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CHAPTER 1: ORIENTATION

1.1 Introduction

Corporate governance has been a hot bed for scholars from diverse disciplines (Hambrick, et al., 2008). In the 18th century the famous economist prophesised the inevitable conflicts of interests between shareholders and managers of modern corporations (Smith, 1776). Adam Smith (1776) in his book ‘the wealth of nations’ warned that managers may lack the incentives to act in the interest of shareholders as managers control “*rather of other people’s money than of their own*”. Later Berle and Means (1932) emphasized the adverse effect of dispersed ownership on performance and proposed ownership concentration to remedy the problem. Since then particularly over the past few decades, the issue of agency problem in publicly held corporations has attracted scholars from various academic fields (Hambrick, et al., 2008). In the 20th century, Jensen and Meckling (1976) formalized the the agency problems that occur as shareholders of a corporation (principals) delegate a manager (agent) to perform tasks on their behalf. Agency problems occur due to the lack of incentives on the side of the manager (Shleifer and Vishny, 1997) that opens rooms for managerial misbehaviour and the expropriation of shareholder wealth (Jensen and Meckling, 1976; Fama and Jensen, 1983a). Managers whose interests are not congruent with that of shareholders’ do not have the incentive to maximize shareholder value. In this context, managers exercise their discretion on company resources in the form of higher managerial compensation and spending on perquisites, investing on inefficient projects, and even staying on the job without qualification (Eisenhardt, 1989; Shleifer and Vishny, 1997).

Corporate governance provides managers the incentive to strive for higher shareholders' wealth (Jensen and Meckling, 1976; Fama, 1980). It deals with the mechanisms by which investors of a widely held corporation assure themselves of getting a return from their invested capital (Shleifer and Vishny, 1997). The Organization for Economic Cooperation and Development, hereafter OECD explains that corporate governance specifies the distribution of rights and responsibilities among parties to a corporation such as managers, directors and shareholders in a way that sound objectives are developed and progress and performances are monitored (OECD, 2004a). Corporate governance has legal and economic as well as micro and macro aspects. Capital markets (Fama, 1980; Fama and Jensen, 1983a), ownership concentration (La Porta, et al., 1999; Holderness, 2003), the board of directors (Fama, 1980; Fama and Jensen, 1983a), managerial ownership (Jensen and Meckling, 1976; Agrawal and Knoeber, 2012) and strong legal and regulatory systems (Shleifer and Vishny, 1997; La Porta, et al., 1997) are prominent corporate governance mechanisms. These are a "bundle of governance mechanisms" (Rediker and Seth, 1995) instituted to limit managerial discretion and make them behave in the interests of shareholders for profit maximization. Following accounting scandals in major companies (Enron, WorldCom and Tyco), several corporate governance regulations have been adopted to be applied by public companies (Agrawal and Chadha, 2005). In the U.S. the Sarbanes-Oxley act, the NYSE, NASDAQ and AMEX emerged in response to corporate scandals.

There is much evidence on the significance of corporate governance both at firm and national levels. The Centre for International Private Enterprise, hereafter CIPE explains how corporate governance affects corruption. By demanding appropriate disclosure and

transparency of company transactions, good corporate governance blocks the supply side of corruption that would drain company resources (CIPE, 2002). Good corporate governance allows companies to access finance at lower costs (Klapper and Love, 2002). Corporate governance affects the financial viability of companies. Good corporate governance requires managers and boards to devise sound strategies that help attract external finance at favourable terms and enhance company performance (Daily and Dalton, 1994; CIPE, 2002). National level evidences show that countries with good corporate governance regimes are associated with high entrepreneurial growth and better economic development (Claessens, 2003; OECD, 2004a), large financial markets (La Porta, et al., 1997) and low corruption rate (Wu, 2005).

Agency theory is a predominantly used framework in corporate governance research (Shleifer and Vishny, 1997). Scholars using this framework prescribe different corporate governance mechanisms for companies. Their general premise is that corporate governance mechanisms are universal and one size fits all (Black, et al., 2010). Studies thus demonstrate that these governance mechanisms individually or collectively predict higher firm performance (Zajac and Westphal, 1994; Li and Simerly, 1998). Organizational theory maintains that it is not possible to reduce the conflict of interests in modern corporations to the principal-agent relationship (Mintzberg, 1984), as all external shareholders may not have similar interests (Drucker, 1988; Vickers and Yarrow, 1988). The theory suggests that the choice of organizational forms should depend on factors both internal and external to a firm (Burns and Stalker, 1961; Lawrence and Lorsch, 1967). Several researchers accept this context driven argument (Himmelberg, et al., 1999; Demsetz and Lehn, 1985; Bhagat, et al.,

2008; (Klapper and Love, 2002); Nelson, 1991). Diversities of corporate governance mechanisms across countries (Klapper and Love, 2002; Black, et al., 2010; Lins, 2003) and even across firms within a country (Himmelberg, et al., 1999; Black, et al., 2010) explain the varieties of governance choices that companies make (Nelson, 1991). This context dependent assumption has implications for organization studies. Organizational scholars argue that performance is contingent on the fit between corporate governance and firm characteristics (Black, et al., 2010; Li and Simerly, 1998; Thomsen and Pedersen, 2000). This line of thinking has recently become the new direction for corporate governance literature (Boyd, et al., 2012).

This thesis is written to clarify these controversies surrounding the literature as well as many other issues. There is limited evidence on how African companies are governed and how this affects their performance. Most of the information we have about corporate governance comes from developed economies. Research is required to explain the implications of global evidence to African companies that have been aliens to modern corporate culture. Particularly, the Ethiopian context creates much interest. It has the lowest rated investor protection regime, no formal corporate governance institutions, the weakest corporate governance enforcement and no formally organized stock market.

The study builds on the advice of Eisenhardt (1989) and Burton (2000) who suggest complementing the perspectives of agency theory and organizational theory. It has two main arguments: (1) organizational contingencies affect the level of use of corporate governance mechanisms and (2) the effect of corporate governance mechanisms on performance depends on contingency factors. Specifically, we need to examine how uncertainty, firm growth, and

owner identity influence corporate governance choice and how the choices explain performance variances across firms. This line of inquiry adds to the knowledge we already have by augmenting traditional corporate governance researches with contingency perspectives from the field of organizational perspectives (Boyd, et al., 2012; Thomsen and Pedersen, 2000). Moreover extending corporate governance researches to developing countries such as Ethiopia which do not have capital market may set the boundaries of the commonly used agency theory with new insights. Therefore explaining the antecedents and consequences of corporate governance opens new avenue for research (Hambrick, et al., 2008). The purpose of this thesis is to examine how firm level contingencies (firm growth, firm risk and owner identity) influence corporate governance choice and how firm level contingencies moderate the relationship between corporate governance and firm financial performance.

1.2 Problem Statement

Since the classical work of Berle and Means (1932), there have been many theoretical and empirical studies on agency problems and the remedy, corporate governance. The agency problem occurs due to the separation of ‘ownership and control’ (Shleifer and Vishny, 1997) between shareholders of a corporation (principal) and the manager who is delegated by the shareholders (Agent) to perform tasks on their behalf. The principals require maximum return from their invested capital and the manager is responsible to behave in the interests of shareholders for maximum company performance. Nevertheless, the manager may be reluctant to achieve maximum company performance as the benefits belong to shareholders

while costs are born by the manager. Corporate governance deals with making the manager to behave in the interest of shareholders for higher return.

Although the agency perspective is an often used framework in corporate governance studies (Shleifer and Vishny, 1997), researchers from organizational perspectives have contributed new insights to the issue (Burton, 2000). Both perspectives recognize the presence of self-interest, information asymmetry and risk aversion in modern corporations (Eisenhardt, 1989). Both assume self-interested and opportunistic managers and emphasise that corporate governance is a remedy to align the interests of shareholders and managers. Given such similarities, one would expect that the perspectives unequivocally predict positive association between corporate governance and company performance. Higher return is what corporate governance ultimately assures of shareholders (Shleifer and Vishny, 1997).

However, the agency and organizational perspectives have subtle differences on the nature of corporations, corporate governance and the governance-performance link. Agency theory implicitly assumes corporations as arenas of the principal-agent conflict. This implies that an examination of modern corporations should focus on the theory's dichotomous view. Organizational scholars recognize the complexity of influences in corporations which are difficult to reduce to dichotomy (Mintzberg, 1984; Drucker, 1988; Vickers and Yarrow, 1988). Agency theory researchers believe that modern corporations are victims of inherent conflict of interest, thus all should adopt equal level of corporate governance (Zajac and Westphal, 1994; Aguilera, et al., 2007). Under this condition, corporate governance would have a positive effect on firm performance. On the other hand, organizational perspectives maintain that firms differ in their adopted corporate governance level depending on the

environmental contingencies in which they operate (Holderness, 2003). Consequently, company performance depends on the degree of fitness or congruence between contingency factors and the adopted corporate governance (Burns and Stalker, 1961; Galbraith, 1973). While the corporate governance conceptions of agency and organizational perspective seem to be contradictory, they are in fact complementary. Corporate governance researchers have developed such contingency models to reflect the complementarities of the agency and organizational perspectives (Finkelstein and D'Aveni, 1994). The objective of this study is to integrate the two perspectives into a single framework. Specifically, the study tries to demonstrate the complementarities of the agency and organizational perspectives by examining how firm level contingencies influence adopted level of corporate governance and how fitness or congruence between corporate governance and firm contingencies in turn influence firm performance.

The agency perspective allows us to identify corporate governance mechanisms that constrain managerial discretion and make them act for higher company performance. Proponents of the agency perspective have suggested that the board of directors (Fama, 1980; Fama and Jensen, 1983a), managerial ownership (Jensen and Meckling, 1976), ownership concentration (Shleifer and Vishny, 1997) and appropriate disclosure and transparency (Abrahamson and Park, 1994) are relevant corporate governance mechanisms. The organizational perspective complements the agency perspective by recognizing firm difference in level of corporate governance. Proponents of organisation perspectives argue that adoption of corporate governance mechanisms depends on environmental contingencies within which firms operate (Klapper and Love, 2002). The central idea of organizational

researchers is that firms operating in different contracting environments differ in their level of agency problems thus calling for contingent corporate governance (Demsetz and Lehn, 1985; Himmelberg, et al., 1999; Klapper and Love, 2002). Empirical studies have reported that contingency factors at industry level (Demsetz and Lehn, 1985; Himmelberg, et al., 1999) and firm level (Demsetz and Lehn, 1985; Finkelstein and D'Aveni, 1994; Alves and Martins, 2010) influence the level of adoption of corporate governance. At the firm level the level of agency problems is affected by firm growth (Bathala and Rao, 1995; Himmelberg, et al., 1999), firm risk (Demsetz and Lehn, 1985; Bathala and Rao, 1995), identity of the largest owner (Abrahamson and Park, 1994; Holderness, 2003) and asset composition (Klapper and Love, 2002; Alves and Martins, 2010).

The link between corporate governance and firm performance is another dimension that the agency and organizational perspectives appear to have different predictions. In the tradition of agency theory, firm performance is a direct function of corporate governance (Jensen and Meckling, 1976). Nevertheless, organizational scholars argue that performance is a function of the level of fit between chosen structural forms and environmental contingencies that influence those choices (Burns and Stalker, 1961; Boyd, et al., 2012). The implication is that the form and strength of relationship between an independent variable on a dependent variable is moderated by another variable (Venkatraman and Prescott, 1990; Schoonhoven, 1981). Corporate governance researchers have obtained that the effect of corporate governance on firm performance is moderated by firm growth (Black, et al., 2010), firm risk (Li and Simerly, 1998) and identity of large owners (Thomsen and Pedersen, 2000). In summary, this thesis proposes that organizational perspectives can complement agency

theory's traditional conceptions of corporate governance in such a way that additional insights can be obtained.

Empirical Corporate governance studies can be categorized on how they put corporate governance in their analysis. Studies on antecedents of corporate governance identify firm and environmental contingencies that could affect firm level corporate governance mechanisms. Relevant contingency factors considered as antecedents of corporate governance are firm growth (Bathala and Rao, 1995), Firm risk (Zajac and Westphal, 1994; Bathala and Rao, 1995; Himmelberg, et al., 1999), firm size (Demsetz and Lehn, 1985; Bathala and Rao, 1995), owner identity (Abrahamson and Park, 1994) and asset composition (Himmelberg, et al., 1999; Klapper and Love, 2002). Other studies explain the effect of some measure of corporate governance on firm performance (Klapper and Love, 2002; Gompers, et al., 2003; Bauer, et al., 2008; Black, et al., 2010). Still others emphasize on how the level of existence of contingency factors moderate the governance-performance relationship.

However few studies have integrated antecedents of corporate governance and the moderating effect of antecedent factors in the corporate governance-performance relationship into a single framework. This approach is commonly known as full contingency model. The central idea of contingency models is corporate governance is enhanced where it is required most (Zajac and Westphal, 1994; Bebczuk, 2005). Finkelstein and D'Aveni (1994) conceptualize and test the conflicting hypothesis of CEO duality suggested by organizational theory and agency theory. Bebczuk (2005) and Black, et al., (2010) indicate that firm growth moderates the relationship between corporate governance and firm

performance. Li and Simerly (1998) hypothesized and empirically tested the moderating effect of environmental dynamism on the managerial ownership-performance relationship. Thomsen and Pedersen (2000) study the moderating effect of owner identity on the governance-performance relationship.

The empirical corporate governance literature has several limitations. Corporate governance encompasses a bundle of mechanisms that should be included in an analysis that otherwise would lead to missing variable bias (Gompers, et al., 2003; Black, et al., 2010). Firm heterogeneity is another problem few studies have addressed (Demsetz and Lehn, 1985; Himmelberg, et al., 1999; Demsetz and Villalonga, 2001; Zajac and Westphal, 1994). Despite addressing the aforementioned limitations, testing moderation hypotheses are the major setback for researchers. This study has the responsibility of taking care of the limitations of previous empirical studies.

The corporate form of organization in Ethiopia is at its infancy stage (Negash, 2008). There is no formal secondary financial market. The share company law is the only corporate governance mechanism in the country and the Ministry of Trade (MoT) is the only entity that regulates and supervises share companies (Negash, 2008). Therefore studies have focused on evaluating the company law based on international corporate governance frameworks.

Most of the studies agree on one thing: the share company law is insufficient to address more pertinent corporate governance provisions. It doesn't address adequately governance issues related to the board of directors (Tura, 2012). Specifically the company law ignores

board dimensions such as the composition and independence of the board of directors, and separation of the jobs of the chair and the CEO. The share company law does not have enough provisions requiring companies to disclose material information especially relative to international standards (Gebeyaw, 2012).

Similar evaluative studies have also unveiled the limitations of the company law. Negash (2008) used the African Peer Review Mechanism (APRM) framework to evaluate the company law and found out that the company law has severe problems related to inadequacy to address complex governance issues, lack of incorporating international codes and principles of corporate governance, high agency cost associated with political party domination in the corporate sector, high ownership concentration and pyramid ownership structure, inefficient legal and court system that creates inadequate investor protection, and lack of organized share market characterize the overall corporate governance system in the country. Gebeyaw (2012) evaluates the Ethiopian share company law on the bases of the six governance principles of the OECD. Compared with international governance standards, the legal and regulatory framework of the share company law is ineffective to promote efficient market.

The only economic analysis study examines the corporate governance of Ethiopian banks and the implications on financial performance (Fanta, et al., 2013). However, the legal and institutional environment within which financial institutions operate is different from that of non-financial institutions. This study focuses on non-financial share companies of Ethiopia.

Although the adoption of relevant international governance mechanisms with the consideration of legal, economic and cultural circumstances of the country has paramount importance to the economic growth of the country (Gebeyaw, 2012; Tura, 2012), it couldn't be realized in the near future. Recognizing the limitations of the share company law to address contemporary market situations the government has been working on a new draft. Recently the government of Ethiopia commits itself to developing the private sector. Moreover, the country is aspiring to attract foreign investment.

Despite insufficient company law and virtually no regulatory systems, Ethiopian share companies are still operating in the market. Moreover, newly established ones are joining the market. Therefore, it can be presumed at this point that Ethiopian share companies consistently adjust their internal corporate governance mechanisms in response to the environment especially to their internal environment within which they operate. Difference in performance of Ethiopian share companies could be to a large extent the result of difference in capacity to adjust their corporate governance mechanisms. Therefore, what determines the corporate governance of Ethiopian share companies, and to what extent does adjustment of corporate governance in response to environmental factors affect corporate performance? Therefore, the objective of this study is to examine the effect of firm level contingencies on corporate governance and examine the moderating impact of firm level contingencies on the relationship between corporate governance and firm financial performance in the Ethiopian non-financial share companies.

1.3 Aim and Objectives

The aims of this study are to examine the effect of firm level contingencies on corporate governance and examine the moderating impact of firm level contingencies on the relationship between corporate governance and firm financial performance in the Ethiopian non-financial share companies. The specific objectives of the study are to explain,

- the effect of firm growth on corporate governance in the Ethiopian non-financial share companies.
- the effect of firm risk on corporate governance in the Ethiopian non-financial share companies.
- the effect of owner identity on corporate governance in the Ethiopian non-financial share companies.
- the effect of corporate governance on firm financial performance in the Ethiopian non-financial share companies.
- the moderating effect of firm growth in the relationship between corporate governance and firm financial performance in the Ethiopian non-financial share companies.
- the moderating effect of firm risk in the relationship between corporate governance and firm financial performance in the Ethiopian non-financial share companies.
- the moderating effect of owner identity in the relationship between corporate governance and firm financial performance in the Ethiopian non-financial share companies.

1.4 Hypotheses

For each of the above specific objectives, testable hypotheses are developed in chapter four.

It should be noted that the aim of this study is to explain what firm level contingencies affect corporate governance and how firm level contingencies moderate the relationship between corporate governance and firm performance. Thus, based on the level of analysis, we can have three groups of hypotheses.

Hypotheses for the impact of firm level contingencies on corporate governance

Firm growth

H1a: The higher the growth opportunities of firms the stronger will be their corporate governance.

H1b: The higher the growth opportunities of firms the weaker will be their corporate governance.

Firm risk

H2a: The higher the risk of firms the stronger will be their corporate governance.

H2b: The higher the risk of firms the weaker will be their corporate governance.

Owner identity

H3a: the impact of owner identity on corporate governance is positive for bank and government ownership relative to management ownership.

H3b: the positive impact of owner identity on corporate governance is greater for bank ownership than government ownership relative to management ownership.

Hypothesis for the impact of corporate governance on firm performance

H4: The effect of corporate governance on firm performance is positive.

Hypotheses for the moderating effect of firm level contingencies on the corporate governance-firm performance relationship.

The moderating effect of Firm growth

H5: The relationship between corporate governance and firm performance is moderated by firm growth. The greater the growth of firms the greater will be the positive influence of corporate governance on firm performance.

The moderating effect of Firm risk

H6: The relationship between corporate governance and firm performance is moderated by firm risk. The greater firm risk the greater will be the positive influence corporate governance on firm performance.

The moderating effect of Owner identity

H7: the relationship between corporate governance and firm performance is moderated by the identity of the largest owner. If the largest owner is bank the greater will be the positive influence of corporate governance on firm performance.

1.5 Rationale

The strong link between corporate governance and economic performance is the main reason that justifies for undertaking this thesis. Studies have indicated that good corporate governance is associated with entrepreneurial growth (La Porta, et al., 1999), high flow of external finance (CIPE , 2002), lower diversion of firm resources and high firm performance

(Shleifer and Vishny, 1997; Gompers, et al., 2003; Klapper and Love, 2002; Bauer, et al., 2008; Claessens, 2003). In fact, the effect of corporate governance is systemic. For example, a cross-country study shows that countries with poor legal rule and weaker law enforcement do have smaller and narrower capital markets (both equity and debt) (La Porta, et al., 1997; Claessens, 2003). The OECD (2004a) notes that;

.....

“If countries are to reap the full benefits of the global capital market, and if they are to attract long-term “patient” capital, corporate governance arrangements must be credible, well understood across borders and adhere to internationally accepted principles. Even if corporations do not rely primarily on foreign sources of capital, adherences to good corporate governance practices will help improve the confidence of domestic investors, reduce the cost of capital, underpin the good functioning of financial markets, and ultimately induce more stable sources of financing.”

.....

The forth-going discussion briefly highlights the significance of corporate governance to economic development at a national level. The question should be what role the findings of this thesis can play. Obviously, the role of this thesis is to inform policy makers and other stakeholders on the benefits of corporate governance on economic performance both at a company and country level. As Bebczuk (2005) comments, even in the absence of financial markets in a country, companies may be encouraged to strengthen their governance mechanisms if findings show a positive link between corporate governance and firm

financial performance. This initiative addresses only the private issue of economic institutions. The idea can be extended to the broader policy. Financial markets do not exist in Ethiopia and corporate governance institutions and standards are virtually absent. Therefore, the agency and information problems examined in the developed markets can have also implication in a market that is shy to much of the realities in developed markets. (Gebeyaw, 2012) mentions several weaknesses of the Ethiopia share company law to address corporate issues in accordance with international best practices. Thus, findings of the study have important implications to the legal issues of corporate governance. Corporate governance is a public issue as well that minority shareholders need to be legally protected from the expropriation of insiders and large shareholders (Bebczuk, 2005). Obviously, this is the task of authorities. There has been a tremendous effort by scholars and researchers to studying corporate governance and its effect on corporate decisions and performance. In comparison with the benefits of good governance to financial stability, capital market development and investment promotion the attentions given to the field is not enough. It is disturbing to observe the lack of concern by researchers as well as lawmakers to the creation and enhancement of corporate governance culture in Ethiopia. Ethiopia is a civil law affiliated country. Its legal system is one of the weakest to protecting shareholders (La Porta, et al., 1997). Owing to its weak institutions both legal and financial, managers may expropriate the benefits of minority shareholders, as there are no external mechanisms that discipline managers (Cornelius, 2005). The weak legal framework allows managers to pursue their interest at the expense of shareholders (Gebeyaw, 2012). In the absence of capital markets, especially stock markets potential employers may not know the performance of managers

and hence managers may not have the incentive to exert their efforts to maximize the wealth of shareholders. In these contexts, corporate governance interventions assures the viability of businesses (Daily and Dalton, 1994). In fact, studies show that corporate governance benefits those companies that operate in countries with weak governance institutions (Klapper and Love, 2002; Cornelius, 2005). Although there are fragmented studies on the legal issues of corporate governance in Ethiopia (Negash, 2008; Fekadu, 2010), economic analysis of the field is virtually absent.

Recently there have been initiatives by the business community and other stakeholders to influence the government of Ethiopia to establish necessary corporate governance regulations and institutions. This movement has already started recruiting voluntary companies to implement a standard corporate governance code that has been under development and has not been completed to date. The timing of this thesis is so perfect that findings could help identify appropriate corporate governance mechanisms and the type of companies that could benefit from a given mix. Literature has reminded us that unless supported by valid empirical information the adoption of any corporate governance mechanism would result in either poor implementation due to resistance or poor performance due to incongruence between firm level contingencies and adopted corporate governance mechanism.

The absence of formal financial market in the country is a unique context to address corporate governance. Significant number of studies has focused on developed nations or have addressed the issue of corporate governance in the context of secondary financial markets. Even though these studies have informed us a lot about the issue, there is no

guarantee that the findings would also apply to other contexts especially developing nations that do not have secondary financial markets. Therefore, information on the corporate governance of Ethiopian companies could add something to our knowledge about corporate governance.

The nature of ownership structure in Ethiopia is another area worth investigation. In addition to the issue of concentrated vs. dispersed ownership structure, the identity of the largest shareholder has recently been the focus of much theoretical and empirical inquiry.

1.6 Delineation of field and Scope of the Study

Corporate governance is a multidisciplinary issue that can be explained by political theory, legal theory, sociology, management, psychology, economics, and accounting and finance. Over the past few decades, the issue of agency problem in publicly held corporations has attracted scholars from various academic fields (Hambrick et al., 2008). This study addresses the broader fields of economic and organizational theories. Nevertheless, the legal and regulatory institutional environment of Ethiopia is also addressed as economic analysis could be impossible or at least incomplete without a clear understanding of the macro-level factors underling corporate governance. The scope of the study can be defined in cross sectional and temporal dimensions. The population of the study is non-financial share companies of Ethiopia. That is financial companies such as banks and insurance companies are not included in the study. This is because we do not expect both financial and non-financial firms to operate in similar legal frameworks. Theoretically, these companies raise capital by selling stocks (ownership shares) to the public. For econometrics reasons, companies that have been operating since 2009 are considered.

1.7 Importance of the Study

The thesis contributes to the corporate governance literature in three ways. *First*, a unique hand collected corporate governance index is constructed for Ethiopian non-financial corporations and related to firm performance. Previous works have studied the institutions and legal framework that shape the corporate governance of Ethiopia at country level (WGI, 2010) or simply evaluate only the legal aspect of corporate governance (Williamson, 1975). Findings from these studies indicate that Ethiopia has weak regulatory and legal system. There have been conflicting propositions about the relationship between institutional systems and firm level corporate governance. On one hand, firms embedded in weak institutional systems are not expected to adopt good corporate governance as courts and investors do not understand the added governance features when conflicts among members of the firm arise (Klapper and Love, 2002). On the contrary, other scholars claim that investors are willing to pay a premium price if firms in weak institutional systems augment the weak system with better corporate governance. The legal and regulatory systems in Ethiopia are too weak to protect shareholders from managerial abuse (Fekadu, 2010; Negash, 2008). In this respect, this study contributes also to practice. In less developed markets, a clear understanding of corporate governance is a prerequisite to initiate major institutional change (Shleifer and Vishny, 1997). Additionally, Good corporate governance assures the growth of entrepreneurship (La Porta, et al., 1997; La Porta, et al., 1999), high flow of external finance, low diversion of firm resources and higher firm performance (Shleifer and Vishny, 1997) and reduces corruption (Wu, 2005). Therefore, the thesis contributes to the literature by providing new evidence on the corporate governance of Ethiopia.

Second, the thesis contributes to the corporate governance literature by identifying relevant firm level contingencies that affect the level of adoption of corporate governance. Corporate governance researches traditionally assume that the separation of ownership and control demand mechanisms to constrain managerial discretion (Shleifer and Vishny, 1997; Eisenhardt, 1989). This approach considers all corporations as targets of such control mechanisms irrespective of differences in characteristics. Literature however reminds us that firms have the discretions to choose their mode of governance (Demsetz and Villalonga, 2001; Klapper and Love, 2002; Himmelberg, et al., 1999; Demsetz and Lehn, 1985; Li and Simerly, 1998). Literature also reminds us that large investors not only constrain managerial discretion but also may have the incentive to expropriate minority shareholders (Thomsen and Pedersen, 2000). Germane to this objective is firms choose their corporate governance in response to the specificity of their characteristics. Apart from observed firm level contingencies, this thesis shows that unobserved firm heterogeneity affect both corporate governance and firm performance.

Third, Contrary to agency theory's assumption that the link between corporate governance and firm performance is context free, this study provides evidence that factors in the contracting environment of firms' are important moderating contingencies for the relationship. Since firms choose governance mechanism endogenous to their characteristics, performance should depend on the level of fit between the chosen governance mechanism and firm level contingencies (Schoonhoven, 1981; Venkatraman and Prescott, 1990). Recently the argument has gained prominence in the corporate governance literature. Proponents maintain that the benefit of using corporate governance mechanisms is higher in

situation where greater agency problem is more likely (Zajac and Westphal, 1994). This thesis contributes to the literature by drawing insights from organizational perspective that states firm level contingencies-corporate governance alignment positively influences firm performance (Burton, 2000; Boyd, et al., 2012; Thomsen and Pedersen, 2000). Except Few studies (Black, et al., 2010; Li and Simerly, 1998; Thomsen and Pedersen, 2000), the literature provides scarce evidence on the link between corporate governance and firm performance.

1.8 Limitations of the study

Although this study is a result of relentless effort and enthusiasm, it may have some limitations. The major one relates to sample selection. In the corporate governance literature, selecting sample based on specified period and data availability is a common approach (Yermack, 1996). This study follows the literature and selects companies that have been operating for at least five years. It requires identifying companies that started operation before or in 2009 (2013 being the last year). Further, we excluded companies with insufficient data and end up with a usable sample of 42 companies. This has two consequences. First, companies that commence operation before or on 2009 may have quit before 2013. This reduced the number of observations that may have significant effect on results obtained on the remaining companies. The problem is severe if excluded companies have different corporate governance systems and financial performance. For instance, the excluded companies had bad governance systems that led them to underperform or even to bankruptcy (Daily and Dalton, 1994). Second, young companies that commence operation later than 2009 are also excluded from the sample. A similar selection bias would exist if

these companies had different corporate governance or performance. In this context, the results of the study would have been different if young companies were included. Nevertheless, we do not have such evidence. The best we can do is to investigate the effect of the two cases of selection biases is showing if governance and performance have some kind of distribution pattern. As discussed in the methodology chapter, the distribution of the variables does not indicate the presence of sample selection bias. Still, there is some chance for the presence of the problem.

1.9 Study Environment

In the last three decades there has been fewer topics placed in the international business and development agenda than corporate governance. Business failures, financial crisis and high profile scandals across the world have brought corporate governance to top priority of developing countries (CIPE , 2002). Despite much theoretical and empirical evidence on the links between corporate governance and economic development the issue has been alien to the African continent (Negash, 2008). The limited evidence in the continent has led scholars and practitioners to hold a generalist view observed from their corporate governance reform recommendations based on evidences obtained from developed markets (CIPE , 2002).

Ayogu (2001) undertakes a survey of corporate governance for listed companies of Botswana, Egypt, Ghana, Kenya, Mauritius, Namibia, Nigeria, South Africa, Swaziland, Zambia and Zimbabwe. The survey employs global corporate governance indicators such as board size composition executive compensation, succession planning, committee structure, and accounting standards. Nganga, et al. (2003) survey legal systems effectiveness across

Botswana, Egypt, Ghana, Mauritius, Morocco, Nigeria, Tunisia and Zimbabwe. They conclude that shareholders of Africa enjoy similar rights as in other emerging markets do.

1.9.1 Corporate governance in Ethiopia

1.9.1.1 Legal and regulatory institutions

Share company is new to Ethiopia (Negash, 2008). It was in 1960 that the current commercial code adopted from the French commercial code. The share company law is a part of this commercial code. However recognizing its inadequacy to address contemporary market situations the government has been working on a new draft and it has not been completed at the time of writing on this dissertation. Therefore, this review section focuses on the legal framework of the 1960 commercial code of Ethiopia and the institutions related to it. The Ministry of Trade is the only entity that regulates and supervises share companies (Negash, 2008). Gebeyaw (2012) evaluates the Ethiopian share company law on the bases of the six governance principles of the OECD. He concludes that the legal and regulatory framework of the share company law is ineffective to promote efficient market and could even alienate investors. Similarly, Tura (2012) examines the legal framework that governs companies. He reports the inadequacy of the legal framework to specify clearly the roles, composition and remuneration of boards of directors. Specifically, there is no legal provision for the need for independent directors. Moreover, the duties of executive directors is not clearly delineated from non-executive directors. Gebeyaw (2012) and Tura (2012) recommend for the adoption of relevant international governance mechanisms with the consideration of legal, economic and cultural circumstances of the country.

1.9.1.2 Corporate governance structure

a. Shareholder rights

Shareholder rights are one of the fundamental elements of good corporate governance (Claessens, 2003). Shareholders have the right to demand relevant information regarding the operation and governance of their company (arts 406, 417, 422 and 427).¹ Shareholders have also the right to vote in shareholders' meeting (art 407). Shareholders can exercise their voting rights on matters related to approval or removal of directors and auditors, approval or rejection of directors' and auditors' reports, authorization or prohibition of directors' involvement with competing companies, invoking legal suits against directors, approving or rejection of resolutions passed by the general meeting etc. (arts 353(1) 355, 356 372, and 419(2)). There are however some exceptions. For example, a shareholder may not vote when his interest conflicts with the company's and preferred shareholders are allowed to vote only in extraordinary meetings (336(3)). Other shareholder rights include the right to get their share in company profit (art 345 (1 and 2)), the preferential right to buy new shares in proportion to their shareholdings (art 470), the right to transfer their shares unless restricted by the article of association or extraordinary meetings (art 333), and the right to withdraw from the company (art 463).

b. Ownership structure

Shares may have different classes i.e. preferred and ordinary (art 335). In cases of misconduct, shareholders cannot sue insiders and majority holders (Gebeyaw, 2012). The

¹ Art(s) refer to article(s) in the company law section of the commercial code of Ethiopia.

powers of shareholder concentration are indicated in the share company law. Shareholders owning not less than 10% of the shares can call shareholders general meetings (art 391(2)) and can demand the ministry of trade reduce board remuneration (art 353(7)). Shareholders owning 20% of the shares can appoint one auditor (art 368(2)).

c. Board structure

The board of directors are elected to serve for three years. Unless prohibited by the company's laws, a board member is eligible for re-election (art 350 and 354). The law requires the size of the board to be between 3 and 12 (art 347). Related to board composition, all board members should be shareholders of the company. Even though the general manager is an employee, the article of association may require directors to be managers of the company (art 348 and 363(2)). Tura, (2012) comment that the share company law does not clearly specify the role and structure of the board. There is no clear legal provision stating the need for independent board of directors and the delineation of the duties of executive directors from the non-executive directors. In one hand, the fact that the general manager is an employee of the company and may not be board member requires all board members to be non-executives. On the other hand if the article of association may specify that one or more of the board members can be managers, implies that the board may include at least one executive member. CEO-duality, which refers to whether the positions of the general manager of a firm and the chair of the board are held by different persons, is not clearly indicated in the company law.

d. Disclosure and transparency

Theoretically, law requires share companies to publish identity, address and shareholding of each owner in the official and commercial news paper (art 392(1)). In actual situations, no single share company discloses financial statements and other relevant information on its website and other public media. The shareholders as well as the financial performances of many of Ethiopian share companies are not known by the public (Negash, 2008). The share company law does not have enough provisions requiring companies to disclose material information especially relative to international standards (Gebeyaw, 2012). Gebeyaw (2012) note that the share company law is incapable of addressing the minimum standard of disclosure of relevant information. Balance sheet and income statements are only submitted to the ministry of trade and are not accessible for the general public. Studies show that disclosure of financial statements explain difference in performance of companies (Bauer, et al., 2008). Share company law allows companies to issue bearer shares (art 325) that provides anonymous owners the opportunity to be shareholders. This could result in low transparency and disclosure and may lead insiders to misuse company resources. The share company law does not have provisions for mandatory disclosure and transparency standards (Gebeyaw, 2012). The law does not clearly state whether financial statements need to be prepared in accordance with international standards (art 446 and 448). It has been reported that poor transparency and disclosure increases a country's financial volatility as external stakeholders do not have adequate information to analyze firms while insiders can have this limited information and engage in transactions that benefits only them (Claessens, 2003).

Table 1: Comparison of corporate governance in Ethiopia and developed nations

Governance mechanisms	Developed nations	Ethiopia
Internal mechanisms		
Ownership structure	Dispersed	Concentrated
Shareholder type	Institutional investors	Management, government and political parties.
Board of directors	Can include non-shareholders.	Are elected from shareholders.
Disclosure and transparency	Good	Weak or virtually absent
External mechanisms		
Legal framework	Good legal framework and enforcement, enough protection of shareholders.	Weak legal framework and enforcement, weak protection of shareholders.
Other external mechanisms	Product, financial and managerial labour markets.	No such disciplining mechanisms.
Corporate governance culture	Strong	Very weak or virtually absent.

1.9.1.3 Previous studies on Ethiopian corporate governance

Negash (2008) undertakes a qualitative study of the corporate governance of Ethiopia using the APRM questionnaire.² APRM was aimed at enhancing the quality of governance in Africa and corporate governance was one of the themes. The study reports frustrating corporate governance environment. Inadequacy to address complex governance issues, lack of incorporating international codes and principles of corporate governance, high agency cost associated with political party domination in the corporate sector, high ownership concentration and pyramid ownership structure, inefficient legal and court system that

² APRM refers to the African Peer Review Mechanism adopted by the African Union on the 9th of 2003 (Negash, 2008)

creates inadequate investor protection, and lack of organized share market characterize the overall corporate governance system in the country. The author recommends that in the absence of market mechanisms to discipline managers, internal corporate governance should fill the gap. Klapper and Love (2002) also argue that internal corporate governance is strong in countries with weak legal and regulatory systems. If this proposition works in Ethiopia, we should find a systematic voluntary adoption of corporate governance mechanisms. Gebeyaw (2012) evaluates the Ethiopian share company law on the bases of the six governance principles of the OECD. Compared with international governance standards, the legal and regulatory framework of the share company law is ineffective to promote efficient market. Similarly, Tura (2012) examines the legal framework that governs companies and reports the inadequacy of the legal framework to specify clearly the roles, composition and remuneration of boards of directors. Specifically, there is no legal provision for the need for independent directors. Moreover, the duties of executive directors is not clearly delineated from non-executive directors. Both Gebeyaw (2012) and Tura (2012) recommend for the adoption of relevant international governance mechanisms taking the country's legal, economic and cultural circumstances. The above studies explore the legal aspects, which draws on the socially desirable implications of corporate governance (Hambrick, et al., 2008). The only economic analysis study examines the corporate governance of Ethiopian banks and the implications on financial performance (Fanta, et al., 2013). However, the legal and institutional environment within which financial institutions operate is different from that of non-financial institutions. In fact, the study explains that weak legal environment, poor investor protection, low level corporate governance awareness and the absence of

financial markets have had adverse effect on corporate governance and performance of Ethiopian banks.

1.10 Clarification of Concepts and Constructs

- Agency theory (perspective): an economic theory that emphasises the separation of ownership (financing) and control (management) in modern share companies. Agency theorists believe that managers are self-serving, opportunistic and are more likely to expropriate shareholder money. The theory suggests mechanisms to monitor managers and align their interests with that of shareholders'. Consequently, firms that institute good corporate governance are expected to have high performance.
- Organizational theory (perspective): paradigms including organizational contingency, resource dependence, organizational economics.
- Corporate governance: legal and economic institutions established at both micro and macro levels.
- Internal corporate governance: mechanisms rationally established by a firm to regulate relationships among members.
- External corporate governance: refer to legal and economic institutions established outside firms. This may include corporate governance principles, rules and regulations, courts, markets such as financial, labour and product markets, associations etc.
- Measures of corporate governance: numerical values that indicate the quality of corporate governance.
- Single measure of corporate governance: corporate governance measure that focus on a specific aspect: single measures may consider an aspect of board of directors or ownership structure.
- Board size: the number of directors a board has.
- CEO duality: refers to whether the positions of the CEO and board chair are held by one person.

- Proportion of outside/inside directors: the proportion of non-executive/executive directors in a board relative to total number of directors.
- Board ownership: the proportion of firm shares owned by directors.
- Ownership concentration: the cumulative proportion of firm shares owned by a particular group of shareholder, e.g. ownership by the largest shareholder, the top five shareholders, top 10 shareholders or by all executives of a firm.
- Owner identity: refers to who a particular shareholder is. For instance, identity may refer to a board member, other company, bank, government etc.
- Corporate governance index: a composite score constructed from multiple corporate governance indicators such as board characteristics, ownership structure and disclosure and transparency. Various combinations of aspects of governance indicators can be formed.
- CGIETH: refers to Corporate Governance Index for Ethiopia. The index is constructed from board characteristics, ownership structure and disclosure and transparency. Board characteristics includes, board size, board composition, CEO duality, and board ownership. Ownership structure includes ownership concentration of top outside shareholders, dummy indicators of whether a minimum of 10% of shares is owned by the CEO, outside shareholder or other directors. Disclosure and transparency is measured by dummy indicators of whether a company discloses the identity, ownership etc of all shareholders and directors; financial statements to the public and allowances to directors in its financial statements.
- Firm level contingencies: firm characteristics (firm growth, firm risk, size, leverage, asset composition etc.) that can affect both corporate governance and firm performance.
- Antecedents: refers to firm level contingencies.
- Moderation: a framework that assumes that the effect of an independent variable on a dependent variable is depends on another variable referred as a 'moderator'.

1.11 Plan of the Study

The thesis is organised in to seven chapters. Chapter 1 presents the general orientation of the thesis. In this chapter introduction to the thesis, precise problem statement along with the objectives of the thesis are reported. Chapter 2 discusses the theoretical framework. The chapter provides an integration of the agency and organizational perspectives in to a single framework. The theoretical framework serves as a base from which testable hypotheses are developed later in chapter 4. Chapter 3 reviews relevant literature. The focus of the literature review is on the findings of empirical studies, measurement of variables and analysis methods. The review is organized into major themes. In chapter 4, testable hypotheses are developed based on the theoretical and empirical reviews of chapter 2 and chapter 3 respectively. The methodology of the study is outlined in chapter 5. it addresses issues related to sampling, data collection instruments, variables and their measurement, empirical models, data analysis procedures and robustness checks. Chapter 6 is reserved for the analysis of major findings of the study. Various descriptive and inferential statistics outputs are reported in the chapter. The findings of the study are analysed as appeared in tables and figures but their implications in terms of the literature is maintained for the next chapter. Finally, chapter 7 is for the discussion, conclusions and recommendations. In the discussion section, findings reported in chapter 6 are elaborated in terms of both theoretical and empirical reviews. In the conclusions section of chapter 7, we summarize major findings of the study. Finally, recommendations are provided that may have important implications for both theory and practice.

CHAPTER 2: THEORETICAL FRAMEWORK

2.1 Introduction

This chapter discusses about two theories relevant to the analysis of corporate governance in this thesis. Agency theory has been an often used framework and holds a major part in this chapter and in the thesis as a whole. The framework also incorporates the organizational theory. Different perspectives make up the organizational theory and are mentioned explicitly when necessary. For each theory, we discuss separately on assumptions of a corporation, the central idea of the theory the corporate governance implications of the theory. We then synthesize the theories in to a single framework. Finally, the synthesized framework is depicted with a diagram.

2.2 Agency Theory

Agency theory is an element of the contractual view of the firm (Shleifer and Vishny, 1997) that views the firm as legal machinery established as a nexus for complex contracts among dispersed individuals (Jensen and Ruback, 1983). The pioneers of agency theory have mentioned that shareholders of corporations delegate work to managers that subsequently results agency problems (Berle and Means, 1932). The theory focuses on the contractual relationship between parties in which the owners of a corporation (principals) delegate tasks to another party (the agent) (Jensen and Meckling, 1976). In their influential work, Jensen and Meckling (1976) define agency problem as a contractual relationship in which “one or more persons (principal) engage another person (agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent”. This is commonly known as the ‘separation of ownership and control’ or finance and management (Shleifer and Vishny, 1997). In some circumstances where the contract is not specific about

the principals hold the ‘residual control right’ i.e. decision making rights in cases of unspecified in the contract (Jensen and Meckling, 1976). Principals however are not qualified or informed enough to exercise their residual rights. Managers end up with having higher residual control rights or discretion.

The central issue of agency theory is that due to the separation of control and ownership managers are self-serving and may act contrary to the profit-maximizing interest of principals (Jensen and Meckling, 1976). This is because shareholders desire greater profit while managers do not as profit belongs to the shareholders (Agrawal and Knoeber, 2012). The agency problem manifests itself through various characteristics of inefficiency. Consequences of managerial discretion include resource diversion, transfer pricing, higher managerial compensation and perquisite, managerial entrenchment in which the manager stay on the job without contribution or qualification and value minimizing investments (Eisenhardt, 1989). Corporate governance is about the limits to managerial discretion (Shleifer and Vishny, 1997). Solving the agency problem aligns the interests of managers with that of shareholders, as a result profit increases.

Agency theory has two complementary views regarding the principal-agent contract. The Positive agency theory focuses on identifying situations where there are high principals-agent conflict in large corporations and devise appropriate governance mechanisms to reduce managerial discretion (Eisenhardt, 1989). The principal-agent stream of agency theory on the other hand describes which governance mechanism is efficient and under what different circumstances (Eisenhardt, 1989).

Generally, the concern of agency theory is resolving two problems (Eisenhardt, 1989). first, the agency problem that arises when the goals of the principals and the agent diverge, and the agency problems that arise due to the fact that the principals cannot verify that the agent has appropriate behaviour. Second, the problem of risk sharing in which the principals and the agent may have different attitude towards risk and therefore may prefer different actions. To solve these problems agency theory focuses on identifying the most efficient contract to align the interest of managers with that of the principals' (Eisenhardt, 1989). These are a "bundle of governance mechanisms" (Rediker and Seth, 1995) instituted to limit managerial discretion and make them strive for profit maximization. The efficient contract could be either behaviour oriented (ex ante mechanisms such as salary, various control mechanism) or outcome oriented (market governance). Behavioural contracts are monitoring mechanisms instituted to reduce the ex ante managerial misbehaviour. These monitoring mechanisms include the board of directors (Fama and Jensen, 1983a; Shleifer and Vishny, 1997; Agrawal and Knoeber, 2012), large shareholders (Holderness, 2003; Agrawal and Chadha, 2005; Shleifer and Vishny, 1997) and appropriate disclosure and transparency requirements (Agrawal and Knoeber, 2012). Agency theorists have even emphasised efficient capital market, the product market and managerial labour market as ex post discipline mechanism (Fama, 1980; Fama and Jensen, 1983a). These mechanisms however work if markets are perfect, in the absence of which internal governance mechanisms are indispensable to constrain managerial discretion (Shleifer and Vishny, 1997).

2.3 Organizational theory

The organizational theory considers corporations as a 'coalition of vested interests' (Cyert and March, 1963; Cohen and Cyert, 1973; Pfeffer and Salancik, 1978). This view has two important implications: First, various parties have a vested interest in the modern corporation, Second, the strategies crafted by corporations should be consistent with the power relationships of the parties involved (Zahra, 1996). According to Mintzberg (1984) modern corporations are controlled by a complex set of forces and cannot be reduced to a simple principal-agent relationship. Therefore, organizational studies should incorporate the multiple interests that may affect both firm strategy and firm performance (Thomsen and Pedersen, 2000; Cyert and March, 1963). The presence of individuals with different interests and identities implies conflict of interests and sub goal optimization (Cyert and March, 1963). The organizational viewpoints that the duty of the executive is serving as an agent of the complex relationships in the corporation, constrained by the need to balance the multiple demands of the various interest groups. In the organizational theory, profit as the sole measures of executive effectiveness is equivocal. Organization performance may be measured several criteria (Pfeffer and Salancik, 1978).

The organizational theory asserts the discretionary choices of firms and the subsequent difference in behaviour and performance (Nelson, 1991). Most importantly, the theory strongly focuses on the influence of environmental factors on firm strategy and performance. Since the seminal work of Burns and Stalker (1961), and Lawrence and Lorsch (1967), there has been a long tradition in the organizational literature to explain structural choices of firms as results of contingency factors. The central idea of the theory is that contingency factors

influence structural choice of a firm and the level of fit or congruence between the contingency factor and the structure chosen in turn influences firm performance (Lawrence and Lorsch, 1967; Burns and Stalker, 1961).³ Contingency factors can include environmental (Burns and Stalker, 1961), organizational (Child, 1972), and strategy (Chandler, 1962; Miles and Snow, 1978).

In the corporate governance literature, the organizational view proposes adoption of governance mechanisms based on firm and environmental factors (Finkelstein and D'Aveni, 1994; Zajac and Westphal, 1994) as firm governance is one constituent of firm structure. Nelson elaborates on this,

“structure involves how a firm is organised and governed, and how decisions actually are made and carried out” (Nelson, 1991).

According to organizational scholars, contingencies within the organization and its environment affect the costs and benefits of governance mechanisms (Demsetz and Lehn, 1985; Zajac and Westphal, 1994). Contingencies under which use of a particular governance mechanism is costly tend to reduce the level of the chosen mechanism. On the other hand, contingencies that enhance the benefits of use of a governance mechanism tend to increase the use of the mechanism.

2.4 Synthesizing agency theory and organizational theory

Even though agency theory has been the dominant theoretical framework in the corporate governance literature (Shleifer and Vishny, 1997), scholars have emphasised the significance

³ Contingency theory is just one of the relevant organizational perspectives used in this thesis.

of complementing the theory with other theories. More specifically agency theory has important contributions to organizational study, if complemented with organizational perspectives provides deep insight (Eisenhardt, 1989). Although the corporate governance conceptualization of agency theory and organizational theory seems divergent and conflicting, they provide complementary insights in identifying contingency factors that affect choice and effectiveness of corporate governance.

Agency theory informs us that there is information asymmetry, goal conflict between the principals and agents that leads self-interest to dominate in organizations (Eisenhardt, 1989). However, the theory is not comprehensive enough to explicate the whole picture as it reduces the goal conflict to the manager-shareholders relationship (Thomsen and Pedersen, 2000). The agency model holds that managers and shareholders of corporations are in constant conflict and this leads managers to behave inappropriately to the detriment of shareholders' interest for higher firm profit (Jensen and Meckling, 1976; Fama and Jensen, 1983a). However, organizational theorists depict the modern corporation as melting points of a multitude of interests in which the power relationship among the various coalition groups determine both corporate strategy and performance (Cyert and March, 1963; Cohen and Cyert, 1973).

Agency theory maintains that managers are self-serving (Jensen and Meckling, 1976), and internal governance mechanisms align the interest of manager and shareholder especially when markets are not efficient (Shleifer and Vishny, 1997). Internal governance mechanisms such as the board of directors and reporting systems reveal managerial behaviour and thus reduce moral hazard and adverse selection (Eisenhardt, 1989). However, agency theory is

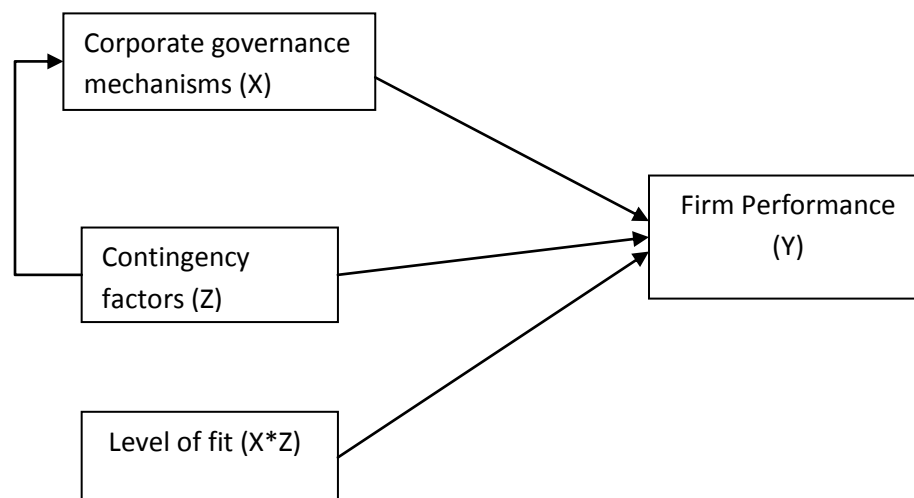
not clear about the situations that influence the level of moral hazard. The agency theory predictions of the corporate governance-firm performance relationships are context free (Burton, 2000). Two implications can be drawn: first, agency theory posits that mechanisms of reducing managerial discretion should always be instituted for all corporations (Eisenhardt, 1989). Second, in agency theory there is always positive relationship between governance mechanisms and firm performance. Organizational scholars suggest that firms differ in behaviour and performance as they discretionally choose their governance structure (Nelson, 1991). Thus, adoption of governance mechanisms should depend on factors both internal and external to a firm (Burns and Stalker, 1961; Lawrence and Lorsch, 1967).⁴ Several researchers from various disciplines have recognised this idea by complementing agency theory with organizational perspectives. They have showed that contingencies at firm level (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001; Himmelberg, et al., 1999; Klapper and Love, 2002), industry level (Demsetz and Lehn, 1985), and even country level (Klapper and Love, 2002) affect choice of governance mechanisms. At the firm level, growth potential (Klapper and Love, 2002; Black, et al., 2010), demand volatility (Demsetz and Lehn, 1985; Himmelberg, et al., 1999; Himmelberg, et al., 1999; Klapper and Love, 2002), firm size (Demsetz and Lehn, 1985), capital structure (Thomsen and Pedersen, 2000), and investment rate (Finkelstein and D'Aveni, 1994; Himmelberg, et al., 1999; Klapper and Love, 2002) are recognized as important contingency factors influencing the choice of governance mechanism. The effect of industry factors on the choice of governance mechanisms is well argued by (Demsetz and Lehn, 1985). Similarly, agency theory's

⁴ *This conceptualization calls for identifying antecedents of corporate governance.*

performance prediction is not valid since the effect of a particular mechanism on firm performance depends on its fit with the firm's internal and external factors (Hambrick and Cannella, 2004).⁵ Contrary to agency theory's assertion that strong monitoring of managers can lead to high firm performance, strategic management attributes firm performance to the level of fit/misfit between corporate governance with firm or/and environment factors (Galbraith, 1973).

The following conceptual model is a synthesis of the agency theory with organizational theory.

Figure 1: A conceptual framework for the antecedents and performance effect of corporate governance.



⁵ This conceptualization calls for examining the moderating effect of firm and environment factors on the corporate governance-firm performance relationship.

2.5 Conclusion

Several theoretical frameworks have tried to address the issue of corporate governance. Agency theory has been the most researched framework. Agency theory views modern corporations as arenas for the divergent interests of managers and shareholders. Managers are assumed to be opportunistic and self-serving. Hence, shareholders need to institute incentive systems and monitoring devices to constrain managerial discretion. Several mechanisms have been suggested. Board characteristics that increase its vigilant, managerial incentives, major ownership stake by non-board shareholder, appropriate disclosure systems have been pronounced as important corporate governance mechanisms. The upshot is that the presence of these mechanisms affects firm performance positively.

Organizational scholars open the black box and define corporations as the “coalitions” of multiple interests. The job of the manager is designing and implementing corporate strategies constrained by the various interests of this coalition. Consistent with economic perspectives, organizational scholars believe in the presence of self-interest in modern corporations. However, they consider firm differences in behaviour and performance. Specifically, the idea that contingencies within the firm and its environment affect the level of governance mechanisms adopted has been emphasised. Such contingencies do not only affect choice of governance but also influences firm performance.

It has been suggested that complementing agency theory with organizational theory contributes a lot to organizational research. Agency theory informs us that instituting appropriate governance mechanisms aligns the manager-shareholder interest and makes the former to work for higher firm performance. Organizational theory complements this idea by

identifying contingency factors that can explain differences in the level of governance mechanisms across firms.

The next chapter reviews the empirical corporate governance literature organized on relevant themes. Detail account of previous researches is provided. The focus of the review is on (1) corporate governance mechanisms; (2) findings of previous studies linking antecedent factors, corporate governance and firm performance; (3) research methodologies such as variables used, variable measurement, and analysis methods.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This chapter presents the literature organized and presented based on major thematic areas. The major focus is the empirical literature. The themes of the review are definition of corporate governance, governance mechanisms of reducing managerial discretion, effect of antecedent factors on corporate governance, effect of corporate governance on firm performance and the moderating effect of firm level contingencies on the corporate governance-firm performance relationship, measuring firm level contingencies, corporate governance and firm performance variables and analysis techniques.

3.2 Definition of corporate governance

Scholars have defined corporate governance on several dimensions. Often corporate governance definition are framed on ‘what it constitutes’, ‘whom it affects’ and ‘its consequences’. Corporate governance can be viewed from investors’ perspectives. Shleifer and Vishny (1997) define corporate governance as “...deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.” Metrick and Ishii (2002) use similar definition, “...the promise to repay a fair return on capital invested and the commitment to operate a firm efficiently given investment”. Mayer (1997) also emphasises that corporate governance aligns the interests of shareholders and managers and assures that companies are operated for the benefit of investors. This definition reflects agency theory’s conception of corporate governance. Regional and international institutions emphasise on the elements of corporate governance and on what it is supposed to accomplish. CIPE (2002) explains that “Corporate governance

is the body of “rules of the game” by which companies are managed internally and supervised by boards of directors, in order to protect the interests and financial stake of shareholders...” Similarly, the OECD (2004a) states that “Corporate governance specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance.”

Corporate governance can also be perceived on the bases of its constituencies and the kind of change interventions. Shleifer and Vishny (1997) suggest that corporate governance structures encompass economic and legal institutions. The Cadbury committee (Cadbury, 1992) defines corporate governance as “the system by which companies are directed and controlled”. Zingales (1995) states a governance system as “the complex set of constraints that shape the ex-post bargaining over the quasi rent registered by the firm”.

These institutions can be altered for the better by appropriate interventions at private and public levels (Bebczuk, 2005). At the private level, change in corporate governance requires the participation of those affected by it. However, major institutional improvement can be achieved at the public level. Corporate governance interventions at this level provide protection to minority shareholders (Bebczuk, 2005).

Alternatively, the consequences of corporate governance can serve to clarify the concept. Researchers have suggested that corporate governance is associated with entrepreneurial

growth (La Porta, et al., 1999), flow of external finance (Shleifer and Vishny, 1997) and financial market development (La Porta, et al., 1997). Metrick and Ishii (2002) and (Klapper and Love, 2002) argue that corporate governance benefits firms operating in weaker institution countries. On the other hand, Bebczuk (2005) suggests that weak institutional environment such as financial markets constrain the benefits firms can get from good corporate governance. The reason is that investors react to corporate governance information through their actions in financial markets. Bebczuk (2005) believes that even in the absence of financial markets, companies should be encouraged to improve their corporate governance if evidence can show the positive link between corporate governance and firm performance.

From the above definitions, it is clear that corporate governance is a complex set of structures and processes that are put in place by companies to limit agency problems. The structures of corporate governance encompass economic and legal institutions whose change for the better require interventions at micro and macro levels. Obviously, the prominence of corporate governance is largely due to its effect on economic development.

3.3 Corporate governance mechanisms of reducing managerial discretion

In the spirit of agency theory, managers are self-serving and opportunistic (Jensen and Meckling, 1976). Managers with significantly high level of discretion misuses firm resources that may lead to lower firm performance. Good corporate governance is thus required to align the interest of managers with that of the shareholders' in a way that managers strive for higher firm performance (Shleifer and Vishny, 1997; Mayer, 1997).

The agency problem occurs when shareholders desire greater profit while managers do not because the profit belongs to the shareholders (Shleifer and Vishny, 1997). Consequently,

managers consume perquisites (personal benefits such as expenditures on airplane), may not work hard, may not exploit all opportunities, or may involve in power play with company resources (Eisenhardt, 1989). Solving the agency problem aligns the interests of managers with that of shareholders, as a result profit increases. Scholars have suggested several corporate governance mechanisms. For instance, Shleifer and Vishny (1997) explain that successful corporate governance system requires some combination of legal protection of investors and ownership concentration.

3.3.1 Managerial ownership

Share ownership by managers enables their behaviour to align with the principals (Jensen and Meckling, 1976; Agrawal and Knoeber, 2012).⁶ Higher managerial ownership may also allow managers to control the company and expropriate minority shareholders (Fama and Jensen, 1983a; Demsetz and Lehn, 1985).⁷ Inside ownership does not restrict managers from pursuing private benefits but makes managers share the costs of their behaviour and actions with shareholders (Agrawal and Knoeber, 2012). According to Agrawal and Knoeber (2012) the advantage of management ownership is that shareholders do not have to monitor managers as managers are also owners of the company. However firm performance is a noisy measure of management effectiveness as several factors may affect it apart from the behaviour of managers. This has two adverse effects: first, managers may lose the incentive to behave appropriately since they know that profit is not determined only by their behaviour. Second, since they bear the risk alone they should be highly paid in return. The

⁶ This is referred to 'the alignment effect'.

⁷ This is referred to 'the entrenchment effect'.

situation calls for the use of other mechanisms that allow shareholders to monitor managerial behaviour so that rewards and penalty depends on their behaviour.

3.3.2 Ownership structure and concentration

Ownership concentration is a measure of shareholders' power to influence managerial behaviour (Thomsen and Pedersen, 2000) through significant ownership by an individual shareholder or minority ownership by several shareholders even in countries with weak legal system and inefficient courts (Shleifer and Vishny, 1997). Large investors have both the incentive and capacity to monitor management as they have more interest to profit maximization and more control over firm right (Shleifer and Vishny, 1997). The presence of block holders can increase the monitoring ability of the board of directors even if the CEO has an influence on the board (Agrawal and Chadha, 2005). Especially, the presence of outside block holders are believed to affect the form and level of managerial compensation (Holderness, 2003).

Nevertheless, the efficacy of large owners to monitor managers depends on the level of legal protection (Shleifer and Vishny, 1997). Large ownership by one large owner can be an effective monitor of management as long as the majority owner observes firm operations and the voting mechanism is efficient. Large ownership by more than one owners may be less effective than large ownership by a single shareholder since it requires concerted action by all large minority shareholdings as managers may interfere in the process of collective actions which.⁸ The free-rider problem may also affect the effectiveness of minority shareholders in monitoring management (Agrawal and Knoeber, 2012). According to

⁸ Large ownership by an owner and ownership by several small owners are commonly known as block holding and minority holding respectively.

Holderness (2003), block ownership may be motivated by two factors: the shared benefits of control and the private benefits of control. The first is related to the fact that block holders have the incentive and capacity to monitor management to the benefits of all shareholders. The second motive emphasise the fact that block holders may be motivated by private benefit of control (Holderness, 2003) in which block owners expropriate minority holders (Shleifer and Vishny, 1997).

The effect of ownership concentration on firm performance is not a settled issue. Berle and Means (1932) suggest a positive relationship between ownership concentration and firm performance. Thomsen and Pedersen (2000) explain that restructuring ownership structure has positive performance consequences, as the process is a rational decision of owners of the company to fit the amount of their shareholdings with the strategy of the firm. Still ownership concentration may have a negative effect on performance as large investors may have interests that do not align with other shareholders or managers and may redistribute resources efficiently or inefficiently from others (Shleifer and Vishny, 1997). The problem is especially severe if other shareholders have firm specific investment or if voting right is more than cash flow right (Shleifer and Vishny, 1997). On the other hand, Demsetz and Lehn (1985) argue that diffuse ownership may have some advantages that counterbalances the disadvantages associated with the agency problems. If diffuse ownership were dangerous to firm performance, we would not observe such ownership forms. Accordingly, owners decide on the level of their ownership stakes after assessing the costs and benefits and therefore ownership concentration should not relate to financial performance.

3.3.3 Board structure

Agency theory considers the board of directors as the ultimate disciplining mechanism (Fama and Jensen, 1983a; Jensen and Ruback, 1983). Shareholders provide their money to firms because by exercising their legal right they are sure that they can get their money back and the most important shareholder right is electing the board of directors (Shleifer and Vishny, 1997). Directors serve as monitoring devices to align the interests of managers with that of shareholders (Fama and Jensen, 1983a). The board of directors serve as an information system that shareholders can use to monitor and control managerial opportunism (Fama and Jensen, 1983a).

Agency theory suggests that an effective board has large size (Agrawal and Knoeber, 2012), is composed of more outside independent directors (Fama, 1980; Fama and Jensen, 1983a; Agrawal and Chadha, 2005), has members owning significant ownership stakes in the firm (Baysinger and Butler, 1985), and has a chairperson who is not sitting also in the position of a CEO (Jensen and Meckling, 1976).

Large board size increases the source of information but may also limit the members to come to a collective decision-making (Agrawal and Knoeber, 2012). Agrawal and Knoeber (2012) explain that a firm adjusts its board size in response to the factors inside and outside of it that influence the relative costs and benefits of board size.

Fama (1980) and Fama and Jensen (1983a) view outside directors as indispensable tools of internal control. Outside directors that do not have any relationship with the CEO or the firm are considered to be effective monitors of managerial behaviour (Shleifer and Vishny, 1997; Agrawal and Chadha, 2005; Agrawal and Knoeber, 2012; Zahra, 1996). A high proportion of

outside directors broadens a board's expertise and assures its objectivity in monitoring the CEO (Zahra, 1996). Consistent with agency theory, international institutions have emphasised on outside directors as better monitoring devices (OECD, 2004a). Outside directors monitor managerial behaviour better than inside directors (Shleifer and Vishny, 1997), due the risk of reputation loss and legal litigations (Agrawal and Knoeber, 2012). The Sarbanes-Oxley act and the New York stock market rules assume outside director as better monitors of management (Agrawal and Chadha, 2005). The corporate governance principles of the Organization for Economic Cooperation and Development suggests more non-executive board members as they are believed to make independent judgements (OECD, 2004a). Outside directors are especially actively involved in monitoring organizational outcomes and threatening management to disclose negative outcomes (Abrahamson and Park, 1994). Independent directors do not have the incentive to help a firm hide its accounting problems (Agrawal and Chadha, 2005). Unlike managers whose human skills are idiosyncratic and undiversified independent directors are not employees of the company and have nothing to loose if something wrong happens to the company. Moreover, due to risk of reputation loss and legal litigation, they are less likely to help the firm hide inappropriate behaviours. A board with more outside members may be effective in coming to a collective decision-making but may lack relevant information that insiders have (Agrawal and Knoeber, 2012).

According to agency theory, significant ownership by outside directors aligns their interest with shareholders (Jensen and Meckling, 1976; Agrawal and Knoeber, 2012; Morck, et al., 1988; Agrawal and Knoeber, 2012). A Board owning few or no shares does not have the

incentive to monitor and discipline management (Finkelstein and D'Aveni, 1994). Outside directors with block holding have the incentive and capacity to monitor management for the benefit of all.

CEO duality describes the situation where the same person holds the positions of both the CEO and chairperson of the board in a corporation (Rechner and Dalton, 1991). Contrary to established theory about the favourability of separating the jobs of the CEO and board chairperson there is lack of consensus in the empirical literature (Daily, et al., 2003). However, advocates of agency focus on issues of monitoring and entrenchment and the advantages of separating the positions of the CEO and board chair (Finkelstein and D'Aveni, 1994). The CEO's influence on the board reduces its effectiveness in monitoring management (Agrawal and Chadha, 2005; Fama and Jensen, 1983a). It also allows management entrenchment leading to misallocation of firm resources contrary to shareholders' interest (Jensen and Meckling, 1976). A CEO who is also a chair of the board dominates both the agenda and content of board meetings (Finkelstein and D'Aveni, 1994). CEO duality creates a conflict of interest in which the CEO is the head of the firm's strategic management and is an evaluator of this strategic management at the same time (Finkelstein and D'Aveni, 1994).

3.3.4 Disclosure and transparency

Agency problem may arise due to information asymmetry between managers and shareholders (Jensen and Meckling, 1976). Company provide disclosure in response to information asymmetry and agency problems between shareholders and managers (Healy and Palepu, 2001). Adequate disclosure is an essential element of good corporate governance

(Abrahamson and Park, 1994). The OECD (2004a) stresses the significance of timely and accurate disclosure of information for successful corporate governance. Adequate disclosure and transparency allows shareholders to exercise their ownership rights. It also allows regulators to identify and correct an ethical and illegal company practices. With sufficient disclosure and transparency, the market is able to reap the services of analysts and rating agencies that transfer unorganized data in to usable information for investors to make informed decisions. However, with poor transparency and disclosure regime, external stakeholders do not have the information to analyze companies. Then, insiders can take advantage of the situation and engage themselves in transactions that benefit only them that may lead to financial volatility as investors lose confidence (Claessens, 2003).

Company disclosure especially tailored to investors is an important ingredient for an efficient capital market (Healy and Palepu, 2001). Companies use different means to provide disclosure. Financial statements, management reports, press release, internet sites and other regulatory filings are well-known company disclosure vehicles. For instance, management may employ financial reporting and disclosure to inform outside investors on firm performance and governance (Healy and Palepu, 2001).

In capital markets setting, disclosure reduces resource allocation problems that occur due to information asymmetry. As noted by La Porta, et al. (1997) and Claessens (2003) good corpora governance is associated with capital market development. Healy and Palepu (2001) provide two reasons why disclosure is an indispensable tool for the smooth relationships between investors and company managers. Disclosure reduces information gaps of potential investors who may not otherwise appreciate investment opportunities of entrepreneurs.

According to Myers and Majluf (1984), managers have the incentive to reduce the information asymmetry with adequate disclosure as this lowers the cost of capital. With appropriate disclosure, entrepreneurs can easily access to external finance. Once they provide their fund, investors demand managers to disclose relevant information on how company resources are being utilized.

3.4 Antecedents of corporate governance

Agency theorists consider managers having enough discretion (Jensen and Meckling, 1976). Since managers may act contrary to shareholder interests, instituting corporate governance reduces the conflict of interests between them. On the other hand, organizational scholars argue that firms' choose structural forms depending on internal and external factors (Burns and Stalker, 1961).

Several scholars have called for studies that would include antecedent factors to explain variations in the adoption of certain corporate governance mechanisms between firms (Demsetz and Lehn, 1985; Zajac and Westphal, 1994; Bathala and Rao, 1995; Demsetz and Villalonga, 2001). These researchers believe that the potential for moral hazard and agency problems varies systematically depending on environmental contingencies. Contrary to agency theory's assumption, firms trade off the costs and benefits of a particular governance mechanism (Zajac and Westphal, 1994; Agrawal and Knoeber, 2012). Methodologically, explaining cross sectional variation of corporate governance reduces potential endogeneity problem (Demsetz and Lehn, 1985). If this problem is not addressed estimates are biased. Therefore, research that can adequately explain corporate governance variation across firms is required.

The type of corporate governance and measurement mechanisms used does not matter for the flavour of endogenous governance to work (Klapper and Love, 2002; Himmelberg, et al., 1999). Baysinger and Butler (1985) find that the optimal board composition is varies systematically depending on circumstances. Demsetz and Lehn (1985) find that the cost and benefit of ownership concentration varies depending on firm size, firm risk and industry type. Bathala and Rao (1995) study the determinants of the proportion of outside directors by incorporating leverage, CEO tenure, firm size, firm risk and growth that are assumed to affect the level of agency problem and others. Himmelberg et al. (1999) obtain that both observed and unobserved firm level characteristics affect managerial ownership.

Relevant contingency factors considered as antecedents of corporate governance are firm growth (Bathala and Rao, 1995), Firm risk (Zajac and Westphal, 1994; Bathala and Rao, 1995; Himmelberg, et al., 1999), firm size (Demsetz and Lehn, 1985; Bathala and Rao, 1995), and asset composition (Himmelberg, et al., 1999; Klapper and Love, 2002).

In the following paragraphs, the discussion focuses on firm level contingencies that are believed to affect the scope of managerial discretion and thus the level of corporate governance adopted. The main variables of interest are firm risk, firm growth and owner identity, but we also address other control variables.

3.4.1 Firm growth

Studies show that firm growth increases the level of agency problem and moral hazard (Bathala and Rao, 1995; Himmelberg, et al., 1999; Klapper and Love, 2002). These studies predict a positive link between firm growth and corporate governance. Limited number of studies shows that high growth firms adopt good corporate governance (Himmelberg, et al.,

1999; Klapper and Love, 2002). Klapper and Love (2002) examine the link between firm level corporate governance and a list of factors that are believed to determine it. Using data in 14 emerging markets their result show that past growth rate is positively related to corporate governance index. In a panel of U.S. companies, Himmelberg et al. (1999) find that managers of firms with higher growth potential have larger ownership stake, i.e. a strong governance mechanism.

On the other hand, studies report negative association and even null association between firm growth and corporate governance. Bathala and Rao (1995) examine the determinants of corporate governance in a cross section of 261 firms. Using OLS regression they find that sales growth is negatively related to the proportion of outside directors. Agrawal and Chadha (2005) obtain that growth is unrelated to the probability of earnings restatement.

3.4.2 Firm risk

There is a growing belief that firms operating in volatile environments have greater agency problems that require adoption of stronger corporate governance mechanisms (Demsetz and Villalonga, 2001). Empirical studies show that the optimal choice of a given corporate governance mechanism depends on the degree of instability in the firms' environment. For example, optimal ownership structure (Thomsen and Pedersen, 2000; Demsetz and Villalonga, 2001), proportion of outside directors (Bathala and Rao, 1995) and disclosure (Abrahamson and Park, 1994) are determined by the volatility of the firm's environment. Demsetz and Lehn (1985) examine the link between firm specific risk and ownership concentration in a cross section of 511 U.S. firms. They find that firm specific risk explains

the cross sectional variation in ownership concentration. Specifically, instability of profit rate explains the variation of ownership structure positively.

Other studies have reported negative association between risk and corporate governance (Bathala and Rao, 1995). Bathala and Rao (1995) examine the determinants of the proportion of outside directors in a cross section of 261 firms. Using OLS regression, they find that firm risk measured by volatility of firm return negatively affects the proportion of outside directors. Demsetz and Villalonga (2001) examine the effect of firm specific risk on ownership concentration in a panel of 400 U.S. corporations. Their result shows that higher firm risk is associated with lower level of CEO stock ownership.

3.4.3 Owner identity

Agency theory assumes that all block holders have the motivation to monitor management equally (Jensen and Meckling, 1976; La Porta, et al. 1999). Organizational scholars suggest that all shareholders do not similar risk profile and may have divergent interests (Mintzberg, 1984; Vickers and Yarrow, 1988). For instance, block holders may have different objectives and prefer different strategies (Vickers and Yarrow, 1988; Thomsen and Pedersen, 2000). In this context, the issue is not limited to the conflict of interests between shareholders and the manager but also between shareholders themselves that may affect firm decisions differently (Go'rriz and Fum'as, 1996). Specifically block holders may not have similar incentive to monitor management behaviour. For instance, Abrahamson and Park (1994) obtain that non-executive shareholders do not have similar interest on disclosure of negative outcomes.

There is scarcity of empirical evidence on the associations between owner identity and corporate governance. Ananchotikul (2007) shows that the effect of foreign direct

investment on firm level corporate governance depends on identity of owners. Especially, industrial ownership has negative effect on corporate governance while institutional ownership is associated positively with higher corporate governance.

3.4.4 Other antecedent factors

Firm size

The expected effect of firm size on corporate governance is not conclusive. Larger firms are believed to have greater agency problems (Himmelberg, et al., 1999; Klapper and Love, 2002). On the other hand, smaller firms may adopt stronger governance mechanisms as they may have better growth opportunities, badly in need of external finance at lower cost of capital (Klapper and Love, 2002).

The empirical literature documents mixed results. After controlling for unobserved firm effects Himmelberg, et al. (1999) find that firm size has a positive effect on managerial ownership in a panel of U.S. firms. Alves and Martins (2010) obtain a positive effect of firm size on the proportion of outside board of directors.

Studies also indicate negative association between firm size and corporate governance mechanisms. Demsetz and Lehn (1985) indicate that larger firms have less ownership concentration for a cross section of U.S. firms. Agrawal and Chadha (2005) report that firm size increases the probability that a firm restates its earnings. Alves and Martins (2010) use different governance mechanisms in one study and find that firm size negatively affects board ownership and outside block ownership.

Still, studies find no-association between firm size and corporate governance. For instance firm size has no effect on an overall governance index (Klapper and Love, 2002) and the proportion of outside directors (Bathala and Rao, 1995). Therefore, the evidence is inconclusive. Surprisingly, in a single study firm size may have mixed results for different measures of governance mechanisms. Alves and Martins (2010) report positive result for the proportion of outside board of directors and negative result for board ownership and outside block ownership.

Asset composition

The composition of a firm's asset determines the level of managerial discretion. The extent that assets are observable can explain the tightness of monitoring required. Compared to intangible assets it is difficult to steal fixed assets (Himmelberg, et al., 1999; Klapper and Love, 2002). It is generally believed that the proportion of intangible assets in a firm influences the level of agency problems (Alves and Martins, 2010; Zahra, 1996). Intangible assets are associated with high information asymmetry (Zahra, 1996), increased scope of managerial discretion and opportunism (Alves and Martins, 2010).

Consistent with the above argument, studies find a negative link between fixed capital and corporate governance. Himmelberg, et al. (1999) obtain that firms with high proportion of fixed assets have a lower level of managerial ownership. In a cross-country study Klapper and Love (2002) show that firms with higher proportions of fixed assets have lower corporate governance index.

Studies using soft capital as a proxy for the scope of managerial discretion support the results obtained for fixed assets. For instance, Finkelstein and D'Aveni (1994) show that non-production overhead as a measure of soft capitals is negatively associated with CEO duality. This result corroborates the literature as CEO duality reduces the effectiveness of the board as a monitoring device (Agrawal and Knoeber, 2012). Similarly, Himmelberg, et al. (1999) finds that advertising intensive firms have higher managerial ownership.

Market power

Agency theorists assume that higher free cash flow is associated with higher agency problems (Jensen, 1986). The empirical literature considers various indicators to proxy for the level of free cash flow. Himmelberg, et al. (1999) find that market power measured by the ratio of operating income to sales is positively relate to managerial ownership. Thomsen and Pedersen (2000) and Black, et al. (2010) controlled for industry type as indicator of market power and claim that it has a direct influence on performance and indirectly through ownership structure.

Leverage

Leverage reflects the monitoring role of creditors that otherwise shareholders would exercise. Debt serves to focus management towards efficiency and limits free cash flow (Jensen, 1986). Leverage may reduce the agency cost by preventing managers from investing in value-reducing projects or force them sale unproductive assets. Demsetz and Villalonga (2001) obtain a negative association between leverage and the five largest shareholdings.

3.4.5 Corporate governance and performance

Several researchers examine the link between corporate governance and firm performance (Klapper and Love, 2002; Gompers, et al., 2003; Bauer, et al., 2008; Black, et al., 2010). It is generally believed that good corporate governance enhances a firm's performance. Corporate governance includes multiple aspects of contracts imposed for aligning interests of shareholders and managers. Researchers may examine the link between one or more governance indicators individually and collectively and firm performance. Individual governance indicators if used to predict firm performance may result in missing variable bias unless other governance variables are controlled for. The issue is discussed in the methodology chapter in detail. Researchers often construct governance indices to measure the strength of shareholder rights. Governance indices are believed to be able to capture the multiple constraints that firms use for aligning the interests of shareholders and managers (Bauer, et al., 2008; Black, et al., 2010). Despite measures of corporate governance utilized, examining its effect on firm performance has been considered as a valid approach by researchers. Therefore, the literature review does not focus on a particular governance mechanism. Measures of firm performance have been problematic. Researchers use either market based or financial measures of performance indicators. This review focuses on studies that use financial measure of performance as a dependent variable. There are two reasons for this. First, this thesis uses only financial performance indicators: return on asset (ROA) and return on equity (ROE) that previous financial-based studies are more relevant to the current study than market-based studies are. Second, market measures and financial measures indicate different things and some times are not positively correlated.

Several studies focus on single measures of corporate governance to the examination of firm performance. The effect of ownership concentration on firm performance has been the focus of much of empirical research. Demsetz and Lehn (1985) argue that there should be no systematic relation between ownership structure and firm performance. They suggest that diffuse ownership can have an advantage that offsets the agency problems associated with diffusion. For instance, Demsetz and Lehn (1985) find no relationship between ownership concentration and return on asset (ROA) in a cross section of U.S. firms. Similarly, Himmelberg et al. (1999) indicate that there is no relationship between managerial ownership and firm performance.

Researchers consider the board of directors as an important governance mechanism. Studies examine board characteristics such as board size, the proportion of outside directors, board ownership and CEO duality and link with firm performance. Baysinger and Butler (1985) study the relationship between board composition and financial performance in a sample of 266 firms for the period 1970 to 1980. Using a system of regression equations, they show that change in board composition at the beginning of the decade predicted change in financial performance. Daily, et al. (2003) find that firms with high proportion of affiliated board members have higher probability of bankruptcy. The probability of bankruptcy is also found to be high for firms that have CEOs sitting as chairs of boards.

However, studies indicate no relationship between measures of board characteristics and firm financial performance. Using a meta-analysis Daily et al. (2003) analyze the effects of board characteristics on financial performance and obtain that there is no systematic relationship between the proportion of outside directors and financial performance. The same

meta-analysis failed to find significant relationship between CEO duality and financial performance. Harris and Raviv (2008) model the optimal control of the board of directors and show that there is no relationship between board size and firm performance. In a cross-country study Kyereboah-Coleman (2007) obtains that board size has no significant relationship with return on asset (ROA) in companies of several African countries. Black et al. (2010) find insignificant result for the relationship between disclosure sub-index and firm value. They argue that the result could have been different unless other governance mechanisms were not controlled.

Studies that use single measures of governance mechanisms have found inconsistent results (Bhagat, et al., 2008). The problem is linked to missing variable bias, as single measures do not capture the multiple aspects of governance (Bhagat, et al., 2008; Black, et al., 2010). Klapper and Love (2002) use firm level corporate governance rating of firms in 14 emerging markets. The index was constructed from a survey instrument that contains 57 binary (yes/no) questions on management discipline, transparency, independence, accountability, responsibility, and fairness. They show that the corporate governance index is positively related to ROA. Bebczuk (2005) Construct a transparency and disclosure index from and examine the link between corporate governance and firm performance in 65 non-financial Argentinean companies. Different OLS specifications show a robust positive association between the governance index and return on asset (ROA). A further marginal analysis indicates that for a firm with average governance index, a 10-point increase in the governance index increases ROA by 1.9% of its average value.

Gompers, et al. (2003) investigate the effect of corporate governance on firm performance in 1500 large U.S. firms during 1990's. They constructed a "Governance Index" (G-index) to proxy for shareholder rights. Single equation regressions indicate that firms with stronger shareholder rights have higher return on equity (ROE) and higher net profits. Bebchuk, et al. (2004) construct an entrenchment index that limit shareholder rights using the G-index. OLS results show that the entrenchment index both individually and in aggregate correlate negatively with return on asset (ROA).⁹ Bhagat and Bolton (2008) Study the relationship between corporate governance and performance. They argued that from an econometric point of view studying the relationship among corporate governance and other firm specific factors requires formulating a system of simultaneous equations that specifies the relationship. Governance as the main variable of interest was measured by seven different measures: the Gompers, et al. (2003) index (GIM or G-index), an "entrenchment index" created by Bebchuk, et al. (2004) (BCF) called the E-index, a 52 governance features index by Brown and Caylor (2004) and other variables such as Stock ownership of board members, CEO-chair separation and board independence. The result indicate that better governance measured by GIM and BCF indices, stock ownership by board members, CEO-Chair separation are positively correlated with contemporaneous and subsequent operating performance (ROA). Furthermore an economic impact analysis indicated that improving the G-index by 1% improved performance during the study period and performance of the next year by more than 0.5%, and performance of the next two years by more than 0.25%. Bauer, et al. (2008) use overall corporate governance index and found that corporate governance

⁹ Lower values of entrenchment is favorable and negative association of this variable with financial performance indicates performance enhancing effect of corporate governance.

significantly affects company performance. Japanese firms that have good governance rating outperform low rated firms by about 15.12% a year.

3.4.6 The effect of corporate governance on performance: a contingency perspective

As discussed above, studies based on agency theory assume that corporate governance has a positive effect on firm performance. On the other hand, organizational scholars suggest that the link between corporate governance and firm performance depends on context. This line of thinking often referred as 'contingency' framework has two approaches. In the first approach, studies identify contingency factors as antecedents of corporate governance. The previous section reviews such studies that relate firm level contingency factors with different corporate governance mechanisms. In the second contingency approach, studies try to show that firm level contingencies moderate the relationship between corporate governance and firm performance. This thesis employs both approaches, as a full contingency analysis requires identification of relevant antecedents of corporate governance that may also have moderating effects in the governance-firm performance relationship. Contingency models are used to resolve conflicting hypothesis of different theoretical frameworks (Finkelstein and D'Aveni, 1994).

Black, et al., (2010) advice researchers to suspect their findings obtained from full sample analyses. Several researchers have reported that the effect of a corporate governance mechanism on performance is not the same across firms which have different characteristics (Black, et al., 2010; Bebczuk, 2005; Thomsen and Pedersen, 2000; Daily, et al., 2003), operate in different industries (Li and Simerly, 1998; Black, et al., 2010) or country of origin (Klapper and Love, 2002). Studies that address specific governance mechanisms support this

contingency thinking. For instance, researchers comment that the effect of the composition of the board of directors (Baysinger and Butler, 1985) and CEO duality (Finkelstein and D'Aveni, 1994) is contingent on factors within the firm and in the environment in which the firm operates. Finkelstein and D'Aveni (1994) conceptualize and test the conflicting hypothesis of CEO duality suggested by organizational theory and agency theory. They modelled and tested a contingency framework in a sample of firms belonging to three industries. The result from several logistic regressions show that effective board favours CEO duality when performance is low and informal CEO power is low. However, CEO duality is rare when the CEO has informal power and when firm performance is high.

Studies have used various moderator variables. However, this review focuses on researches that use firm growth, firm risk and owner identity as moderators of the governance-firm performance relationship. Moreover, even if moderation studies can use either interaction moderation analysis or sub group analysis to test hypotheses, the review is limited focuses only on the interaction moderation. Although a detail explanation is given in the methodology chapter, interaction moderation is a regression analysis that includes a variable that is a multiplicative product of a corporate governance variables and a moderator variable. Limiting the scope of the review to too few moderators as well as to interaction moderation is believed to increase relevance to the current study and help generalise across studies. Central to contingency models is that the value of corporate governance is enhanced where it is required most (Zajac and Westphal, 1994; Bebczuk, 2005).

3.4.6.1 The moderating effect of firm growth on the corporate governance-performance relationship

Studies indicate that firm growth moderates the relationship between corporate governance and firm performance (Bebczuk, 2005; Black, et al., 2010). These studies would prove moderation if the coefficient of the interaction terms is significantly different from zero. For a particular case of firm growth, studies suggest that the positive effect of corporate governance is stronger for high growth firms. Black, et al. (2010) study the effect of corporate governance on firm performance in a cross section of 66 Brazilian non-financial firms. By interacting an overall governance index with a dummy variable for high growth firms, they find that the positive effect of corporate governance on firm performance is greater for high growth firms. Moreover, Black et al. (2010) indicate that for high growth firms, there is greater positive effect of disclosure and transparency sub-index on firm performance. Bebczuk, (2005) obtain that firm growth moderates the relationship between corporate governance and performance. The interaction effect of a disclosure and transparency affects firm performance negatively.

3.4.6.2 The moderating effect of firm risk on the corporate governance-performance relationship

Li and Simerly (1998) suggest that greater firm risk affects both managers and outside owners. Managers facing greater firm risk are expected to devise appropriate strategies in the realm of vague situations, tend to have limited alternative courses of actions and less concrete criteria. Strategies developed in these contexts are complex. Shareholders can monitor managerial behaviour and performance if they are able to comprehend the environment within which the firm is functioning. Environmental firm risk renders such

monitoring capacity more challenging (Li and Simerly, 1998). Thus, the efficiency of monitoring managerial actions depends on the level of environmental dynamism.

Li and Simerly (1998) hypothesized and empirically tested the moderating effect of environmental dynamism on the managerial ownership-performance relationship for 90 firms in two industries that have significantly different dynamism. OLS regression results indicate that the interaction of environmental dynamism dummy variable and CEO ownership leads to positive performance. More directly, for firms with higher environmental dynamism, there is a stronger positive relationship between CEO ownership and firm performance.

3.4.6.3 The moderating effect of owner identity on the corporate governance-performance relationship

According to Thomsen and Pedersen (2000) the null hypothesis between ownership structure and firm performance (Demsetz, 1983) could be solved if owner identity is considered. They comment that knowledge on how owner identity affects firm performance has important implications for matching corporate strategies with corporate governance. Thomsen and Pedersen (2000) study the link between ownership concentration and firm performance in a panel of 435 largest European companies for the period 1990-95. Using autoregressive estimation technique, the interaction term of ownership concentration and owner identity indicators show that the effect of ownership concentration on firm performance is negative for bank, family and government ownership relative to institutionally owned firms.

3.4.7 Measuring corporate governance

Single dimension vs. Composite measures of corporate governance

3.4.7.1 Single dimension corporate governance

Single dimension measures focus on a particular governance mechanism. Research on single dimension of governance mechanisms focus on ownership concentration and the board of directors. Ownership concentration is a measure of shareholders' power to influence managerial behaviour (Thomsen and Pedersen, 2000). Demsetz and Villalonga (2001) advise researchers to separate shareholdings among the different owners who are assumed to have different interests. ownership by the CEO including the CEO's stock options (Li and Simerly, 1998), management shareholding (Demsetz and Lehn, 1985; Himmelberg, et al., 1999), shareholding by largest shareholders (Demsetz and Villalonga, 2001), concentration of all outside shareholders (Zahra, 1996; Mura, 2007; Alves and Martins, 2010), and dummy indicator for the presence of a major non-board block holder owning a percentage of firm's shares (Zajac and Westphal, 1994), have been widely used measures of ownership concentration.

The board of directors has gained much coverage in the empirical governance literature. The board of directors is often characterized by its size, composition and share ownership. The measurement of board composition is not a settled issue in corporate governance studies (Daily, et al., 2003). (Daily, et al., 2003; Zahra, 1996) define board composition as the proportion of non-affiliated outside directors. Affiliation is defined personal or professional relationships with the corporation or the CEO. Agrawal and Chadha (2005) use the term independent directors and defined as outside board members who are not ex-employees of

the firm, are not family members of the CEO, and do not have business relationship with the company such as consultants, lawyers, bankers, accountants, customers, suppliers and other service providers. Many researchers have used the proportion of non-executive directors as a measure of board composition (Mura, 2007).

There is a growing belief that ownership by directors is an important indicator of the incentive of the board to monitor the CEO. Board ownership can be measured by the proportion of shares held by all directors in the board, by non-executive directors or by executive directors (Mura, 2007).

3.4.7.2 Corporate governance index

Researchers argue that using single dimensions of governance mechanisms leads to missing variable bias (Agrawal and Knoeber, 2012; Black, et al., 2010). Considering this, several studies have constructed corporate governance index from multiple indicators. Studies use two approaches to emphasise the multi dimensionality of corporate governance. Some analyze several governance measures individually in a single study. Mura (2007) reflects the multidimensionality of corporate governance by including different measures of board ownership and a board structure in a single study. A composite index may not be always necessary but analysis that does not control for other governance mechanisms is still vulnerable to the same missing variable bias (Black, et al., 2010).

In the second approach, researchers construct an overall corporate governance index from multiple governance mechanisms informed by both the theoretical and empirical literature. There are multiple dimensions of corporate governance. Single dimension governance

proxies can only captures a glimpse of the overall governance practices (Ananchotikul, 2007; Black, et al., 2010). Moreover, their efficiency to represent the overall corporate governance depends on the assumption that they are correlated with other governance practices.

For several decades, corporate governance has been the focus of much theoretical and empirical research in developed economies. However, many studies have addressed the issue in developing economies (Klapper and Love, 2002; Bebczuk, 2005; Ananchotikul, 2007; Javed and Iqbal, 2007; Black, et al., 2010). Klapper and Love (2002) use firm level corporate governance data in 14 emerging markets. Originally, the data were collected from 495 companies in 25 countries by an independent private firm. Corporate governance index was constructed from a survey instrument that contains 57 binary (yes/no) questions on management discipline, transparency, independence, accountability, responsibility, and fairness. Analysts answer to the questions based on firm publications, interviews with senior managers, executives and board members. Average of the results is the governance measure for each firm.

Ananchotikul (2007) constructed corporate governance index for 365 listed non-financial companies of Thailand. The index includes 76 questions and is further classified in to five sub indices: board structure, conflict of interest, board responsibility, shareholders right, and disclosure and transparency. With unequal weight for each sub index the overall index for each company ranges between 0 and 100, hundred being the best governance. Only publicly available information was used to avoid misreport and self-selection. Bebczuk (2005) construct a transparency and disclosure index for 65 non-financial listed companies of

Argentina for the period 2003-2004 using various public sources. The index is based on 32 'yes' or 'no' questions on whether a firm discloses corporate governance information publicly and has three sub indices: board, disclosure and shareholders.

Javed and Iqbal (2007) Constructed corporate governance index for 50 Pakistani listed non-financial companies for the periods 2003 and 2005. Various corporate governance ordinances were used including the Pakistani legal framework and the securities exchange commission of Pakistan. Twenty-two provisions were included grouped in to three sub indices: board, ownership and shareholdings and transparency, disclosure and audit.

Black, et al. (2010) construct firm level corporate governance for 66 Brazilian non-financial firms by mailing a 41 binary question survey containing the following elements: board structure, ownership structure, board procedure, disclosure, related party transaction and minority shareholder right. They did not rely on corporate governance required by the Brazilian law. They claimed that response rate would have been low or results would not have varied as all firms were expected to comply the law. For each sub index, they sum the elements and divide it by the maximum value achieved by any firm. This makes each sub index to be within 0 and 1 (in theory). The overall corporate governance index is the average of the sum of the sub indices. In practices corporate governance index lies within 0.32 and 0.81.

In developed markets governance indices are constructed in the U.S (Gompers, et al., 2003), Japan (Bauer, et al., 2008) . Gompers, et al. (2003) investigate the effect of corporate governance on firm performance of 1500 large U.S. firms during 1990's. Based on data

compiled by the Investor Responsibility Research Centre (IRRC), they constructed a “Governance Index” (G-index) to proxy for shareholder rights. The index has 24 provisions and is constructed in terms of corporate laws decreasing shareholder rights.¹⁰ Bebchuk, et al. (2004) questioned the relevance of all of the 24 provisions used in the Gompers, et al. (2003) study. They argued that some provisions might have little relevance in determining firm value, profitability and sales growth. Based on the same data set compiled by IRRC they constructed an entrenchment index (E-index) comprising of six provisions (four that limit shareholder rights and two that make potential hostile takeover difficult) for all firms between 1990 and 2003.¹¹ Each firm was rated on the absence or presence of each provision, from 0 to 6. Bauer, et al. (2008) study the link between corporate governance and company performance of Japanese firms by using an overall governance rating constructed from six governance sub-indices: board accountability, financial disclosure and internal controls, shareholder rights, remuneration, market for control, and corporate behaviour.

3.4.8 Limitations in Empirical Corporate Governance Literature

The literature has several limitations. These limitations can fall under, *measurement*, *model specification* and, *data analysis and hypothesis testing*.

Measurement of corporate governance has been a controversial issue in the literature. Corporate governance encompasses a “bundle” of mechanisms adopted to constrain

¹⁰ The index is compiled by the Investor Responsibility Research Center, U.S.A. (IRRC) and has 24 equally weighted corporate provisions such as poison pills, golden parachutes, classified boards, cumulative voting etc. that limit shareholders’ rights and increase management power.

¹¹ The E-index was constructed from the IRRC data set too. Four of the E-Index set constitute limit on shareholder voting, i.e. Staggered boards, limits to shareholders amendments of the by-laws, supermajority requirements for mergers, and supermajority requirements for charter amendments. The remaining two are measures taken in preparation for a hostile offer. i.e. poison pills and golden parachute arrangements.

managerial discretion (Rediker and Seth, 1995). The board of directors, ownership concentration, managerial ownership and appropriate disclosure and transparency are believed to be important elements of effective corporate governance. Hence, an examination of corporate governance should incorporate these mechanisms into a composite measure. Studies that ignore to develop a holistic measure of corporate governance are deemed to missing variable bias (Gompers, et al., 2003; Black, et al., 2010). Under this condition estimates are incorrect and lead to wrong interpretations.

Model specification is another limitation of the literature. The adequacy of a specified corporate governance model can be judged on whether relevant firm level contingencies are identified and incorporated, whether unobserved firm heterogeneity are accounted for, and whether moderating firm factors are considered in the governance-firm performance relationship. Contrary to agency theory's assumption that 'one size fits all' (Black, et al., 2010), organizational scholars believe that choice of structural forms is affected by both firm level and environmental contingencies both within and outside a company (Burton, 2000). The issue is firms choose their corporate governance endogenously to contingency factors. Few researchers have explained corporate governance endogenous to firm level contingencies (Demsetz and Lehn, 1985; Himmelberg, et al., 1999; Demsetz and Villalonga, 2001; Zajac and Westphal, 1994). Although including relevant observed firm level contingencies is an important approach to reduce the problem of endogeneity, it does not avoid the problem completely. The effect of unobserved firm heterogeneity on temporal behavior of firms is well addressed both in econometrics (Green, 2002; 2010) and empirical studies (Himmelberg, et al., 1999; Cavaco, et al., 2013). In the corporate governance

literature, this would mean unobserved fixed firm effects affect the level of governance mechanisms adopted and financial performance. Unobserved fixed firm effects if ignored can lead to biased coefficient estimates and to wrong interpretations of findings. For example, exclusion of unobserved firm effects in a model linking corporate governance and firm performance would lead to a wrong association between them. Studies based on agency theory implicitly assume that the corporate governance-firm performance link is context free (Li and Simerly, 1998). However, organizational researchers have suggested that the effect of an organizational form on performance depends on whether it is in fit with environmental contingencies (Burns and Stalker, 1961; Galbraith, 1973). The idea is that contingencies moderate the relationship between corporate governance and firm performance. Although this line of thinking is getting more prominence, few studies dare to conceptualize and test such contingency hypotheses (Li and Simerly, 1998; Thomsen and Pedersen, 2000; Black, et al., 2010).

Finally, *Data analysis and hypothesis testing* are major gaps in the corporate governance literature. Even if all limitations discussed so far were addressed, the effort would be in futile if researchers employ incorrect data analysis and hypothesis testing approaches. Especially, testing moderation hypotheses are the major setback for researchers and require great care. Although a moderation hypothesis can be evaluated by testing the significance of the interaction term (Allison, 1977; Friedrich, 1982), it cannot address the full implication of the hypothesis (Schoonhoven, 1981). In addition to testing the significance of a multiplicative term, a moderation hypothesis requires sketching the overall effect of corporate governance against a moderating variable (Schoonhoven, 1981). No single study

makes use of the multi-staged hypothesis testing approach. No single study addresses all the limitations discussed above.

Bridging the gap

This study bridges the gap in previous corporate governance studies. A holistic corporate governance index is constructed that are believed to be relevant for effective corporate governance. This study also addresses the problem of model specification by incorporating relevant firm level contingencies, accounting for unobserved firm heterogeneity through fixed effect estimation, and estimating a moderation regression that considers important moderating variables in the governance-firm performance relationship. Finally this study recognizes the limitation of previous studies in testing hypotheses by pushing the methodology one further step. In addition to statistical tests, graphical sketches are used to test moderation hypotheses (Schoonhoven, 1981).

3.5 Conclusion

This chapter reviews the corporate governance literature informed by both agency and organizational perspectives. Corporate governance is a complex set of structures and processes that are put in place by companies to limit agency problems. The agency problem occurs when shareholders desire greater profit while managers do not because the profit belongs to the shareholders. The consensus is managers with significantly high level of discretion misuses firm resources that may lead to lower firm performance. Several corporate governance mechanisms have been proposed. Share ownership by managers enables their behaviour to align with the principals. Large investors have both the incentive and capacity to monitor management. Agency theory suggests that the board of directors

serve as a monitoring device and its effectiveness depends on its characteristics such as its size, structure and shareholdings. Moreover, company disclosure reduces information asymmetry and agency problems between shareholders and managers.

Contrary to agency theory's assumption, organizational scholars believe that the potential for moral hazard and agency problems varies systematically depending on environmental contingencies. Limited number of studies shows that contingency factors such as firm growth, firm risk and owner identity influence the corporate governance choice of firms. There is a general belief that good corporate governance enhances a firm's performance. Agency based researches report insignificant association between corporate governance and firm performance. Organizational scholars comment that ignoring contingency factors is the cause of inconsistencies in results of agency based studies. This line of idea has led several researchers to understand how contingency factors moderate the effect of governance mechanisms on firm performance.

This chapter also discusses the multidimensionality of corporate governance and the need to construct composite scores to reduce missing variable bias. Overall, measurement of corporate governance, model specification and data analysis and hypothesis testing are major limitations in the empirical corporate governance literature.

The next chapter presents statement of the problem. Based on the theoretical framework presented in chapter two, agency theory and organizational theory are integrated and testable hypotheses are developed.

CHAPTER 4: PROBLEM STATEMENT AND HYPOTHESES

4.1 Introduction

This chapter is dedicated to developing hypotheses. As discussed in earlier parts, this study is based on agency and organizational theories that are synthesized into a single research framework. Three groups of hypotheses are developed. Scholars comment that complementing agency theory with other perspectives in organizational studies provides deep insight (Eisenhardt, 1989; Daily, et al., 2003). Agency theory has important contributions to organizational theory (Eisenhardt, 1989; Hambrick, et al., 2008). Consistent with agency theory and organizational theory, the first group of hypotheses links corporate governance with firm level contingencies. In the theoretical framework, we have mentioned that firms choose their corporate governance depending on contingency factors. Three main contingency variables are antecedents of corporate governance. Firm growth, firm risk and identity of the largest owner have gained more attention in the empirical corporate governance literature.¹² The second group depicts the link between corporate governance and performance that traditional agency researchers often address. Researches that rely heavily on agency theory assume firm performance as a direct consequence of corporate governance. In the third group of hypotheses, we complement the traditional agency research tradition with organizational perspective. Consistent with organizational scholars, we account for the moderating effect of firm level contingencies in the corporate governance-firm performance. Organizational researchers suggest that the effect of corporate governance on firm performance depends on contingency factors that exist within and outside firms.

¹² (Zajac and Westphal, 1994) comment that limited availability of prior research makes identifying a comprehensive list of contingencies let alone ranking them based on importance.

4.2 Hypotheses

4.2.1 Hypotheses for the effect of antecedent factors on corporate governance

Agency theory holds that as managers are self-serving and behave in value minimizing way, instituting appropriate governance mechanisms is unquestionable for maximum firm performance (Jensen and Meckling, 1976; Shleifer and Vishny, 1997). Organizational scholars also share the idea that less motivated shareholders or their representatives leads managers to serve their own interests (Eisenhardt, 1989). However, organizational theorists emphasise that governance mechanisms need to consider the demands of the environment imposed on firms (Burton, 2000; Cohen and Cyert, 1973; Pfeffer and Salancik, 1978). The nature of the environment both internal and external to a firm affects the costs and benefits of governance mechanisms adopted by the firm (Agrawal and Knoeber, 2012; Zajac and Westphal, 1994; Agrawal and Knoeber, 2012). Hence, the levels of use of governance mechanisms depend on firm and environmental contingencies.

Several scholars have called for studies that would include antecedent factors to explain variations in the adoption of certain corporate governance mechanisms within firm and between firms (Demsetz and Villalonga, 2001; Demsetz and Lehn, 1985). The central idea is governance mechanisms are endogenously chosen by firms. Observed (Demsetz and Lehn, 1985; Klapper and Love, 2002; Himmelberg, et al., 1999; Holderness, 2003; Black, et al., 2010; Demsetz and Villalonga, 2001) and unobserved firm level characteristics (Himmelberg, et al., 1999), and observed and unobserved industry characteristics (Demsetz and Lehn, 1985; Himmelberg, et al., 1999) determine the adoption of governance mechanism across firms. In fact, cross-country studies show that unobserved country effects

explain variations in the strength of corporate governance mechanism (Klapper and Love, 2002).

Holderness (2003) comment that the incentive and capacity of block holders either to monitor management or to expropriate minority shareholders depends on firm level contingencies. Himmelberg et al. (1999) suggest researchers to include observed firm characteristic that relate to potential moral hazard and affect optimal managerial ownership. They show that managerial ownership is predicted by factors of the contracting environment in which the firm operates. More over they find that the cross sectional variation in managerial ownership is largely affected by unobserved heterogeneity. Demsetz and Villalonga (2001) suggest the inclusion of firm and environment factors to explain ownership structure. Klapper and Love (2002) argue that corporate governance mechanisms are endogenously determined can equally work for all governance mechanism. Firms have the discretion to flexibly choose their corporate governance mechanism depending upon contexts (Burton, 2000; Black, et al., 2010; Desender, et al., 2013). Baysinger and Butler (1985) show that optimal board composition varies systematically depending on circumstances. Similarly, Zajac and Westphal (1994) explain that greater agency problems require greater monitoring through higher proportion of outside directors, large percentage of outside director ownership, a separate CEO/board chairperson position, block ownership by a non-board shareholder. They suggest that policy prescriptions for a standard form of the board of directors would be inappropriate, as firms may be different and changing constantly. Demsetz and Lehn (1985) find that the level of private and shared benefits of

control differs across industries. Regulated industries are more likely to have diffusely owned firms as regulators substitute the monitoring role of shareholders.

Relevant contingency factors considered as antecedents of corporate governance are firm growth (Bathala and Rao, 1995), Firm risk (Zajac and Westphal, 1994; Bathala and Rao, 1995; Himmelberg, et al., 1999), firm size (Demsetz and Lehn, 1985; Bathala and Rao, 1995), and asset composition (Himmelberg, et al., 1999; Klapper and Love, 2002). Demsetz and Lehn (1985) use firm size, control potential and systematic regulation as antecedents of ownership concentration. Klapper and Love (2002) include country-level measure of shareholder rights and their enforcement, firm growth, and the proportion of intangible assets. Himmelberg et al. (1999) use firm size, capital intensity, R & D intensity, advertising intensity, cash flow, volatility and investment rate as determinants of managerial ownership. Bathala and Rao (1995) study the determinants of the proportion of outsider directors by incorporating leverage, CEO tenure, firm size, firm risk, growth as the factors determining the level of agency problem. The type of governance mechanisms used as a dependent variable does not matter as endogeneity equally applies to all governance forms (Klapper and Love, 2002). The hypotheses for the firm level determinants of corporate governance mainly focus on firm growth, firm risk, and owner identity. Nevertheless, we also address other firm level contingencies roughly.

4.2.1.1 The effect of firm growth on corporate governance

Both the theoretical and empirical literature document inconsistent relationship between firm growth and corporate governance. Moreover, for a given prediction scholars provide different reasons. Firms respond to their growth potential by instituting appropriate

governance system. For instance, firms with high growth opportunities are expected to have high proportion of outside directors in the board (Bathala and Rao, 1995). Moreover, firms may get highly concentrated or have higher proportion of outside directors to signal external financiers that the risk of expropriation by management is less likely (Klapper and Love, 2002). At the same time, growing firms may need appropriate financial management and instituting good corporate governance limits inefficient investments (Bebczuk, 2005). Moreover a growing firm badly needs external finance and the cost of capital is generally lower for a firm with effective control mechanisms compared to a firm with weak control mechanisms (Bebczuk, 2005). Ownership that is more concentrated is also predicted, as shareholders do not want to handover their control to creditors if the firm raises external finance (Shleifer and Vishny, 1997). Empirical Studies show that firm growth increases the level of agency problem and moral hazard (Bathala and Rao, 1995; Himmelberg, et al., 1999; Klapper and Love, 2002). Klapper and Love (2002) study the effect of firm growth on corporate governance of firms in 14 countries. Using a governance index to represent the multiple dimensions of governance they obtain that past growth rates are positively related to corporate governance. Himmelberg et al. (1999) find that firm growth positively affects the level of managerial ownership. The following hypothesis is developed on the basis of the above argument for positive association between firm growth and corporate governance.

H1a: The higher the growth opportunities of firms the stronger will be their corporate governance.

On the other hand, firm growth may affect corporate governance negatively. Since growing firms operate in volatile environment, managers often use a great deal of subjective decision-

making during the strategic making process (Bathala and Rao, 1995). As executives have better information in these situations, managers of high-growth firms may prefer more insiders in their board. This will extend to other governance mechanisms as well (Klapper and Love, 2002). For example, the desire to have freedom of making subject decision, a manager of a growing firm may prefer dispersed ownership, limited disclose of relevant information to both insiders and outsiders, etc. Bathala and Rao (1995) examine the determinants of the proportion of outside directors in a cross section of 261 firms. Using OLS regression they find that sales growth is negatively related to the proportion of outside directors. The following hypothesis is based on the above evidence;

H1b: The higher the growth opportunities of firms the weaker will be their corporate governance.

4.2.1.2 The effect of firm risk on corporate governance

There is a growing belief that firms operating in volatile environments have greater agency problems that require adoption of stronger corporate governance mechanisms (Demsetz and Villalonga, 2001). Agency theory emphasises the importance of firm risk in explaining efficient contracts (Eisenhardt, 1989). Daily et al. (2003) suggest that the volatility of operations firms face recently gives researchers a room to study the governance mechanism such firms adopt. Results from such studies add to the knowledge we have about corporate governance. Volatility in a firm's environment is unfavourable as it limits a firm's ability to understand its environment (Cohen and Cyert, 1973). Decisions tend to be more subjective and conflicts are more likely higher (Cohen and Cyert, 1973). Environment volatility increases the severity of agency problems and thus demands tighter monitoring of

management (Demsetz and Lehn, 1985; Thomsen and Pedersen, 2000; Demsetz and Villalonga, 2001).

Demsetz and Lehn (1985) and (Demsetz and Villalonga, 2001) argue that the wealth gain obtained by shareholders through strong monitoring of managerial performance depends on conditions of the firm's environment. For a firm that operates in a dynamic environment, the manager is expected to make timely decisions (Galbraith, 1973). However, it is difficult to identify whether firm performance is directly attributed to managerial behaviour. The situation makes monitoring managerial behaviour in volatile environments difficult. Thus, the greater the volatility of the environment the greater the wealth gain by shareholders from tighter controls (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001). Moreover, since monitoring has the advantage of linking rewards with the behaviour of managers more concentrated ownership (Agrawal and Knoeber, 2012) and greater managerial ownership aligns the interests of managers and shareholders in more volatile environment (Zahra, 1996).

Studies show that firm risk has positive effect on optimal structure of ownership structure (Thomsen and Pedersen, 2000; Demsetz and Villalonga, 2001), proportion of outside directors (Bathala and Rao, 1995), and company disclosure (Abrahamson and Park, 1994). Based on the discussion the following hypothesis is developed.

H2a: The higher the risk of firms the stronger will be their corporate governance.

On the other hand volatile environment increases performance variability (Zahra, 1996). Since managers are risk averters (Jensen and Meckling, 1976), they prefer more compensation (Agrawal and Knoeber, 2012). Managers prefer rewards based on the quality of their decisions in making strategic choices rather than the actual outcomes of the decision (Bathala and Rao, 1995). Outside directors reward managers based on outcomes and such outcomes are volatile. On the other hand, inside board members reward managers based on the processes managers follow to make decisions. Therefore, managers of firms operating in volatile environment are more likely to prefer high proportion of inside board members. In addition, managers tend to resist disclosing organizational outcomes as volatility may affect firm performance adversely (Abrahamson and Park, 1994) or may resist incentives directly linked with performance (Zajac and Westphal, 1994).

The information processing perspective of organizational theory emphasises the link between the environment and information processing demand of a firm. Risky environments require executives to process large amount of information (Galbraith, 1973), that tend to require innovativeness and use of a large amount of subjectivity (Cohen and Cyert, 1973; Bathala and Rao, 1995). In this, situation insiders possess important information (Zahra, 1996; Harris and Raviv, 2008) and hence the agency costs associated with insiders is lower relative to the costs of information loss when the board is dominated by outsiders (Harris and Raviv, 2008; Agrawal and Knoeber, 2012). Moreover, the degree of interference on the manager's decisions decreases with more inside directors and smaller board size (Agrawal and Knoeber, 2012). Studies have reported negative association between risk and corporate

governance (Bathala and Rao, 1995). This calls for an inverse relationship between firm risk and corporate governance.

H2b: The higher the risk of firms the weaker will be their corporate governance.

4.2.1.3 The effect of owner identity on corporate governance

The consensus among scholars in agency theory is that owners are expected to aspire for the maximization of their wealth (Jensen and Meckling, 1976). Research based on agency perspective treat shareholders as a homogenous group of individuals with identical risk exposure and goal preference. This assumption works well when markets are perfect i.e. when all the risk is diversifiable (Thomsen and Pedersen, 2000). When markets are imperfect, due to the differential risks and returns they assume, owners may disagree on company strategy. As organizational scholars such as Mintzberg (1984) and Drucker (1988) suggest the forces that influence modern corporations are too complex to explain in a simple principal-agent dichotomy that agency theory maintains. Vickers and Yarrow (1988) further noted that, even in the absence of uncertainty, information asymmetry and imperfect markets, shareholder interests do not coincide. Second, owners such as institutional investors, banks, non-financial companies and governments are intermediate agents of the ultimate owners that may not have similar objectives (La Porta, et al., 1999). Hence, like managers owners may maximize their utility at the expense of the overall value of the company. Although, large owners engage themselves with corporate governance more actively (Shleifer and Vishny, 1997), they may also inefficiently redistribute wealth from other investors to themselves (La Porta, et al., 1999). In this case the question is not about

the conflict of interest between share holder and managers but it is about how large investors dominate the decision making process of the company in such a way that performance is affected either positively or negatively (Go'rriz and Fum'as, 1996).

The evidence tells us little about who monitors controlling owners (La Porta et al., 1999) and owner identity is the key to discover the risk and return preferences of the various categories of owners and resulting corporate governance choices and firm performance. In this direction, pushing the analysis beyond the traditional principal-agent relationship is vital. Further research aimed at providing clear understanding of the goal preferences and risk profiles of key shareholders is required (Gedjavlovich, 1989). Specifically further research that can discriminate between management, family, government, company and bank ownership categories is required.

Thomsen and Pedersen (2000) identify most notable owner category that invest in and control publicly held corporations: families, banks, institutional investors, government and other non-financial companies. Distinguishing which of these owner categories dominate firms provides information on the degree of expropriation minority holders are exposed to. It expands the analysis beyond the traditional manager-shareholder conflict and to the conflict of interest between majority and minority shareholders.

a. Management ownership

Agency theory assumes significant ownership by managers aligns their interests with that of shareholders (Jensen and Meckling, 1976). Nevertheless, managerial ownership may lead them to entrench themselves and act contrary to shareholder interests. Generally, companies

with entrenched managers have higher agency problems. Management ownership is a predominant structure in Ethiopia. In at least 50% of sampled companies, managers are the largest shareholders. This may not be common in other countries particularly in developed markets. Since there are no formal corporate governance institutions in the country, managers with significant ownership may misuse firm resources. It is also possible that significant ownership reduces the agency problems as managers could bear large part of the costs (Agrawal and Knoeber, 2012). Therefore, this special ownership structure provides a fertile ground to study the role of management ownership to governance mechanisms.

b. Family ownership

Even though whether family ownership eliminates or creates agency cost is an empirical question, the relationship between family ownership and agency cost has conflicting theoretical predictions (Abdullah, 2006a). Thomsen and Pedersen (2000) explain that due to their firm specific investment, family owners have long-term commitment. Cronqvist and Nilsson (2003) argue that family controlled firms have the highest agency costs than firms controlled by other categories of owners. This is because family owners may entrench themselves and gain personal benefits by controlling much of the decision power of the company.

Other researchers claim that their findings show an indirect association between family ownership and the prevalence of agency cost. For example, Abdullah (2006a) find that the ratio of family members in the board of directors is positively related to the quality of financial reports. They pose that family owners have the expertise on the firm's condition

and to monitor the activities of the firm. Similarly, Go'rriz and Fum'as (1996) comment that family ownership reduces the agency and contractual costs. Since family members themselves are agents, the necessity of disciplining and monitoring agents is eliminated. That does not however prove that the dominance of family ownership across the world is due to lower agency cost of family control (La Porta, et al., 1999). In the study of the largest companies of 27 wealthy countries of the world, La Porta, et al. (1999) find that family owners do not monitor management as top management is a part of the family owners.

c. Bank ownership

Significant ownership by banks lets them influence the company through board representation and lending (La Porta, et al., 1999). Banks have professional managers who are not entrenched themselves to expropriate other shareholders (Cronqvist and Nilsson, 2003). Jensen (1989) poses that joint ownership of debt and equity by large informed investors such as banks results in strong managerial monitoring and creates incentive for managers to pursue activities that maximize shareholders value.

d. Government ownership

Government's influence is more obvious than others' are (Gedjavlovich, 1989). Government may influence the democratization of corporations. Through various initiatives, it gives direction on how corporations are run (Mintzberg, 1984). For example, if the government holds shares it may require 'public interest' representations in the board of directors. Thus with substantial ownership government may serve as an alternative governance mechanism (Thomsen and Pedersen, 2000). Similarly, Shleifer and Vishny (1997) comment that

companies under the process of privatization may not have large investors. In this context, managers of these firms would end up with high control and discretion. This is particularly interesting for Ethiopia. Little after the current government took power, many state owned companies have been privatized. The privatization agency requires companies to undergo series of clearing procedures before allowing full control by private owners. In the mean time, the government maintains its position as a shareowner. On the other hand, government may not be sensitive to corporate governance matters in the case where there is high asymmetric information on the side of the society. The lack of information about its role in governance systems, a government may not have high reputation and re-election impact to motivate it enroll in monitoring the activities of management in a profit maximizing way (La Porta, et al., 1999).

e. Company ownership

Company block holders exhibit unique behaviors that are not common to individual block holders. Company ownership usually forms business groups each of which are found at different stages of the value chain (Thomsen and Pedersen, 2000). Reports show that the effect of company ownership on corporate governance is not as clear as ownership by other categories of owners. For example, Thomsen and Pedersen (2000) explain that the advantage of transfer of knowledge when companies own other companies along a given industry value chain may be outweighed by risk of lack of mutual monitoring. In this case, the agency cost of company dominance is expected to be high.

From the above discussion, the role of family and company ownership to corporate governance is not clear. There are some reasons that indicate the incentive of government to monitor management. We may also suspect this as government may not know its role in governance systems. Bank ownership is an undisputed predictor of corporate governance. Since managers (executives and directors) are the largest owners in half of the sampled companies, they serve as a reference group in the analysis. Therefore, the following hypotheses are developed.

H3a: the impact of owner identity on corporate governance is positive for bank and government ownership relative to management ownership.

Hypothesis 3a would be weak as the theoretical prediction for government ownership is not consistent as it is for bank ownership. Hypothesis 3b is supposed to resolve this by emphasising more on the role of bank ownership than government ownership.

H3b: the positive impact of owner identity on corporate governance is greater for bank ownership than government ownership relative to management ownership.

4.2.1.4 Other antecedents of corporate governance

Firm size

The expected effect of firm size on corporate governance is not settled. Larger firms are believed to have greater agency problems (Himmelberg, et al., 1999; Klapper and Love, 2002). Himmelberg et al. (1999) comment that large firms have greater agency problems and

thus require tighter monitoring. This may be due to management complexity (Bebczuk, 2005) that renders monitoring in large firms difficult (Klapper and Love, 2002). Therefore, large firms should adopt stronger corporate governance mechanism.

On the other hand, smaller firms may adopt stronger governance mechanisms as they may have better growth opportunities,¹³ badly in need of external finance at lower cost of capital (Klapper and Love, 2002; Bebczuk, 2005). Bebczuk (2005) suggest that large firm size may be correlated negatively with growth opportunities, positively with diversification, greater economies of scale and scope, more professionalized management and higher access to finance. According to Demsetz and Lehn (1985) and Demsetz and Villalonga (2001) for a given degree of control an owner requires a small share of the firm as firm size gets larger. Similarly, Himmelberg, et al. (1999) argues that large firms benefit from monitoring by top-level management and external institutions. In this set up, both Demsetz and Lehn (1985) and Himmelberg et al. (1999) would predict that larger firms may have lower agency problems and may require lower corporate governance. Increase in firm size raises the cost of sustaining central control (Cohen and Cyert, 1973).

Asset composition

The scope of managerial discretion in a firm may depend on the degree that its assets are observable. Compared to intangible assets it is difficult to steal fixed assets (Himmelberg, et al., 1999; Klapper and Love, 2002).¹⁴ Intangible assets are soft capitals that are difficult to

¹³ This is contrary to the evidence of null relationship between firm size and expected firm growth (Simon, 1964).

¹⁴ Tangible assets are fixed assets such as property, plant and equipment while intangible assets refer to "soft" capital which include R&D capital and short term assets such as inventories (Klapper and Love, 2002).

monitor and may lead to high managerial discretion (Klapper and Love, 2002). Thus, the agency problem and managerial discretion is higher in intangible asset intensive firms than fixed asset intensive firms are. As a result, due to greater scope of managerial discretion intangible intensive firms should have good corporate governance to align the interests of shareholders with managers.

Consistent with the above argument studies find a negative link between fixed capital and corporate governance (Himmelberg, et al., 1999). Alternatively, empirical studies show that soft capitals require tighter monitoring of managerial behaviour and actions. For instance, soft capital calls for the separation of the positions of CEO and the chair of the board (Finkelstein and D'Aveni, 1994) or higher managerial ownership (Himmelberg, et al., 1999), both of which indicate good corporate governance.

Market power

Agency theorists assume that higher free cash flow is associated with higher agency problems (Jensen, 1986). The empirical literature considers various indicators to proxy for the level of free cash flow. These studies assume that market power is an indicator of the level of free cash flow that in turn influences agency problems and managerial discretion. For instance, market power measured by the ratio of operating income to sales (Himmelberg, et al., 1999) and industry type (Thomsen and Pedersen, 2000; Black, et al., 2010) is found to affect the level of governance mechanisms positively.

Leverage

The effect of leverage on corporate governance is inconclusive as well. On one hand, highly leveraged firms should have good corporate governance to reduce the incentive for overinvestment and excessive risk taking (Bebczuk, 2005). On the other hand, debt may reflect the monitoring role of creditors that otherwise shareholders would exercise. This can be viewed as a substitution effect of governance mechanisms (Zajac and Westphal, 1994). Debt decreases the agency problem as it increases ownership stake of managers and lowers the amount of free cash flow available for overinvestment (Jensen, 1986).

For a particular shareholder or a small group of shareholders, the ability to control the firm increases with the level of Leverage as leverage can reduce the impact of wealth constraint on control potential (La Porta, et al., 1999). Debt serves to focus management towards efficiency and limits free cash flow (Jensen, 1986). Leverage may reduce the agency cost by preventing managers from investing in value-reducing projects or force them sale unproductive assets (Thomsen and Pedersen, 2000).

4.2.2 Hypotheses for the Effects of Corporate Governance on Performance

The major premise of agency theory is the ‘separation of ownership and control’ which gives managers significant discretion (Jensen and Meckling, 1976). Managers may act contrary to the interest of shareholders for profit maximization (Jensen and Meckling, 1976). This is commonly referred to as agency problem. Scholars have discussed specific evidences of managerial discretion. These include resource diversion, transfer pricing, higher managerial compensation and perquisite, managerial entrenchment in which the manager stay on the job

without contribution and investing in value minimizing investments (Eisenhardt, 1989; Shleifer and Vishny, 1997).

Corporate governance is about the limits to managerial discretion (Shleifer and Vishny, 1997). Corporate governance reduces the agency problems by aligning the interests of managers and shareholders as a result managerial actions are directed toward higher profits (Eisenhardt, 1989). Agency theorists maintain that perfect markets can discipline management to act in the interest of shareholders for higher profits (Fama, 1980; Fama and Jensen, 1983a). However, perfect markets are less likely in which internal governance mechanisms are indispensable to constrain managerial discretion (Shleifer and Vishny, 1997). These governance mechanisms include managerial ownership (Jensen and Meckling, 1976; Agrawal and Knoeber, 2012); the board of directors (Fama and Jensen, 1983a; Shleifer and Vishny, 1997; Agrawal and Knoeber, 2012); large share holders (Shleifer and Vishny, 1997; Holderness, 2003; Agrawal and Chadha, 2005), and appropriate disclosure and transparency requirements (Healy and Palepu, 2001; Agrawal and Knoeber, 2012).

The consensus among scholars is that corporate governance enhances firm performance. Firms with effective corporate governance can invest in profitable projects and enhance the efficiency of operations (Shleifer and Vishny, 1997). Many studies obtain that corporate governance has positive impact on firm performance (Klapper and Love, 2002).

H4: The effect of corporate governance on firm performance is positive.

Other firm level contingencies may affect firm performance. Firm growth may have negative effect on firm performance, as growth requires raising fund at higher cost of capital. Firm risk will have negative impact on firm performance. Faced with volatile environment, managers use their high discretion to use firm resources in value reducing manner. Moreover, volatility reduces firms' ability to understand their environment and develop appropriate strategy (Demsetz and Lehn, 1985). Firms that use higher level of debt in their capital structure are expected to perform poorly. High level of debt is associated with increased interest expense that lowers the net income available for shareholders. Moreover, highly leveraged firms have higher probability of bankruptcy that increases the costs of capital for additional financing needs. Firm size may affect firm performance negatively. Bigger firms tend to use more debt relative to equity. Thus, bigger firms may act to satisfy debt holders rather than shareholders. As a result, they grow at higher cost of capital. Capital intensity is expected to have positive impact on firm performance. Capital-intensive firms enjoy economies of scale from their investments that may lead to lower costs associated with investments.

4.2.3 Hypotheses for the moderating effect of firm level contingencies on the corporate governance-performance relationship.

Agency theory contends that governance mechanisms aligns the interests of managers with that of shareholders' that subsequently leads to high firm performance (Jensen and Meckling, 1976). Nevertheless, empirical researches on corporate governance doubt on the universality of the effect of corporate governance on performance; and whether the result is robust across times, different organizational contexts and within a country for many periods (Aguilera, et al., 2007). Results indicate that the direct link is not consistent in different

institutional and organizational contexts. In a theoretical and empirical review, Burton (2000) finds that there is no consistent relationship between independent board and firm performance. He mentions that methodological flaws specifically, measurement of the independent and dependent variables are the sources of errors in empirical researches. In the study of Demsetz and Lehn (1985), ownership concentration has no significant relationship with firm performance as measured by accounting profit rate. Himmelberg, et al. (1999) estimates the effect of managerial ownership on firm performance using panel data. After accounting for both observed and unobserved firm characteristics, the result shows no relationship between ownership and performance. Boyd et al. (2012) content reviewed 1173 empirical strategic management articles with contingency perspectives published in strategic management journal. They reported that empirical researches that focus on the effect of corporate governance (for example CEO duality or the proportion of outside directors) on performance could not find a simple and direct relationship.

From the above account of empirical researches relating one or more of corporate governance mechanisms and performance (market based or accounting based), those hypothetical links that are supposed to operate universally have been tested but in general consistent results are lacking. Another strand of literature focuses on the importance of fitting corporate governance to firm contexts. In an elaborated manner Bhagat et al. (2008) state that, if firms deliberately choose their corporate governance structure, we should expect systematic difference across firms; if firms optimize on the different governance choices, we should not expect differential performances i.e. firms with high governance ranking should not outperform those firms with low ranking. Burton (2000) reviewed theoretical and

empirical works and found that there have been inconsistent outcomes in empirical researches on the performance effects of corporate governance mechanism. He argues that such inconsistencies arise from the neglect of contingency propositions. The contingency proposition maintains that performance is enhanced if structural forms (corporate governance) fit with the firm's characteristics.

Organizational theory especially the contingency perspective suggests that contingency factors influence structural choices, and firm performance is a function of the level of fit between the chosen structure and the contingency factors (Burns and Stalker, 1961; Lawrence and Lorsch, 1967). The corporate governance implication of organizational theory is that firms that fit their governance mechanisms with the contingency factors outperform others without such fit (Black, et al., 2010). The costs and benefits of using governance mechanisms to alleviate agency problems depend on organizational and environmental contingencies. That is the benefit of using governance mechanisms is higher in situation where greater agency problem is more likely (Zajac and Westphal, 1994). Both agency theory and empirical studies do not have complete treatise of the implications of contextual factors on the corporate governance-performance relationship.

Black, et al. (2010) advice researchers to suspect their findings obtained from full sample analyses. In addition, Burton (2000) explains that inconsistent results in traditional agency based research are due to wrong methodology. Several researchers have reported that the effect of a corporate governance mechanism on performance is not the same across firms which have different characteristics (Black, et al., 2010; Bebczuk, 2005; Thomsen and Pedersen, 2000; Daily, et al., 2003), which operate in different industries (Li and Simerly,

1998) or country of origin (Klapper and Love, 2002). Baysinger and Butler (1985) argue that the performance effect of the composition of the board of directors is contingent on factors within the firm and in the environment in which the firm operates. Finkelstein and D'Aveni (1994) show that effective board favours CEO duality when performance is low and informal CEO power is low. However, CEO duality is rare when the CEO has informal power and when firm performance is high. The focus here is also the firm level contingency factors: firm growth, firm risk and owner identity.

4.2.4 Hypothesis for the moderating effect of firm growth on the corporate governance performance relationship

Agency and organizational perspectives emphasise on the positive link between corporate governance and firm performance. However, Studies indicate that firm growth moderates the relationship between corporate governance and firm performance (Bebczuk, 2005; Black, et al., 2010). Although corporate governance has a positive effect on firm performance, the effect is enhanced form high growth firms. High growth firms require good corporate governance so that they can raise external finance at lower costs (Klapper and Love, 2002) and constrain management from inefficient investments (Bebczuk, 2005). This is consistent with contingency frameworks that assume that corporate governance mechanisms chosen in a way that fit with firm growth have greater performance impact than mechanisms that do not have the required fit. Firm growth determines the level of agency problem. The following hypothesis captures the complex relationships among firm growth, corporate governance and firm performance.

H5: The relationship between corporate governance and firm performance is moderated by firm growth. The greater the growth of firms the greater will be the positive influence of corporate governance on firm performance.

4.2.5 Hypothesis for the moderating effect of firm risk on the corporate governance-firm performance relationship

Li and Simerly (1998) comment that research outcomes fail to find significant relationship between governance mechanism specifically between managerial ownership and performance because they failed to consider the moderating impact of environmental dynamism in the governance-performance relationship. Environment volatility increases the severity of agency problems (Demsetz and Lehn, 1985; Bathala and Rao, 1995; Thomsen and Pedersen, 2000) as decisions tend to be more subjective that makes firms unable to understand the environment (Cohen and Cyert, 1973). In this context, monitoring management is very difficult (Galbraith, 1973). Li and Simerly (1998) provide a similar argument. Managers facing greater firm risk are expected to devise appropriate strategies in the realm of vague situations, limited alternative courses of actions and less concrete criteria. It is highly probable that the strategy developed in these contexts is complex. Owners can monitor managerial behaviour and performance if they are able to comprehend the environment within which the firm is functioning. Environmental volatility renders such monitoring capacity more challenging. Thus, the efficiency of monitoring managerial actions depends on the level of environmental dynamism. Since the benefit of monitoring management is greater under higher agency problems, the wealth gain obtained by shareholders through strong monitoring of managerial performance is greater in high risk firms (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001). Overall, the literature

emphasises the enhancing effect of firm risk in the corporate governance-firm performance relationship. The following hypothesis is developed to reflect the moderating effect of firm risk;

H6: The relationship between corporate governance and firm performance is moderated by firm risk. The greater firm risk the greater will be the positive influence corporate governance on firm performance.

4.2.6 The moderating effect of owner identity on the corporate governance-performance relationship

According to Thomsen and Pedersen (2000) null predictions for the effect of governance structures on firm performance could be solved if owner identity is considered. This has important implications for matching corporate strategies with corporate governance (Thomsen and Pedersen, 2000). Shareholders may have other objectives than maximum firm value is a recent research agenda. Owners engage in the affairs of the firm in a profit maximizing manner if markets are perfect. However, in the context of imperfect markets owners may not easily reach at a consensus about firm strategy due to divergence in their assumptions about risk and timing of future cash flows (Thomsen and Pedersen, 2000).

The ownership structure of a firm is a contractual structure (Fama and Jensen, 1983a; Jensen and Meckling, 1976). Since contracts are written and enforced at a cost, the organizational form adopted reflects such costs and is more or less efficient (Hansmann, 1988; Go'rriz and Fum'as, 1996). In assigning ownership to any of the owner categories, evaluating the costs and benefits of ownership is needed so that its dominant objectives are identified (Thomsen and Pedersen, 2000). Ideally, a particular owner category may assume

ownership. This involves transaction costs: ownership costs and the costs of market contracting. An owner category that controls a firm incurs ownership cost but is relieved of the cost of market contracting (Hansmann, 1988). The opportunity cost of reassigning ownership to another owner category involves the sum of ownership cost additional costs of market contracting. The cost of ownership includes monitoring and risk-bearing cost and the cost of collective decision making if the category consists of large heterogeneous owners. On the other hand, the cost of market contracting includes information cost, ex post transaction cost due to asset specificity (Williamson, 1975, 85 and 88) and market power distortion cost. Firms run by owner managers avoid the transaction costs by hiring professional managers while they incur the transaction costs of associated with debt financing. On the other hand, investor-owned companies avoid the transaction costs of debt financing due to availability of equity financing while they incur the transaction costs of hiring professional managers. As argued elsewhere, the effect of a particular owner group on firm performance depends on the costs and benefits of that group.

Family Ownership

Family ownership reduces the agency and contractual costs as family members are agents that eliminate the necessity of disciplining and monitoring agents (Go'rriz and Fum'as, 1996). However, agency cost reduction mechanisms are side by side with costs of inefficient risk allocation and lack of specialization in family controlled firms. For instance, family owners may fear loss of control, be reluctant to attract external equity finance, favor growth and survival than profitability (Thomsen and Pedersen, 2000). According to Go'rriz and Fum'as (1996), compared with others family owned firms have high concentration of

decision making in the hands of few family member. This results in restricted diversification, higher cost of capital and lower investment rate. Even though due to their risk aversion tendency family firms have higher efficiency than non family firms (Go'rriz and Fum'as, 1996), the effect of higher entrenchment and suboptimal investment decisions may reduce firm value and profitability (Cronqvist and Nilsson, 2003). Studies report positive effects of family ownership on firm performance. For example, Gedajlovic and Shapiro (1998) argue that family owners adopt better governance and monitoring practice. This may be because the family owners are wealth and may commit themselves to the long-term survival of the company (Thomsen and Pedersen, 2000). Gedajlovic and Shapiro (1998) show that family ownership has significant positive effect on firm performance.

Bank Ownership

In bank-centered economies as opposed to market-centered ones, banks serve as universal finance providers to industrial companies (Thomsen and Pedersen, 2000). Bank owned firms may have easy access to finance, information and other services (Thomsen and Pedersen, 2000).

Government Ownership

According to Thomsen and Pedersen (2000), government owned firms are advantageous in terms of credit, liquidity or cost of capital, in which governments are relatively wealthier than other categories of owners. On the other hand, government may have value reducing effect. For instance, high interference by government allows it to have more control rights with no substantial cash flow rights (Shleifer and Vishny, 1997). Moreover, governments may have political goals (Shleifer and Vishny, 1997), favor social welfare and employment

creation (Thomsen and Pedersen, 2000). As a result, government owned firms are more likely to be poor performers (Shleifer and Vishny, 1997).

Company Ownership

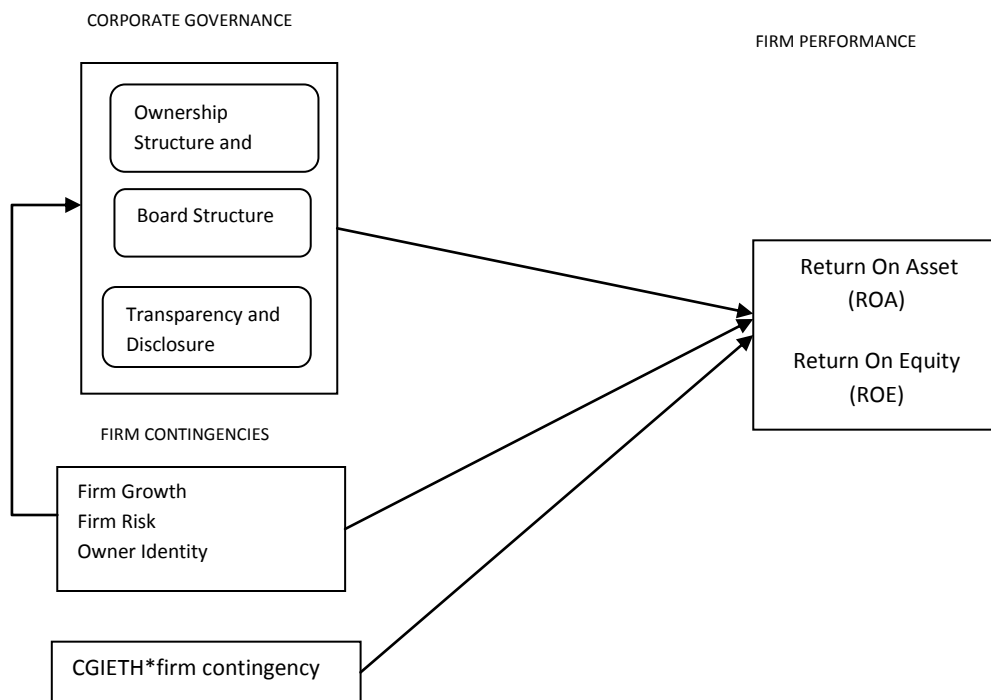
Company block holders exhibit unique behaviors that are not common to individual block holders. Company ownership usually forms business groups each of which are found at different stages of the value chain (Thomsen and Pedersen, 2000). The most important advantage of company ownership relates to the transfer of knowledge. However, company ownership has costs too. It has been reported that company ownership reduces flexibility and lacks mutual controlling between business partners. According to Thomsen and Pedersen (2000), company owned firms are expected to perform poorly as they may favor business transactions and growth. There is limited empirical evidence on the role of different owner groups in influencing effectiveness of governance mechanisms. Thomsen and Pedersen (2000) study the impact of ownership structure on firm performance in a panel of 435 largest European companies. They show that the effect of ownership concentration on firm performance is negative for bank, family and government owned firms relative to institutional owners.

The above discussion explains that except bank ownership all are associated with costs. Together with our discussion on corporate governance effect of owner identity, the above argument leads to the following hypothetical relationship.

H7: the relationship between corporate governance and firm performance is moderated by the identity of the largest owner. If the largest owner is bank the

greater will be the positive influence of corporate governance on firm performance.

Based on the above theoretical argument the following research framework is proposed. The model is common in studies that employ contingency perspectives (Hambrick and Cannella, 2004).



4.3 Conclusion

This chapter has argued theoretically and developed testable hypotheses by synthesizing the agency and organizational literatures. The perspectives have salient differences on the nature of corporations, corporate governance and the governance-performance link. While agency theorists view corporations as the nexus for the principal-agent relationships, organizational

theorists doubt this and argue that relationship in modern corporations are too complex to explain with a dichotomous framework. Agency theorists have suggested the benefits of aligning the interests of managers and shareholder. In this perspective a variety of corporate governance mechanisms are proposed. The board of directors structured in a way that enhances its vigilance, significant ownership by non-board owners, managerial incentives such as share ownership and appropriate disclosure are believed to align manager-shareholder interest. Consequently, managers whose interests are congruent with that of shareholders act to maximize firm performance. On the other hand, organizational scholars heavily criticize agency theory and the research tradition along the framework as firm differences are ignored. The main idea of the organizational perspective is organizational contingencies explain differences in the level of use of corporate governance mechanisms across organizations. Contrary to the agency perspective, firm performance is not a direct function of governance mechanisms rather it is a function of the fit between the adopted governance and relevant organizational contingencies. Thus, in this chapter two main arguments are outlined: (1) organizational contingencies may explain differences in the level of firms' use of corporate governance mechanisms. Specifically, firm growth, firm risk, and identity of the largest owner are relevant organizational contingencies that may affect firms' choice of corporate governance mechanisms; and (2) the effect of corporate governance on performance depends on organizational contingencies.¹⁵ More clearly, the fit between corporate governance and organizational contingencies influences the effect of the former on firm performance.

¹⁵ *These organizational contingencies are selected for this thesis as they have gained much emphasis in the literature.*

CHAPTER 5: RESEARCH DESIGN

5.1 Introduction

This chapter presents the strategies of the study. It outlines how sample is selected, identifies the sources of data, discusses and justifies how variables are measured, assembles variables into models, develops approaches of data analysis and assumption testing.

5.2 Research type

This study follows a positivist approach that assumes knowledge about firm specific variables of interest objectively exists and influence corporate governance; that in turn fits with the firm specific variables to influence firm performance. Firm growth, firm risk, and owner identity are firm specific factors. These factors differ from firm to firm, as a result the adopted corporate governance mechanisms differ from firm to firm as well. Depending on the level and direction of fit between the firm specific factors and the corresponding corporate governance mechanisms adopted, the result ultimately influences firm performance accordingly.

5.3 Target Population and sample

This study focuses on examining corporate governance of Ethiopian share companies. The potential for conflict of interest between the principals (owners of the corporation) and the agent (the manager) is high in firms which are organized by selling shares to the public and therefore this form of organization is an ideal setting to address corporate governance (Eisenhardt, 1989).

To be in the sample a firm must be in operation before or at the year 2009. This allows collecting a five-year data. Collecting corporate governance and financial data based on the

criteria of available minimum consecutive years avoids the survivorship bias (Yermack, 1996). At the beginning of every fiscal year (September to October), share companies (all companies for that matter) are required to report to the ministry of trade and renew their license.¹⁶ The sample includes all share companies that report to the ministry for the period 2009 – 20013. After dropping companies for which there is no adequate data, we have a usable sample of 42 companies.¹⁷ The usable number of observations is 210 (42 companies*5 year data). The companies represent five broad industry classes. 4 companies are selected from finance, insurance, real estate and trade, 4 companies from manufacturing, 7 companies from public administration and others, 6 companies from transport, warehousing and communication, and 21 companies from wholesale and retail trade (see Appendix 1).

Sample selection baize may not be a problem and the sample fairly represents the population.¹⁸ A simple investigation of the various descriptive statistics indicates that the sample fairly represents the population in terms of relevant firm characteristics. For example, the sample includes both poor performers and bad performers, and badly governed and well-governed firms.

¹⁶ *The ministry of trade has the legal power to register newly formed companies, require annual disclosure of company status and collect relevant documents on owners and officials (art 323 and 447).*

¹⁷ *Sampling based on availability of sufficient data is a commonly approach in corporate governance studies (Finkelstein and D'Aveni, 1994; Himmelberg, et al., 1999).*

¹⁸ *Selection bias is a situation where study units or excluded units tend to be similar in certain aspects. Archive based studies are susceptible to selection bias (Himmelberg, et al., 1999) and care should be given to minimize the problem or take remedial actions.*

5.4 Data sources and data collection instrument

The most challenging task of completing this thesis was data collection. Actually several corporate governance researchers have provided rigorous reports about the tedious data collection procedures they had to follow. Since the corporate governance variable should be constructed from varied indicators, an effective means is to prepare a survey instrument based on the literature. However, a preliminary assessment of the legal, regulatory, and operating environment affecting Ethiopian share companies renders some of the survey items irrelevant. Observing a governance mechanism is not relevant at least if its values do not vary across companies. These factors led to a refined survey instrument. The instrument consists of three measures of governance mechanisms: ownership structure, board structure and disclosure and transparency.

The Ministry of Trade requires share companies to deposit among other things, documents related to the names, addresses and shareholdings of their owners and the board of directors. This requirement applies to newly incorporated companies as well as to existing companies if relevant changes occur on shareholdings, the board of directors or the CEO. Several types of documents are deposited such as article of association, board minutes, annual shareholders meeting reports, financial statements, etc.

Since shareholdings data are not organized in a meaningful way I have hand collected data related to various governance elements. The ownership structure consists of measures of ownership concentration and block holding. The measures of shareholdings in this dissertation are based on 'cash flow right' as the share company law has provisions that

restrict the application of one-share one-vote rule.¹⁹ Ownership data reports are assumed to be accurate as firms would be legally penalized if they are found out to be misreporting (Holderness, 2003). The share company law of the commercial code of Ethiopia holds founders of a company liable if ownership information is incorrect or misleading (art 308-310). Board structure measures the independence of the board. Board size, board composition, outside board ownership and board leadership indicate the level of board independence. Disclosure and transparency measures the amount of information firms provide to the public.

Firm level contingencies and financial variables are obtained from financial statements companies submit to the Ministry of Trade. Even though the requirement that a firm should have at least five years data allows collecting complete data on all corporate governance variables, some of the firms did not submit their financial statements to the Ministry of Trade for all periods during which they operated.²⁰ When a firm has missing data on financial variables other sources have been consulted.

5.5 Variables and variable measurement

For all variables in this study a time series data for the cross section of firms are collected. Since the same cross-section of firms is observed for five years, we have a balanced panel data. The advantage of a panel data over a cross section is the latitude that the researcher enjoys to model differences in the behaviour of individuals (Greene, 2010).

¹⁹ For example, a shareholder may not vote if his/her interest conflict with that of the company's. Moreover, a board member is restricted from voting if the agenda relates to his/her roles.

²⁰ Contrary to the shareholder law, the Ministry of Trade offers companies to submit either financial statements or bank statements.

5.5.1 Corporate Governance Index for Ethiopia (CGIETH)

While studying the effect of specific governance mechanism on firm performance, controlling for other mechanisms avoids omitted variable bias (Black, et al., 2010; Agrawal and Knoeber, 2012; Desender, et al., 2013). It requires that relevant governance mechanisms be identified and an overall index be constructed (Gompers, et al., 2003; Bebchuk, et al., 2004; Black, et al., 2010). The CGIETH is constructed from the sub-indices of board structure, ownership structure and disclosure and transparency.

5.5.1.1 Board Structure

The corporate governance literature identifies relevant board characteristics that are believed to affect its independence and thus effectiveness. Agency theory suggests that an effective board has large size (Agrawal and Knoeber, 2012), is composed of more outside, independent directors (Agrawal and Chadha, 2005; Shleifer and Vishny, 1997; Zahra, 1996), has members owning significant ownership stakes in the firm (Baysinger and Butler, 1985), and has a chairperson who is not sitting also in the position of a CEO (Jensen and Meckling, 1976). For instance, Daily and Dalton (1994) obtain that bankrupt firms had both fewer independent directors and board chairs held by CEOs.

Finkelstein and D'Aveni (1994) measure Board independence by standardizing and summing the proportion of outside directors and the proportion of firm shares owned by outside board members. The board structure sub-index is a normalized sum of indicators of board size, proportion of outside board of directors, proportion of ownership by outside board of directors and CEO duality. Board size is a dummy variable if the board has more than six

members. Although optimal board size is not a settled issue, Lipton and Lorsch (1992) have suggested a board size of between seven and nine members. Large boards are believed to be effective monitors of management (Agrawal and Knoeber, 2012). Proportion of outside directors is measured by the ratio of non-executive directors to total board size (Kyereboah-Coleman, 2007; Desender, et al., 2013). The proportion of ownership by outside directors is measured by the ratio of the number of shares owned by non-executive directors to total number of shares outstanding (Agrawal and Knoeber, 2012). CEO duality is a board leadership indicator measured by a dummy variable if the CEO is not also the chair of the board (Agrawal and Chadha, 2005).

$\text{Board Structure Sub-Index} = \text{Board Size Dummy} + \text{Proportion of Outside Directors} + \text{Proportion of Shares Owned by Outside Directors} + \text{CEO Duality Dummy}$

5.5.1.2 Ownership Structure

Ownership structure index consists of two major components: ownership concentration and block holding. Ownership concentration is measured by the fraction of shares owned by the top five outside shareholders. Demsetz and Villalonga (2001) comment that a measure of ownership structure should separate between management and outsiders' ownership. However, by using the fraction of shares owned by the largest five shareholders, (Demsetz and Villalonga, 2001) claimed that the presence of management among the largest five shareholders is unlikely, and thus the measure could accurately reflect the power of shareholders to control management. For a sample of 42 companies in this study the fraction of shareholdings by management and five largest owners is 50% and 59% respectively. The

evidence in this study shows that the correlation between management shareholding and largest five shareholding is 0.92. It would be misleading to assume that shareholding by the largest five could reflect the ability of shareholders to control management. What is more surprising is that fraction of shares by the five largest shareholders excluding management shareholding is about 19% and the correlation between the fraction of shares by the five largest shareholders as a whole and the fraction of shares by the five largest non-management shareholders is -0.026. Obviously, the fraction of shares by the five largest non-management shareholders can reflect the ability of shareholders to control management.

The importance of block holders has been emphasized in the corporate governance literature. A block holder is a shareholder owning significant shares of a company measured by a certain threshold. La Porta et al. (1999) use a 10% threshold and explain that it 1) provides significant threshold of votes 2) is a disclosure standard for many countries. The share company law of Ethiopia provides shareholders owning a minimum of 10% of the shares to demand the Ministry of Trade reduce board remuneration (art 353(7)) and have the right to call shareholder general meetings (art 391 (2)). Block holding is measured by three dummy indicators for CEO, board of directors and outside shareholder. That is if the CEO owns at least 10% of the shares of a firm a dummy indicator of '1' is assigned or else a '0' is assigned. This is consistent with the prediction of agency theory that a CEO owning significant percentage of a firm's share more likely aligns her/his interest with that of shareholders'. The same criterion applies to the board of directors in which a dummy is assigned if any director holds at least 10% of the shares. Similarly, if a non-management outside shareholder owns at least 10% of the shares a dummy of '1' is assigned, otherwise a

‘0’ is assigned. Holderness (2003) suggest that outside block shareholders are better monitors of managerial behaviors and action as a result any analysis on block shareholders should separately deal with these outside block shareholders and insider block holders. Ownership structure is a normalized sum of ownership by largest five outside shareholders, CEO block holding, board block holding and outside block holding.

Ownership Structure Sub-Index = Ownership by Largest Five outside Shareholders + CEO Block Holding + Board Block Holding + Outside Block Holding

5.5.1.3 Disclosure sub-index

Disclosure is an important measure of the quality of corporate governance of a firm (Abrahamson and Park, 1994; Beattie, et al., 2004; Bauer, et al., 2008). The OECD (2004a) explains that appropriate disclosure and transparency is a crucial ingredient of good corporate governance. The financial and operation reports, ownership structure and voting rights, board of directors, senior management along with their remuneration and independence are few of the information to be disclosed by companies. More surprisingly, Bauer, et al. (2008) find out that from the overall governance index, disclosure of financial statements and remuneration related matters explains much of the performance difference of Japanese companies. The disclosure and transparency sub index is a normalized sum of disclosure indicators for financial statements, board allowance and identity, address, ownership etc of shareholders and board of directors.

Disclosure sub-index= financial statement disclosure + board allowances disclosure + owner and board member disclosure

The CGIETH is constructed from the three sub-indices discussed above. However, before combining the sub-indices to an overall governance index, the sub-indices are standardized relative to a maximum score (Black, et al., 2010). For example, the board structure sub-index is standardized by taking the ratio of board scores to the maximum score achieved by any company. The process allows the governance scores to be between zero and one. The overall CGIETH is the average of the standardized sub-indices.

$\text{CGIETH} = \text{Mean (Board Structure Sub-Index + Ownership Structure Sub-Index + Disclosure Sub-Index)}$
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5.5.2 Firm performance

The choice of performance variables is often problematic as performance is multidimensional (Li and Simerly, 1998). In the corporate governance literature, whether market measures or accounting measures of performance can effectively show the effects of governance mechanisms is not a settled issue (Demsetz and Lehn, 1985). However, since this thesis deals with the alignment of interests of owners and managers, return measures are more appropriate (Li and Simerly, 1998). According to Demsetz and Villalonga (2001), researchers wrongly ignore accounting measures of firm performance in favor of market measures. For example, their regression result remains robust after substituting a market value measure by ROA. Moreover, Li and Simerly (1998) suggest that performance is a multidimensional construct, thus valid analysis may not be possible with single measure. They use several measures of performance such as ROA, ROE, ROI and OROA. Studies in strategic management and financial management often use the first three (Li and Simerly,

1998). Particularly, corporate governance studies widely use ROA (Bebczuk, 2005) and ROE (Demsetz and Lehn, 1985; Bhagat and Bolton, 2008; Bebchuk, et al., 2004). Baysinger and Butler (1985) state that return on equity reflects shareholder welfare and is most widely used accounting performance measure. In this thesis both return on asset (ROA) and return on equity (ROE) are used. Besides, calculating firm value as some studies do (Gompers et.al, 2003; Bhagat and Bolton, 2008) is impossible, as it requires market value of stocks information based on investors' anticipation of the firm's return. In the absence of stock market in Ethiopia, using financial measures of performance is the available option.

5.5.3 Independent variables

5.5.3.1 Firm Growth

Growth opportunities determine the potential for managerial discretion (Himmelberg, et al., 1999). Studies often use sales growth to account for firm growth potential and the scope of agency problems (Demsetz and Villalonga, 2001). Sales growth can be constructed easily from financial statements and relates past performance with future prospects. Firm growth is measured by the year-to-year growth in firm sales. Sales growth between two periods is the ratio of the difference in sales of the periods to the previous period's sales.

5.5.3.2 Firm Risk

Corporate governance studies employ several measures of firm risk. Common to all studies is the assumption that instability in a firm's environment influences the level of managerial discretion thus the required corporate governance (Zajac and Westphal, 1994; Demsetz and Lehn, 1985). Instability of firm return is often used as a proxy for risk. Both market data (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001) and financial data (Zajac and Westphal, 1994) can be used. Demsetz and Lehn (1985) use variability of the firm's profit

as the measure of instability in the firm's environment to explain corporate governance in general and ownership concentration in particular. They include three measures: firm specific risk as the standard error of estimates from fitting the "market model", standard deviation of monthly stock market return, and standard deviation of monthly accounting profit rate. Demsetz and Villalonga (2001) employ both firm specific risk and market risk in the governance equation. Similarly, Himmelberg et al. (1999) use the standard deviation of the idiosyncratic component of daily stock prices. Other studies consider financial return variability measured by standard deviation of ROA (Zajac and Westphal, 1994) and coefficient of variation of earnings before interest and taxes (Bathala and Rao, 1995). In this thesis, firm risk is measured by the standard deviation of five years return on asset (ROA) covering the period 2009 to 2013.

5.5.3.3 Owner identity

Owner identity refers to who the largest owner is. Following Thomsen and Pedersen (2000) owner identity is a dummy variable for five owner categories: Management, bank, company, government, Family/individual. Management refers to board members, the CEO and other executives (Demsetz and Lehn, 1985). If the largest shareholder is commercial bank (government or private owned), it is referred to as bank. A private firm that holds the largest fraction of shares of the target firm is referred to as company. Government may refer to the federal government, regional government, political party or related entities. The largest shareholder can be an individual/family who is not a board member or does not involve in the management of the company. Hence, for each owner category a value of one is assigned. The corporate governance literature identifies two ownership rights: cash flow right and

voting right (La Porta et al., 1999; Javed and Iqbal, 2007). The cash flow right is dependent on the proportion of shares a shareholder holds. Voting right may be greater than cash flow right due to pyramidal ownership and cross holding. Actually, the discrepancy between the level of share ownership and voting right appear if one-share-one vote is violated. To avoid confusion the notion of cash flow right is adopted here. The largest owner calculated by the proportion of share ownership of the top owner is set as a criterion to assign ownership. Therefore, the variables for owner identity are as follows: FAM, if the largest owner is family or an individual or a foundation, BANK, if the largest owner is a bank, GOV, if the largest owner is a government (federal, state government or a political party), and COMP, if the largest owner is a non-financial company or corporation.

5.5.3.4 Firm Size

Logarithm of firm sales (Himmelberg, et al., 1999) and book value of asset or its logarithm (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001; Bebczuk, 2005; Mura, 2007; Black, et al., 2010) are commonly used measures of firm size in corporate governance researches. Demsetz and Lehn (1985) argue that using book value of assets does not affect results obtained from using market value of common equity. In this study, firm size is measured by the natural logarithm of book value of total asset.

5.5.3.5 Leverage

Debt reflects the monitoring capacity of creditors. At the same time, debt limits free cash flow available after a firm invests in profitable projects (Jensen, 1986). Corporate governance researchers consider debt as an important factor that influences both governance and firm performance. Studies use either the ratio of total debt to total book value of asset

(Demsetz and Villalonga, 2001; Bebczuk, 2005; Mura, 2007; Black, et al., 2010) or the ratio of long-term debt to total equity (Demsetz and Lehn, 1985). This study uses the former approach and measures leverage by the ratio of total debt to total book value of asset.

5.5.3.6 Market power

Market power is believed to affect the level of agency problems. The process works either through its impact on free cash flow (Jensen, 1986; Himmelberg, et al., 1999) or through product market completion (Thomsen and Pedersen, 2000). Measuring market power is problematic in the governance literature. Studies often use crude measures to control the indirect effect of market power on both governance and firm performance. For instance, several researchers use industry type to control for the effect of market power (Thomsen and Pedersen, 2000). Himmelberg et al. (1999) use the ratio of operating income to sales as a market power prox. Clearly market power can be measured both at firm level and industry level. A variable that reflects both levels is more likely capable of capturing the influence of market power on governance and performance. Therefore, for a particular firm market power is measured by the ratio of firm sales to total industry sales to which the firm belongs.

5.5.3.7 Asset composition

Governance researchers argue that the extent that a firm's asset are observed predict the scope for managerial discretion and the required level of governance mechanisms (Himmelberg, et al., 1999). Compared with intangible or 'soft' assets, fixed assets can easily be observed and are difficult to steal.

There are fairly stable measures of asset composition. Many studies have incorporated both the tangible and intangible aspects of firm asset composition. Capital intensity measured by the ratio of fixed assets (plant, property and equipment) to sales (Mura, 2007) is a commonly used proxy for the effect of tangible assets on managerial discretion. Alternatively, studies employ advertising expenditure to sales ratio (Himmelberg, et al., 1999) and R&D expenditure to sales ratio (Alves and Martins, 2010) to indicate the difficulty of observing soft capital and its association with the scope of managerial discretion.

This study uses measures for both tangible and intangible assets. The ratio of fixed asset to firm sales and the ratio of advertising expenditure to firm sales are used to emphasise the importance of tangible and intangible assets in a firm's asset structure respectively.

5.5.4 Validity and reliability of measures of corporate governance index and sub-indices

It has been explained that the focus of the thesis is corporate governance. A composite index of corporate governance is constructed for a sample of firms based on the sub-indices of ownership structure and concentration, board structure and disclosure and transparency. The chosen sub-indices are informed by the corporate governance literature and are relevant to the Ethiopian context.²¹ Before the overall corporate governance index is constructed, greater care has been taken to assure the validity of individual components used to generate each of the sub-indices. In fact, valid measures for the components of each sub-index were identified through detailed search of both the theoretical and empirical literature. The battery

²¹ See the 'data type and data collection instruments' section for the procedures followed in the selection of relevant corporate governance variables.

of validity also includes in the process of combining the components of the sub-indices and combining in turn these sub-indices for the overall corporate governance index. Factor analysis is performed to further check the validity of the elements of the index. Factor analysis results shows that monetary measure of ownership by CEO, outside shareholder and other directors is not a valid measure of ownership structure. Thus monetary measures of ownership are replaced by dummy indicators for each owner group. The reliability of the components and the sub-indices are checked using alpha.

Table 2: summary of variables and their definition.

Variables	Definition
Corporate governance (CGIETH)	Corporate governance index for Ethiopia constructed for firm i at time t.
Return on asset (ROA)	Net income to total book value of (NI/book value of Assets) assets for firm i at time t.
Return on equity (ROE)	Net income to book value of shareholder's equity (NI/Equity) for firm i at time t.
Firm risk (RISK)	Standard deviation of return on asset $st.dev(ROA)$.
Firm growth (GROW)	Year-to-year sales growth to proxy firm growth opportunity $(Sales_{t-1} - sales_t)/sales_{t-1}$.
Owner Identity	Top largest owner identity for firm i at year t : (takes 1 or 0): family (FAM), management (MAN), bank (BANK), government (GOV) or company (COMP).
Firm size (SIZE)	Logarithm of book value of total asset $\log(\text{Book Value of Asset})$.
Capital structure (LEV)	The ratio of total debt to the book value of assets (total debt/book value of asset).
Capital intensity (CAP)	The ratio of fixed asset to sales (fixed asset/sales).
Advertising intensity (ADV)	The ratio of advertising expenditure to sales (adv. Exp/sales).
Market power (POW)	Ratio of firm sales to total industry sales.
Investment (INV)	Dummy if a firm reports annual investment on fixed assets.
u_i	Dummy for firm i.
Ind_j	Takes 1 if the firm is found in industry j, or 0.
T_t	Year dummy for the period 2009-2013.

5.6 Research models

The strength of corporate governance and its effect on performance can partially be explained if we account for unobserved firm heterogeneity (Holderness, 2003). Himmelberg et al. (1999) model managerial ownership as a function of observed firm level contingencies and unobserved firm heterogeneity, and the effects of these variables on firm performance. They argue that unobserved firm heterogeneity is a “firm fixed effect” and incorporating this unobserved heterogeneity enables to explain the cross sectional variations in the adoption of corporate governance mechanisms. If unobserved firm heterogeneity are not controlled for in a regression of governance mechanisms on firm performance any relation observed between governance mechanisms and firm performance is spurious. One of the benefits of using panel data is its ability to allow arbitrary correlation of the unobservable effects with the explanatory variables, and a fixed effect analysis is best to do that (Wooldridge, 2002). Corporate governance researchers recommend the inclusion of unobserved individual effects to account for unexplained variation on the dependent variable (Klapper and Love, 2002; Cronqvist and Nilsson, 2003).

Himmelberg et al. (1999) mention three sources of unobserved firm heterogeneity: monitoring capability, market power and intangible assets. Unobserved firm heterogeneity may relate to monitoring capability. A firm with high monitoring capability will choose lower level of managerial ownership (Himmelberg, et al., 1999). Another example of unobserved firm heterogeneity is intangible assets (Himmelberg, et al., 1999). Since intangible assets are harder to monitor and managers have higher discretion (Himmelberg, et al., 1999; Klapper and Love, 2002). Thus, a firm with high proportion of intangible assets

will choose higher level of managerial ownership to align the interest of the manager and shareholders.

Unobserved firm heterogeneity may arise due to difference in market power. Since a manager firm is insulated from the disciplining of the product market, the firm will choose to allocate high managerial ownership. Managerial ownership is only one of the governance mechanisms and therefore the idea can easily be transferred to other mechanisms (Klapper and Love, 2002). For example, a firm with higher monitoring capability, lower market power and lower proportion of intangible assets will choose less concentrated ownership, lower level of disclosure etc.

Following Himmelberg et al. (1999) the following section presents specifications of corporate governance and firm performance. Let x_{it} be observed firm level contingencies and u_i be unobserved firm heterogeneity. The variables in x_{it} are the factors in the contracting environment of the firm and affect the choice of governance mechanisms. u_i accounts for the unobserved firm heterogeneity due to conditions we discussed previously and are assumed to be time-invariant. Faced with variables in its contracting environment (x_{it}) and unobserved heterogeneity u_i , a firm chooses the level of its corporate governance mechanisms.

[1]

$$CGIETH_{it} = \beta_1 x_{it} + \alpha_1 u_i + e_{it}$$

Where $CGIETH_{it}$ is an overall corporate governance index for firm i at time t. The assumption behind using an overall measure is that firms employ a combination of various

governance mechanisms such as ownership concentration, board of directors, disclosure etc. to align the interests of managers and shareholders. x_{it} is a matrix of observed firm level contingencies that affect the level of the agency problem. specifically firm growth, firm risk, owner identity, capital intensity, advertising intensity, firm size, leverage and market power are included as key variables the contracting environment of the firm and e_{it} is the error term.

5.6.1 Empirical specification for the antecedents-corporate governance relationship

The relationship between antecedent factors and corporate governance is modelled based on equation 1. In this model, corporate governance is the dependent variable. Corporate governance index is constructed for each firm based on three corporate governance dimensions. The main independent variables are firm risk, firm growth and owner identity. More over the model control for capital intensity, advertising intensity, leverage, firm size and market power.

[2]

$$CGIETH_{it} = \beta_0 + \beta_1 GROW_{it} + \beta_2 RISK_{it} + \beta_3 FAM_{it} + \beta_4 COMP + \beta_5 GOV + \beta_6 BANK + \delta z_{it}^t + u_i + T_t + \varepsilon_{it}$$

Where CGIETH is the corporate governance index for a particular firm, RISK is firm risk, GROW is firm growth, FAM, COMP, GOV and BANK are dummy variables for the largest owner identity for which management (MAN) is a reference group and is dropped from the model. z_i^t includes a set of control variables (firm size, leverage, capital intensity, advertising intensity, market power, investment), u_i is firm fixed effect for firm i and T_t is

the fixed time effect for the period 2009-2013 and ε_{it} is the disturbance term. Performance related measures are not included in the governance equation, since separate equations are used to relate corporate governance and performance.

Given the optimal contract, it is possible to specify the performance model. Firm performance is a function of the chosen level of corporate governance, observed firm level contingencies and unobserved firm heterogeneity.

[3]

$$\pi_{it} = \theta CGIETH_{it} + Z_1 x_{it} + \alpha_2 u_i + T_t + v_{it}$$

Where π_{it} is firm performance, x_{it} is the same firm level contingencies that may affect both governance and performance, u_i is unobserved firm fixed effect, T_t is fixed time effect and v_{it} is independent error term.

5.6.2 Empirical specification for the corporate governance-performance relationship

The empirical specification for firm performance takes use of equation 3.

[4]

$$ROA/ROE_{it} = \lambda_0 + \lambda_1 CGIETH_{it} + \lambda_2 GROW_{it} + \lambda_3 RISK_{it} + \lambda_4 FAM + \lambda_5 COMP + \lambda_6 GOV + \lambda_7 BANK + \delta z_{it}^t + u_i + T_t + v_{it}$$

Equation 4 relates corporate governance with firm performance. Firm performance is measured by two measures. ROA and ROE are accounting performance measures. CGIETH is the same governance index. The model also includes control variables in equation 2, firm and time fixed effects and the error term v_{it} .

5.6.3 Empirical specification for moderating variables in the corporate governance-performance relationship

This study hypothesized that firm level contingencies moderate the relationship between corporate governance and firm performance. Moderation can be expressed by cross-multiplying governance mechanisms with contingency factors (Zahra, 1996). Firm growth, firm risk and owner identity are believed to moderate the relationship between corporate governance and firm performance. Below is a variant of equation 4 specified by multiplying the corporate governance variable with each of the moderating variables.

[5]

$$\begin{aligned} \text{ROA/ROE}_{it} = & \alpha_0 + \alpha_1 \text{CGIETH}_{it} + \alpha_5 \text{GROW}_{it} + \alpha_3 \text{RISK}_{it} + \alpha_4 \text{FAM} + \alpha_5 \text{COMP} + \alpha_6 \text{GOV} + \\ & \alpha_7 \text{BANK} + \alpha_1 (\text{CGIETH} * \text{GROW})_{it} + \alpha_2 (\text{CGIETH} * \text{RISK})_{it} + \alpha_3 (\text{CGIETH} * \text{FAM})_{it} + \\ & \alpha_4 (\text{CGIETH} * \text{COMP})_{it} + \alpha_1 (\text{CGIETH} * \text{GOV})_{it} + \alpha_1 (\text{CGIETH} * \text{BANK})_{it} + \delta z_{it}^t + u_i + T_t + v_{it} \end{aligned}$$

Equation 5 is a moderation equation as it includes interaction between corporate governance with each moderating variables. In addition to interaction terms, main effects of the variables involved in cross multiplications are added. Since there is no theoretical justification for the inclusion of all interactions in a single equation, separate analysis made for each (Gujarati, 2004). Equation 5 also has the same control variables and fixed firm and fixed time effects. Estimation of equation 2, equation 4 and equation 5 is the right approach because by controlling the fixed effects we can avoid omitted variable bias (Gujarati, 2004).

5.7 Data analysis techniques

The data analysis follows three main stages.

Stage one: describing the sample

The first stage of data analysis is the traditional descriptive and correlation analysis for all the variables used in the study. Descriptive statistics are provided to summarize the measures used to construct corporate governance sub indices and the overall corporate governance index (CGIETH). This stage also provides descriptive and correlations statistics for all variables involved in various estimations.

Stage two: testing the influence of antecedent firm level contingencies on corporate governance

The antecedent firm level contingencies are the independent variables that are believed to affect corporate governance. The corporate governance index (CGIETH) is the dependent variable and firm growth, firm risk and owner identity indicators are the main independent variables (equation 2). To justify for the validity of the proposed models in previous sections, different specifications of regression models. Specifically, pooled OLS with the assumption of absent individual effect, industry effect, and firm fixed effect equation specifications are analysed. As we use different specifications each at a time, changes in parameters and model fit are closely inspected and possible explanations are given. The significance of each variable is tested at 10%, 5% and 1%. To allow comparison between variables, coefficients are standardized (beta). Great care is taken to satisfy basic regression assumptions (Normality, Heteroskedasticity, and multicollinearity).

Stage three: testing the influence of corporate governance on firm performance

At this stage, the link between corporate governance and firm performance is investigated. The two accounting measures of performance i.e., ROA and ROE are the dependent variables. However, the same sets of independent variables are included in both performance models. The specifications are similar with that used in stage one. For each performance model OLS, industry effect and firm fixed effect specifications are considered. As in the previous stage, coefficients are standardized, the same significance levels are used and whether various estimations assumptions are fulfilled are checked.

Stage four: testing the moderating effect of firm level contingencies on the corporate governance-performance relationship

This data analysis stage is intended to test the moderating effects of firm growth, firm risk and owner identity on the corporate governance-performance relationship, separate analysis for each moderator variable. Strategic management studies use interaction moderation and subgroup moderation to test their contingency hypotheses (Venkatraman, 1989). In the subgroup moderation analysis, the researcher divides the sample units in to groups based on the contextual variable and t-tests (for two groups) or chi-square tests (for more than two groups) is used to identify the strength of relationships between the predictor and the outcome variables (Boyd, et al., 2012). Then the specified hypothesis of fit is supported if there is statistically significant difference in the correlation coefficients of the predictor variable and the outcome variable in the groups (Venkatraman, 1989). Sub group moderation requires large sample size (Boyd, et al., 2012). On the other hand, moderation analysis focuses on the form of relationship between the independent and dependent variables

(Venkatraman, 1989). In the relationship of X on Y, interaction moderation seeks to answer whether ‘a change in X has similar effect on Y in group 1 as in group 2’.

The theoretical arguments developed in this thesis focus on the ‘form’ of relationship between corporate governance and firm performance. For example, the effect of corporate governance on firm performance is greater for highly growing firms. An alternative way of saying is ‘the greater the value of firm growth the greater will be the effect of corporate governance on firm performance’ (Schoonhoven, 1981). Thus, Interaction moderation is used in this thesis. It is a valid approach to test contingency hypotheses (Friedrich, 1982).²²

For each moderator variable, an interaction term is generated by cross-multiplying the corporate governance variable and the moderator variable. Testing whether a variable has moderating effects require running and comparing two regression specifications. First, we run a regression model incorporating the main effects of corporate governance, the moderator variables and other control variables. Second, regression model including the interaction effect of the corporate governance variable and each moderator variable is estimated (Cohen and Cohen, 1983). The procedure is referred as hierarchical regression and is commonly used in studies that use interaction moderations (Finkelstein and D'Aveni, 1994; Li and Simerly, 1998; Zahra, 1996).

There are several ways of testing the significance of moderating effects. The first approach is based on the magnitudes of the beta coefficients of the main effect and interaction effect.

The moderating hypothesis is supported if the interaction term has greater beta than the main

²² Since subgroup moderation analysis requires dividing units of analysis in to two or more groups each of which containing 200 units; it should not be used if the number of units of analysis under study does not support such criterion (Boyd et al., 2012).

effect (Li and Simerly, 1998). However, if variables are transformed to reduce multicollinearity, testing moderation hypotheses based on beta coefficients is incorrect (Allison, 1977). An alternative approach involves directly testing the significance of the interaction term at certain significance level, say 1% or 5% (Finkelstein and D'Aveni, 1994). The test statistics (p-value) obtained is similar if we also test the change in R^2 (ΔR^2) obtained when interaction terms are added (Kim, et al., 2001). In both cases, the moderating hypothesis is supported if the test statistics is significant. A further analysis of this approach requires sketching the marginal effect of the focal variable (e.g. corporate governance) on the dependent variable for significant interaction term (Schoonhoven, 1981; Kim, et al., 2001).²³

The methods informed by Friedrich (1982) and Schoonhoven (1981) are more appropriate for this thesis. Friedrich (1982) suggests that coefficients of variables involved in interactive specifications are conditional rather than stand-alone. Assume an estimation result of a reduced model; $\text{Performance} = B_1 + B_2 * \text{CGIETH} + B_3 * \text{Moderator} + B_4 * (\text{CGIETH} * M)$. CGIETH is the corporate governance variable and M is a moderating variable. The coefficients (B_1 , B_2 and B_3) are outputs of an estimation. Coefficient B_2 is the effect of CGIETH on performance if M is zero. Alternatively, B_3 is the effect of the moderating variable (M) on performance if corporate governance (CGIETH) is zero. The coefficient of the interaction term of CGIETH and M (B_4) is the change in the slope of performance on CGIETH due to a unit change in M. If B_4 is positive, it would mean that a one unit increase

²³ (Schoonhoven, 1981) sketches the marginal effects of different measures of organization structure on the dependent variable for significant interaction terms. For example if the interaction terms X_1X_2 in a model of $y = B_1 + B_2X_1 + B_3X_2 + B_4X_1X_2 + e$ is significant, the marginal effect of the focal variable (X_1) on Y is given by $Y = B_2 + B_4X_2$.

in M increases the slope of performance on CGIETH by B_4 (Friedrich, 1982). Since, our conceptualization is on the overall effect of CGIETH on performance, we need to integrate the conditional coefficients of CGIETH and CGIETH*M and test it for significance. The derivative of the performance equation with respect to CGIETH gives us the overall effect of CGIETH: $\Delta (\text{Performance})/\Delta (\text{CGIETH}) = B_2 + B_4M$. By using a formal 't' test on the integrated coefficients, we can get the overall effect of CGIETH for particular values of M along with the associated significance level. The procedure applies to each moderating variable and consists of two sub-stages.

- a. Test whether the un-standardized coefficient of the interaction terms is significant (Venkatraman, 1989).
- b. Test the overall effect of CGIETH on performance along the observed values of the moderator variable (Mean, Mean + SD and Mean – SD) (Friedrich, 1982).
- c. Graph overall effect of CGIETH on performance along the observed values of the moderator variable.

5.8 Testing For Violations of Assumptions

5.8.1 Normality

Normality is one of the basic requirements of linear regression analysis. For valid results for, independent variables of a model must have normal distribution. Normality can be tested either before or after estimation. In both cases, various plots are available that can depict normality more clearly than statistical tests. Researchers recommend quintile-normal plots for practitioners (Miller, 1997). Quantile-normal plots emphasise on the tails of the distribution and are one of the pre-estimation plot techniques. Normality is tested by evaluating the distribution of a variable against a diagonal axis that represents an ideal

normal distribution. Although it is difficult to obtain perfect normality, most of the analysis variables have normal distribution (see Appendix 4)

5.8.2 Multicollinearity

Multicollinearity exists when there is high correlation among variables of a specific model (Green, 2002). Although multicollinearity may occur in any regression analysis, it is a common problem in interaction moderation analyses (Venkatraman, 1989). Transforming the variables by subtracting the respective mean values and creating the interaction term with the transformed variables avoids the problem (Li and Simerly, 1998; Venkatraman, 1989; Li and Simerly, 1998). In this study, measures of corporate governance, firm growth, firm risk and owner identity are transformed by subtracting their respective mean values and interaction terms are formed using the transformed variables.

Regardless of model specification, a correlation coefficient that is higher than 0.75 is considered as an indicator of multicollinearity. In this study, no correlation coefficient has value that is as high as 0.75. A formal test of multicollinearity for each model is performed using VIF (Variance Inflation Factor). VIF measures the dimension compatibility of individual variables with respect to the other variables in a model. The inverse of multicollinearity (tolerance) is an alternative measure of Multicollinearity. Higher values of tolerance shows lower multicollinearity and vice versa. The risk of multicollinearity is higher if mean VIF is significantly different from 1 and the largest VIF for individual variables is greater than 30 (Chatterjee and Hadi, 1986). All model specifications satisfy the criteria, thus multicollinearity is not a problem (see Appendix 5).

5.8.3 Heteroskedasticity

The potential problem of heteroskedasticity in the regressions models is tested using Breusch-Pagan/Cook-Weisberg tests (Green, 2002). The null hypothesis of the test is that there is homoskedasticity or constant variance in error terms. A rejection of the null hypothesis indicates the presence of heteroskedasticity problem. In addition to including time dummies in all models to solve the problem (Zajac and Westphal, 1994), a formal test was undertaken. All tests indicate that heteroskedasticity is not a major problem. That is the null hypothesis for homoskedasticity is not rejected as indicated by large p-values (see Appendix 5).

5.8.4 Endogenous corporate governance

Corporate governance studies are often criticised for their failure to account for the risk of endogeneity problem (Demsetz and Villalonga, 2001; Harris and Raviv, 2008). The presence of endogeneity could lead to biased estimates thus distorts the effect of corporate governance on firm performance (Demsetz and Villalonga, 2001). Endogeneity may be caused due to the presence of unobserved fixed firm heterogeneity that can affect both corporate governance and firm performance (Himmelberg, et al., 1999), the failure to include all relevant variables commonly referred as omitted variable bias (Demsetz and Lehn, 1985) and reverse causality as firm performance may affect corporate governance (Mura, 2007).

Consistent with the corporate governance literature relevant firm level contingencies are included in all performance models (Demsetz and Villalonga, 2001). According to Demsetz and Villalonga (2001), information on how a governance mechanism responds to both firm

level contingencies and factors in the firm's environment is one way of addressing endogeneity. Moreover, to avoid the presence of endogeneity caused by unobserved firm heterogeneity all performance models include firm fixed unobserved effects (Himmelberg, et al., 1999; Gompers, et al., 2003; Cavaco, et al., 2013).

While appropriate remedial actions such as mentioned above can reduce the risk of endogeneity, the problem may not be completely solved due to reverse causality. Bebczuk (2005) suggests that performance may have positive effect on corporate governance 1) only profitable firms afford the costs of adopting good corporate governance. 2) there may be a system at an equilibrium state in which there is a group of firms with high performance/good corporate governance, whose owners are enjoying the benefits resulted from the strong corporate governance and are willing to maintain it; and the second group includes low performance/bad corporate governance firms in which insiders expropriate minorities and try hard to maintain it. In such situations, other methods are often used. Researchers used different methods to account for endogeneity. Instrumental variables regression (Himmelberg, et al., 1999; Bebczuk, 2005), simultaneous equation model (Bhagat and Bolton, 2008; Bebczuk, 2005), or lagged values of performance variables are commonly used (Finkelstein and D'Aveni, 1994; Cavaco, et al., 2013).

Cavaco, et al. (2013) use a variant of the following model to check endogeneity of board characteristics to previous financial performance (ROA and ROE).

[6]

$$CGI_{it} = \Omega Performance_{i,t-1} + \pi x_{i,t-1} + e_{it}$$

Performance refers to ROA and ROE alternatively, X_{it} refers to other firm level contingencies such as firm growth and e_{it} the error term. The focus here is Ω . If Ω is significant different from zero, the effect of CGIETH on financial performance is biased. For Both financial performance variables, the result clearly indicates that previous performance does not affect present corporate governance. Thus, it is safe to consider results in this study as valid (see Appendix 6:

5.9 Conclusion

This chapter discusses the strategies of the study. Sample selection requires great care as validity of results heavily depends on it. This chapter proposes sample selection based on a criterion that a company must be in operation for a specified period. This is consistent with the corporate governance literature. One of the major setbacks for governance studies is obtaining data. The problem is severe in countries where corporate governance is alien. This is especially true in Ethiopia. Multiple data sources had to be consulted to obtain data for this study. Similarly, standard data collection instruments appeared to be invalid for this study. As a result, a customized but comprehensive data gathering tools is developed. This chapter also explains how variables of the study are measured. Generally, studies use either single measure or composite measure of corporate governance. We argued that single measures are not capable of the multiple aspects of governance and composite measures assure the validity of results. Although there are several regression models available for researchers the literature reports concerns that researchers should address. This study uses firm fixed effects regression models and moderation regressions. Fixed effect models are used to account for

unobserved firm heterogeneity that could bias results. Various techniques are used to test violation of regression assumptions. Results indicate that assumptions of normality, heteroskedasticity and multicollinearity are not serious problems to affect the validity of results in this study. The next chapter presents data analyses and reports results. The chapter is organized by data analysis stages that are sub divided further based on relationship hypothesised in chapter four.

CHAPTER 6: RESULTS

6.1 Introduction

In this chapter, results of the study are presented based on the four stages of data analysis outlined in the previous chapter. At stage one various descriptive analysis are performed. The effect of firm level contingencies on corporate governance is analysed in stage two. Three different specifications are used to check the robustness of corporate governance regressions. At stage three corporate governance is associated with firm financial performance. ROA and ROE are the dependent variables as consistency of the effect of corporate governance can be evaluated for alternative measures of performance. In the fourth stage, the moderating effects of firm level contingency factors are analysed. In addition to regressions analysis, marginal analyses are performed using various graphs. Results from all stages of data analyses are not related to the literature as it is the main task of chapter seven.

6.2 Descriptive and correlation statistics

Table 3 shows the corporate governance variables from which the various governance indices are constructed. The top five non-management shareholders own on average 19% of company shares (t5_out). The group owns a maximum of 91% of company shares and a minimum ownership of 0%. The standard deviation of 0.21 clearly indicates a wider dispersion. Regarding the block holding variables, CEO's and non-CEO board members separately are block holders in 38% of the observations. The figure is only 28% for non-management shareholders. It demonstrates the dangers of the dominance of insiders in the ownership structure of Ethiopian companies. The mean board size is approximately 6, with the minimum and maximum board size of 3 and 9 respectively. The company law of

Ethiopia requires board size to be between 3 and 12. The standard deviation of 1.6 is quite low implying that companies do not differ significantly in their board size.

Table 3: summary statistics of corporate governance variables (2009-2013).

	mean	Std.Dev	min	max
Ownership Structure				
t5_out	0.19	0.21	0	0.91
Block_CEO	0.38	0.49	0	1
Block_BoD	0.38	0.49	0	1
Block_out	0.26	0.44	0	1
Board Structure				
BoD_sz	5.98	1.60	3	9
nexcBoD_sz	0.87	0.17	0.4	1
CEO_duality	0.84	0.37	0	1
nexBoD_own	0.40	0.38	0	1
Disclosure and Transparency				
Disc_own	0.99	0.07	0	1
Disc_allow	0.50	0.50	0	1
Disc_finance	0.66	0.47	0	1
<i>No. of observations</i>	210			

T5_out is the proportion of common equity owned by the top five non-management shareholders. Block_CEO is a dummy variable (1 if CEO owns 10% or more stakes or 0 otherwise). Block_BoD is a dummy variable (1 if at least a board member owns 10% or more stakes or 0 otherwise). Block_out is also a dummy variable (1 if any non-management shareholder owns 10% or more stakes or 0 otherwise). BoD_sz is size of the board. nexBoD_sz is the proportion of non-executives in the board. CEO_duality is a dummy variable taking 1 if the positions of the CEO and the chair of the board held by two persons or 0 otherwise. nexBoD_own is the proportion of common equity owned by all non-executive board members. Disc_own, Disc_allow and Disc_finance are dummy variables that assume 1 if there is public disclosure of the identity and ownership of shareholders, board members, etc., board allowances and financial and operating performance statements respectively.

The proportion of non-executive board members is very large (87%) which may show strong monitoring capacity of the board of directors. This figure is as high as 100% of the board. However, it should be clear that the boards of some companies are dominated by 60% of executive directors. The disclosure variables show large discrepancy. The mean value of Disc_own (99%) suggests that almost all companies disclose the identity, address and share

ownership of their shareholders and board members. The result is not surprising expected as the company law requires all share companies to do so. Companies should submit such documents at the time of the formation of the share company and when any change occurs either in the ownership structure or the board of directors. This fact is also demonstrated by the very low standard deviation. On the other hand, on average 50% the companies disclose board allowances in their financial statements. The company law of Ethiopia states nothing regarding the amount and determination of board allowance. This is one of the weaknesses of the law relative to international corporate governance practices. The variability of disclosure of board allowances is large as significant number of companies do not disclose board allowances. Finally, the mean value of disclosure of financial statements implies that 66% of the companies disclose their financial statements to the public. Public disclosure in this context is that companies submit their financial statements to the Ministry of Trade at the end of the year (July 7). According to the ministry, financial statements are publicly available and thus anyone interested could inspect them. Unlike international practices, Ethiopian companies have the discretion to disclose their financial statements to the public. This is the practice rather than the law in. The company law unequivocally obliges all share companies to submit their financial statements to the Ministry of Trade. In unwritten operating routine however, the ministry provides a company the option to submit its financial statements or a bank statement on its cash position. Whichever option a company exercises, the ministry would renew its license.

Table 4 reports descriptive statistics and simple correlations of the governance variables. The overall governance index (CGIETH) is a composite value of the three sub indices: ownership

sub index, board sub index and disclosure and transparency sub index. The mean value of the board and disclosure sub indices are above the theoretical threshold of 50%. The sub indices might have influenced the overall index.

Table 4: Descriptive statistics for CGIETH and its sub indices (2009-2013).

	mean	Standard deviation	CGIETH	Owner	Board	Disclosure
CGIETH	0.56	0.1547	1			
Owner	0.31	0.2631	0.500***	1		
Board	0.64	0.2054	0.554***	-0.0822	1	
Disclosure	0.72	0.3005	0.729***	-0.0477	0.245***	1
No. observations	210					

Significance level of correlations coefficients: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The overall index has strong positive correlation with the three sub indices at a 0.1% significance level ($p < 0.001$). The result is not surprising as CGIETH is an arithmetic average of the sub indices. Disclosure and transparency sub index is also positively related with the board sub index ($p < 0.001$).

Company level CGIETH of the sampled companies for each year in the period 2009-2013 is provided in the appendix (see Appendix 3). During the period, companies progressed and regressed in their governance.

Figure 2: Distribution of the Ethiopian Corporate Governance Index (CGIETH: 2009-2013).

N= 42 companies, Mean= 0.56, standard deviation= 0.155, minimum=0.24, maximum= 0.84

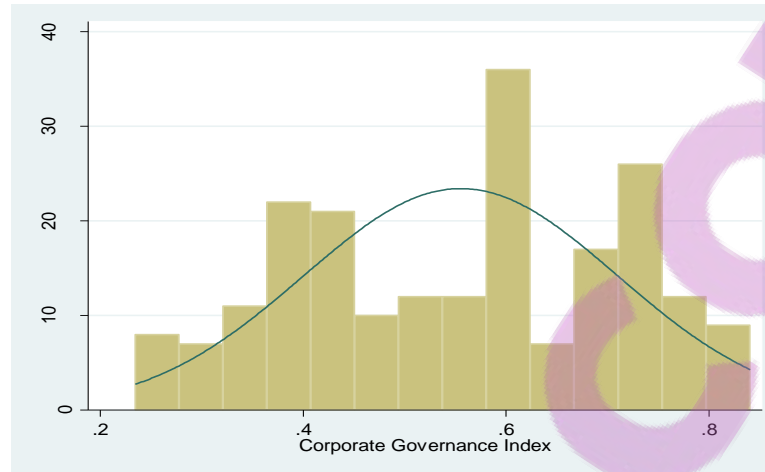


Figure 2 presents the distribution of the overall corporate governance index. The index is symmetric, almost normally distributed. This is good news for the regression analyses, as the variable is the focus of this thesis. CGIETH has a minimum of 0.24 and a maximum of 0.84. Theoretically, the index lies between 0 and 1 (0 is weakest corporate governance while 1 is strongest corporate governance). The practical range of the variable is between 0.32 and 0.8 (Black, et al., 2010).

Table 5: descriptive statistics for identity of largest owners, year (2009-2013).

Owner Group	observations	percent	Cum. percent
Bank	5	2.38	2.38
Company	32	15.24	17.62
Family/individual	47	22.38	40.00
Government	20	9.52	49.52
Management	106	50.48	100.00
Total	210	100.00	

Source: ministry of trade documentation.

Table 5 shows descriptive statistics of the identity of the largest owner. The management group is the largest owner in more than 50% of the observations (42 firms and 5-year

period). The group includes the CEO and executive and non-executive board members. It is comparable with block ownership (10% or more of common equity) by the CEO and non-CEO board members discussed in table 3. Bank ownership seems to be less common in Ethiopia. family/individual owners control more than 22% of the companies in the study period. Ownership by other companies account for more than 15%. Company ownership is allowed in Ethiopia. A company can have as much shares as possible but cross holding is not allowed if one of them holds 10% or more of the capital of the other company. Government ownership is also allowed in which a joint company can be formed with private investors. In most cases, the government owns shares of a company under the process of privatization. Compared with bank ownership, the government of Ethiopia is the dominant owner in more than 9% of the companies.

Table 6: descriptive statistics and simple correlation of variables of the study (2009-2013)

	mean	St.dev	CGIETH	ROA	ROE	GROW	RISK	SIZE	CAP	ADV	LEV	POW	INV
CGIETH	0.56	0.15	1										
ROA	0.03	0.07	0.37***	1									
ROE	0.04	0.15	0.34***	0.83***	1								
GROW	4.36	50.1	0.13*	-0.06	-0.04	1							
RISK	0.06	0.05	-0.12*	-0.07	-0.06	-0.02	1						
SIZE	17	1.44	0.33***	0.3***	0.27***	0.016	-0.29***	1					
CAP	2.5	9.15	-0.09	-0.09	-0.02	-0.02	-0.09	0.09	1				
ADV	0.01	0.01	0.25***	-0.02	-0.01	-0.04	-0.15**	0.31**	0.04	1			
LEV	0.38	0.21	0.13*	-0.04	-0.03	0.16**	-0.13*	0.16**	-0.08	0.16**	1		
POW	0.12	0.24	0.13*	0.12*	0.16**	0.20***	0.03	0.52**	-0.08	0.21***	0.28***	1	
INV	0.26	0.44	0.30***	0.0410	0.01	-0.02	0.01	0.02	0.04	0.16**	0.06	-0.01	1

- No. of observations= 210
- Significance level for correlation coefficients: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 6 presents descriptive statistics and simple correlations of all variables of the study except owner identity. All variables except capital intensity significantly correlate with the corporate governance index. The highly skewed distribution of capital intensity could have caused the result and needs transformation. ROA and ROE are the performance variables.

The variables strongly correlate. Correlations coefficients are generally fair and multicollinearity may not be a problem.

6.3 The effect of firm contingencies on corporate governance

Table 7 examines the relationship between firm level contingencies (antecedent factors) and the level of corporate governance. The table reports standardized coefficients (BETA) for different specifications of the corporate governance model. Standardized coefficients allow comparison among similar variables in a particular specification. For instance, the magnitude of the relative effect of owner identity variables is worth investigating and the beta coefficients have such information. The result from the pooled OLS is reported in Equation 1 (the second column). The main assumption of Pooled OLS is that individual differences can be explained by observed variables and thus unobserved individual effects are excluded. Unobserved fixed effects are included in equations 2-4. Equation 2 of the third column includes industry fixed effects for each industry class while equation 3 and 4 include firm fixed effects for each company. Year dummies are incorporated in all of the specifications.

Table 7: regression analysis for the effect of antecedent factors on corporate governance.

Dependent variable: Corporate Governance index (CGIETH 2009-2013)

	(1)	(2)	(3)	(4)
	Pooled OLS	Industry Effect	Firm Effect	Firm effect
GROW	0.1143* (0.0002)	0.1036* (0.0002)	0.0083 (0.0001)	0.0072 (0.0001)
RISK	-0.0782 (0.1845)	-0.0859 (0.1988)	0.2110*** (0.1759)	0.2116*** (0.1759)
FAM	-0.1779*** (0.0234)	-0.1820*** (0.0256)	0.0459 (0.0462)	
COMP	0.0868 (0.0289)	-0.0190 (0.0449)	0.2025 (0.0635)	
GOV	0.2744*** (0.0334)	0.2855*** (0.0348)	0.6519*** (0.0471)	
BANK	0.1386** (0.0600)	0.1431** (0.0614)	0.3219*** (0.0449)	
NPRV				0.6860*** (0.0448)
CAP	-0.0783 (0.0051)	-0.0895 (0.0053)	-0.2238*** (0.0042)	-0.2227*** (0.0042)
ADV	0.1926*** (1.1372)	0.1749** (1.1682)	0.3079*** (0.7710)	0.3054*** (0.7703)
LEV	0.0238 (0.0462)	0.0297 (0.0499)	-0.0084 (0.0382)	-0.0010 (0.0380)
SIZE	0.1642** (0.0089)	0.1597* (0.0091)	0.1175* (0.0067)	0.1142* (0.0067)
POW	-0.0584 (0.0484)	-0.0622 (0.0526)	0.1691** (0.0453)	0.1665** (0.0446)
INV	0.2799*** (0.0225)	0.2768*** (0.0226)	0.1699*** (0.0134)	0.1630*** (0.0132)

Continued

	(1)	(2)	(3)	(4)
	Pooled OLS	Industry Effect	Firm Effect	Firm effect
year dummy	Yes	Yes	Yes	Yes
Industry effect	No	Yes	No	No
Firm effect	No	No	Yes	Yes
Constant	Yes	Yes	Yes	Yes
<i>N</i>	210	210	210	210
<i>R</i> ²	0.401	0.415	0.857	0.855
adj. <i>R</i> ²	0.352	0.353	0.81	0.81
F	8.084***	6.696***	17.20***	17.82***

Standardized beta coefficients; Standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

CGIETH is an overall corporate governance index constructed by taking the average score of board, ownership and disclosure sub indices. Growth is year-to-year sales growth over a five-year period. RISK is standard deviation of return on asset (ROA). CAP is the logarithm of the ratio of fixed asset to sales. Advert is the ratio of advertizing expenditure to sales. LEV is the ratio of total debt to total asset. Size is firm size measured by the logarithm of total asset. POW is market power measured by the ratio a firm's sales relative to total sales of its industry. INV is a dummy indicator whether a firm invests in fixed assets as reported in its financial statement. FAM, COMP, GOV and BANK are dummy indicators for the identity of the largest shareholder. NPRV is also a dummy indicator if the largest shareholder is government or bank.

Consistent with the hypothesis, the pooled OLS indicates that firm growth affects corporate governance positively and significantly. While we hypothesise a positive link between firm risk and corporate governance, the coefficient is negative and insignificant. Similarly, capital intensity, leverage and market power have insignificant coefficients. The ownership identity variables appear to affect corporate governance. While family ownership has negative effect, government and bank ownership are positively and significantly associated with corporate governance.

The industry effect specification does not differ significantly from the previous pooled OLS specification except slight differences in the magnitudes of some coefficients. The adjusted R^2 in equations 1 and 2 are almost equal. Including industry effect reduces the significance of the coefficients of advertising intensity and firm size. The sign and significance of other

coefficients are similar with those reported in the pooled OLS regression. This suggests that unobserved fixed industry effects correlate with observed firm characteristics and bias estimated coefficients in a pooled analysis. If we did not control for fixed industry effects, the coefficients of advertising intensity and firm size would have been large in the pooled OLS. Advertising intensity (ADV) predicts firm level corporate governance positively and significantly ($p < 0.05$). The inclusion of fixed industry effects decreases the magnitude of the coefficient compared with the pooled OLS. Firm size predicts corporate governance positively and significantly ($p < 0.1$).

The last two columns of table 7 (equation 3 and 4) consider unobserved firm heterogeneity by incorporating a dummy variable for each sampled firm. The adjusted R^2 in equation 3 and 4 are more than twice as large as the adjusted R^2 's in equation 1 and 2. The inclusion of fixed firm effects increases the adjusted R^2 from 0.352 to .81. It implies that unobserved firm heterogeneity carry attributes that explain half of the cross sectional variation of corporate governance. The unobserved effect is a firm fixed effect that may correlate with observed firm contingencies (Himmelberg, et al., 1999). The inclusion of fixed firm effects change coefficient estimates of firm growth, firm risk, capital intensity, advertising intensity, market power and the owner identity dummies of family and bank ownerships.

In fact, a formal test of the presence of unobserved firm heterogeneity was performed with an F-test. The null hypothesis is that the parameters of the individual dummies are zero. The F-test compares the pooled OLS without dummies with the one-way individual fixed effect model. For the regression that includes corporate governance as a dependent variable (model 1), the F statistic of 4.81 rejects the null hypothesis at 1% significance level ($p < 0.01$).

Similarly, an F statistic of 6.96 rejects the null hypothesis of zero parameters of time fixed effects at 1% significance level ($p < 0.01$). A test for a two-way effect model compares a pooled OLS without dummies with a two-way individual and time effect model. The null hypothesis is that the parameters of the individual effects and time effects are all zero. An F statistic of 5.12 rejects the zero individual and time fixed effect hypothesis in favour of a two-way fixed effect model at 1% significance level ($P < 0.01$). Thus, all fixed effect tests support the inclusion of both individual fixed effect and time fixed effect in the corporate governance regression analysis.

Equation 3 and 4 are similar except the representation of owner identity. In equation 3, individual owner identity variables are included and the reference is management ownership. Equation 4 combines owner identity into broad classes. Company, government and bank ownership represent the 'non-private' owner identity. The 'private' group includes ownership by family/individual and management. The regression equation incorporates the non-private group and the private group is the reference group. Except for owner identity variables, result analysis for all variables refers equation 3 and 4 as firm effect equation(s).

Turning to the result in table 7, firm growth turn out to be insignificant in the firm effect equations (the last two columns). The result suggests that firm growth is correlated with unobserved firm characteristics and thus the coefficient is biased upward in the pooled OLS and industry effect equations. Firm risk is positively and significantly associated with corporate governance ($p < 0.01$). Again, if we did not control for fixed firm effects, the coefficient of firm risk would have been biased downward in both the pooled OLS and industry effect equations. Similarly, the inclusion of fixed firm effects changes the

significance level of capital intensity. Capital intensity is found to be associated negatively and significantly with corporate governance ($p < 0.01$). The exclusion of fixed firm effects would bias the coefficient estimate downward (in absolute terms) in the pooled and industry effects regressions. Advertising intensity influences corporate governance positively and significantly ($p < 0.01$). The inclusion of fixed firm effects increases the magnitude of the coefficient significantly compared with the pooled and industry effects analyses. Firm size influences corporate governance positively at a 10% significant level. Market power is also associated with corporate governance positively and significantly ($p < 0.05$). The sign and significance level of the coefficient estimates change in the firm effects regression. The evidence shows that unobserved firm characteristics are correlated with market power downward biasing the coefficient.

The investment dummy is consistently and positively predicts the level of corporate governance at a 1% significance level. The investment dummy (INV) is used to refine more the scope of discretionary spending. It allows investigation of whether companies reporting their investments differ in corporate governance compared with non-reporting companies.

Owner identity is found to be significantly associated with corporate governance. Government and bank ownership are found to be positively associated with corporate governance compared with management ownership at a 1% significance level ($p < 0.01$). Relative to management ownership, the effect of government ownership on corporate governance is more than twice of the effect of bank ownership (relative beta coefficients). Relative to management ownership, if the largest owner is government corporate governance increases by 0.15 or 27% of average corporate governance. Using similar logic, relative to

management ownership if the largest owner is bank corporate governance increases by 0.14 or 25% of average corporate governance.

The negative link between family ownership and corporate governance relative to management ownership levels off by the inclusion of fixed firm effects. Relative to management ownership, family and company ownership have no significant effect on corporate governance. The last column of table 7 presents analysis for the non-private owner group (company, government and bank). The effect of owner identity on corporate governance is significantly positive if the largest owner is non-private shareholder relative to private shareholders.

In summary, the results presented in table 7 suggest that observed firm contingencies in the contracting environment influence the level of firm corporate governance. It is also evident that unobserved fixed industry level and firm level characteristics are correlated with observed firm contingencies rendering estimates from pooled regression analysis biased. The results have also suggested that even accounting for industry effects, parts of the contracting environment remain unobserved. The implication is clear; analysis linking the contracting environment with corporate governance should account for unobserved fixed firm effects that otherwise could lead to biased coefficient estimates.

6.4 The effect of corporate governance on financial performance

In the previous analysis, we have found out that the contracting environment within which firms operate predicts the cross sectional variation of corporate governance. The analysis has also shown that unobserved characteristics are correlated with observed firm contingencies rendering coefficient estimates biased. Specifically the inclusion of unobserved firm effects

increases the adjusted R^2 from 0.352 to .81. Thus, corporate governance is not an exogenous phenomenon. The investigation of the link between corporate governance and financial performance should include not only firm contingencies but also unobserved firm characteristics.

The examination of the link between corporate governance and financial performance is based on two accounting based variables: return on asset (ROA) and return on equity (ROE). For each financial performance variable, three equations are specified. Similar with the previous analysis, pooled OLS, industry effects, firm effects regression analysis are used for comparison. The results are presented in table 8. The inclusion of fixed firm effects increases the adjusted R^2 from 0.224 to 0.41 in the ROA equation and from 0.17 to 0.41 in the ROE equation. This suggests that unobserved firm effects explain much of the cross sectional variation of financial performance.

Return on asset (ROA): corporate governance has positive and significant influence on ROA in all specifications at a 1% level ($p < 0.01$). The increase in the adjusted R^2 in the firm effect equation is a clear indication of the interplay of unobserved firm characteristics influencing firm performance. For a firm with average corporate governance (CGIETH=0.56), a 1% increase in CGIETH is associated with a 0.014 increase in its ROA, that is, 4% of average ROA (0.03). A worst-to-best CGIETH (0.234 to 0.84) is associated with a jump in ROA by 0.16 (from -0.06 to 0.10).

Firm growth is negatively and significantly associated with ROA in the pooled and industry effects specifications. Similarly, firm risk has a statistically negative influence on ROA in

the firm effect equation. ROA is also influenced negatively and significantly by capital intensity and leverage in all specifications. On the other hand, ROA is positively and statistically associated with firm size in all specifications. All owner identity variables as well as advertising intensity, market power, and investment do not significantly influence ROA in all specifications.

Return on equity (ROE): corporate governance has a significant positive influence on ROE in all specifications ($p < 0.01$). Evaluating the effect of corporate governance at different values on ROE provides additional information as a robustness check. As we did for ROA, the firm effect specification is the focus of the analysis. Using the same logic, for a firm with average corporate governance, a 1% increase in corporate governance is associated with an increase in ROE by 0.03, which 79% of average ROE (0.04). A worst-to-best CGIETH (0.234 to 0.84) is associated with a jump in ROE by 0.32 (from -0.13 to 0.19).

ROE is influenced negatively by firm growth in the OLS specification. ROE is associated with some of the owner identities. Relative to management, ROE is influenced positively if the largest owner is family and negatively if the largest owner is bank. Capital intensity has a statistically significant negative effect on ROE in the OLS and industry effect specifications. Similarly, leverage has a negative influence on ROE in the firm specification. The positive effect of firm size on ROE is consistent across all specifications. Firm risk, advertising intensity, market power and investment have no significant effect on ROE.

In summary the results reported in table 8 suggests that unobserved firm heterogeneity explain much of the cross sectional variation in financial performance. Together with the

results in table 8, the evidence suggests that unobserved firm fixed effects influence both corporate governance and financial performance. Corporate governance is found to be a strong predictor of financial performance. What is more fascinating in the results of table 8 is that a change in corporate governance is associated with greater change in the magnitude of financial performance. Apart from the explanatory power of corporate governance firm level contingencies are important predictors of firm financial performance. The overall idea is that in an examination of the link between corporate governance and financial performance, a more robust analysis requires the inclusion of not only observed firm level contingencies but also unobserved firm heterogeneity.

Table 8: Regression analysis for the effect of corporate governance on firm financial performance.

	Dep. Variable: ROA			Dep. Variable: ROE		
	(1) Pooled OLS	(2) Industry Effect	(3) Firm Effect	(4) Pooled OLS	(5) Industry Effect	(6) Firm Effect
CGIET	0.3259*** (0.0375)	0.3383*** (0.0382)	0.5309*** (0.0671)	0.3079*** (0.0781)	0.3465*** (0.0777)	0.5600*** (0.1352)
GROW	-0.1298** (0.0001)	-0.1271* (0.0001)	-0.0930 (0.0001)	-0.1223* (0.0002)	-0.1056 (0.0002)	-0.0633 (0.0002)
RISK	-0.0485 (0.0966)	-0.0574 (0.1049)	-0.3694*** (0.1528)	-0.0107 (0.2010)	0.0110 (0.2134)	-0.1772 (0.3077)
FAM	0.0640 (0.0124)	0.0618 (0.0137)	-0.0638 (0.0387)	0.1232* (0.0259)	0.1448* (0.0279)	0.1297 (0.0779)
COMP	0.0014 (0.0151)	0.0197 (0.0236)	0.3982 (0.0534)	-0.0367 (0.0315)	0.1490 (0.0479)	0.3350 (0.1076)
GOV	0.0514 (0.0182)	0.0340 (0.0192)	-0.2877 (0.0456)	0.1134 (0.0380)	0.0895 (0.0390)	-0.2426 (0.0918)
BANK	-0.0116 (0.0317)	-0.0233 (0.0327)	-0.1349 (0.0434)	-0.0062 (0.0660)	-0.0163 (0.0666)	-0.1546* (0.0874)
CAP	-0.2991*** (0.0027)	-0.2903*** (0.0028)	-0.2843*** (0.0037)	-0.1585** (0.0055)	-0.1387* (0.0057)	-0.1588 (0.0075)
ADV	-0.0722 (0.6059)	-0.0672 (0.6245)	-0.0968 (0.7363)	-0.0988 (1.2610)	-0.0734 (1.2704)	-0.0920 (1.4825)

Continued						
	Dep. Variable: ROA			Dep. Variable: ROE		
	(1) Pooled OLS	(2) Industry Effect	(3) Firm Effect	(4) Pooled OLS	(5) Industry Effect	(6) Firm Effect
LEV	-0.1320* (0.0241)	-0.1371* (0.0262)	-0.2875*** (0.0319)	-0.0928 (0.0502)	-0.0947 (0.0534)	-0.2088** (0.0643)
SIZE	0.2456*** (0.0047)	0.2442** (0.0048)	0.3510*** (0.0057)	0.1735* (0.0098)	0.1744* (0.0098)	0.2212** (0.0114)
POW	-0.0172 (0.0253)	0.0026 (0.0277)	-0.0654 (0.0386)	0.0985 (0.0526)	0.1039 (0.0563)	0.0487 (0.0778)
INV	-0.0262 (0.0123)	-0.0244 (0.0125)	-0.0568 (0.0119)	-0.0573 (0.0256)	-0.0638 (0.0254)	-0.0905 (0.0240)
year dm	Yes	Yes	Yes	Yes	Yes	Yes
Industry eff.	No	Yes	No	No	Yes	No
Firm eff.	No	No	Yes	No	No	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
N	210	210	210	210	210	210
R ²	0.287	0.292	0.563	0.238	0.277	0.563
adj. R ²	0.224	0.213	0.41	0.17	0.20	0.41
F	4.549***	3.700***	3.606***	3.524***	3.434***	3.602***

- Standardized beta coefficients; Standard errors in parentheses; significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. CGIETH is an overall corporate governance index constructed by taking the average score of board, ownership and disclosure sub indices. Growth is year-to-year sales growth over a five-year period. RISK is standard deviation of return on asset (ROA). CAP is the logarithm of the ratio of fixed asset to sales. Advert is the ratio of advertizing expenditure to sales. LEV is the ratio of total debt to total asset. Size is firm size measured by the logarithm of total asset. POW is market power measured by the ratio a firm's sales relative to total sales of its industry. INV is a dummy indicator whether a firm invests in fixed assets as reported in its financial statement. FAM, COMP, GOV and BANK are dummy indicators for owner identity.

Moderating effects

This part presents results for the moderating effects of firm level contingencies on the relationship between corporate governance and firm performance. We have hypothesized that firm growth, firm risk and owner identity moderate the corporate governance-firm performance relationship. As discussed in previous parts, moderation analyses are vulnerable to multicollinearity; transforming the variables in multiplicative interactions can avoid the problem (Venkatraman, 1989). Subtracting the means of variables from their values brings its own problems. The standardized coefficient (Beta) coefficient of the multiplicative term is affected by the transformation (Allison, 1977). Thus for meaningful interpretation of results and hypothesis testing, all moderating effect analysis are based on unstandardized coefficients. Equally applicable is that the transformed data is the new data source for testing various specifications of relationships. It should be noted that transforming variables does not alter the essence of the model except rearranging the meanings of coefficients of transformed variables (Allison, 1977). As discussed before, analysis of all moderating regression results follow three phases: *phase one*- significance testing of interaction terms, *phase two*- evaluating overall effect of corporate governance at different values of the moderating variable and *phase three*- graphical depiction of the marginal effects of corporate governance across observed values of the moderating variable.

6.5 The moderating effect of firm growth on the corporate governance-firm performance relationship.

Table 9 reports the results for firm growth as a moderator. ROA and ROE are the dependent variables. Equation 1 and equation 3 include only main effects of CGIETH and firm growth among other variables. The last columns of ROA and ROE (equation 2 and 4 respectively)

are specifications relevant for testing the contingency hypothesis. The inclusion of the multiplicative interactive term between CGIETH and GROW increases the adjusted R^2 . Adjusted R^2 changes from 0.41 to 0.47 in the ROA equations and from 0.41 to 0.46 in the ROE equations. The addition of interaction terms explain about 6% more of the variation of ROA and about 5% more of the variation of ROE relative to that excluding interaction. This is one apparent advantage of using multiplicative interaction (Allison, 1977). However, explanative power alone should not be a success as contingency hypotheses requires more formal testing procedures.

The first phase of analysis is evaluating the coefficient of the interaction term. Equation 2 and 4 shows that firm growth moderates the positive effect of corporate governance on firm performance. Our contingency hypothesis states that the greater the firm growth the greater is the influence of corporate governance on firm performance. In both ROA and ROE equations, the interaction of firm growth and corporate governance (CGIETH*GROW) indicates that the effect of corporate governance on financial performance is enhanced with increase in firm growth by one unit. The additional effect of corporate governance on ROA associated with a unit increase in firm growth is 0.01. The corresponding effect of corporate governance on ROE associated with a unit increase in firm growth is 0.018. For both ROA and ROE the hypothesis on the moderating effect of firm growth is supported and is significant at a 1% level ($p < 0.01$).

Table 9: Fixed Effect regression analysis for the moderating effect of firm growth in the corporate governance-firm performance relationship.

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
CGIETH	0.253*** (0.067)	0.263*** (0.063)	0.537*** (0.135)	0.556*** (0.129)
GROW	-0.000137 (0.000)	-0.00287*** (0.001)	-0.000187 (0.000)	-0.00520*** (0.001)
CGIETH*GROW		0.01*** (0.002)		0.018*** (0.004)
RISK	-0.518*** (0.153)	-0.474*** (0.145)	-0.500 (0.308)	-0.419 (0.294)
FAM	-0.0113 (0.039)	-0.00662 (0.037)	0.0461 (0.078)	0.0546 (0.074)
COMP	0.0815 (0.053)	0.0751 (0.050)	0.138 (0.108)	0.126 (0.103)
GOV	-0.0721 (0.046)	-0.0746* (0.043)	-0.122 (0.092)	-0.127 (0.088)
BANK	-0.0651 (0.043)	-0.0489 (0.041)	-0.150* (0.087)	-0.121 (0.084)
CAP	-0.0101*** (0.004)	-0.00961*** (0.004)	-0.0114 (0.007)	-0.0104 (0.007)
ADV	-0.795 (0.736)	-1.018 (0.697)	-1.519 (1.482)	-1.929 (1.418)
LEV	-0.101*** (0.032)	-0.0622** (0.031)	-0.147** (0.064)	-0.0766 (0.064)
SIZE	0.0180*** (0.006)	0.0167*** (0.005)	0.0228** (0.011)	0.0205* (0.011)
POW	-0.0205 (0.039)	0.0166 (0.037)	0.0306 (0.078)	0.0987 (0.076)

Continued

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
INV	-0.00955 (0.012)	-0.00583 (0.011)	-0.0307 (0.024)	-0.0238 (0.023)
year dummy	Yes	Yes	Yes	Yes
Firm effect	Yes	Yes	Yes	Yes
Constant	-0.190* (0.101)	-0.194** (0.095)	-0.200 (0.204)	-0.207 (0.194)
N	210	210	210	210
R ²	0.563	0.613	0.563	0.604
adj. R ²	0.407	0.471	0.406	0.459
F	3.606***	4.329***	3.602***	4.171***

- Standard errors in parentheses; significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

CGIETH is an overall corporate governance index constructed by taking the average score of board, ownership and disclosure sub indices. Growth is year-to-year sales growth over a five-year period. RISK is standard deviation of return on asset (ROA). CAP is the logarithm of the ratio of fixed asset to sales. Advert is the ratio of advertizing expenditure to sales. LEV is the ratio of total debt to total asset. Size is firm size measured by the logarithm of total asset. POW is market power measured by the ratio a firm's sales relative to total sales of its industry. INV is a dummy indicator whether a firm invests in fixed assets as reported in its financial statement. FAM, COMP, GOV and BANK are dummy indicators for the identity of the largest shareholder. NPRV is also a dummy indicator if the largest shareholder is company, government or bank.

The second phase of the analysis is to test the overall effect of corporate governance on financial performance over observed range of firm growth, often at Mean, Mean + SD and Mean - SD. The overall effect of corporate governance can be specified by taking the derivative of firm performance relative to corporate governance $\left(\frac{d(\text{financial performance})}{d(\text{corporate governance})}\right)$. Based on table 9 the reduced specification for the overall effect of corporate governance is given by;

$$ROA = 0.263 + 0.01 * GROW \quad [7]$$

$$ROE = 0.556 + 0.018 * GROW \quad [8]$$

Both equations include main effects of corporate governance and its enhanced effect due to a one unit change in firm growth. Although regression results in table 9 support the contingency hypothesis for firm growth, additional analysis can strengthen the robustness of the findings. At this second phase of the analysis, the marginal effect of corporate governance on firm performance is evaluated at different values of firm growth.

Table 10 reports marginal effects of corporate governance on ROA evaluated at mean – SD, mean and mean + SD of firm growth (lower value, average value and higher value respectively). When firm growth is at average, there is statistically positive association between corporate governance and ROA. At average value of firm growth, a one unit increase in corporate governance increases ROA by 0.263 at a 1% significance level. At lower values of firm growth (Mean – SD), increase in corporate governance is associated with decrease in ROA. For low growth companies, one unit increase in corporate governance is associated with a decrease in ROA by 0.224 at a 10% significance level. This is consistent with the hidden implications of contingency hypotheses. At this point, the greater firm growth the greater is the effect of corporate governance on firm performance implies that at lower values of firm growth increase in corporate governance is associated with decrease in firm performance (Schoonhoven, 1981). The coefficient of -0.224 suggests the hidden implication of the contingency hypothesis developed in this study. The last row of table 10 shows the impact of corporate governance at higher values of firm growth (mean + SD). The greater impact of corporate governance on ROA is statistically significant at 1% level. Compared with the average company, the effect of one unit increase in corporate governance increases ROA by three-fold.

Table 10: Marginal effect of corporate governance on ROA evaluated at different values of firm growth.

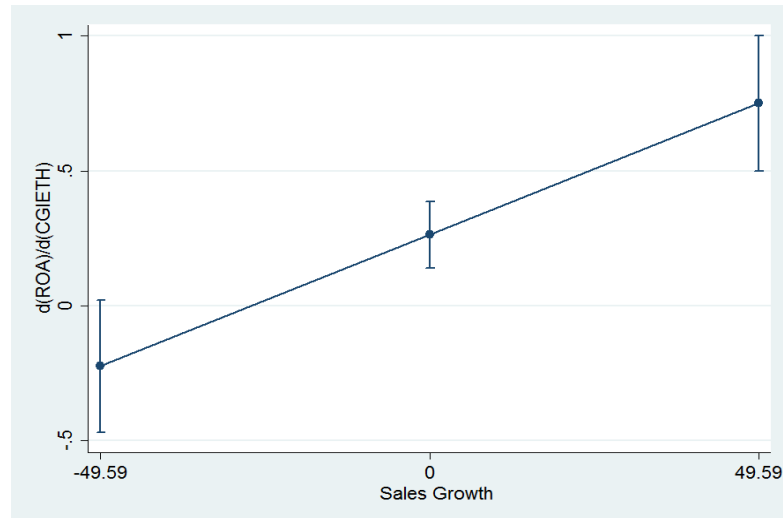
Growth at	$\frac{\partial ROA}{\partial CGIETH}$	Std. err	p-value
Mean – Standard Deviation	-.224*	.124	0.072
Mean	.263***	.063	0.000
Mean + Standard Deviation	.750***	.1283	0.000

• Significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure 3 shows the third phase of the moderation analysis. The marginal effect of corporate governance on ROA (vertical axis) is evaluated at three values of firm growth as discussed above. The point at which the line crosses the '0' value of the vertical axis is the level of firm growth where corporate governance has no effect on ROA. Below the point, corporate governance has negative effect on ROA while the effect is positive above the point.

Figure 3: Moderating effect of firm growth in the corporate governance-ROA relationship

(Firm growth is computed at Mean - sd, mean and mean + sd)



The two-phase approach applied for the ROA equation is repeated here for the ROE equation. Table 11 presents marginal effects of corporate governance on ROE at three

different values of firm growth. The result is similar with that of ROA except the insignificant result for lower values of firm growth. There is statistically significant positive association between corporate governance and ROE for both average growth and high growth companies. For the average growth companies, a one unit increase in corporate governance increases ROE by 0.556 at a statistical significance level of 1%. The magnitude of the effect is more than twice as large for the high growth companies relative to the average growth companies. For the high growth companies, a one unit increase in corporate governance is associated with a 1.45 increase in ROE at a significance level of 1%. In addition, the result in table 11 supports the hidden implication of the contingency hypothesis but is not statistically significant. For low growth companies, increase in corporate governance decreases ROE. Apart from its insignificance, the result supports the non-monotonous contingency relationship that strategic management researchers have suggested. The third phase of the analysis depicts the marginal effect of corporate governance on ROE as shown below in figure 4.

Table 11: Marginal effects of corporate governance on ROE evaluated at different values of firm growth.

Growth at	$\frac{\partial ROE}{\partial CGLIETH}$	Std. Err.	P-value
Mean – Standard Deviation	-.337	.253	0.183
Mean	.556***	.129	0.000
Mean + Standard Deviation	1.449***	.261	0.000

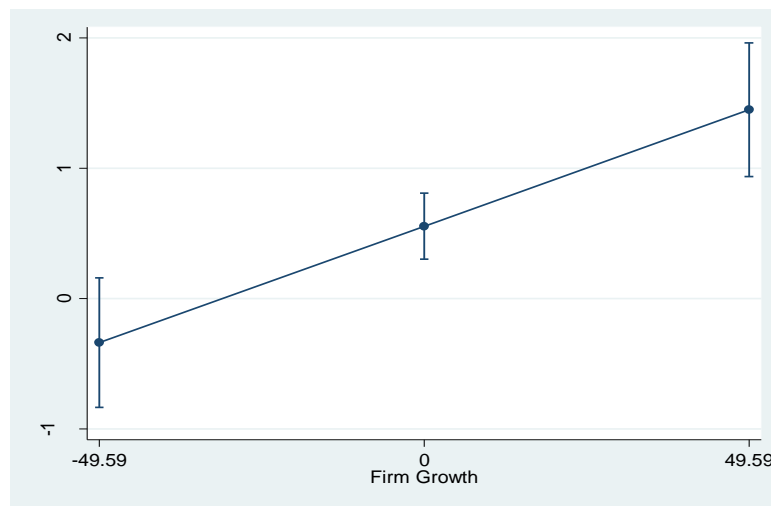
• Significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

According to figure 4, the effect of corporate governance on ROE is non-monotonous across the values of firm growth. At a point between the lowest and the average firm growth, the effect of corporate governance on ROE is zero (the line crosses the grid where

$\Delta(\text{ROE})/\Delta(\text{CGIETH})=0$). Above the point the marginal effect of corporate governance is positive. On the other hand, below the point the marginal effect is negative. The result in table 10 however indicates that the negative marginal effects of corporate governance at lower values of firm growth is insignificant.

Figure 4 : Moderating effect of firm growth in the corporate governance-ROA relationship

(Firm growth is computed at Mean - sd, mean and mean + sd)



We now turn to the discussion of control variables in table 9. The moderating specifications (Equation 2 and 4) are the focus of discussion. Firm risk, owner identity, capital intensity and leverage are significant only in the ROA specification. Firm risk is statically and negatively associated with ROA at a 1% significance level. Only one of the owner identity variables is marginally significant in the ROA specification. If the largest owner in a company is government compared with management, the effect of owner identity on ROA is negative at significance level of 10%. Capital intensity has also negative effect on ROA at a 1% significance level. Leverage has a statistically significant effect on ROA at 5%. The positive effect of firm size on financial performance is statistically significant at 1% in the

ROA and 10% in the ROE specifications. Advertising intensity, market power and the investment dummy are insignificant in all specifications.

6.6 The moderating effect of firm risk on the corporate governance-firm performance relationship.

Table 12 reports the results for firm risk as a moderator. The contingency hypothesis states that the positive effect of corporate governance on firm performance is greater at higher firm risk. The hypothesis is supported if the coefficient of the multiplicative term is statistically positively significant. ROA and ROE are the dependent variables. Equation 1 and equation 3 include only main effects of corporate governance and firm growth among other variables. The last columns of ROA and ROE (equation 2 and 4 respectively) include interaction of CGIETH and RISK. The equations are relevant for testing the contingency hypothesis of the moderating effect of firm risk. In the ROA equation, the inclusion of the multiplicative term does not change adjusted R^2 . It can be attributed to the non-significant coefficient of the interaction term in equation 2. On the other hand, inclusion of the interaction term increases adjusted R^2 from 0.41 to 0.42 in the ROE equation. The interaction of CGIETH and RISK is statistically significant at a 5% level. Thus, firm risk moderates the positive relationship between corporate governance and firm performance although limited in the ROE equation. The coefficient of CGIETH*RISK term indicates the additional effect of corporate governance on ROE associated with as firm risk increases by one unit. The additional positive effect of corporate governance (CGIETH) on ROE as firm risk (RISK) increases by one unit is 5.1 at a statistically significance level of 5%.

Table 12: fixed effect regression analysis for the moderating effect of firm risk in the corporate governance-performance relationship.

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
CGIETH	0.253*** (0.067)	0.254*** (0.067)	0.537*** (0.135)	0.543*** (0.133)
RISK	-0.518*** (0.153)	-0.356 (0.238)	-0.500 (0.308)	0.306 (0.472)
CGIETH*RISK		1.018 (1.143)		5.072** (2.271)
GROW	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
FAM	-0.011 (0.039)	-0.015 (0.039)	0.046 (0.078)	0.028 (0.077)
COMP	0.082 (0.053)	0.079 (0.054)	0.138 (0.108)	0.127 (0.106)
GOV	-0.072 (0.046)	-0.056 (0.049)	-0.122 (0.092)	-0.041 (0.098)
BANK	-0.065 (0.043)	-0.058 (0.044)	-0.150* (0.087)	-0.113 (0.088)
CAP	-0.010*** (0.004)	-0.010*** (0.004)	-0.011 (0.007)	-0.011 (0.007)
ADV	-0.795 (0.736)	-0.722 (0.741)	-1.519 (1.482)	-1.158 (1.473)
LEV	-0.101*** (0.032)	-0.093*** (0.033)	-0.147** (0.064)	-0.109* (0.066)
SIZE	0.018*** (0.006)	0.018*** (0.006)	0.023** (0.011)	0.021* (0.011)

Continued

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
POW	-0.020 (0.039)	-0.029 (0.040)	0.031 (0.078)	-0.013 (0.079)
INV	-0.010 (0.012)	-0.009 (0.012)	-0.031 (0.024)	-0.030 (0.024)
year dummy	Yes	Yes	Yes	Yes
Firm effect	Yes	Yes	Yes	Yes
Constant	-0.218** (0.097)	-0.216** (0.097)	-0.227 (0.196)	-0.219 (0.193)
<i>N</i>	210	210	210	210
<i>R</i> ²	0.563	0.565	0.563	0.576
adj. <i>R</i> ²	0.407	0.406	0.406	0.421
F	3.606***	3.551***	3.602***	3.718***

Standard errors in parentheses; significance level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

CGIETH is an overall corporate governance index constructed by taking the average score of board, ownership and disclosure sub indices. Growth is year-to-year sales growth over a five-year period. RISK is standard deviation of return on asset (ROA). CAP is the logarithm of the ratio of fixed asset to sales. Advert is the ratio of advertizing expenditure to sales. LEV is the ratio of total debt to total asset. Size is firm size measured by the logarithm of total asset. POW is market power measured by the ratio a firm's sales relative to total sales of its industry. INV is a dummy indicator whether a firm invests in fixed assets as reported in its financial statement. FAM, COMP, GOV and BANK are dummy indicators for the identity of the largest shareholder. NPRV is also a dummy indicator if the largest shareholder is government or bank.

For the significant CGIETH*RISK term analysis of the overall effect of corporate governance on firm performance requires evaluating the relationship along different values of firm risk. Table 13 reports the marginal effect of corporate governance on ROE at Mean – SD, Mean and Mean + SD values of firm risk.

As reported in table 13, the marginal effect of corporate governance on ROE is statistically significant only at average and higher values of firm risk. For companies with average firm risk, the marginal effect of corporate governance on ROE is 0.543 at a 1% significance level.

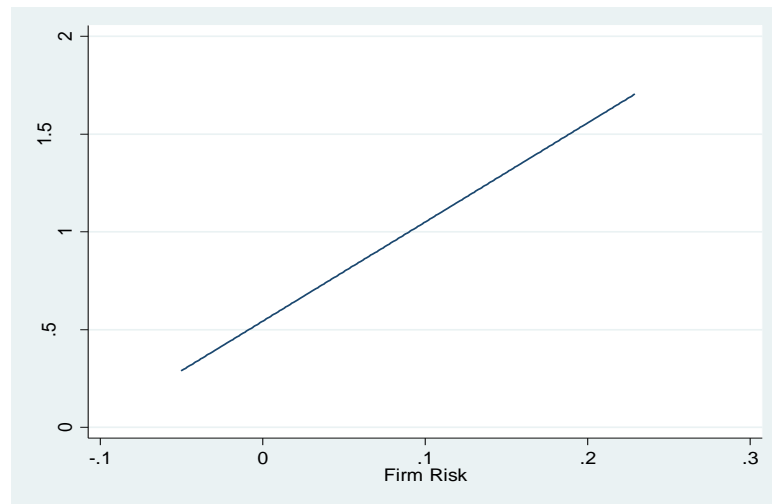
On the other hand, the marginal effect of corporate governance on ROE is greater for high-risk companies. For high-risk companies the marginal effect of corporate governance on ROE is 0.812 at a statistical significance level of 1%. Compared with the average risk company, the effect is greater. At lower values of firm risk however, the marginal effect of corporate governance is insignificant. The non-monotonous effect would have been implied if increase in corporate governance decreased performance at lower values of firm risk. By graphically depicting the marginal effect of corporate governance, one can see whether there is non-monotonous relationship.

Table 13: Marginal effects of corporate governance on ROE evaluated at different values of firm growth.

Firm Risk at	$\frac{\partial ROE}{\partial CGLIETH}$	Std. Err.	P-value
Mean – Standard Deviation	.274	.178	0.126
Mean	.543***	.133	0.000
Mean + Standard Deviation	.812***	.181	0.000

According to figure 6 the marginal effect of corporate governance is always positive across all values of firm risk. Unlike values of firm risk, the marginal performance effects of corporate governance are all above zero. Although the result is insignificant, even for low risk companies increase in corporate governance is associated with higher ROE. Hidden in the contingency hypothesis is that at low firm risk increase in corporate governance should result in lower performance. The graph should have extended to both positive and negative values of the vertical axis. This does not imply however rejection of the hypothesis. The moderation hypothesis is supported but is limited to higher values of firm risk.

Figure 5: Moderating effect of firm risk in the corporate governance-ROE relationship



Looking at the moderation equations (equation 2 and 4) reveals that few of the control variables have statistically significant results. Leverage is negatively and statistically associated with both ROA ($p < 0.01$) and ROE ($p < 0.10$). Firm size influences ROA at 1% and ROE at a 10% significance level. Capital intensity is only significant in the ROA equation and has a statistically negative effect at a 1% level. The owner identity dummies, market power, investment, advertising intensity and growth are all insignificant both in ROA and ROE equations.

6.7 The moderating effect of owner identity in the corporate governance-firm performance relationship

To test the moderating effect of owner identity in the corporate governance-firm performance relationship, four owner identity variables were created relative to management: family/individual, company, government and bank. Interaction terms are formed by cross multiplying the governance variable with each of the four owner identity

variables. Thus, interpretations of coefficients of these variables is based on the reference of management ownership. Table 14 reports the results. Still ROA and ROE are the dependent variables. The same set of control variables are use in all specifications. Equations 1 and 4 are for the main effects of corporate governance and owner identity variables. The interaction terms are included in equation 2 and 3 and the focus of analysis is on these equations. Including all forms of interaction between corporate governance and owner identity reduces adjusted R^2 in the ROA equation. The result is not surprising as all interaction terms are insignificant. On the other hand adjusted R^2 increases in the ROE equation when interaction terms are included. This is consistent with the significance of at least one variable in the equation.

Table 14: the moderating effect of owner identity in the corporate governance-firm performance relationship.

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
CGIETH	0.253*** (0.067)	0.236*** (0.085)	0.537*** (0.135)	0.726*** (0.168)
BANK	-0.065 (0.043)	-0.046 (0.057)	-0.150* (0.087)	-0.141 (0.112)
COMP	0.082 (0.053)	0.089 (0.054)	0.138 (0.108)	0.150 (0.107)
FAM	-0.011 (0.039)	-0.001 (0.040)	0.046 (0.078)	0.047 (0.079)
GOV	-0.072 (0.046)	-0.073 (0.050)	-0.122 (0.092)	-0.092 (0.098)
CGIETH*BANK		-0.117 (0.305)		-0.608 (0.601)
CGIETH*COMP		-0.075 (0.154)		-0.331 (0.303)
CGIETH*FAM		0.095 (0.115)		-0.083 (0.227)
CGIETH*GOV		0.030 (0.166)		-0.872*** (0.327)
RISK	-0.518*** (0.153)	-0.510*** (0.155)	-0.500 (0.308)	-0.547* (0.306)
GROW	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
CAP	-0.010*** (0.004)	-0.011*** (0.004)	-0.011 (0.007)	-0.011 (0.008)
ADV	-0.795 (0.736)	-0.828 (0.754)	-1.519 (1.482)	-2.225 (1.486)

Continued

	(1) ROA	(2) ROA	(3) ROE	(4) ROE
LEV	-0.101 ^{***} (0.032)	-0.107 ^{***} (0.033)	-0.147 ^{**} (0.064)	-0.162 ^{**} (0.064)
SIZE	0.018 ^{***} (0.006)	0.019 ^{***} (0.006)	0.023 ^{**} (0.011)	0.031 ^{**} (0.012)
POW	-0.020 (0.039)	-0.015 (0.040)	0.031 (0.078)	0.033 (0.078)
INV	-0.010 (0.012)	-0.010 (0.012)	-0.031 (0.024)	-0.030 (0.024)
year dummy	Yes	Yes	Yes	Yes
Firm effect	Yes	Yes	Yes	Yes
Constant	-0.189 [*] (0.101)	-0.208 [*] (0.109)	-0.199 (0.204)	-0.287 (0.214)
<i>N</i>	210	210	210	210
<i>R</i> ²	0.563	0.567	0.563	0.585
adj. <i>R</i> ²	0.407	0.397	0.406	0.422
<i>F</i>	3.606 ^{***}	3.332 ^{***}	3.602 ^{***}	3.585 ^{***}

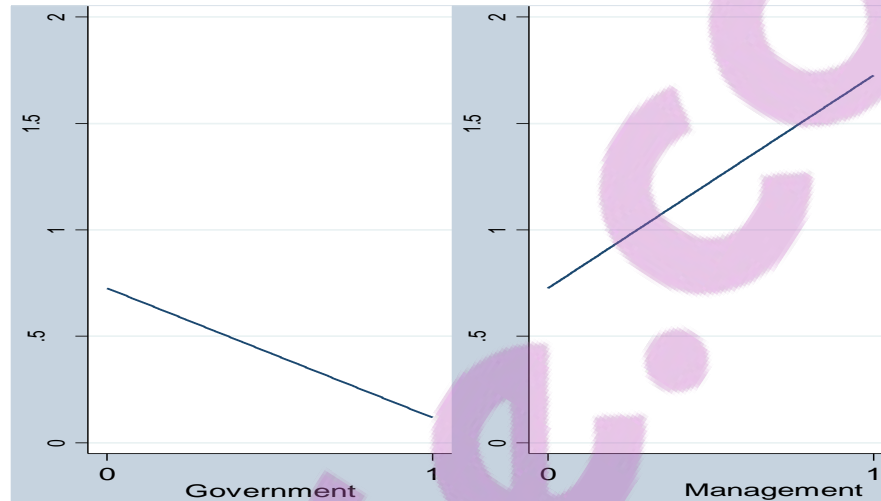
- Standard errors in parentheses; significance level: ^{*} $p < 0.1$, ^{**} $p < 0.05$, ^{***} $p < 0.01$.

CGIETH is an overall corporate governance index constructed by taking the average score of board, ownership and disclosure sub indices. Growth is year-to-year sales growth over a five-year period. RISK is standard deviation of return on asset (ROA). CAP is the logarithm of the ratio of fixed asset to sales. Advert is the ratio of advertizing expenditure to sales. LEV is the ratio of total debt to total asset. Size is firm size measured by the logarithm of total asset. POW is market power measured by the ratio a firm's sales relative to total sales of its industry. INV is a dummy indicator whether a firm invests in fixed assets as reported in its financial statement. FAM, COMP, GOV and BANK are dummy indicators for the identity of the largest shareholder. NPRV is also a dummy indicator if the largest shareholder is government or bank.

The results in table 14 shows that most of the interaction terms are insignificant. The only significant term is the CGIETH*GOV interaction in the ROE equation. If the largest owner is government, increase in corporate governance reduces ROE by 0.872 relative to management ($p < 0.01$). For other owner identity variables, there is no additional effect of corporate governance on financial performance relative to management.

Figure 6 shows additional evidence. The downward moving graph (left) indicates that the effect of corporate governance on ROE is lower if the largest owner is government relative to management (right).

Figure 6: the moderating effect of owner identity in the corporate governance-firm performance relationship.



We now turn the discussion to the control variables in table 14. ROA is influenced negatively by uncertainty, capital intensity and leverage and positively by firm size. ROE is influenced negatively by uncertainty and leverage and positively by firm size. Firm growth, advertising intensity, market power and investment have no significant effect on both ROA and ROE. The effect of capital intensity on ROE is also insignificant.

6.8 Conclusion

This chapter presented results of the study. Ethiopian companies have executive dominated boards. It is also shown that management is the largest owner in more than half of the companies. Bank ownership appeared to be less common in Ethiopia. The status of disclosure is somehow good. Almost all companies disclose the identity, address and share

ownership of their shareholders and board members. Moreover, average number of companies discloses managerial remuneration in their financial statements.

Regression results indicate that corporate governance is influenced by observed firm characteristics. Capital intensity reduces corporate governance. Firm risk, advertising intensity, firm size and investment predict corporate governance positively. The identity of the largest owner has association with the level of corporate governance. If the largest owner is government or bank corporate governance is enhanced. Relative to management ownership, the effect of government ownership on corporate governance is more than twice of the effect of bank ownership.

Firm performance is influenced by corporate governance, observed firm level contingencies as well as by fixed firm heterogeneity. A worst-to-best CGIETH is associated with a significant positive jump in both ROA and ROE. For both ROA and ROE leverage has a negative influence while firm size has positive effect. Moreover, ROA is influenced negatively by firm risk and capital intensity. Advertising intensity, market power, and investment do not significantly influence both ROA and ROE. The identity of the largest owner has some effect on financial performance. Relative to management, ROE is influenced positively if the largest owner is family and negatively if the largest owner is bank.

Firm level contingencies are found to moderate the positive association between corporate governance and firm performance. Firm growth moderates the positive association between corporate governance and firm financial performance for both ROA and ROE. Although the

significance of an interaction term can indicate the presence of moderation, graphical analysis is required to evaluate effect pattern. Marginal analysis shows that increase in corporate governance enhances the positive effect of corporate governance on financial performance. Similarly, increase in corporate governance reduces the effect of corporate governance on firm financial performance. Firm risk moderates the positive relationship between corporate governance and firm performance although it is limited to ROE. However, the non-monotony effect is not supported. For firms with high risk, increase in corporate governance enhances the positive association between corporate governance and financial performance. For firms with low firm risk increase in corporate governance has no significant effect on financial performance. Therefore, there is weak support for the moderation effect of firm risk on the governance-financial performance relationship. We have also weak evidence on the moderating effect of owner identity. Owner identity has a moderating effect for ROE. If the largest owner is government, corporate governance has a negative impact on financial performance relative to management.

CHAPTER 7: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

7.1 Introduction

This chapter presents the discussion, conclusion and recommendations. The discussion section explicates results of the analysis from the point of view of the corporate governance literature. It provides possible explanations for the outcomes obtained in the analysis. While we used the corporate governance implications of both the agency and organizational perspectives in this thesis, we follow an integrative approach in which explicit address of the perspectives is irrelevant. The conclusion section summarizes the main findings of the study. The section also provides implications of findings obtained as expected and possible justifications for those that deviate from expectations. Finally, recommendations are given for policy makers and future researchers.

7.2 Discussions

The effect of antecedent factors on corporate governance

Due to the ‘separation of ownership and control (Shleifer and Vishny, 1997) in modern corporations managers are more likely to be self-serving and may act contrary to the profit-maximizing interest of principals (Jensen and Meckling, 1976; Fama, 1980). Agency theory recommends corporate governance mechanisms to limit managerial discretion (Shleifer and Vishny, 1997). These are a “bundle of governance mechanisms” (Rediker and Seth, 1995) instituted to make managers strive for profit maximization. On the other hand, organizational perspectives suggest adoption of governance mechanisms depending on factors both internal and external to a firm (Burns and Stalker, 1961; Lawrence and Lorsch, 1967). In response to

this call, several researchers have recognized the significance of antecedent factors to explain variations in the adoption of certain corporate governance mechanisms within firm and between firms (Demsetz and Lehn, 1985; Zajac and Westphal, 1994; Bathala and Rao, 1995; Demsetz and Villalonga, 2001). At firm level, growth potential (Klapper and Love, 2002; Black, et al., 2010), demand volatility (Demsetz and Lehn, 1985; Himmelberg, et al., 1999; Himmelberg, et al., 1999; Klapper and Love, 2002), firm size (Demsetz and Lehn, 1985), capital structure (Thomsen and Pedersen, 2000), and investment rate (Finkelstein and D'Aveni, 1994; Himmelberg, et al., 1999; Klapper and Love, 2002) are important contingency factors that influence the choice of governance mechanisms. Greater agency problems require greater monitoring through a combination of governance mechanisms such as higher proportion of outside directors, large percentage of outside director ownership, a separate CEO/board chairperson position, block ownership by a non-board shareholder (Zajac and Westphal, 1994).

To investigate the influence of firm contingencies on corporate governance, three specifications are considered. These are the pooled OLS, fixed industry effects and fixed firm effects specification. The pooled analysis requires the assumption that observed characteristics can explain the cross sectional variation of corporate governance. On the other hand the fixed industry and fixed firm effects assume that unobserved characteristics are correlated with observed firm contingencies and thus if not controlled coefficient estimates are biased (Green, 2002). In fact, the results reported in the analysis support this idea. The coefficients change either their sign or significance level when unobserved fixed effects are included. This suggests that unobserved effects are correlated with observed firm

level contingencies and biased coefficient estimates in the pooled analysis (Himmelberg, et al., 1999; Cavaco, et al., 2013).

Firm growth- the analysis indicates that firm growth has no significant influence on corporate governance. However, the result becomes insignificant by the inclusion of unobserved firm characteristics. Thus, hypotheses H1a and H1b have weak support. The result suggests that unobserved firm characteristic are correlated with growth making the magnitude of the coefficient very large in the pooled OLS and industry effects specifications. It should be noticed that firm growth is associated positively and significantly with corporate governance in the regression with industry fixed effects. It implies that firm growth is correlated more with unobserved firm effects than unobserved industry effects. Studies have noted that firms with greater growth opportunities have high agency problems as managers have greater discretion (Bathala and Rao, 1995). It may be the case that a growing firm needs external finance badly that adopting effective control mechanism reduces the cost of capital than doing otherwise (Klapper and Love, 2002). At the same time, corporate governance constrains managers from investing inefficient projects (Bebczuk, 2005). The idea can extend to address specific governance mechanisms. For example, since raising external finance dissolves existing effective control right, shareholders may have the desire to increase their ownership stake that ultimately leads to higher concentration (Shleifer and Vishny, 1997). Moreover, by increasing the proportion of outside directors in the board, a growing firm signals potential financiers that the risk of expropriation by management is minimal (Klapper and Love, 2002). The insignificant coefficient in the firm effect specification is more likely due to the positive correlation between firm growth and

unobserved firm characteristics. Researchers have reported a positive link between firm growth and corporate governance (Himmelberg, et al., 1999; Klapper and Love, 2002). Corporate governance studies in Africa obtain insignificant association between firm growth and corporate governance (Kyereboah-Coleman, 2007).

Firm risk- the regression analysis demonstrates that firm risk positively influences corporate governance. Hypothesis 2a is supported but not hypothesis 2b. Demsetz and Lehn (1985) argue that the wealth gain by shareholders from exercising tighter control depends on the demand for control imposed by a firm's internal and external situations. Volatility makes monitoring managerial behavior difficult and increases managerial discretion (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001). Moreover, decisions tend to be more subjective and conflicts are more likely higher in volatile situations (Cohen and Cyert, 1973). Thus, under this situation a firm responds with tighter control through various governance mechanisms. For example, more concentrated ownership (Agrawal and Knoeber, 2012) and greater managerial ownership (Zahra, 1996) can align the interest of managers and shareholders in more volatile environment. Tighter control then reduces organizational conflict (Cohen and Cyert, 1973) and thus allows shareholders to gain larger wealth (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001). Demsetz and Villalonga (2001) indicate that market risk has positive effect on managerial ownership. In their examination of the ownership structure of 511 U.S. firms Demsetz and Lehn (1985) find that instability of profit rate explain the systematic variation of ownership structure positively. Studies on the corporate governance of African companies find similar results. Kyereboah-Coleman (2007) studies the corporate governance of Ghanaian companies and show that more risky

companies have larger boards. This result corroborates the argument that managers of high-risk firms have enough discretion and larger size increases the effectiveness of the board to monitor managerial actions (Agrawal and Knoeber, 2012).

Owner identity- Agency theory reduces the goal conflict to the manager-shareholders relationship (Thomsen and Pedersen, 2000). The theory assumes that all block holders have the motivation to monitor management equally (Jensen and Meckling, 1976; La Porta, et al., 1999). One of the theory's major departures from the organizational perspectives is its assumption of homogeneity of non-management block holders (Thomsen and Pedersen, 2000). In the organizational perspective, modern corporations are 'coalitions' of various interests in which power relationship among the coalition groups determine both corporate strategy and performance (Cyert and March, 1963; Cohen and Cyert, 1973). Contrary to the assumption of agency theory, block holders may have different objectives and prefer different strategies (Thomsen and Pedersen, 2000). For example, Abrahamson and Park (1994) show that all non-officer shareholders do not have similar interest on disclosure of negative outcomes. Thus, the issue should not be limited to the conflict of interests between a manager and shareholders but also between shareholders themselves that may affect firm decisions differently (Go'rriz and Fum'as, 1996).

Family ownership- the regression result shows that large family shareholders have adverse effect on the strength of corporate governance. The coefficient of the family variable is significantly negative relative to management block holders in the OLS and industry effect specifications. The result supports the idea that family block holders may have the incentive to expropriate minority shareholders, may also favor growth and survival than profitability

(Thomsen and Pedersen, 2000). However, the result becomes insignificant when we account for unobserved firm heterogeneity with the inclusion of firm dummies. A possible explanation is some unobserved firm characteristics influenced corporate governance (Himmelberg, et al., 1999) and may have positive correlation with owner identity in family dominated firms.

Company ownership- all equation specifications show that company block holders do not have significant influence on corporate governance relative to management block holders. Since company owners form business groups each of which are found at different stages of the value chain, they may have focused on business transactions and may have lacked mutual controlling between businesses partners (Thomsen and Pedersen, 2000). The Ethiopian company law refers a company that owns shares of another company as a holding company or a parent company (Gebeyaw, 2012). The company law provides provisions to safeguard firm level corporate governance in which other companies own shares. It states that where a company owns at least 10% of the shares of another company, the later cannot own shares of the former (Art 344(1)). However, the result fails to find any relationship between company ownership and corporate governance.

Government ownership- the finding of the study on the link between government ownership and corporate governance is congruent with the literature. Government ownership has positive effect on corporate governance relative to management ownership and is robust across different equation specifications. Shleifer and Vishny (1997) comment that companies under the process of privatization may not have large investors. These companies require greater monitoring. Government plays in the democratization of these types of firms

(Mintzberg, 1984) that may be by placing public representatives in the board of directors. In fact, firms in which the Ethiopian government is involved have larger boards in average than others. Government involvement in the ownership of share companies is legally allowed (Gebeyaw, 2012). This often requires converting public enterprises into share companies (Art 47(2) (a) of Proclamation No. 25/1992) in which the government gradually reduces its ownership stakes. This form can be considered as partially privatized. The process is believed to be less likely to create large investors that lead to high managerial control and high managerial discretion (Thomsen and Pedersen, 2000). Since leaving higher managerial discretion uncontrolled has a disastrous effect on firm performance, instituting tighter governance mechanisms should be a priority for government-controlled companies. Unlike full-fledged share companies, some corporate governance provisions of the company law are not applicable to those companies in which the government has ownership stakes (Negash, 2008). For example, shareholders meeting and appointment of directors are not applicable to government dominated companies. These exceptions may have allowed government dominated companies to institute strong corporate governance mechanisms. This may be the reason for the positive link between government ownership and corporate governance.

Bank ownership- The analysis provides strong evidence that bank ownership has positive effect on corporate governance. This corroborates the literature. Bank owned firms might have easy access to finance, information and other services (Thomsen and Pedersen, 2000). Through joint ownership of debt and equity, banks have the incentive to monitor management (La Porta, et al., 1999). Although bank ownership is not common in Ethiopia, the literature has given attention to the implication of bank ownership to corporate

governance. Ananchotikul (2007) shows that institutional investors are associated with higher corporate governance. The positive association of government and bank ownership with corporate governance supports hypothesis 3a. However, the hypothesis for a greater impact on corporate governance of bank ownership than government ownership is not supported (H3b). To the contrary, government ownership has a greater impact than bank ownership.

The analysis also assesses the effect of broader ownership category and corporate governance. It groups owner identity into private or non-private category. The evidence supports the findings we discussed for specific owner identities above. Non-private ownership, that represents intermediate agents of ultimate owners, affects corporate governance positively. This is contrary to the assumption that institutional investors, banks, non-financial companies and governments may not have similar objectives (Thomsen and Pedersen, 2000). At least, all non-private owners believe that corporate governance assures better performance, as this is what their ultimate owners expect.

Capital intensity- measures the proportion of tangible capital in a firm's asset structure. There is strong evidence on the association between capital intensity and corporate governance. Capital intensity has a negative effect on corporate governance although it is significant only in the firm fixed effect regression. This should not be surprising as the firm effect specification is the true model in which unobserved firm characteristics are incorporated. The result suggests that unobserved firm characteristics correlate with capital intensity downward biasing the coefficient estimates (in absolute terms) in the pooled OLS

and industry effects regressions (Himmelberg, et al., 1999). The result proves the premise that tangible assets are easier to monitor relative to intangible assets (Himmelberg, et al., 1999; Klapper and Love, 2002). Klapper and Love (2002) find that firms with higher proportions of fixed assets have weaker corporate governance measured by a composite index. In the study that accounts unobserved firm heterogeneity, Himmelberg et al. (1999) obtain a negative association between the level of fixed capital and managerial ownership.

Advertising intensity- is another measure of a firm's asset composition. It is rather a measure of soft or intangible capital. The coefficient of advertising intensity positively and significantly predicts corporate governance in all specifications. Researchers have suggested that intangible assets are associated with high information asymmetry (Zahra, 1996), increased scope for managerial discretion and opportunism (Alves and Martins, 2010) and greater management entrenchment (Finkelstein and D'Aveni, 1994). Investment on soft capitals may be an indication of managers' intention to hold funds within a firm rather than distribute to shareholders (Zahra, 1996). The implication is that greater proportion of soft capitals allows managers with higher discretion (Himmelberg, et al., 1999). Thus, the negative relationship between advertising intensity and corporate governance proves that intangible assets are difficult to monitor and thus require tighter control (Himmelberg, et al., 1999; Klapper and Love, 2002). Finkelstein and D'Aveni (1994) obtain that nonproduction overhead as a measure of soft capitals is negatively associated with CEO duality.²⁴

To capture the remaining link between investment on assets and corporate governance, an

²⁴ In other words, higher proportion of intangible assets necessitates tighter control by separating the positions of the CEO and board chairperson.

investment dummy variable is used. The variable has positive sign in all equation specifications.²⁵ The result might have been influenced by the method used to construct the variable. The variable was constructed by assigning a 1/0 value based on whether a company discloses investment on fixed assets in the financial statements. One explanation is that well governed firms disclose their fixed asset investment. An alternative explanation could be disclosing firms have large size and thus have good corporate governance. However, Himmelberg et al. (1999) use dummy variables to account for missing data on some variables.

Leverage- the result shows that leverage has no effect on the level of corporate governance. If leverage serves as a substitution for internal corporate governance (Zajac and Westphal, 1994; La Porta, et al., 1997) and reduce the agency problems (Thomsen and Pedersen, 2000) by lowering the free cash flow available for inefficient spending (Jensen, 1986), it should reduce the level of corporate governance. Thus, leverage should have been related with corporate governance negatively (Demsetz and Lehn, 1985).

Market power- Himmelberg, et al. (1999) relate market power to agency theory's free cash flow (Jensen, 1986) which is believed to determine the level of agency problems. This assumption may prove valid if market power increases free cash flow and thus should have a positive effect on corporate governance. The positive relationship between market power and corporate governance supports the free cash flow hypothesis. Greater market power increases free cash flow available for discretionary allocation by management (Jensen, 1986).

²⁵ *Capital intensity and advertising intensity measure investment on tangible and intangible assets respectively.*

The disciplining effect of product market competition appeared not to operate at least in this study. In fact, market mechanisms as disciplining device work under perfect market conditions (Shleifer and Vishny, 1997). It is unlikely to be the case in the context of Ethiopia. Himmelberg, et al. (1999) find that market power measured by the ratio of operating income to sales is positively relate to managerial ownership.

Firm size- firm size appears to be a stable predictor of corporate governance across all equation specifications. The result is consistent with the corporate governance literature. Larger firms are believed to have greater agency problems (Himmelberg, et al., 1999; Klapper and Love, 2002). Large size may also render monitoring difficult and thus large firms should adopt stronger corporate governance mechanism (Klapper and Love, 2002; Pearce and Zahra, 1992). Strong corporate governance may also be required by large firms as investors may feel safe to provide their finances at lower cost of capital (Klapper and Love, 2002). Himmelberg, et al. (1999) obtain positive link between firm size and management stock holding. (Alves and Martins, 2010) show that firm size positively affects the proportion of outside board of directors. Kyereboah-Coleman (2007) obtains a positive association between firm size and size of the board of directors in Ghanaian companies. Overall, there is strong evidence that large firms have the incentive to adopt strong corporate governance.

The effect of corporate governance on financial performance

This study develops a conceptual framework linking among others, corporate governance and financial performance. Based on agency theory, this study hypothesizes that corporate governance influences firm financial performance positively. The major premise of agency

theory is the ‘separation of ownership and control’ gives managers significant discretion (Jensen and Meckling, 1976). Managers may act contrary to the interest of shareholders for profit maximization (Jensen and Meckling, 1976; Fama, 1980). Managers with greater discretion may use company resources inefficiently (Eisenhardt, 1989). Corporate governance is about the limits to managerial discretion (Shleifer and Vishny, 1997). Both agency and organizational perspectives believe that corporate governance reduces the agency problems by aligning the interests of managers and shareholders in which managerial actions are directed toward higher profits (Eisenhardt, 1989).

The examination of the link between corporate governance and firm financial performance is based on OLS, industry effect and firm effect specifications (table 8). For each specification return on asset (ROA) and return on equity (ROE) are measures of financial performance used as dependent variables. The main variable of interest is the Ethiopian corporate governance index (CGIETH). Before discussing about specific results, the logic behind relative explanatory power of the specifications is worth addressing. Compared to OLS specifications, including firm level effects increases the adjusted R^2 dramatically. The change in R^2 from 0.22 to 0.41 in the ROA specification and the corresponding R^2 change in the ROE specification obviously indicate the presence of unobserved firm heterogeneity influencing the cross sectional variation in financial performance (Himmelberg, et al., 1999; Cavaco, et al., 2013). Thus the validity of results depend more on firm effect specifications.

The evidence supports agency theory’s prediction that internal corporate governance matters (Shleifer and Vishny, 1997). The results in table 8 show that CGIETH influences both ROA

and ROE positively and significantly in all specifications. Therefore, hypothesis 4 is supported (H4). The result is consistent with the argument that in imperfect markets, internal corporate governance affects firm financial performance positively (Shleifer and Vishny, 1997; Klapper and Love, 2002). It is found that a worst-to-best corporate governance is associated with a change in ROA from negative to positive (-0.06 to 0.10). Relative to the average ROA the impact of CGIETH is 5.33 times. Other researchers obtain positive association between corporate governance index and return on asset (ROA). In a cross-country study, Klapper and Love (2002) show that a corporate governance index influences ROA positively and significantly. Bebczuk (2005) examines the link between corporate governance and firm performance in 65 non-financial Argentinean companies. Based on a transparency and disclosure index different OLS specifications show that there is a robust positive effect of the governance index on ROA. Similarly, Bhagat, et al. (2008) obtain a positive association between corporate governance and ROA, even robust to alternative corporate governance measures. They report that better governance measured by GIM and BCF indices are positively associated with contemporaneous and subsequent ROA.

The effect of the Ethiopian Corporate Governance Index (CGIETH) on return on equity (ROE) is also significantly positive across all equation specifications. A marginal analysis shows that a worst-to-best increase in CGIETH is associated with increase in ROE by 0.32 (-0.13 to 0.19). The impact can be translated to a jump by 8 times of average ROE. Thus, a change in CGIETH impacts ROE more than ROA. Bebczuk (2005) finds a significant

positive association between a corporate governance index and ROE in 65 non-financial Argentinean companies although limited only to one specification.

Overall, results reported in table 8 demonstrates that monitoring mechanism do have positive impact on firms' financial performance. It should be noted that the Ethiopian Corporate Governance Index (CGIETH) is an overall measure of the monitoring capacity a firm to constrain managerial behavior. Researchers suggest that individual governance mechanisms do not have the required monitoring strength (Black, et al., 2010). An adequate examination of corporate governance should account for the impact of governance mechanisms in concert. These monitoring mechanisms include managerial ownership (Jensen and Meckling, 1976; Agrawal and Knoeber, 2012), the board of directors (Fama and Jensen, 1983a; Shleifer and Vishny, 1997; Agrawal and Knoeber, 2012), large share holders (Shleifer and Vishny, 1997; Holderness, 2003; Agrawal and Chadha, 2005) and appropriate disclosure and transparency requirements (Agrawal and Knoeber, 2012). Thus, with appropriate adoption of these governance mechanisms influences company financial performance.

Other firm level contingencies and financial performance

Firm growth

As reported in table 8 of the previous chapter, there is weak evidence on the link between firm growth and financial performance. Firm growth influences both ROA and ROE negatively. However, the result is limited to OLS specification for both ROA and ROE and industry effect specification for ROA. A possible explanation can be firm growth correlates

with unobserved firm heterogeneity that upward biases its effect in OLS and industry effect estimations. Alternatively, firm growth may have an effect on financial performance through corporate governance.

Firm risk

The results in the previous chapter indicate a negative link between firm risk and ROA. It may be because firms are unable to understand their environment to develop appropriate value increasing strategy (Cohen and Cyert, 1973). The absence of relationship between firm risk and ROE has no clear explanation but could be attributed to the large variability of ROE relative to ROA.

Owner identity

All owner identity variables are insignificant in ROA. On the other hand, there is some evidence for ROE. Relative to management, ROE is influenced positively if the largest owner is family and negatively if the largest owner is bank. This is consistent with the argument that family block holders may expropriate minority shareholders, may favour growth and survival than profitability (Thomsen and Pedersen, 2000).

Capital intensity

There is strong evidence on the negative effect of capital intensity on financial performance. except in the firm effect of ROE, the negative effect of capital intensity on financial performance is robust in all specifications. Other studies obtain that capital intensity is negatively related to ROA (Klapper and Love, 2002).

Leverage

As expected and consistent with theoretical support and empirical support there is a strong evidence that leverage influences financial performance negatively (Thomsen and Pedersen, 2000). For both ROA and ROE, the negative effect of leverage is statistically significant in the firm effect. Since the firm effect equation is a complete specification, it is safe to accept the result as a valid evidence for the link between leverage and financial performance. The literature documents consistent negative association between leverage and financial performance despite using alternative performance measures. Firms with high debt in their capital structure have more interest expense that reduces the amount of shareholder return. leverage has costs as firms are unable to undertake profitable projects because previous debt contracts may require them not to raise additional funds (Shleifer and Vishny, 1997) or leverage creates asset substitutions and underinvestment (Bebczuk, 2005). (Demsetz and Villalonga, 2001), Bebczuk (2005) and Li and Simerly (1998) obtain that leverage is associated negatively with ROA and ROE.

Firm Size

The result reported in table 8 of the previous chapter shows a non-controversial evidence for the positive effect of firm size on financial performance. Firm size has a positive impact on both ROA and ROE and is robust across all equation specifications. The result may be because large firms are more diversified, have greater economies of scale, scope and professional managers (Bebczuk, 2005). Studies report positive result (Bebczuk, 2005).

The moderating effects of firm level contingencies

The consensus among agency scholars is that corporate governance has benefits for all firms in which there is a separation of ownership from control (Shleifer and Vishny, 1997). Recently scholars from various disciplines, of course including the traditional agency theory, have started to respond to advises of organizational scholars who suggest explaining performance as a function of fit or congruence between structural forms chosen and environmental contingencies. Organizational scholars argue that effectiveness of structural forms depends on contingency factors (Burns and Stalker, 1961; Lawrence and Lorsch, 1967; Galbraith, 1973). They suggest that modelling a structural form as a function of contingency factors and subsequently evaluating effectiveness as a function of fit between the chosen structure and contingency factors (Hambrick and Cannella, 2004). In the literature of corporate governance, studies have identified different firm and environmental contingencies and have tried to explain the moderation impact of these contingencies in the governance-performance relationship. Although, an exhaustive list of contingency factors is hard to find, firm growth, firm risk and identity of the largest owner have gained more attention in the empirical corporate governance literature. Results of this study prove that complementing agency theory with other perspectives in organizational studies in fact can provide deep insights (Eisenhardt, 1989; Daily, et al., 2003).

The moderating effect of firm growth in the corporate governance-firm financial performance relationship

There is strong evidence that firm growth moderates the relationship between corporate governance and firm financial performance (H5). It is shown that increase in corporate

governance has different effects for firms at different levels of growth. For a firm that has high growth, increase in corporate governance enhances financial performance. For a firm that has low growth increase in corporate governance reduces financial performance. The effect of corporate governance on financial performance is non-monotonous for firms at different stages of growth (Schoonhoven, 1981). Contrary to traditional economic perspectives, organizational theory maintains that the benefits of structural forms chosen depend on their fit with environmental contingencies (Burns and Stalker, 1961; Lawrence and Lorsch, 1967; Galbraith, 1973). This is consistent with the view that corporate governance can benefit those firms with high agency problems associated with high growth (Klapper and Love, 2002). Bebczuk (2005) for Argentinean and Black, et al. (2010) for Brazilian firms obtain that the impact of corporate governance on firm performance is greater for high growth firms. Black, et al. (2010) show that the moderation impact of firm growth is not sensitive to different measures of corporate governance.

The moderating effect of firm risk in the corporate governance-firm financial performance relationship

There is partial evidence that firm risk moderates the effect of corporate governance on financial performance (Hypothesis 6). The interaction of corporate governance and firm risk is only significant for ROE. The result indicates that a one-unit increase in firm risk enhances the effect of corporate governance by 5.1. A further investigation indicates that the marginal effect of corporate governance on ROE is statistically significant for average and high-risk firms. Agency theory emphasizes the importance of firm risk in explaining efficient contracts (Eisenhardt, 1989). Although firm risk moderates the governance-

financial performance link, the evidence does not prove the non-monotonous assumption of contingency framework. If low risk firms strengthen, their corporate governance there would be no change in the effect of corporate governance on financial performance. Nevertheless, the partial evidence indicates that environment volatility increases the severity of agency problems (Demsetz and Lehn, 1985; Thomsen and Pedersen, 2000) and tighter monitoring of management enhances the benefits of corporate governance (Zajac and Westphal, 1994). Similarly, the ability of shareholders to monitor management depends on environmental dynamism (Li and Simerly, 1998). Thus, the extent that shareholders can monitor management determines their gain from their investments (Demsetz and Lehn, 1985). Managers of firms that operate in volatile environments should make timely decisions (Galbraith, 1973). Nevertheless, under volatile conditions it is difficult to identify whether performance is a direct result of managerial behavior. Mechanisms that allow to link rewards to performances can align the interests of shareholders and managers (Agrawal and Knoeber, 2012). Managers whose interests are aligned with owners' have the incentive to maximize profit. Therefore, greater monitoring and incentive alignment mechanisms can have greater impact on firm performance in volatile environments. Li and Simerly (1998) obtain that firms with higher environmental dynamism, there is a stronger positive relationship between CEO ownership and firm performance.

The moderating effect of owner identity in the corporate governance-firm financial performance relationship

There is partial evidence that owner identity moderates the relationship between corporate governance and financial performance. In fact hypothesis 7 (H7) is not supported. Rather

government ownership has a moderating effect on the governance-ROE link. Relative to management, if the largest owner is government corporate governance would have negative effect on financial performance. This is consistent with the literature. Thomsen and Pedersen (2000) show that the effect of ownership concentration on firm performance is negative for bank, family and government owned firms relative to institutionally owned firms. The result corroborates the argument for the value reducing effect of government ownership. For instance, a government shareholder may have political goals (Shleifer and Vishny, 1997) and favors social welfare and employment creation (Thomsen and Pedersen, 2000). In these contexts, firms that have large government ownership perform poorly (Shleifer and Vishny, 1997; Thomsen and Pedersen, 2000).

7.3 Conclusions

This study shows that firms choose their corporate governance in response to firm characteristics. The evidence is consistent with organizational theory that assumes the choice of corporate governance endogenous to contexts. Moreover, financial performance is affected by factors of the contracting environment in which firms operate.

- Hypotheses 1a and 1b are not accepted. After accounting for firm heterogeneity the effect of firm growth on corporate governance disappears. This may be due to the correlation of firm growth with firm fixed effects. If firm effects were not accounted for the effect of firm growth on corporate governance would have been upward biased in the OLS and industry effects regressions. The result implies that firm heterogeneities account for the cross sectional variation of corporate governance and if not accounted for biases findings and may lead to wrong interpretation.

- Hypothesis 2a is accepted while hypothesis 2b is not. Firm risk has a strong effect on corporate governance at a 1% significance level. The inclusion of fixed firm effects increases the coefficient. If fixed firm effects were not controlled for, the coefficient would have been downward biased leading to wrong interpretation. The result is consistent with organizational scholars that firms with greater risk have higher agency problems. Since managers have enough discretion on firm resources, firms respond the situation by adopting strong corporate governance.
- Hypothesis 3a is accepted. The evidence in this study indicates that knowing who the largest shareholder has important implications to corporate governance. Government and bank ownership are found to be positively associated with corporate governance compared with management ownership at a 1% significance level ($p < 0.01$). Moreover, the effect of government ownership on corporate governance is more than twice of the effect of bank ownership. Marginal analysis proves the comparative effect of government and bank ownership. Relative to management ownership, if the largest owner is government corporate governance increases by 0.15 or 27% of average corporate governance. In addition, relative to management ownership if the largest owner is bank corporate governance increases by 0.14 or 25% of average corporate governance. Again, this is consistent with organizational scholars that governments may influence the democratization of companies through for instance, allowing public interest groups in the board of directors. The result is surprising

given that management is the largest shareholder in more than half of the companies. Bank ownership is very rare according to the data. The effect of family ownership disappears when fixed firm effects are included. The reason may be family firms have characteristics that are unobserved to the researcher. Company ownership has no significant effect on corporate governance. A further investigation provides insight that broader group of owners do have similarity. Company, bank and government ownership denoted as 'non-private shareholders' have positive effect on corporate governance relative to the private ones. However, this may be caused by government and bank ownership that have significant effect on corporate governance separately.

- Other firm level contingencies have strong predictive power on corporate governance. Capital intensity is found to be associated negatively and significantly with corporate governance ($p < 0.01$). Advertising intensity influences corporate governance positively and significantly ($p < 0.01$). Both of these variables measure the extent that firm assets are observed and measure the scope of discretionary investment by management. Compared with advertising expenditures, which is intangible, capital expenditures are observable and are difficult to steal. Therefore, advertising intensive firms have stronger corporate governance. The result is consistent with the literature that greater agency problem requires tighter monitoring of managerial behavior and actions. The explanatory power of unobserved firm characteristics is significant for both variables. If fixed firm effects were not controlled for the

coefficients of capital intensity and advertising intensity would have been downward biased in the OLS and industry effects estimations.

Firm size at 10% and market power at 5% levels of significance predict corporate governance. The corporate governance literature emphasizes the link between firm size and market power with the level of agency problems. Firm size increases management complexity that renders monitoring difficult. A firm with greater market power is more likely to have free cash available for discretionary investment by management. Therefore, large firms and firms with greater market power should institute good corporate governance to reduce the agency problems.

- Financial performance is affected by both observed and unobserved firm characteristics. The inclusion of fixed firm effects increases the adjusted R^2 from 0.224 to 0.41 in the ROA equation and from 0.17 to 0.41 in the ROE equation. Most importantly, there is a strong evidence that corporate governance has a positive impact on firm financial performance ($p < 0.01$). For a firm with average corporate governance ($\text{CGIETH} = 0.56$), a 1% increase in CGIETH is associated with a 0.014 increase in its return on asset (ROA), that is, 4% of average ROA (0.03). A worst-to-best CGIETH (0.234 to 0.84) is associated with a jump in ROA by 0.16 (from -0.06 to 0.10). Similarly, for a firm with average corporate governance, a 1% increase in corporate governance is associated with an increase in ROE by 0.03, which 79% of the average return on equity (ROE) (0.04). A worst-to-best CGIETH (0.234 to 0.84) is associated with a jump in ROE by 0.32 (from -0.13 to 0.19). The results on both ROA and ROE indicate that there is a strong support for hypothesis 4 (H4). This is

consistent with the predictions of agency theory and organizational theory that good corporate governance increases shareholder returns. Other firm level contingencies have also significant influence on financial performance.

- The moderating effect of firm growth in the effect of corporate governance on financial performance is strongly supported (hypothesis 5). For both ROA and ROE the hypothesis on the moderating effect of firm growth is supported and is significant at a 1% level ($p < 0.01$). Our contingency hypothesis states that the greater the firm growth the greater is the influence of corporate governance on firm performance. In both ROA and ROE equations, the interaction of firm growth and corporate governance indicates that the effect of corporate governance on financial performance is enhanced with increase in firm growth by one unit. The additional effect of corporate governance on ROA associated with a unit increase in firm growth is 0.01. The corresponding effect of corporate governance on ROE associated with a unit increase in firm growth is 0.018. This is consistent with the idea that the benefit of corporate governance is enhanced where there is greater agency problems. We have argued that high growth firms have greater agency problems. Increase in corporate governance for high growth firms enhances the benefits of corporate governance. On the other hand, the evidence shows that for low growth firms, increase in corporate governance decreases financial performance. Organizational scholars call this situation as a ‘non-monotonous effect’.

- There is partial evidence that firm risk moderates the positive relationship between corporate governance and firm performance at a 5% significance level (hypothesis 6). Nevertheless, the result is limited in the ROE equation. The additional positive effect of corporate governance on ROE as firm risk (RISK) increases by one unit is 5.1 at a statistically significance level of 5%. For companies with average firm risk, the marginal effect of corporate governance on ROE is 0.543 at a 1% significance level. On the other hand, the marginal effect of corporate governance on ROE is greater for high-risk companies. For high-risk companies the marginal effect of corporate governance on ROE is 0.812 at a statistical significance level of 1%. Compared with the average risk company, the effect is greater. At lower values of firm risk however, the marginal effect of corporate governance is insignificant. This shows that we have partial evidence for the moderation effect of firm risk. First, the effect is insignificant for ROA. Second, even its significant effect on ROE is monotonous across its observed values. For low risk firms there is no change in the effect of corporate governance on financial performance.
- Our evidence on the moderating impact of owner identity in the effect of corporate governance on financial performance is not robust. Only government ownership has moderating effect. If the largest owner is government, increase in corporate governance reduces ROE by 0.872 relative to management ($p < 0.01$). For other owner identity variables, there is no additional effect of corporate governance on financial performance relative to management. Therefore, hypothesis 7 is not supported. However, the literature documents the value reducing effect of government

ownership. For instance, a government may favor social welfare and employment creation that leads government dominated companies to perform poorly.

7.4 Recommendations

- Implications for corporate governance institutions

The results in this thesis provide strong evidence that corporate governance enhances firm financial performance. There is much evidence on the significance of corporate governance on firm level performance. Firms may not exploit their corporate governance quality in the absence of financial markets as the market generally lacks information about them. However, if corporate governance is positively related to financial performance, firms may be encouraged to strengthen their governance mechanisms (Bebczuk, 2005). From this perspective, the government and other stakeholders should intervene in the institution and monitoring of corporate governance among Ethiopian companies (Daily and Dalton, 1994; CIPE , 2002).

At the macro level, there is a link between corporate governance and economic performance (Claessens, 2003), entrepreneurial growth (La Porta, et al., 1999) and corruption (Wu, 2005). La Porta, et al. (1999) suggest initiatives of good corporate governance mechanisms for the growth of entrepreneurship as new entrepreneurs would generally be interested to issue new ownership stakes if they are assured of protection. Good corporate governance assures high flow of external finance while bad corporate governance is associated with diversion of firm resources and lower firm performance (Shleifer and Vishny, 1997; Claessens, 2003; OECD, 2004a).

Corporate governance mechanisms encompass economic and legal institutions (Shleifer and Vishny, 1997). Corporate governance reforms require change in legal, regulatory and market institutions (Claessens, 2003). One of the fundamental economic institutions of corporate governance is a stock market (La Porta, et al., 1997). The role of stock markets in the economic growth and development of nations has been the focus of scholars and practitioners and political leaders. A Stock market promotes long-term investment and economic growth through easing capital flow and allowing risk sharing between those who demand finance and investors (Shleifer and Vishny, 1997). Especially, a liquid stock market increases investors' confidence to move their money easily and at low cost. Therefore, establishing a stock market should be a priority not an exception in Ethiopia.

Other corporate governance institutions should also be the priorities of the country. Several Ethiopian scholars have long been worried about the capability of the legal framework to institute and enforce good corporate governance in the country. According to Bebczuk (2005), corporate governance is both a private and public issue. Policy recommendations to improve corporate governance requires cooperation from parties affected and this depends on the additional benefits each party may get from such improvements relative to the loss of private benefits. More over corporate governance is a public issue that minority shareholders need to be legally protected from the expropriation of insiders and large shareholders. A personal account of the researcher uncovers the fact that there is no formal corporate governance institution. Most surprisingly, the term 'corporate governance' is alien to those persons and institutions that should have greater stake in the development and enforcement of corporate governance. There are several weaknesses in the share company

law of Ethiopia to address corporate issues in accordance with international best practices. The consequence is investors lose confidence, market inefficiency, high cost of capital (Gebeyaw, 2012). The share company law alone is not sufficient to protect shareholders from expropriation and must be supported by other laws. Gebeyaw (2012) recommends security laws, voluntary codes and listing standards.

Overall, the Ethiopian government should bear much of the responsibility to change the corporate governance landscape of the country for the growth and sustainability of economic development in the country. As Bebczuk (2005) explains, change in corporate governance is made effective through political process.

- For governance prescriptions

This study provides strong evidence that corporate governance is not an exogenous factor. Consistent with much of the theoretical and empirical literature the level of corporate governance is affected by both unobserved and observed firm characteristics. Most importantly the factors in the contracting environment as well as firm specific factors explain much of the cross sectional variation of corporate governance. Policy prescriptions on the governance of firms should take great care that corporate governance is not a pill that all companies should take. Corporate governance a structural form that should take in to account the demands of a specific type of firms. For instance, findings of this study indicate that firm growth, firm risk and owner identity strongly affect the level of adopted corporate governance. Recently the business community has started a movement to lobbying the Ethiopian government to establish corporate governance institutions. Although it is an

encouraging endeavor, policy prescriptions and recommendation should be based on empirical evidence. Despite operating in a weak corporate governance environment, Ethiopian companies have chosen their governance mechanisms depending on their environmental contingencies. This study shows that Ethiopian companies are not so unique than others are.

- For future studies

With limited sample size, this study offers much evidence on the corporate governance of Ethiopian companies. Future research can benefit from loopholes of the study. Other researchers may add to the findings of this study if they can overcome the limited availability of data. This could be possible with the voluntary cooperation of companies to participate in such investigations.

Future researchers may benefit from this study in a way that they can employ its findings for undertaking a cross-country study. Most African countries have better corporate governance than Ethiopia has or are in the way to develop a better corporate governance culture. Therefore, access to corporate governance data is more likely easier in other African countries than it is here in Ethiopia. Studies that could discriminate how different institutional environment affects corporate governance and firm performance are required (Klapper and Love, 2002). Another potential area for further study is examining the corporate governance of bankrupt Ethiopian companies. Reports show that weak corporate governance explains subsequent bankruptcy (Daily and Dalton, 1994).

The performance effect of corporate governance could also be a major arena for future studies. This study provides strong evidence that there is no direct link from corporate governance to financial performance. The influence of corporate governance on financial performance is moderated by firm level contingencies. Specifically, the effect of corporate governance on financial performance depends on firm growth, firm risk and identity of the largest owner. Future researchers could expand our knowledge on how firm level contingencies moderate the effect of corporate governance on financial performance as sample size gets larger or/and in among firms operating in different legal and economic contexts.

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Appendices

Appendix 1

Table 15: sampled companies by industry

INDUSTRY	No. of	
	Companies	Observations
Finance, Insurance, Real Estate and Trade	4	20
Manufacturing	4	20
Public Administration and Others	7	35
Transport, Warehousing And Communication	6	30
Wholesale and Retail Trade	21	105
Total	42	210

Table 16: Sampled companies by name

no	company	no	company
1	Hohiyat Business	22	Lemat
2	Horizon Addis Tyre	23	New Millinium Institute
3	internatinal trading, manufacturing and services	24	Neway Challenge Academy
4	International Cardiovascular Medical Center	25	Nigat Mechanical Engineering
5	Jemo General Business	26	Oda
6	Kolfe Genet Market Center	27	Orbis Trading and Technical Generals
7	Alpha Education And Training	28	Selam Bus
8	Ambo Mineral Water	29	Sheba Travel Service
9	Biftu Adugna Business	30	Shola
10	Boran Real Estate	31	Sky Bus Transport Systems
11	City University College	32	Total Ethiopia
12	Dashen Brewery	33	Unversal Investors Coshco
13	Dera Trading	34	Yetebaberut Beherawi Petroleum
14	Dolphin Transit And Shipping	35	Addis Ababa Bottle Glass
15	East African Holding	36	Addis Ababa Gebeya Merkato
16	Efoyta Bekolfe Marketing Center	37	Addis Mender Homing
17	Electro Commercial	38	Admastel
18	Ethio Berwh	39	Africa Beza
19	Ethio Horti	40	Africa Juice Tibila
20	Ethiopia Leather Development	41	Hibret
21	Gutter	42	Hohete Tibeb

Appendix 2

Table 17: Corporate Governance Survey Instrument.

Survey Items	
Board Characteristics <ul style="list-style-type: none"> • The number of directors in the board • Whether the positions of CEO and chair of the board are held by two different persons • The proportion of non-executive directors in the board • The proportion of shares owned by non-executive directors • The proportion of shares owned by executive directors 	
Ownership Structure and Concentration <ul style="list-style-type: none"> • The proportion of shares owned by the largest shareholder • The identity of the largest shareholders: management, family/individual, other company, government or bank • The proportion of shares owned by the five largest shareholders • The proportion of shares owned by management • The proportion of shares owned by the top five largest shareholders excluding management • Whether the CEO owns at least 10% of firm shares • Whether there is a director owning at least 10% of firm shares • Whether there is a non-management shareholder owning at least 10% of firm shares 	
Disclosure and Transparency <ul style="list-style-type: none"> • Whether a firm discloses the names, identities, address and ownership of shareholders and directors • Whether a firm discloses its financial statements to the public • Whether a firm discloses the remunerations for directors 	

Appendix 3

Table 18: ranking of firm level corporate governance.

company	Year				
	2009	2010	2011	2012	2013
1	0.669	0.669	0.558	0.558	0.446
2	0.597	0.411	0.410	0.540	0.318
3	0.840	0.840	0.618	0.840	0.729
4	0.601	0.601	0.601	0.601	0.379
5	0.623	0.612	0.389	0.389	0.389
6	0.754	0.754	0.754	0.754	0.532
7	0.742	0.742	0.742	0.742	0.742
8	0.491	0.714	0.714	0.714	0.714
9	0.754	0.754	0.532	0.532	0.532
10	0.627	0.627	0.405	0.405	0.405
11	0.695	0.585	0.363	0.363	0.363
12	0.446	0.446	0.669	0.752	0.530
13	0.615	0.615	0.615	0.749	0.749
14	0.755	0.755	0.755	0.669	0.755
15	0.367	0.367	0.367	0.367	0.256
16	0.585	0.585	0.363	0.585	0.585
17	0.668	0.668	0.668	0.668	0.446
18	0.536	0.536	0.313	0.536	0.532
19	0.296	0.296	0.272	0.494	0.494
20	0.492	0.494	0.402	0.401	0.401
21	0.674	0.674	0.821	0.821	0.738
22	0.433	0.433	0.433	0.433	0.322
23	0.837	0.837	0.837	0.837	0.615
24	0.588	0.588	0.588	0.588	0.366
25	0.341	0.563	0.563	0.328	0.337
26	0.235	0.235	0.235	0.456	0.456
27	0.595	0.595	0.595	0.595	0.484
28	0.575	0.575	0.674	0.687	0.464
29	0.518	0.740	0.740	0.740	0.740
30	0.780	0.754	0.643	0.643	0.643
31	0.586	0.586	0.364	0.364	0.364
32	0.577	0.577	0.577	0.587	0.586
33	0.424	0.424	0.424	0.424	0.313
34	0.731	0.731	0.731	0.731	0.508
35	0.594	0.594	0.372	0.372	0.372
36	0.547	0.539	0.428	0.428	0.428
37	0.612	0.612	0.599	0.598	0.376

Continued

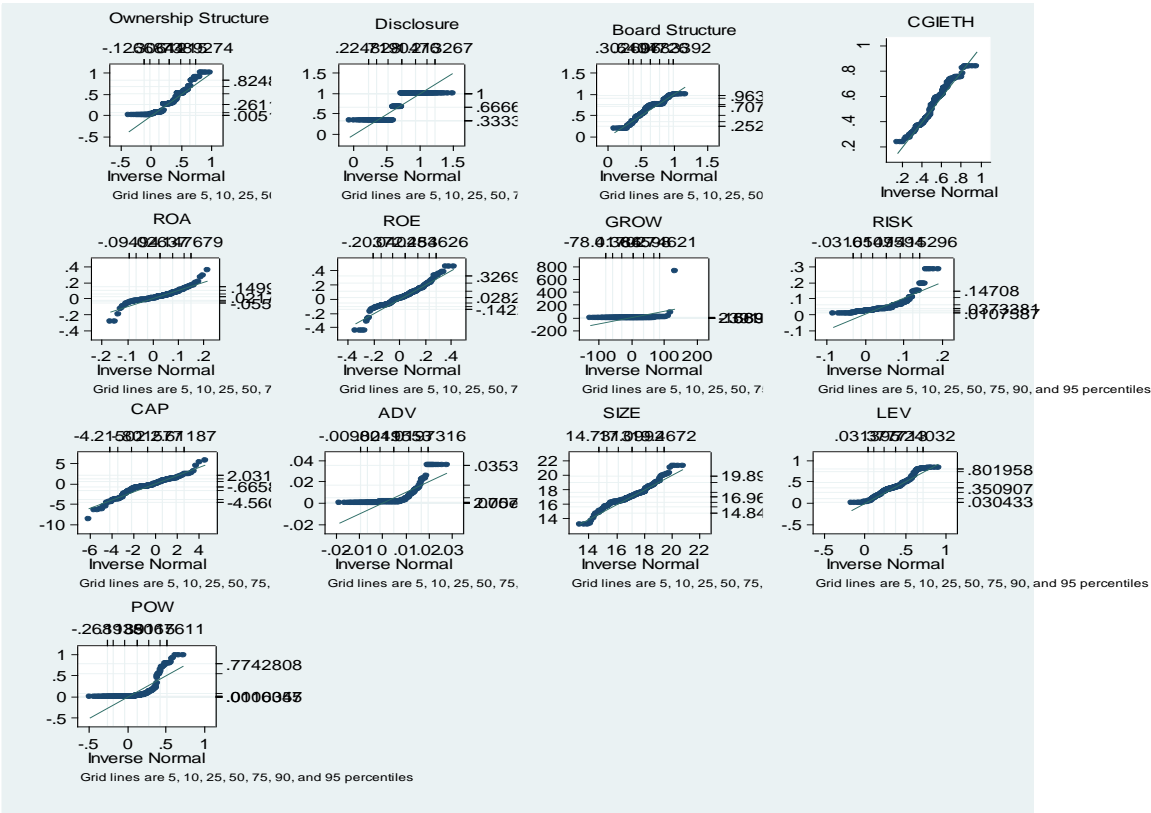
Year

company	2009	2010	2011	2012	2013
38	0.669	0.669	0.669	0.669	0.446
39	0.441	0.663	0.663	0.441	0.441
40	0.390	0.612	0.529	0.307	0.307
41	0.713	0.713	0.713	0.713	0.490
42	0.382	0.382	0.271	0.271	0.271

Note: corporate governance is a composite index (CGIETH). Value lies between 0 and 1.
Companies are not arranged according to the list of names in appendix 1.

Appendix 4

Figure 7: Quantile-Normal Plots of Variables.



Appendix 5

Table 19: Multicollinearity and heteroskedasticity tests for firm level contingency-corporate governance regressions.

Variable	OLS	Industry effect	Firm effect
GROW	1.11	1.16	1.44
RISK	1.27	1.48	3.88
CAP	1.5	1.62	3.49
ADV	1.4	1.49	2.17
LEV	1.27	1.49	2.93
SIZE	2.21	2.3	4.24
POW	1.76	2.07	5.17
INV	1.31	1.33	1.56
FAM	1.28	1.54	16.89
COMP	1.46	3.52	23.7
GOV	1.3	1.42	8.68
BANK	1.13	1.19	2.13
Industry2		4.57	
Industry3		3.21	
Industry4		3.25	
Industry5		4.97	
firm1			6.3
firm2			4.3
firm3			2.58
firm4			4.1
firm5			1.78
firm6			6.19
firm7			2.87
firm8			6.84
firm9			2.35
firm10			4.29
firm11			1.91
firm12			6.39
firm13			2.18
firm14			2.24
firm15			2.06
firm16			2.08
firm17			2.04
firm18			2.34
firm19			1.75
firm20			3.84
firm21			1.99

Continued

Variable	OLS	Industry effect	Firm effect
firm22			2.3
firm23			4.57
firm24			1.87
firm25			4.14
firm26			1.93
firm27			4.06
firm28			2.31
firm29			4.28
firm30			1.95
firm31			7.86
firm32			2.11
firm33			3.71
firm34			2.59
firm35			2.09
firm36			2.12
firm37			4.16
firm38			6.37
firm39			3.2
firm40			3.6
firm41			3.1
year2	1.86	1.86	1.91
year3	1.7	1.7	1.77
year4	1.8	1.8	1.92
year5	2.01	2.02	2.15
mean VIF	1.52	2.2	3.94
hetro.test			
(P > chi2	0.2675	0.1292	0.1479

Table 20: Multicollinearity and Heteroskedasticity Tests for the corporate governance-financial performance Regressions.

Variable	ROA			ROE		
	OLS	Industry Effect	Firm Effect	OLS	Industry Effect	Firm Effect
CGIETH	1.67	1.71	6.99	1.67	1.71	6.99
GROW	1.13	1.18	1.44	1.13	1.18	1.44
RISK	1.28	1.49	4.19	1.28	1.49	4.19
FAM	1.34	1.6	16.91	1.34	1.6	16.91
COMP	1.47	3.52	23.99	1.47	3.52	23.99
GOV	1.43	1.55	11.65	1.43	1.55	11.65
BANK	1.16	1.22	2.85	1.16	1.22	2.85
CAP	1.51	1.63	3.84	1.51	1.63	3.84
ADV	1.47	1.54	2.83	1.47	1.54	2.83
LEV	1.28	1.49	2.93	1.28	1.49	2.93
SIZE	2.26	2.35	4.34	2.26	2.35	4.34
POW	1.76	2.08	5.37	1.76	2.08	5.37
INV	1.44	1.46	1.77	1.44	1.46	1.77
Industry2		4.6			4.6	
Industry3		3.21			3.21	
Industry4		3.26			3.26	
Industry5		4.98			4.98	
firm1			6.42			6.42
firm2			4.3			4.3
firm3			3.35			3.35
firm4			4.25			4.25
firm5			1.9			1.9
firm6			6.7			6.7
firm7			3.45			3.45
firm8			6.93			6.93
firm9			2.37			2.37
firm10			4.44			4.44
firm11			2			2
firm12			6.39			6.39
firm13			2.18			2.18
firm14			3.26			3.26
firm15			2.06			2.06
firm16			2.44			2.44
firm17			2.27			2.27
firm18			2.36			2.36
firm19			1.76			1.76
firm20			4.06			4.06

Continued

Variable	ROA			ROE		
	OLS	Industry Effect	Firm Effect	OLS	Industry Effect	Firm Effect
firm21			3.24			3.24
firm22			2.36			2.36
firm23			4.76			4.76
firm24			1.94			1.94
firm25			4.15			4.15
firm26			2.22			2.22
firm27			4.58			4.58
firm28			3.22			3.22
firm29			4.35			4.35
firm30			2.19			2.19
firm31			8.13			8.13
firm32			2.21			2.21
firm33			3.9			3.9
firm34			2.83			2.83
firm35			2.36			2.36
firm36			2.5			2.5
firm37			4.25			4.25
firm38			6.86			6.86
firm39			1			2.1
firm40			2			1.52
firm41			2.25			1.65
year2	1.9	1.9	2	1.9	1.9	2
year3	1.7	1.7	1.77	1.7	1.7	1.77
year4	1.8	1.8	1.92	1.8	1.8	1.92
year5	2.01	2.02	2.2	2.01	2.02	2.2
Mean VIF	1.56	2.2	2.29	1.56	2.2	2.29
HET TEST	0.3286	0.3801	0.5523	0.9556	0.5714	0.836

Table 21: Multicollinearity and heteroskedasticity tests for the regression of the moderating effect of firm growth in the governance-financial performance relationship.

Variable	ROA	ROE
CGIETH	7	7
GROW	2.8	2.8
CGIETH*GROW	8.3	6.3
RISK	4.21	4.21
FAM	6.92	6.92
COMP	4.01	4.01
GOV	11.66	11.66
BANK	2.88	2.88
CAP	3.85	3.85
ADV	2.85	2.85
LEV	3.17	3.17
SIZE	4.35	4.35
POW	5.66	5.66
INV	1.78	1.78
firm2	6.43	6.43
firm3	4.38	4.38
firm4	3.38	3.38
firm5	4.25	4.25
firm6	1.9	1.9
firm7	6.71	6.71
firm8	3.46	3.46
firm9	6.94	6.94
firm10	2.4	2.4
firm11	4.44	4.44
firm12	2.01	2.01
firm13	6.4	6.4
firm14	2.19	2.19
firm15	3.27	3.27
firm16	2.09	2.09
firm17	2.45	2.45
firm18	2.27	2.27
firm19	2.42	2.42
firm20	1.76	1.76
firm21	4.06	4.06
firm22	3.25	3.25
firm23	2.4	2.4

Continued

Variable	ROA	ROE
firm24	4.77	4.77
firm25	1.95	1.95
firm26	4.17	4.17
firm27	2.23	2.23
firm28	4.58	4.58
firm29	3.23	3.23
firm30	4.35	4.35
firm31	2.23	2.23
firm32	8.21	8.21
firm33	2.21	2.21
firm34	3.91	3.91
firm35	2.84	2.84
firm36	2.36	2.36
firm37	2.5	2.5
firm38	4.25	4.25
firm39	1.88	2.7
firm40	2.26	3.35
firm41	1.95	3.45
firm41	1.64	3.55
year2	2.98	2.98
year3	1.77	1.77
year4	1.93	1.93
year5	2.2	2.2
Mean VIF	3.7	3.8
hetrosked. test (P > chi2)	0.14	0.40

Table 22: Multicollinearity and heteroskedasticity tests for the regression of the moderating effect of firm risk in the governance-financial performance relationship.

Variable	ROA	ROE
CGIETH	7	7
RISK	8.11	8.11
CGIETH*RISK	4.41	4.41
GROW	1.46	1.46
FAM	7.09	7.09
COMP	14.04	14.04
GOV	13.52	13.52
BANK	2.96	2.96
CAP	3.84	3.84
ADV	2.87	2.87
LEV	3.14	3.14
SIZE	4.37	4.37

Continued

Variable	ROA	ROE
POW	5.73	5.73
INV	1.77	1.77
firm2	6.54	6.54
firm3	4.42	4.42
firm4	3.71	3.71
firm5	4.26	4.26
firm6	1.9	1.9
firm7	6.75	6.75
firm8	3.84	3.84
firm9	7.24	7.24
firm10	3.16	3.16
firm11	4.53	4.53
firm12	2.01	2.01
firm13	6.5	6.5
firm14	2.32	2.32
firm15	3.49	3.49
firm16	2.07	2.07
firm17	2.55	2.55
firm18	2.27	2.27
firm19	2.46	2.46
firm20	1.77	1.77
firm21	4.15	4.15
firm22	3.52	3.52
firm23	2.4	2.4
firm24	5.1	5.1
firm25	1.96	1.96
firm26	4.17	4.17
firm27	2.74	2.74
firm28	4.64	4.64
firm29	3.6	3.6
firm30	4.46	4.46
firm31	2.22	2.22
firm32	8.36	8.36
firm33	2.23	2.23
firm34	4.1	4.1
firm35	2.84	2.84
firm36	2.55	2.55
firm37	2.57	2.57
firm38	4.34	4.34
firm39	7.15	7.15
firm40	1.3	2

Continued

Variable	ROA	ROE
firm41	1.01	1.5
year 2	2.01	2.01
year3	1.77	1.77
year 4	1.92	1.92
year 5	2.21	2.21
Mean	4	4
hetros. test ($P > \chi^2$)	0.7316	0.7791

Table 23: Multicollinearity and heteroskedasticity tests for the regression of the moderating effect of owner identity in the governance-financial performance relationship.

Variable	ROA	ROE
CGIETH	2.15	2.15
FAM	8.04	8.04
COMP	4.56	4.56
GOV	3.57	3.57
BANK	4.82	4.82
CGIETH*FAM	3.74	3.74
CGIETH*COMP	4.36	4.36
CGIETH*GOV	4.95	4.95
CGIETH*BANK	3.49	3.49
GROW	1.45	1.45
RISK	4.24	4.24
CAP	4.03	4.03
ADV	2.93	2.93
LEV	3.02	3.02
SIZE	5.29	5.29
POW	5.53	5.53
INV	1.77	1.77
firm	6.93	6.93
firm1	4.69	4.69
firm2	4.2	4.2
firm3	4.38	4.38
firm4	2	2
firm5	6.95	6.95
firm6	4.68	4.68
firm7	7.22	7.22
firm8	2.51	2.51

Continued

Variable	ROA	ROE
firm9	4.59	4.59
firm10	2.08	2.08
firm11	7.02	7.02
firm12	2.22	2.22
firm13	4.09	4.09
firm14	2.08	2.08
firm15	2.66	2.66
firm16	2.72	2.72
firm17	2.46	2.46
firm18	1.76	1.76
firm19	4.24	4.24
firm20	4.07	4.07
firm21	2.6	2.6
firm22	5.05	5.05
firm23	1.97	1.97
firm24	4.63	4.63
firm25	2.34	2.34
firm26	4.85	4.85
firm27	3.75	3.75
firm28	4.5	4.5
firm29	2.54	2.54
firm30	1.27	1.27
firm31	2.33	2.33
firm32	4.12	4.12
firm33	3.09	3.09
firm34	2.78	2.78
firm35	2.65	2.65
firm36	4.46	4.46
firm37	2.08	2.08
firm38	2.49	2.49
firm39	2.21	2.21
firm40	1.92	1.92
firm41	1.64	1.64
year2	2.01	2.01
year3	1.78	1.78
year4	1.93	1.93
year5	2.23	2.23
Mean	3.1	3.12
hetro. test (P > chi2)	0.4543	0.3993

Appendix 6:

Table 24: endogenous corporate governance.

	(1) CGIET	(2) CGIET
L.ROA	-0.0509 (0.1035)	
L.ROE		-0.0365 (0.0516)
Control variables	Yes	Yes
year dummy	Yes	Yes
N	168	168
r ²	0.695	0.695
F	20.10***	20.15***

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$