRY	3.514	2.956	.065	1.189	.235
DIV	<---	LOGAGE	3.918	3.278	.064	1.195	.232
DIV	<---	LOGBSIZE	5.897	10.156	.032	.581	.561
DIV	<---	LOGAUMEET	6.309	6.849	.051	.921	.357
DIV	<---	CEODUO	1.757	2.804	.034	.627	.531
DIV	<---	LOGCEOCOM	25.616	2.818	.520	9.091	***
EARN	<---	BIG4	2.780	613.391	.000	.005	.996
EARN	<---	INDUSTRY	471.986	627.908	.043	.752	.452
EARN	<---	LOGAGE	-151.179	696.183	-.012	-.217	.828
EARN	<---	CEODUO	6.867	594.367	.001	.012	.991
EARN	<---	LOGAUMEET	4602.107	1453.173	.182	3.167	.002*
EARN	<---	LOGBSIZE	4360.241	2152.688	.116	2.025	.043*
EARN	<---	INSTOWN	29.240	12.034	.147	2.430	.015*
EARN	<---	DIV	30.258	12.988	.149	2.330	.020*
EARN	<---	LOGCEOCOM	1727.006	683.302	.173	2.527	.011*

Where: BSIZE:board size, LOGBSIZE:natural log board size, CEODUO:CEO duality ,AUMEET:Audit committee meeting, LOGAUMEET:natural log audit committee meeting, INSTOWN:Institutional ownership, CEOCOM:CEO compensations, LOGCEOCOM:natural log CEO compensation, DIV:dividend payment, EARN:earning quality

*.significant at significant level of 0.05

4.2.3 Squared Multiple Correlations

The final concern was the squared multiple correlations (R^2) for the two outcome variables, DIV and EARN (table 4.4). The estimated R^2 for DIV (R^2 = 0.249) indicated that about 24.9% of variance in DIV could be explained through the predictor variables (INSTOWN, BIG4, INDUSTY, LOGAGE, LOGBSIZE, LOGAUMEET, CEODUO, and LOGCEOCOM). The estimate R^2 for EARN was somewhat lower (R^2 = 0.181), indicating that 18.1% of variance in EARN was explained by INSTOWN, BIG4, INDUSTY, LOGAGE, LOGBSIZE, LOGAUMEET, CEODUO, LOGCEOCOM, and DIV. Neither of these models reached the threshold of a moderate to strong predictive

model ($R^2 \geq 0.300$). In other words, there was a lot of unexplained variance in both models, which did not allow for a full or accurate prediction of outcomes. Thus, while the SEM process did deliver an estimated relationship, this model could not readily be used for accurate prediction. This was an expected problem given the non-normal distribution of some of the variables, which can disrupt the predictive potential of the model (Byrne, 2016; Kline, 2016). As a result, the relative weakness of the models reflected the underlying distribution of the variables rather than some other factors. Table 4.4 Estimated R^2 values for DIV and EARN predictive models

Table 4.4 Estimated R^2 values for DIV and EARN predictive models

	Estimated R^2
DIV	.249
EARN	.181

Where: DIV:dividend payment, EARN:earning quality

4.2.5 Effects analysis

The final stage of the process is to analyze of direct, indirect and total effects, which is undertaken to examine the mediating effect of DIV in the relationships of other predictor variables to EARN (Hypotheses 12 to 16). Table 4.4 shows the standardized effects for each of the two outcome variables (DIV and EARN). (Unstandardized effects sizes, which represent effects in terms of real measurements, are included in the Appendix.) In terms of total effects, the strongest effect on DIV was LOGCEOCOM (+) and INSTOWN (-). For EARN, the strongest effect was LOGCEOCOM (+), followed by LOGAUMEET (+), DIV (+), INSTOWN (+), LOGBSIZE (+), INDUSTY (+), BIG4 (-) and LOGAGE (-). This is consistent with the regressions above, in which LOGCEOCOM had the highest regression coefficients in both models.

Total effects are comprised of direct effects and indirect effects, where indirect effects indicates mediation effect variation. The indirect effects showed that there were mediating effects of DIV on EARN, although this effect was low in absolute terms. (The highest indirect effect was for LOGCEOCOM (0.078).) Thus, while DIV did play

a mediating role between the predictor variables and EARN as predicted, it did not fully mediate the relationship. Finally, the proportion of indirect effects to direct effects was calculated for each variable, to understand which of the relationships were significantly mediated by DIV. (This proportion could not be calculated for BIG4 because only indirect effects were observed.) This analysis showed that indirect effects in relationships of EARN←LOGCEOCOM (0.451), EARN←LOGAGE (-0.75), EARN←INDUSTY (0.232), EARN←INSTOWN (-5.682), and EARN←CEODUO (1.2) were mediated substantially by DIV. However, the mediation of the EARN←LOGAUMEET (0.040) and EARN←LOGBSIZE (0.043) through DIV was much lower, only mediating 4% to 4.3% of total effects. This indicates that the relationships of board characteristics (audit meeting frequency and board size) and earnings quality are not mediated as strongly by the dividend payment as other factors.

Finally, total effects sizes are considered, which explains the overall observability of the relationships examined. Total effects sizes of 0.1 (small), 0.3 (medium) and 0.5 (large) are used as criterion, following standard rules of thumb (Cohen, 1988; Kline, 2016; Preacher & Hayes, 2008). The effects sizes show that nearly all relationships have small or very small effects, with the exception of DIV←LOGCEOCOM (large effects). This suggests that for most of the relationships studied. The effects sizes are small. The only difference is that CEO compensation appears to have a large (observable) effect on dividend payouts. Thus, the overall effects of these individual factors may not be apparent. The small effects sizes could be a problem related to the non-normal distribution of some of the variables (Byrne, 2016), but it could also be due to limited effects of the corporate governance factors on DIV and EARN.

Table 4.5 Regression weights of tested relationships

			Unstandard Estimate	S.E.	C.R.	P	Standard Estimate (Direct Effects)	Indirect Effects	Total Effects	Proportion of Indirect to Direct Effect (Mediation)
DIV	<---	INSTOWN	-.145	.056	-2.592	.010*	-.149			.
DIV	<---	BIG4	-3.795	2.886	-1.315	.189	-.076			.
DIV	<---	INDUSTY	3.514	2.956	1.189	.235	0.065	.	0.065	.
DIV	<---	LOGAGE	3.918	3.278	1.195	.232	0.064	.	0.064	.
DIV	<---	LOGBSIZE	5.897	10.156	.581	.561	0.032	.	0.032	.
DIV	<---	LOGAUMEET	6.309	6.849	.921	.357	0.051	.	0.051	.
DIV	<---	CEODUO	1.757	2.804	.627	.531	0.034	.	0.034	.
DIV	<---	LOGCEOCOM	25.616	2.818	9.091	***	0.520	.	0.520	.
EARN	<---	BIG4	2.780	613.391	.005	.996	0.000	-0.011	-0.011	.
EARN	<---	INDUSTY	471.986	627.908	.752	.452	0.043	0.010	0.053	0.232
EARN	<---	LOGAGE	-151.179	696.183	-.217	.828	-0.012	0.009	-0.003	-0.75
EARN	<---	CEODUO	6.867	594.367	.012	.991	0.001	0.005	0.006	1.2

Where: BSIZE:board size, LOGBSIZE:natural log board size, CEODUO:CEO duality ,AUMEET:Audit committee meeting, LOGAUMEET:natural log audit committee meeting, INSTOWN:Institutional ownership, CEOCOM:CEO compensations, LOGCEOCOM:natural log CEO compensation, DIV:dividend payment, EARN:earning quality

*.significant at the 0.05 level

Table 4.5 Regression weights of tested relationships (Cont.)

			Unstandard Estimate	S.E.	C.R.	P	Standard Estimate (Direct Effects)	Indirect Effects	Total Effects	Proportion of Indirect to Direct Effect (Mediation)
EARN	<---	LOGAUMEET	4602.107	1453.173	3.167	.002*	0.182	0.008	0.189	0.040
EARN	<---	LOGBSIZE	4360.241	2152.688	2.025	.043*	0.116	0.005	0.121	0.043
EARN	<---	INSTOWN	29.240	12.034	2.430	.015*	0.147	-0.022	0.125	-5.682
EARN	<---	DIV	30.258	12.988	2.330	.020*	0.149	.	0.149	.
EARN	<---	LOGCEOCOM	1727.006	683.302	2.527	.011*	0.173	0.078	0.250	0.451

Where: BSIZE:board size, LOGBSIZE:natural log board size, CEODUO:CEO duality ,AUMEET:Audit committee meeting, LOGAUMEET:natural log audit committee meeting, INSTOWN:Institutional ownership, CEOCOM:CEO compensations, LOGCEOCOM:natural log CEO compensation, DIV:dividend payment, EARN:earning quality

*.significant at the 0.05 level

4.3 Hypothesis Testing Results

The analysis above allowed to examine the outcomes of the hypotheses, which were initially presented and discussed in chapter two. There were 16 hypotheses proposed for this study, which addressed the effects of corporate governance indicators to DIV (H1 through H5) and EARN (H6 through H11), along with the mediating effect of DIV on the effects of the predictor variables to EARN (H12 through H16). H1 through H11 were tested through the SEM model and its regression outcomes (section 4.2.3) while the effects sizes were used to examine H12 through H16 (section 4.2.4). There were also three control variables which were included in this model (BIG4, INDUSTY, and AGE). These control variables were not found to have a significant influence on DIV or EARN during the path analysis. Therefore, the control variables can be said to not have been significant. Table 4.6 summarized the statements and outcomes of the hypotheses. The outcomes of each of these hypotheses were discussed below.

Table 4.6 Summary of the hypothesis test outcomes

Hypothesis	Predictor Variable	Outcome Variable	Exp.Sign	Finding
1	Board Size	Earnings Quality	(+)	Yes
2	CEO Duality	Earnings Quality	(+)	No
3	Audit Committee Meetings	Earnings Quality	(+)	Yes
4	Institutional Ownership	Earnings Quality	(+)	Yes
5	CEO Compensation	Earnings Quality	(+)	Yes
6	Board Size	Dividend Payment	(+)	No
7	CEO Duality	Dividend Payment	(+)	No
8	Audit Committee Meetings	Dividend Payment	(+)	No
9	Institutional Ownership	Dividend Payment	(+)	No (-)
10	CEO Compensation	Dividend Payment	(+)	Yes
11	Dividend Payment	Earnings Quality	(+)	Yes
12	Board Size	Dividend Payment -> Earnings Quality	(+) Mediating	No*
13	CEO Duality	Dividend Payment -> Earnings Quality	(+) Mediating	No

Table 4.6 Summary of the hypothesis test outcomes (Cont.)

Hypothesis	Predictor Variable	Outcome Variable		Exp.Sign	Finding
14	Audit Committee Meetings	Dividend Payment Earnings Quality	->	(+) Mediating	No*
15	Institutional Ownership	Dividend Payment Earnings Quality	->	(+) Mediating	Yes
16	CEO Compensation	Dividend Payment Earnings Quality	->	(+) Mediating	Yes

Notes: * Indicates minimal mediating effect (<10% of variance in EARN←? mediated by DIV)

4.3.1 Factors Affecting Earnings Quality (H1 through H5 and H11)

Hypotheses 1 through 5 and Hypothesis 11 (factors in earnings quality) were examined through the path analysis, and acceptance was based on the significance of the regression weights ($p < 0.05$). Significant factors in predicting earnings quality included BSIZE (H1), LOGAUMEET (H3), INSTOWN (H4), LOGCEOCOM (H5), and DIV (H11). These relationships were expected and consistent with the proposed direction. Based on the standardized estimates, LOGAUMEET had the biggest effect, followed by LOGCEOCOM, DIV, INSTOWN, and LOGBSIZE, respectively. Therefore, H1, H3, H4, H5, and H11 were all accepted. Frequency of audit meetings, CEO performance-based compensation, dividend payment, institutional ownership, and board size affected earnings quality. However, one factor, CEODUO (H2), was not significant. Thus, H2 was rejected.

4.3.2 Factors in Dividend Payment (H6 through H10)

Hypothesis 6 through 10 were examined factors in DIV, including LOGBSIZE H6), CEODUO (H7), LOGAUMEET (H8), INSTOWN (H9), and LOGCEOCOM (H10). Of these variables, LOGBSIZE, CEODUO, and LOGAUMEET did not reach the expected significance level. INSTOWN was significant, but the effect was negative rather than the expected positive effects. Thus, H9 was rejected, but it was acknowledged that INSTOWN was a significant factor in DIV. Finally, H10 was accepted, as LOGCEOCOM had a positive influence to DIV. The standardized estimates showed that LOGCEOCOM (0.520) had a much stronger effect on DIV than INSTOWN (-0.149). Therefore, significant factors in dividend payment included CEO

performance-based compensation (positive) and institutional ownership (negative). Board size, CEO duality, and frequency of audit committee meetings were insignificant.

4.3.3 The Mediating Effect of Dividend Payment in Relation to Earnings Quality (H12 through H16)

The final set of hypotheses examined the mediating effect of DIV in relation to EARN. Tests of mediating effects showed that DIV did have a mediating effect on LOGBSIZE←EARN (H12), CEODUO←EARN (H13), LOGAUMEET←EARN (H14), INSTOWN←EARN (H15), and LOGCEOCOM←EARN (H16). These mediating effects did vary in terms of their strength, with mediation of CEODUO←EARN, INSTOWN←EARN, and LOGCEOCOM←EARN being relatively strong compared to the mediation of LOGBSIZE←EARN and LOGAUMEET←EARN. These relationships were all significant, and thus H12, H13, H14, H15, and H16 were accepted. Nonetheless, the limited observable effect of DIV as a mediator of LOGBSIZE←EARN and LOGAUMEET←EARN should be considered as a practical limitation. This issue was discussed in the next section, along with consistency with the literature and other issues of concern to the research.

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

The previous chapters examined the different aspects of the study. Chapter 1 was introduction which the background of the study and the rationale for conducting it were established. Chapter 2 discussed the literature review of the study where the existing state of knowledge was examined, and the theoretical framework was constructed. Chapter 3 was the research methodology which explained how the primary research was conducted and why these choices were made. Chapter 4 was research results which presented the results of the primary research and compared these results to the existing research. The purpose of this chapter was to draw together the previous chapters and their information in order to provide a conclusion to the study. In the first section, the findings were summarized and discussed. The limitations of the study were further presented. Finally, recommendations for stakeholder groups including corporate boards, investors, regulators, and the Stock Exchange of Thailand as well as further research were presented.

This study aimed to investigate the effect of corporate governance on earnings quality through dividend payment. The purposes of this study were to investigate the effects of corporate governance (board structure, ownership structure, and executive compensation) on earnings quality and on dividend payments; to examine the effect of dividend payments on earnings quality; and to explore the role of dividend payments as an intervening variable in the relationship between corporate governance factors and earnings quality in publicly listed companies on the Stock Exchange of Thailand. The research topic was chosen because of the importance of corporate governance in the Thai market, which suffered during the 1997 financial crisis due to poor corporate governance practices, resulting in the failure of many companies. The present framework of corporate governance implemented by the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET) is the Principles of Good Corporate Governance (2012), which were based on the OECD Principles of Corporate Governance (2004). This framework has been evaluated as effective by theWorld Bank (2013). Thus, it was of interest to examine how the principles influenced the firm's earnings quality or the

informativeness of its information disclosures, and its dividend payment or its approach to returning value to its owners.

The research questions of the study were established after a review of the research situation. These questions were as follows:

1. Does corporate governance (board size, CEO duality, audit committee meeting, institutional ownership, and CEO compensation) affect earnings quality?

2. Does corporate governance (board size, CEO duality, audit committee meeting, institutional ownership, and CEO compensation) affect dividend payment?

3. Does dividend payment affect earnings quality?

4. Does dividend payment mediate the effects of corporate governance factors (board size, CEO duality, audit committee meeting, institutional ownership, and CEO compensation) on earnings quality?

To answer these questions, the researcher first conducted a literature review that assessed existing studies, identifying appropriate theories and empirical findings which were applied. Moreover, the literature review also helped to identify appropriate corporate governance factors, of which there are a large number. The five factors including size of the corporate board, frequency of audit committee meetings, CEO duality, institutional ownership, and CEO compensation, were chosen because they are related to the structure of the board and decisions made by the board. Other areas of corporate governance such as corporate social responsibility (CSR) and the role of stakeholders were not included in this study. Instead, the study focused only on the role of the board. This was consistent with agency theory, which argues that corporate governance as a practice is oriented toward maintaining shareholder control over the firm, and that the corporate board serves as a primary instrument for this control (Mallin, 2016; Tricker, 2015).

This research was conducted on a cross-sectional survey of non-financial firms listed on the Stock Exchange of Thailand (SET) as of the 2015 reporting year (n = 267 firms). Data were drawn from the firm's Form 56-1 mandatory disclosure and reporting forms, which were extracted from the SET's SETSMART database. A structural equation modeling (SEM) approach was applied to analyze the relationships within the full model, using a three-stage analysis process to study the relationships addressed by

the research questions. Regression coefficients and significance, model R^2, and indirect and direct effects were used to assess the outcomes of the research questions.

5.1 Discussion of Research Finding

The sample included 267 firms listed on the Stock Exchange of Thailand in the year 2015 from all industrial groups except companies in financial industry, property fund & REITs sector, firms with incomplete information, and firms currently under rehabilitation. According to the findings from descriptive statistics, the size of board of directors (BSIZE) indicated that 75% of the sample (201 firms) had the number of the board of directors within the range of 5 to 12 directors while the other 25% (66 firms) had more than 12 directors. Numbers of the board of directors were ranged from the minimum of 6 to the maximum of 21 directors and had the average of 11 directors. Consistent with CEO duality (CEODUO), 73% of firms (194 firms) had a separate CEO and Chairman of the Board while 27% (73 firms) had a shared CEO and Chairman. The frequency of audit committee meeting showed that 46% of firms (122 firms) had less than 4 times per year while 54% (145firms) had the frequency of audit committee meeting more than 4 times per year. The frequencies of audit committee meeting were ranged from the minimum of 1 to the maximum 25 times per year and had the average of 6.04 times per year. The percentage of common shares held by institutional investors (INSTOWN) was range from 0% to 94.06%, with an average of 23.65%. For executive compensation (CEOCOM) was range from the minimum of 3.20 million baht to the maximum of 449.72 million baht, with an average of 52.70 million baht. The ratio of dividends paid to net profit (DIV) ranged between 0.03 and 373.51 times, with the average of 2.07 times. Finally, earnings quality as ability of reported earnings (income) to predict the firms' future earnings (EARN) were ranged from -8,571.14 to 33,721.08 million baht, with an average of 1,134.98 million baht.

5.1.1 Research Question 1: Corporate Governance and Earnings Quality

Research question 1 was to examine the effect of corporate governance on earnings quality. The factors in earnings quality were the primary focus of the literature review and the main issue of concern in this study. Factors which were found to be significant in earnings quality included board size, frequency of audit committee

meetings, institutional ownership, and executive compensation. All significant effects were positive. CEO duality was the only board-related corporate governance factor which was not found to be significant. Each of these relationships was discussed with the relevant literature in the sections below, based primarily on the wider discussion of the literature on corporate governance and earnings quality. The first three of these factors relate to board structure, which is known to be a significant factor in earnings quality based on many previous studies (Baxter & Cotter, 2009; Chang & Sun, 2008; Cornett, McNutt, & Tehranian, 2009; Dhaliwal, Naiker, & Navissi, 2006; Gulzar & Wang, 2011; Ismail, Dunstan, & van Zijl, 2009; Lin, Li, & Yang, 2006; Murhadi, 2009). The remaining three factors relate to board decision making and influences on it, which can also influence the decision process. The following five hypotheses were posed in relation to this research question:

Hypothesis 1: Board size positively relates to earnings quality.

Hypothesis 2: CEO duality positively relates to earnings quality.

Hypothesis 3: Audit committee meeting positively relates to earnings quality.

Hypothesis 4: Institutional ownership positively relates to earnings quality.

Hypothesis 5: CEO compensation positively relates to earnings quality.

To test these hypotheses, the variables (board size, CEO duality (dummy variable), audit committee meeting frequency, institutional ownership, and CEO compensation) were tested as having direct effects on the earnings quality measure, which was calculated by using Sloan's (1996) accruals model. Additional control variables, comprising the firm's age, industry, and whether it used a Big Four auditor, were also included in the model. Variables including board size, audit meeting frequency, and CEO compensation were transformed by using natural logs in order to reduce the asymmetry of the distribution.

The outcomes of the regression test showed that significant predictor variables for earnings quality included audit meeting frequency (β = 0.182, p = .002), board size (β = 0.116, p = .043), institutional ownership (β = 0.147, p = .015), dividend payment (β = 0.149, p = .020), and CEO compensation (β = 0.173, p = .011). Non-significant factors was CEO duality (β = 0.012, p = .991). However, the model R^2 was only

moderate (R^2 = 0.181), indicating that the significant factors explained 18.1% of the variance in earnings quality.

5.1.1.1 Board size and earnings quality (H1)

Board size had a positive and significant, though relatively small, effect on earnings quality. This indicated that in Thailand firms with larger boards have a small but noticeable improvement in earnings quality. This could be because firms with larger boards have a higher level of access to expertise and more oversight capabilities than firms with smaller boards. Board size was one of the most conflicted factors that were identified in the literature review, with studies finding positive, negative, and no effect between board size and earnings quality (Bradbury et al., 2006; Byard et al., 2006; Cornett et al., 2009; Gulzar & Wang, 2011; Ismail et al., 2009). This is a confusing situation which could be related to the differences in group dynamics in small and large boards. On the one hand, larger boards may offer more expertise, particularly more financial expertise, which improves oversight and earnings quality (Bradbury et al., 2006; Byard et al., 2006). On the other hand, large boards may develop group norms like politeness norms which prevent effective action to avoid earnings management or other negative practices (Cornett et al., 2009). This group dynamic situation may mean that these two opposing effects are routinely cancelled out, which could lead to the observed lack of effect. An interesting area for further research would be examining the factors that influence the relationship of board size and earnings quality, for example board expertise or national culture (which could influence formation of politeness norms). Ultimately, this study has contributed a moderate finding of a positive relationship between board size and earnings quality, but this remains an area that needs more research.

5.1.1.2 CEO duality and earnings quality (H2)

The only one factor which was not significant for earnings quality was CEO duality. In other words, on the SET, there is no evidence that CEO duality influences earnings quality one way or the other. A possible reason for this is that CEO duality is not very common in Thailand. It is notable that approximately three quarters of the firms in the sample did not have a dual CEO/Chair role, indicating that the firms are mainly following the recommendations of the SEC's (2012) Principles of GCG.

The theoretical position on the effect of CEO duality on earnings quality is that this should be a negative effect since a dual CEO/Chair holds increased power while retaining an agent position (Chang & Sun, 2008). This position is often supported by the academic literature (Gulzar & Wang, 2011; Murhadi, 2009), but it just as frequently is not supported (Chang & Sun, 2008; García-Meca & Sánchez-Ballesta, 2009; Ismail et al., 2009), and occasionally there is a positive relationship observed (Cornett et al., 2008).

5.1.1.3 Audit committee meetings and earnings quality (H3)

Audit committee meetings had a significant positive effect on earnings quality. This indicated that in Thailand a higher frequency of audit committee meetings was associated with increased earnings quality. The reason for this is probably that higher numbers of audit committee meetings allow for better oversight of financial reporting practices. The SEC's (2012) Principles of GCG require an audit committee and make recommendations about how frequently it should meet, and firms appear to comply with these recommendations with an average of about four meetings a year. The previous research on the effect of audit committees on earnings quality has been diverse in terms of the audit committee attribute tested. It has previously included audit committee formation (Baxter & Cotter, 2009), audit committee independence (Chang & Sun, 2008), financial and accounting expertise (Chang & Sun, 2008; Dhaliwal et al., 2006), and audit committee size (Lin et al., 2010; Ismail, 2009). This study was limited in the information available due to reliance on publicly listed information contained within the Form 56-1. Regarding several previous researchers (Baxter & Cotter, 2009; Lin et al., 2010; Nimer et al., 2009; Sawicki, 2009), frequency of audit committee meeting was selected as the determining factor, and as this study has shown it was positively associated with earnings quality. This finding contributes to the continuing development in the literature on the effects of audit committee on earnings quality.

5.1.1.4 Institutional ownership and earnings quality (H4)

Institutional ownership had a significant positive effect on earnings quality. This suggested that at least in the Stock Exchange of Thailand, a high level of institutional ownership is associated with a higher level of earnings quality. It was fully expected that institutional ownership would influence earnings quality since the active

role in firm management is often used by institutional investors, who often hold large blocks of the firm and direct the firm's activities to their own preferences and their greater access to information (Bhattacharya et al., 2003; Desender, 2009). In the case of Thailand, it is possible that institutional ownership enforces compliance with accounting and corporate governance reporting requirements. Previous studies have routinely identified a positive effect between institutional ownership and earnings quality even though some situations such as pressure to increase earnings can disrupt the relationship (Cheng & Reitenga, 2009; Cornett, Marcus, & Tehranian, 2008; Hashim & Davis, 2007; Moradi & Nezami, 2011). Therefore, the finding of this study was, in relation to institutional ownership, as expected given the literature. Although the effect of institutional ownership was not the strongest, it may have a very high effect in practice due to the high rate of institutional ownership within Thai firms (with a mean 23.7% and a maximum of 94% institutional ownership observed in the sample). Thus, in practice institutional ownership may have a strong influence on the management decisions of the firm, including the decisions towards earnings quality.

5.1.1.5 CEO compensation and earnings quality (H5)

CEO compensation had a significant positive effect on earnings quality. This indicated that higher levels of executive compensation were associated with higher earnings quality, potentially because more skilled and experienced CEOs command higher wages and have stronger norms about financial reporting. Executive compensation is one of the fundamental responsibilities of the board, who must establish the correct mix of price-sensitive, other at-risk, and salary compensation (Mallin, 2016). However, there is an evidence that current compensation practices including the use of salary surveys do not effectively align CEO compensation and the firm's interests (Harford & Li, 2007). In agency theory terms, the use of CEO compensation as a bonding strategy fails to appropriately bond the CEO's interests to those of the firm (Jensen & Meckling, 1976). This could lead to the use of earnings management to influence the firm's earnings in a good direction for the CEO (Laux & Luax, 2009), which has been the dominant relationship observed in the past (Bergstresser & Philippon, 2006; Cornett et al. 2008; Harris & Bromiley, 2007). Nevertheless, this study found a positive effect between CEO price-sensitive

compensation and earnings quality, which suggested that this effect had broken down. One reason could be limitations on the CEO's ability to announce earnings in advance of the official statements, which has been found to limit the use of earnings management (Baker et al., 2003). It could also relate to the firm's level of takeover protection (or shareholder rights), which influences the use of earnings management (Davila & Penalva, 2006). In other words, it may be that the relationship between CEO price-sensitive compensation and earnings management is more complex than it has been studied here, leading to an unexpected contrary finding.

In summary, research question 1 could be answered as follows. Corporate governance factors including audit meeting frequency, CEO price-based compensation, institutional ownership, and board size had a significant positive effect on earnings quality, as observed in this study of Thai firms. However, CEO duality did not have a significant relationship. While most of these findings were consistent with the literature, the literature on board size, CEO duality, and audit committee characteristics is indeterminate, with many conflicting studies. Therefore, there is room for further research to validate these findings, which is discussed below.

5.1.2 Research Question 2: Corporate Governance and Dividend Payment

Research question 2 was to investigate the effect of corporate governance factors on the dividend payment of the firm, measured by the dividend payout ratio. Of the board-related corporate governance factors that were tested, only share of institutional ownership and CEO compensation were significant. Institutional ownership had a negative effect on dividend payment while CEO compensation had a positive effect on dividend payment. Factors comprising board size, CEO duality, and frequency of audit committee meetings did not have a significant effect on dividend payment. These relationships were discussed independently below. The five hypotheses stated for this study included:

Hypothesis 6: Board size positively relates to dividend payment.

Hypothesis 7: CEO duality positively relates to dividend payment.

Hypothesis 8: Audit committee meeting positively relates to dividend payment.

Hypothesis 9: Institutional ownership positively relates to dividend payment.

Hypothesis 10: CEO compensation positively relates to dividend payment.

These hypotheses were examined by using the regression coefficients and significance of the individual relationship, combined with the model R^2. The model R^2 (R^2 = 0.249) was higher than the R^2 for the earnings quality model, indicating that 24.9% of variance in dividend payment was related to variance in the factors that were examined. Nonetheless, the regression tests showed that only two of the path relationships were significant. These significant factors included institutional ownership (β = -0.149, p = .010) and CEO compensation (β = 0.520, p < 0.001). Factors including board size (β = 0.032, p = .561), audit committee meeting frequency (β = 0.051, p = .357), and CEO duality (β = 0.034, p = .531) were not significant. The control variables of firm age (β = 0.064, p = .232), the use of a Big Four auditor (β = -0.076, p = .189), and industry (β = 0.065, p = .235) were also not significant in the model. According to these factors, CEO compensation had a higher positive effect on dividend payment, while institutional ownership had a moderate negative effect on dividend payment.

5.1.2.1 Board size and dividend payment (H6)

Board size was not a significant factor in dividend payment. Thus, in the Stock Exchange of Thailand, there is no evidence that board size influences dividend payments either positively or negatively. Previous researchers have also studied this relationship with mixed findings (Abdelsalam et al., 2008; Abor & Fiador, 2013; González et al., 2014). While Abdelsalam et al. (2008) did not find board size to be a significant factor, Abor and Fiador (2013) and González et al. (2014) found it positively significant. Therefore, it was not unwarranted to expect a positive significant effect even though one did not emerge. It is possible that board size, like CEO duality, has complex interactions with regulations and market expectations that limit the extent to which it can influence dividend payment. Furthermore, it is also possible that emergent politeness norms (Cornett et al., 2008) or other group interactions intervene in the relationship between board size and dividend payment, which seemingly produces inconsistent relationships between studies that could be accounted for by the improved models. This represents an area for further theoretical development and empirical study.

5.1.2.2 CEO duality and dividend payment (H7)

CEO duality was also not a significant factor in dividend payment. Thus, in Thailand there is no evidence that CEO duality influences dividend payments either positively or negatively. As with earnings quality, the evidence for CEO duality and its role on dividend payment is very mixed, with no clear relationship emerging from the literature (Abdelsalam et al., 2008; Abor & Fiador, 2013; González et al. 2013; Sirmans & Ghosh, 2006). These studies showed that whether CEO duality influences dividend payment positively, negatively, or not at all varying from country to country and sometimes within countries. Therefore, there is no clear direction of the relationship, and it could be highly contextual and dependent on institutions and structures such as corporate governance regulations and market expectations within a given country. This study has contributed by supporting no relationship between the two, but the complexity and inconsistency of the literature suggested that this is not the last word in this area.

5.1.2.3 Audit committee meetings and dividend payment (H8)

This study did not find an effect of audit committee meeting frequency on dividend payment. Thus, Thai firms did not appear to change their dividend policy depending on whether they have more or fewer audit committee meetings. This may be due to the measurement basis for committee involvement. Other studies have used various measures of audit committee activity including audit committee quality indices (Jiraporn, et al, 2011; Sawicki, 2009) and specific audit committee characteristics (Nimer et al., 2012). The results of the previous study echo the findings of Nimer et al. (2012) who did not find a significant effect of audit committee quality on dividend payout ratio, which is measured by using Tobin's *q* rather than a direct measure such as dividend payout ratio. Once again, this raises the question of whether the corporate governance framework in place (Stock Exchange of Thailand, 2012), or conversely shareholder expectations surrounding the payment of dividends which vary between markets (Baker, 2009), could have a silent role in influencing dividend payout policies. However, it may also be because audit committees do not have a direct influence on the dividend policy in Thailand though they may be asked to approve dividend payments.

5.1.2.4 Institutional ownership and dividend payment (H9)

One of the two factors that did influence dividend payment was institutional ownership, which had a negative effect. In other words, the higher the level of institutional ownership, the less the firm paid out in dividends. This could be because institutional owners in Thailand have a reduced preference for dividends compared to smaller shareholders although this factor was not directly examined in this study. As with other factors in dividend payments, the evidence in this area is mixed. While firms in Egypt, Kenya, and Ghana showed a positive relationship between institutional investors and dividend payouts (Abor & Fiador, 2013; Abdelsalam et al., 2008), other researches in Ghana and a comparison to Nigeria did not find a significant relationship or found a negative relationship (Abor & Fiador, 2013; Amidu & Abor, 2006). Thus, as with many of the other corporate governance factors in dividend payment, the evidence continues to be mixed. The reason for this difference is uncertain even though it may be related to national-level preference differences in institutional investors such as different time horizons and risk profiles (Bloomfield, 2013). It may also relate to different institutional structures such as differences in the legal position of institutional investors and the extent to which they are allowed to intervene in the operations of the firm. A large cross-national comparison study of the institutional structure for institutional or other block ownership and the rights of block holders could provide useful insight into this question.

5.1.2.5 CEO compensation and dividend payment (H10)

Finally, CEO compensation was found to have a positive effect on dividend payment. Higher levels of option or stock grant compensation was, as expected, associated with a higher dividend payout ratio. Thus, CEOs of Thai firms increased dividend payments when they would benefit from the payout, and they were less likely to do so when they were not. This was entirely consistent with the findings of previous studies (Brown et al., 2007; Minnick & Rosenthal, 2014; Sirmans & Ghosh, 2006). All of these studies have found that there is a significant positive effect of CEO compensation on dividend payment. This raises an issue under agency theory because it implies that the firm's CEOs are able to manipulate dividend payment to allow for self-dealing. This could indicate that the shareholders' monitoring efforts have not been

effective since the CEO is able to make this manipulation (Eisenhardt, 2009). At the same time, a higher dividend payout ratio would provide a higher benefit for shareholders as long as it is not endangering the firm's long-term growth prospects such as by preventing the firm from retaining enough earnings to fund capital investment. Ultimately, CEO compensation was the strongest factor that influenced dividend payment, strongly suggesting that dividend payment is at least partly motivated by self-interested movements by the firm's managers. Nevertheless, it requires more study to understand how and why this relationship emerges.

The findings of research question 2 reflected a somewhat confused state of the literature on the determinants of dividend payment. They suggested that more research, particularly institutional and structural research, is needed to understand the factors which influence dividend payment and how different stakeholders such as CEOs and institutional owners may try to enforce their own interests. Overall, this study did show that conflicting stakeholder interests are stronger influences than board structure in dividend payment for Thai firms, which is useful information.

5.1.3 Research Question 3: Dividend Payment and Earnings Quality

The third research question addressed the relationship between dividend payments and earnings quality. The literature review showed that there is a positive relationship between dividend payments and earnings quality (Skinner & Soltes, 2011). This relationship is logical since both dividend payments and earnings quality demonstrate underlying concern for shareholder interests. It has also been demonstrated through empirical research in different markets although there have been some conflicting findings, as is common in this topic area. The third research question was addressed in the primary research through the eleventh hypothesis as follows:

Hypothesis 11: Dividend payment positively relates to earnings quality.

As with earlier research questions, this research question was examined by using the regression coefficients and the significance of the individual relationship, along with the model R^2, which indicates overall significance. Dividend payments (DIV) were tested along with corporate governance factors (INSTOWN, LOGBSIZE, LOGAUMEET, CEO, and LOGCEOCOM). DIV was a significant factor in EARN (p = 0.020) even though it had a lower coefficient than the significant corporate governance

variables (excluding CEODUO) (β = 0.147). The overall model fit for EARN was somewhat lower than the fit for DIV (R^2 = 0.181), indicating that this was a weak but significant relationship. This regression result showed that dividend payments did have a significant positive relationship to earnings quality although this relationship was weak.

5.1.3.1 Dividend payment and earnings quality (H11)

Finally, dividend payment had a significant positive effect on earnings quality. In other words, firms that pay higher dividends also have higher earnings quality, which would be expected both for corporate governance reasons and because firms with higher dividend payments are interested in supporting investor requirements. This relationship was, as expected, given that dividend payment are an information signal that represents the firm's sustainable financial position (Chen et al., 2013; Gibson, 2009). While firms can sustain dividend payments in the short term in the face of falling revenues, this is not possible in the long term. Therefore, the dividend payout ratio (dividend payment) represents one of the signals that the firm's owners or investors (principals) can use to understand the firm's true financial position (Baker, 2009). Under agency theory, this reduces information asymmetries and increases the owners' control over the firm (Eisenhardt, 2009). The dividend payment also represents a consensus view of the firm's managers and owners on the current stage of the firm in the business lifecycle (Brav et al., 2009; Li, 2016). A younger and more rapidly growing firm with greater need for capital investment and higher stock growth can be expected to have a low dividend payout ratio, or even not pay dividends at all, while shareholders gain value from increases in the stock price. In contrast, older and more established firms with relatively less capital expenditure demand and slower stock price growth will need to increase the dividend payout ratio. This evidence suggests that firms with a higher dividend payout ratio can also be assumed to have higher earnings quality, which would be consistent with an established firm that has a mature corporate governance system with proven processes and monitoring mechanisms in place (Mallin, 2016). Although firm age was not a significant factor in this relationship, it could be an indirect effect of firm maturity.

In summary, research question 3 can be answered as follows. There was a positive relationship between dividend payment and earnings quality, which was supported by both the literature review and the findings. While this was a weak relationship, it still had a noticeable effect and thus should be considered.

5.1.4 Research Question 4: Corporate Governance and Earnings Quality through Dividend Payment

Research question 4 examined whether dividend payment acts as a mediating variable for the relationship between corporate governance factors and earnings quality. This question was one of the main novel issues of the study since dividend payment has not previously been examined in terms of its mediating role. However, it is a theoretically coherent question, given that both dividend payment and earnings quality represent outcomes of the board's and CEO's commitment to corporate governance principles of equitable distribution of earnings and information transparency and disclosure. In agency theory terms, dividend payment can be considered as an information signal about the financial position of the firm though the firm can, of course, sustain an oversized dividend distribution for sometimes based on its retained earnings. The hypotheses proposed to study this relationship were as follows:

Hypothesis 12: Board size has an effect on earnings quality through dividend payment.

Hypothesis 13: CEO duality has an effect on earnings quality through dividend payment.

Hypothesis 14: Audit committee meeting has an effect on earnings quality through dividend payment.

Hypothesis 15: Institutional ownership has an effect on earnings quality through dividend payment.

Hypothesis 16: CEO compensation has an effect on earnings quality through dividend payment.

Analysis of these hypotheses was conducted by examining the direct, indirect, and total effects of the factors as well as their relationship to earnings quality. The analysis showed that there was some degrees of mediation for all of the five corporate governance variables in their relationship to earnings quality. The proportion of indirect

to direct effects was very low ($p < 0.05$) for the relationship of audit committee meetings and board size respectively to earnings quality, indicating that there was little mediation for these two relationships. Nonetheless, other relationships had much more mediation with a proportion of indirect to direct effects of 0.451 for the relationship between CEO compensation and earnings quality. Institutional ownership (0.150) and CEO duality (5) showed the highest proportion of indirect effects to direct effects, suggesting full mediation of the relationship. However, CEO duality was not a significant factor for either dividend payment or earnings quality. Therefore, it can be stated that the institutional ownership-earnings quality relationship is fully mediated by dividend payment whereas other relationships are partially mediated.

5.1.4.1 Board size, dividend payment, and earnings quality (H12)

Dividend payment mediated only a small amount of the relationship between board size and dividend payment, and this was not significant. Thus, dividend payments do not change this relationship. Previous studies have not tested the mediation effect of dividend payment directly, but they have found that there are conflicting relationships of board size on dividend payment and earnings quality (Abdelsalam et al., 2008; Ada, 2013; Chang & Dutta, 2012). This study has shown that while there is a moderating effect, it is minor due to the lack of significant effect of board size on dividend payment. Consequently, this finding was consistent internally and suggested that there may not be a more major role for dividend payment in this relationship although it could be explored further.

5.1.4.2 CEO duality, dividend payment, and earnings quality (H13)

The relationship between CEO duality and earnings quality was fully mediated by dividend payment, but it is notable that CEO duality was not significant for either of these two outcome variables. Thus, this hypothesis was rejected since the initial relationship was not significant. In theory, CEO duality indicates a weak corporate governance structure, creating incentives and capabilities for the CEO to manipulate firm decisions such as dividend payment and earnings statements for their own benefits (Ada, 2013; Chang & Dutta, 2012; Leng, 2007). In practice, a meta-analysis of studies on CEO duality has suggested that the effect is weak and may only be captured using accruals-based methods (García-Meca & Sánchez-Ballesta, 2009),

and the relationships that have been observed have typically been either weak or non-existent. Therefore, while this relationship was mediated, the question must be asked as to whether this mediation effect has any practical significance.

5.1.4.3 Audit committee, dividend payment, and earnings quality (H14)

Similar to board size, the mediation of the relationship between audit committee meeting frequency and earnings quality by dividend payment was small, which indicated that this was only a minor factor in the mediated relationship. As with board size and CEO duality, the evidence for this relationship was weak and conflicting (Jiraporn & Kim, 2011; Nimer et al., 2012; Sawicki, 2009). These studies have shown the relationships with dividend payment and earnings quality, respectively even though the primary research did not support a relationship of audit committee frequency to dividend payment. Nonetheless, the evidence for the mediating effect of dividend payment was weak. This study did contribute to the literature by showing a weak positive mediation effect, but this is an area that could use improved study and analysis.

5.1.4.4 Institutional ownership, dividend payment, and earnings quality (H15)

Dividend payment was found to partially mediate the relationship of institutional ownership and earnings quality, which showed the strongest effect of any of the relationships. This is not surprising since dividend payments fundamentally allow owners to monitor and enforce earnings distributions (Al-Gharaibeh et al., 2013). Therefore, institutional investors with their high monitoring and involvement activities (Al-Gharabeh et al., 2013) would be ideally positioned to both enforce a higher dividend payout ratio and ensure earnings quality through monitoring. Thus, a co-occurrence effect was expected. This study supported the positive relationship of institutional ownership and dividend payout ratio (Abdelsalam et al., 2008; Ahmad & Javid, 2010; Al-Gharaibeh et al., 2013; Dandago, Farouk, & Muhibudeen, 2015). It is acknowledged that market structure could play a role as well (Kumar, 2006) although that does not appear to be the case here. This study has contributed by demonstrating the mediating effect of dividend payment on this relationship, which is one of the key relationships that is routinely supported. The shareholders' equity is an important financial factor of all firms because it is the origin of all businesses. It is the first source

of budgets for producing products or providing services that can eternally provide earnings for the shareholders. According to the basic accounting principles, the financial structures of the firms conform to a formula (i.e. assets = liabilities + shareholders' equity). In other words, the assets are derived from liabilities if all assets of the firms are not derived from the money of the owners (shareholders). The desired earnings have two main parts:

1) paid funds (the funds taken into the firms by the shareholders); and

2) accumulated profits (the total accumulated earnings deducted dividend).

Generally, it is always mentioned about the efficiency of asset or reliability management for firms to comply with their creditors' agreement thoroughly.

If all dividends were paid by cash, then the value of all shareholders after dividend payment would drastically be reduced, and the accounting value per share for the dividend payment would be reduced with the amount equal to the paid dividends per share. If the dividends were paid with shares and by cash, the accounting value per share would be reduced according to the dividend payout ratio. The reduction of the value of all shareholders would be smaller than that if the dividends were paid by cash for only handling the withholding tax. Besides, if the dividends were paid by cash only, then the share prices in SET after the firms' announcement of the dividend payouts were usually increased. If the dividends were paid with share and by cash, then the share prices after the announcements would be increased and higher than those paid by cash because the reductions of the values of the businesses were not as significant as those paid by cash. The shareholders would get the returns similar to those from the dividend payouts by cash only.

5.1.4.5 CEO compensation, dividend payment, and earnings quality (H16)

Finally, dividend payment partially mediated the relationship of CEO compensation and earnings quality, indicating that dividend payment did reduce the effect of CEO compensation on earnings quality. This relationship is particularly important because at least in some firms CEOs do have the capability to manipulate dividend payment and earnings announcements for their own benefit (Minnick & Rosenthal, 2014). For example, a CEO expecting a restricted stock grant which cannot

be sold could increase dividend payouts to increase their own returns, even if this negatively influenced the earnings quality (Minnick & Rosenthal, 2014). At the same time, firms with highly skilled CEOs may show the opposite response due to better management and knowledge (Bhattacharyya et al., 2008). Therefore, this relationship is likely to be complex. However, appropriate dividend payment and earnings quality could both result from the influence of a highly skilled CEO, thus leading to a common relationship. Like the others in this group, this study is one of the only ones which could be found that tested dividend payment as an intervening factor. This remains an opportunity for further development and study.

The answer to research question 4 was that dividend payment partially mediated the relationship between corporate governance and earnings quality. The role of dividend payment as a mediating factor is one of the novel findings of the current study, and it is a relationship that should be studied further. However, as it is theoretically sound as well as there is an evidence for both sides of each of the relationships, it is likely that it would be supported further, and different dimensions of corporate governance may be more sensitive.

5.2 Limitations of the Study

There are six limitations of this study. First, this study only examined the factors of the earning quality of the quantitative factors, not the qualitative factors. Second, this study has a limitation regarding the data of the population that includes the 497 companies registered in the Stock Exchange of Thailand in 2015. Since only the samples with complete data must be selected, the rejected samples are finance & banking and insurance firms, companies under rehabilitation, and the companies with N/A Dividend/CEO Com. The number of the rejected companies is 230 (46.38 percent), while the total number of the samples is 267 (53.72 percent). Third, EARN has many measurement methods including the Jones model, the modified Jones model, the degree of operating leverage, the degree of financial leverage, and the combined leverage, or cash flow ratio. However, the earnings equity was examined in this study by using Sloan (1996)'s technique because this technique was developed from mathematical models in order to develop the relationships among the factors affecting

the uncontrollable inventories. By integrating incomes, it was noticeable that other accruals such as account receivable (i.e. this can be created with the active accounting method). In many cases of auditing, it was found that the mentioned item usually occurred. Hence, the item that is the income of the account receivable may not be appropriate for being included in the uncontrollable accruals. Thus, this technique uses the difference between the net account receivable at the end of previous period and net account receivable in the end of the period in order to completely show the uncontrollable accruals. Some variables are not normal distributions, but those variables are necessary because the analyses must be done. Fourth, the selected variables were from the companies in SET. Only the measurable variables were selected. These are such as the audit committee quality, financial structure, investment opportunities, earnings response coefficient and timeliness (i.e. this variable was not examined). Fifth, for the dividend payment, only cash dividend was studied. Other stock dividends or any other dividends were not studied. Finally, the results from the earning quality, the analysis accuracy was dependent on the companies' accounting or financial budget information.

5.3 Implication for Practice and Future Research

The final goal of this study was to provide recommendations based on the findings and the literature review. The recommendations included recommendations for academic research and corporate practice. Recommendations focused on the implications for different aspects of the academic contributions and recommendations, considering the findings and the interests of different stakeholders, and providing recommendations on how the findings could be used. Identified stakeholders included corporate boards, investors, and government regulators and the Stock Exchange of Thailand along with academic researchers.

5.3.1 Implication for Academic and Practice

This study contributed to the reference for the researcher who would conduct the literature on dividend payment in the future. In particular, this study used the structural equation model for path analysis that never been utilized to examine corporate governance affecting dividend payment and earnings quality. The study was the

evidence of the influence of dividend payment which was the good transfer of board of director characteristics in terms of CEO compensation and institutional ownership. It was the important reference as the guidelines for corporate governance which the firm could achieve the objective according to agency theory. The results represented that board of directors played an importance role in administrating the resource, dividend paid, efficiently and usefully which resulted in the increasing earnings quality. This would result in the better potential in the benefits of the firm. Moreover, the study confirmed the past research that corporate governance has an effect on earnings quality. Factors which were found to be significant in earnings quality included board size, frequency of audit committee meetings, institutional ownership, CEO compensation, and dividend payment, and all significant effects were positive. In addition, institutional ownership had a negative effect on dividend payment whereas CEO compensation had a positive effect on dividend payment. Finally, according to the relationship between institutional ownership and earnings quality, CEO compensation and earnings quality were partially mediated by dividend payment. There is a mediating effect of dividend payment linking corporate governance and earnings quality. This test represents one of the main contributions to the literature since most of the studies have not tested dividend payment as a possible mediator for earnings quality.

This study can also provide guidance for firms in the construction and implementation of their own corporate governance policies. The first recommendation is that the SET's Principles of Good Corporate Governance (2012) should be followed, as these principles have been shown in this study to support corporate governance and effective reporting and earnings quality. These principles are important for ensuring that firms listed on the SET are following best practices and will be providing information required for investors to make good investment decisions (The Stock Exchange of Thailand, 2012). Thus, the most basic recommendation is that firms do need to follow the SET's corporate governance principles as required for SET listing. A further recommendation is that the firm should consider its level of institutional ownership when implementing its strategies including corporate governance strategies. Institutional investors can have both positive and negative implications for the firm, not only enforcing good corporate governance practice but also potentially exerting

influence on the firm to support large share owner interests over those of small share owners. Therefore, the firm's board should consider the effect of institutional ownership on their corporate governance and dividend policies. In particular, firms should ensure that their dividend policies are supporting the needs of both large and small shareholders. The third recommendation is the corporate governance mechanism that the number of committees could affect positive direction of quality of earnings due to committees' different working experience and capability. The greater number of committees become, the more effective and better decision would appear as their varieties of working experience and capability could aid them see a road map or any effects on making more effective decision in management. According to good practice, 5-12 committees might not suitable for every company as the research's results are reported that some companies have more than 12 committees. In addition, it is revealed that the more quantities of committees are, the better earnings quality become. Therefore, any companies involving with corporate governance should review suitable number of committees by probably considering the size of company. However, it also depends on types of business. The fourth recommendation is about the company that arranges audit committee meeting frequently will have enough time to investigate the use of resources for the highest benefits to organization. It is also likely to be the factor to control the profit management so the performance report reflects the profit quality. Thus, the audit committee should be organized at least 4 times a year. The final recommendation is that firms should control their CEO compensation, CEO compensation which is an expense paid to the Chairman and Executive Committee affecting the profit quality directly and indirectly. Moreover, it affects dividend payment. Thus, good corporate governance should focus on the increasing CEO compensation. Company should employ experienced and capable CEO who can apply business proficiency to administration for the growth of the business efficiently and the decrease of conflict of interest. Hence, if the organization needs higher quality of performance and financial report, CEO compensation will increase also.

5.3.2 Future Research

There are other measures of earnings quality that were not applied in our study. The measurements are such as audit committee quality, financial structure, investment opportunities, earnings response coefficient and timeliness. In addition, the future studies should increase qualitatively analysis for earnings quality. For example, it could be conducted by evaluating the effects of the accounting policies used by the businesses on the earnings quality or the expenses as considered by the business management. Also, the future studies should have longer period that the current study for examining the earnings quality in order to see the trends of the earnings quality of the businesses. Plus, the future studies should further study about suitable numbers of audit committees for different sizes of companies. Moreover, the future studies may generalize the findings. For example, the investors may be categorized into local and foreign holding companies. The financial companies including commercial banks, stock companies and insurance companies registered in SET may be examined because the financial budget preparations and business characteristics of the mentioned group are obviously different from other groups registered in SET and not clearly categorized. This is because most financial budgets of this mentioned group cannot clearly show its operations or be compared to the international earnings quality. Besides, evaluating the earnings quality with Sloan (1996)'s technique could only analyze the initial earning quality, so the decisions of the data users must rely on other factors such as cooperate policy and economical effect. Ultimately, the further study must investigate the characteristics of other dividends that are not cash dividend such as stock dividend.

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Biography

Name – Surname	Mrs. Sukritta Burinwattana
Date of Birth	January 14, 1978
Address	Faculty of Management Science, Nakhonratchasima Rajabhat University,30000
Education	Master Degree in Accounting (M.Acc.), (2005)
Experience Work	Lecturer, Accounting Department, Faculty of Management Science, Nakhonratchasima Rajabhat University, (2005 – present)
Telephone Number	09-5159-2956
Email Address	supa_burin@yahoo.com

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.

I give consent to this copy of my dissertation, when deposited in the university library, being available for loan and photocopying.

Sukritta Burinwattana