

**The Impact of Corporate Governance Mechanisms on Firm's Financial
Performance: Evidence from Commercial Banks in Ethiopia**

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This is to certify that the thesis prepared by Yenesew Ferede, entitled: *The Impact of Corporate Governance Mechanisms on firm's Financial Performance: Evidence from Commercial Banks in Ethiopia* and submitted in partial fulfillment of the requirements for the Degree of Master of Business Administration in Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

The Impact of Corporate Governance Mechanisms on Firm's Financial Performance: Evidence from Commercial Banks in Ethiopia

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Corporate governance has become an issue of global significance and has received new urgency due to various corporate scandals and failure. This paper investigates the impact of corporate governance mechanisms on firms' financial performance using five years data from the year 2007 to 2011 with a sample of eight Ethiopian commercial banks. Three financial performance indicators such as return on asset, return on equity and net interest margin were used. Corporate governance mechanisms considered in this study include board size, board gender diversity, board members educational qualification, board members business management and industry specific experience, and audit committee size. The study controls the effect of size, leverage and growth of banks. The regression results show that large size board and audit committee negatively influences financial performance; whereas board members educational qualification positively associated with financial performance. While industry specific experience of director positively related with return on asset but it has a negative effect on net interest margin. Finally, the percentage of female directors and board members business management experience does not have a significant effect. In general, the findings suggest that banks with effective corporate governance mechanisms improve financial performance depending on the measure used although not all corporate governance mechanisms are significant.

Keywords: Corporate Governance Mechanisms, Agency Theory, Financial Performance

Commercial Banks and Ethiopia.

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Acronyms and Abbreviations

AUDSIZE	Audit committee size
BG	Bank growth
Birr	Ethiopian currency
BLEV	Banks Leverage
BMEXP	Board members Business Management Experience
BQUAL	Board members Educational Qualification
BS	Bank Size
BSIZE	Board Size
FD	Female Directors on the board
ICGN	International Corporate Governance Network
INDUEXP	Board members industry specific experience
NIM	Net Interest Margin
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Square
Q. No	Question Number
ROA	Return on Asset
ROE	Return on Equity
VIF	Variance Inflation Factor

Chapter One

Introduction

1.1 Background of the study

Corporate governance has become an issue of global significance. The improvement of corporate governance practices is widely recognized as one of the essential elements in strengthening the foundation for the long-term economic performance of countries and corporations (Ibrahim et al., 2010). It has received new urgency because of global financial crisis and major corporate failures that shock major financial centers of the world (Imam & Malik, 2007). Hence, corporate governance has become an important factor in managing organizations in the current global and complex environment. Corporate governance can be defined as a frame work that protect stakeholders rights by illustrating an effective board of directors, efficient internal control and audit in addition to reliable financial reporting and disclosure (Hassn, n.d.). Melvin and Hirt (2005) described corporate governance as referring to corporate decision-making and control, particularly the structure of the board and its working procedures.

The separation of ownership and control in modern corporations leads to an agency problem where the agent operates the firm in line with their own interests, instead of shareholders (Jensen & Meckling, 1976). The need for corporate governance arises from these potential conflicts of interest among stakeholders such as shareholders, board of directors and managers in the corporate structure. According to Imam and Malik (2007) these conflicts of interest often arise from two main reasons. First, different participants have different objectives and preferences. Second, the participants have imperfect information as to each other's actions, knowledge, and preferences. Corporate

governance is intended at reducing divergence of interest and monitoring of controlling interests of the firm, the absence of which firm value is declined (Nanka-Bruce, 2009).

There are different mechanisms adopted that safeguard the interests of the stakeholders (Sanda et al., 2005). Such corporate governance mechanisms include board size, board gender diversity, size of audit committee, and board of directors' educational qualification and experience. Many researchers have studied the impact of corporate governance mechanisms on firms' performance from different perspectives in different environments using a number of variables of interest (see for instance Sanda et al., 2005; Abu-Tapanjeh, 2006; Aljifri & Moustafa, 2007; Ibrahim et al., 2010; Al-Hawary, 2011; Khatab et al., 2011). The researchers' found mixed results on the relationship between corporate governance mechanisms and firms' performance.

According to Abu-Tapanjeh (2006) good corporate governance is a fundamental necessity to keep on running a firm successfully. It has long been played a crucial role for enhancing the long-term value of stakeholders in the business environment. Corporate governance provides a structure that works for the benefit of the firm and can help in increasing firm's performance by reducing agency problem (Khan et al., 2011).

According to Lupu and Nichitean (2011) corporate governance of banks in developing economies is of even greater importance given the dominant position of banks as providers of fund. In developing economies banks are typically the most important source of finance for the majority of firms. A sound financial system is based on profitable and adequate capitalized banks. As it is said by different researchers performance of banks is affected by good corporate governance practice and policies. Despite this aspect, little

attention has been paid to the research of corporate governance mechanisms in less developed economies in general and particularly in Ethiopia. The aim behind this effort is to aware the banking industry of Ethiopia about the benefits of good corporate governance mechanisms and its impact on financial performance so that they can avail all opportunities to compete not only at national level but also at international level as well.

1.2 Statement of the problem

Given the importance of corporate governance, several studies have been conducted in developed countries on the relationship between corporate governance mechanisms and firms' financial performance and found mixed results (See for example Bauer, et al., 2008; Ibrahim, et al., 2010; Lupu & Nichitean, 2011). However, most of the prior studies have been undertaken on large firms operating within well organized corporate governance mechanisms in developed economic system. Various governance mechanisms operate differentially for different sizes of firms (Habbash, 2010). Therefore, it is difficult to generalize the same result from the findings of those studies for relatively small size Ethiopian commercial banks governance mechanisms.

Furthermore, Ethiopia's corporate governance landscapes are embedded in a setting that differs from a western context in several ways (Dessalegn & Mengistu, 2011). Ethiopian banks corporate governance is characterized by the absence of an organized share market and the country has different regulations, practices, and economic features which needs to conduct a separate study. Nevertheless, as far as the researcher's knowledge concerned, research studies exclusively on the impact of corporate governance mechanisms on banks' financial performance are scanty in less developed countries and in Ethiopia it is

an ignored area of research. Hence, given this gap, this study contributes to the existing body of knowledge and bridge the gap by studying the issue with Ethiopian commercial banks.

Banking industry is the subject of analysis for corporate governance for two reasons; firstly, even though information asymmetries exist in all sectors it is larger in banking industry since banks are generally more opaque than non-financial firms (Levine, 2003). This greater informational asymmetry between insiders (bank management) and outsiders (shareholders and depositors), and the opacity of their assets and activities in banking sector amplifies the agency problem. Thus, it requires giving special attention for banks corporate governance mechanisms. Secondly, banks are corporations which activate different areas of business. Banks have a dominant position in developing economic financial systems, and are important engines of economic growth (Levine, 1997). Hence, banking failure would affect the entire financial system and economy. Keeping this in view and the potential contribution of the banking industry to the economy of developing countries, this study is conducted to measure and analyze the impact of corporate governance mechanisms on firms' financial performance using commercial banks in Ethiopia.

1.3 Hypotheses

In this study the following testable hypotheses were developed.

(**Ha**: alternative hypothesis)

Ha₁: There is a significant negative relationship between board size and financial performance

Ha₂: There is a significant positive association between board gender diversity and financial performance

Ha₃: There is a significant positive association between board members educational qualifications and financial performance

Ha₄: There is a significant positive association between board members business management experience and financial performance

Ha₅: There is a significant positive association between board members industry specific experience and financial performance

Ha₆: There is a significant negative relationship between size of audit committee and financial performance

1.4 Objectives of the study

1.4.1 General objective of the study

The general objective of this study is to examine the impact of corporate governance mechanisms on firms' financial performance by taking evidence from commercial banks in Ethiopia controlling the influence of some selected bank specific variables using five years data from the year 2007 up to 2011.

1.4.2 Specific objectives of the study

Given the overall objective of examining the impact of corporate governance mechanisms on firms' financial performance using some selected commercial banks in Ethiopia, this study had several specific objectives. Specifically, the study sought to:

1. Investigate the relationship between board size and bank performance
2. Examine the association between board gender diversity and bank performance

3. Ascertain the influence of the directors educational qualification on bank performance
4. Identify whether directors business management experience affect bank performance
5. Find out the influence of industry specific experience of directors on bank performance
6. Explain the relationship between size of audit committee and bank performance

1.5 Significance of the Study

The result of this study will contribute to commercial banking firms by identifying relevant corporate governance mechanisms and how these governance mechanisms affect financial performance. The result of this study contributes to the existing literature by providing evidence on the relation between corporate governance mechanisms and banks' financial performance. The empirical results would also be the general indicators of corporate governance mechanisms useful for regulators, policy makers, managers and business people in making policies and decisions. It can serve as a stepping stone for future researchers who want to conduct study on related topic.

1.6 Delimitation of the study

This study is delimited to examining the impact of corporate governance mechanisms on firms' financial performance by taking evidence from commercial banks in Ethiopia for the period of five years, from 2007 to 2011. The dependent variables are delimited to return on asset, return on equity and net interest margin. The explanatory variables are delimited to board size, board gender diversity, directors' educational qualification,

director's business management experience, directors' industry specific experience and size of audit committee and the control variables are bank size, bank growth rate and banks leverage. The study area of this research is delimited to commercial banks in Ethiopia.

1.7 Limitations of the study

As with any other study, this study is subject to some limitations. In this study the sample banks were selected purposively based on the age and availability of data. This may introduce bias inherent with non-probability sampling method. However, this is because there are only eight commercial banks that have complete data for the study period others are established recently. Therefore, these banks were selected purposively. The other limitation of this research is the financial performance of commercial banks in Ethiopia is only measured by using accounting based measures. Therefore, only the accounting measure of bank performance was used. These may limit the findings of this study.

1.8 Structure of the Study

The thesis consists of five chapters. The first chapter introduces what the study is about, the problem to be examined, the objectives, hypotheses, significance, delimitation and limitations of the study. Chapter two provides a highlight of pertinent theoretical and empirical reviews of the literature and conceptual framework relevant to the study. The third chapter provides description about the methodology and the variables used in this study. The fourth chapter presents the results and discussions of the study, based on data collected from secondary and primary sources. The results of the descriptive statistics,

correlation analysis and regression analysis were also presented in the fourth chapter of this study. The study ends with the conclusion and recommendations chapter that brings to light the major findings of the study and possible recommendations in a manner that relates to the topic, namely impact of corporate governance mechanisms on firms' financial performance.

Chapter Two

Literature Review

2.1 Theoretical framework of the study

Corporate governance is the relationship among shareholders, board of directors and the top management in determining the direction and performance of the corporation. It includes the relationship among the many players involved (the stakeholders) and the goals for which the corporation is governed (Kim & Rasiah, 2010).

According to Imam and Malik (2007) the corporate governance theoretical framework is the widest control mechanism of corporate factors to support the efficient use of corporate resources. The challenge of corporate governance could help to align the interests of individuals, corporations and society through a fundamental ethical basis and it fulfills the long term strategic goal of the owners. It will certainly not be the same for all organizations, but will take into account the expectations of all the key stakeholders (Imam & Malik, 2007). So maintaining proper compliance with all the applicable legal and regulatory requirements under which the company is carrying out its activities is also achieved by good practice of corporate governance mechanisms.

There are a number of theoretical perspectives which are used in explaining the impact of corporate governance mechanisms on firms' financial performance. The most important theories are the agency theory, stakeholders' theory and resource dependency theory (Maher & Andersson, 1999).

2.1.1 Agency theory

According to Habbash (2010) agency theory is the most popular and has received greater attention from academics and practitioners. The agency theory is based on the principal-agent relationships. The separation of ownership from management in modern corporations provides the context for the functioning of the agency theory. In modern corporations the shareholders (principals) are widely dispersed and they are not normally involved in the day to day operations and management of their companies rather they hire managers (agent) to manage the corporation on behalf of them (Habbash, 2010). The agents are appointed to manage the day to day operations of the corporation. The separation of ownership and controlling rights results conflicts of interest between agent and principal. To solve this problem or to align the conflicting interests of managers and owners the company incurs controlling costs including incentives given for managers.

According to Bowrin and Navissi (n.d.) agency theory refers to a set of propositions in governing a modern corporation which is typically characterized by large number of shareholders who allow agents to control and manage their collective capital for future returns. The agent, typically, may not always own shares but may possess relevant professional skills and competence in managing the corporation. The theory offers many useful ways to examine the relationship between owners and managers and verify how the final objective of maximizing the returns to the owners is achieved, particularly when the managers do not own the corporation's resources. Agency theory identifies the role of the monitoring mechanism of corporate governance to decrease agency costs and the conflict of interest between managers and owners. It is clear that the principal-agent

theory is generally considered as the starting point for any debate on the issue of corporate governance.

Agency theory having its roots in economic theory was expounded by Alchian and Demsetz (1972) and further developed by Jensen and Meckling (1976). Jensen and Meckling (1976) defined agency relationship as a contract under which the principal engage another person or the agent to perform some service on their behalf which involves delegating some decision making authority to the agent. If both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal. The principal can limit divergences from his interest by establishing appropriate incentives for the agent and by incurring monitoring costs designed to limit the irregular activities of the agent.

Control of agency problems in the decision process is important when the decision managers who initiate and implement important decisions are not the major residual claimants and therefore do not bear a major share of the wealth effects of their decisions. Without effective control procedures, such decision managers are more likely to take actions that deviate from the interests of residual claimants. Individual decision agents can be involved in the management of some decisions and the control of others, but separation means that an individual agent does not exercise exclusive management and control rights over the same decisions (Fama & Jensen, 1983, p.304).

According to agency theory the agent strive to achieve his personal goals at the expense of the principal. Managers are mostly motivated by their own personal interests and benefits, and work to maximize their own personal benefit rather than considering shareholders interests and maximizing shareholders wealth. To reduce agency problem there must be better monitoring and controlling mechanisms which helps to ensure that managers pursue the interests of shareholders rather than only their own interests.

The agency problem can be set out in two different forms known as adverse selection and moral hazard. Adverse selection can occur if the agent misrepresents his ability to perform the functions assigned and gets chosen as an agent. Moral hazard occurs if the chosen agent shirks the responsibilities or underperforms due to lack of sufficient dedication to the assigned duties. Such underperformance by an agent, even if acting in the best interest of the principal, will lead to a residual cost to the principal. These costs resulting from sub-optimal performance by agents are termed as agency costs (Bathula, 2008, p.62).

The concept of corporate governance presumes a fundamental tension between shareholders and corporate managers (Jensen & Meckling, 1976). While the objective of a corporation's shareholders is a return on their investment, managers are likely to have other goals, such as the power and prestige of running a large and powerful organization, or entertainment and other perquisites of their position. Managers' superior access to inside information and the relatively powerless position of the numerous and dispersed shareholders, mean that managers are likely to have the upper hand (Fama & Jensen, 1983).

Therefore, shareholders monitor and controls managers through their representatives such as board of directors. Boards of directors are considered as an important device to protect shareholders from being exploited by managers and help to effectively control managers when they try to maximize their self interest at the expense of the company's profitability. Fama and Jensen (1983) argues that in order to minimize agency problem that emanates from the separation of ownership and control the corporations need to have a mechanisms that enables to separate the authority of decision management from decision control. This would reduce agency costs and ensures maximization of shareholders wealth by effectively controlling the power and self-centered decisions of management.

The agency theory provides a basis for the governance of firms through various internal and external mechanisms. Corporate governance mechanisms are designed to align the interest of owners and managers, constrained the opportunistic behaviors of managers and protect shareholder interests, generally to solve agency problem (Habbash, 2010). Corporate governance is a mechanism through which shareholders are assured that managers will act in their best interests and it limits agency problems. Agency theory suggests that there are a number of mechanisms to reduce the agency problem in the company such as choosing appropriate board composition (in terms of size, gender, experience and competence), effective audit committee, and the threat of firing (Tandelilin et al., 2007).

From agency theory view point, corporate governance improves corporate performance by resolving agency problems through monitoring management activities, controlling self-centered behaviors of management and inspecting the financial reporting process (Habbash, 2010). Moreover, corporate governance is able to alleviate agency costs by aligning the conflicting interests of management and shareholders through monitoring management and using different corporate governance mechanisms. Therefore, corporate governance mechanism such as boards of directors and audit committees enables shareholders to closely monitor the activities of managers. Ineffective board and audit committee may give confidence for managers to pursue their own interests but effective board and audit committee can reduce deceptive behavior of managers by detecting fraudulent financial report and actively monitoring.

According to the assumptions of agency theory corporate governance mechanisms affect financial performance. As a consequence, enhancing corporate governance mechanisms should result in improved financial performance. Taking agency theory into consideration, the study variables were identified with the aim of examining the relationships between corporate governance mechanisms and financial performance. Board structure has relied heavily on the concepts of agency theory, focusing on the controlling function of the board (Habbash, 2010). The corporate governance mechanisms considered in this research include board size, board gender diversity, educational qualification of board members, general and industry specific experience of board members and audit committee size.

2.1.2 Stakeholders theory

Stakeholder theory is an extension of the agency theory, where the agency theory expects board of directors to protect only the interests of shareholders. However, stakeholder theory extends the narrow focus of agency theory on shareholders interest to stakeholders to take into account the interests of many different groups and individuals, including interest groups related to social, environmental and ethical considerations (Freeman et al., 2004).

According to Freeman et al. (2004), stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business. It asks managers to articulate the shared sense of the value they create, and what brings its core stakeholders together. It also pushes managers to be clear about how they want to do business, specifically what kinds of relationships they want and need to create with their

stakeholders to deliver on their purpose. According to stakeholder theory the purpose of the firm is to serve and coordinate the interests of its various stakeholders such as shareholders, employees, creditors, customers, suppliers, government, and the community.

According to Habbash (2010), stakeholder refers to any one whose goals have direct or indirect connections with the firm and influenced by a firm or who exert influence on the firms goal achievement. These include management, employees, clients, suppliers, government, political parties and local community.

According to this theory, the stakeholders in corporate governance can create a favorable external environment which is conducive to the realization of corporate social responsibility. Moreover, the stakeholders in corporate governance will enable the company to consider more about the customers, the community and social organizations and can create a stable environment for long term development. The benefit of the stakeholder model emphasis on overcoming problems of underinvestment associated with opportunistic behavior and in encouraging active co-operation amongst stakeholders to ensure the long-term profitability of the business firm (Maher & Andersson, 1999)

According to Kyereboah-Coleman (2007) management receive capital from shareholders, they depend upon employees to accomplish the objective of the company. External stakeholders such as customers, suppliers, and the community are equally important, and also constrained by formal and informal rules that business must respect. According to stakeholders theory the best firms are ones with committed suppliers, customers, and employees and management. Recently, stakeholder theory has received attention than

earlier because researchers have recognized that the activities of a corporate entity impact on the external environment requiring accountability of the organization to a wider audience than simply its shareholders (Kyereboah-Coleman, 2007). Companies are no longer the instrument of shareholders alone but exist within society. It has responsibilities to the stakeholders. However, most researchers argue that it is unrealistic task for managers (Sundaram & Inkpen, 2004b; Sanda et al., 2005). The stakeholder theory has not been subjected to much empirical study. The common criticisms for stakeholder theory is that how to align the stakeholders conflicting interests since the difficulties result from how to administer different stakeholders with various needs and demands. It is not possible to treat all stakeholders equally (Habbash, 2010). Moreover, it is not practical for all stakeholders to be effectively represented in corporate governance recommendations as this may undermine the welfare of company (Habbash). The other critique of the stakeholder model is that managers or directors may use “stakeholder” reasons to justify poor company performance (Maher & Andersson, 1999).

2.1.3 Resource dependency theory

Whilst the stakeholder theory focuses on relationships with many groups for individual benefits, resource dependency theory concentrates on the role of board directors in providing access to resources needed by the firm (Abdullah & Valentine, 2009). According to this theory the primary function of the board of directors is to provide resources to the firm. Directors are viewed as an important resource to the firm. When directors are considered as resource providers, various dimensions of director diversity clearly become important such as gender, experience, qualification and the like. According to Abdullah and Valentine, directors bring resources to the firm, such as

information, skills, business expertise, access to key constituents such as suppliers, buyers, public policy makers, social groups as well as legitimacy. Boards of directors provide expertise, skills, information and potential linkage with environment for firms (Ayuso & Argandona, 2007).

The resource based approach notes that the board of directors could support the management in areas where in-firm knowledge is limited or lacking. The resource dependence model suggests that the board of directors could be used as a mechanism to form links with the external environment in order to support the management in the achievement of organizational goals (Wang, 2009).

The agency theory concentrated on the monitoring and controlling role of board of directors whereas the resource dependency theory focus on the advisory and counseling role of directors to a firm management. Recently, both economists and management scholars tend to assign to boards the dual role of monitors and advisers of management. However, whether boards perform such functions effectively is still a controversial issue (Ferreira, 2010). Within a corporate governance framework, the composition of corporate boards is crucial to aligning the interest of management and shareholders, to providing information for monitoring and counseling, and to ensuring effective decision-making (Marinova et al., 2010). The dual role of boards is recognized. However, board structure has relied heavily on agency theory concepts, focusing on the control function of the board (Habbash, 2010).

Each of the three theories is useful in considering the efficiency and effectiveness of the monitoring and control functions of corporate governance. But, many of these theoretical

perspectives are intended as complements to, not substitutes for, agency theory (Habbash, 2010).

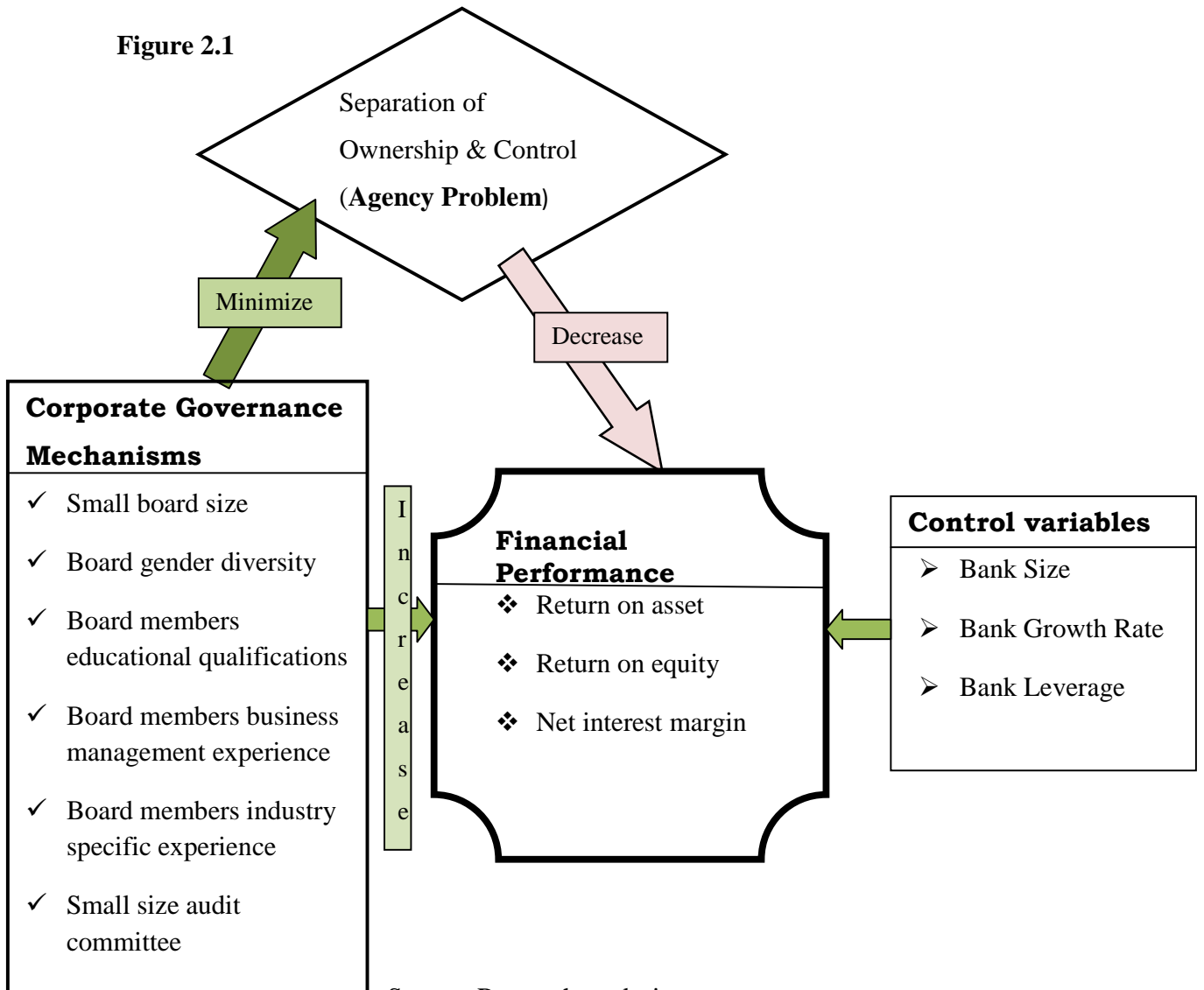
Among the various theories discussed, agency theory is the most popular and has received the most attention from academics and practitioners. According to Habbash (2010), the influence of agency theory has been instrumental in the development of corporate governance standards, principles and codes. Mallin (2007) provides a comprehensive discussion of corporate governance theories and argues that the agency approach is the most appropriate because it provides a better explanation for corporate governance roles (as cited by Habash, 2010).

To sum up, this study will draw on agency theory to test whether hypothesized relationships exist between corporate governance mechanisms and firms' financial performance. The agency theory framework has the ability to explain corporate governance mechanisms. It can also explain the expected association between corporate governance mechanisms and financial performance as shown in figure 2.1 below in the conceptual framework section.

2.2 Conceptual framework of the study

Based on the agency theory the following diagrammatic framework is developed.

Figure 2.1



Source: Researchers design

2.3 Corporate governance and the special nature of banks

According to Levine (2003) banks played a pivotal role for industrial expansion, the corporate governance of firms, and capital allocation. When banks efficiently mobilize and allocate funds, this lowers the cost of capital to firms, boosts capital formation, and

stimulates productivity and economic growth. Thus, the proper functioning of banks has implications for the operations of firms and the prosperity of countries.

Given the importance of banks, the governance of banks themselves has been played a central role (Levine, 2004). If banks designed sound corporate governance mechanisms, the bank can allocate capital efficiently and improve its performance and effective corporate governance protect the interests of shareholders as well as other stakeholders. In contrast, if the banks face poor corporate governance mechanisms, it is less likely to allocate capital efficiently. The bank manager will enjoy enormous discretion to act in his/her own interest rather than in the interests of shareholders or other stakeholders. This leads to banking failure. Banking crises dramatically advertise the enormous consequences of poor governance of banks (Levine, 2004). Therefore, improving banking sector corporate governance principles plays a decisive role to fostering improvement in a business climate and the economy as a whole.

The multiplicity of stakeholders complicates financial sector corporate governance. In addition to investors and depositors, organizers are directly concerned with the bank's performance. At the macroeconomic level, organizers are concerned with the effect of governance on financial institutions' performance, because the economy's health and safety largely depends on their performance (Al-Hawary, 2011).

According to Levine (2003) banks have two related characteristics that induce a separate analysis of the corporate governance of banks. First, banks are generally more opaque than non financial firms. Even though information asymmetries exist in all sectors it is larger in banking industry due to the opaqueness of their assets and activities. In banking,

loan quality is not readily observable and can be hidden for long periods. Furthermore, banks can alter the risk composition of their assets more quickly than most non-financial industries, and bank managers can hide problems by extending loans to clients that cannot service previous debt obligations. The greater information asymmetry between insiders and outsiders and relatively severe difficulties in acquiring information about bank activities and monitor continuing bank activities intensifies the agency problem. This makes the corporate governance mechanism of banks significant.

Second, banks are normally very heavily regulated. Governments impose heavy regulation. The reason is banks are important for the economy of countries, banks assets and activities are opaque this results difficulty of monitoring, and banks are a ready source of fiscal revenue. At the extreme, governments own banks. Actually, banking is not the only regulated industry and governments own other types of firms. However, even countries that intervene little in other sectors tend to impose extensive regulations on the banking industry.

Corporate governance broadly viewed as the methods by which suppliers of finance control managers in order to ensure that their capital cannot be expropriated and to ensure that they earn appropriate return on their investment (Shleifer & Vishny, 1997). The special nature of banking requires not only a broader view of corporate governance, but also government intervention in order to control the opportunistic behavior of bank management (Arun & Turner, 2004). The unique nature of the banking firm, whether in the developed or developing world, requires sound corporate governance, which encapsulates both shareholders and depositors, be adopted for banks.

Corporate governance for banking industry is of even greater importance to the international financial system and merits the stakeholders and countries due to the important financial intermediation role of banks in an economy, and their high degree of sensitivity to potential difficulties arising from ineffective corporate governance and the need to safeguard depositors' funds (Basel Committee on Banking Supervision, 2006).

Effective corporate governance practices are essential to achieving and maintaining public trust and confidence in the banking system, which are critical to the proper functioning of the banking sector and economy as a whole. Poor corporate governance may contribute to bank failures, which can pose significant public costs and consequences due to their potential impact on any applicable deposit insurance systems and the possibility of broader macroeconomic implications (Basel Committee on Banking Supervision, 2006).

2.4 Overview of Ethiopian banking industry

Services organizations in general and financial services in particular are considered to be the key factor for growth and success of projects in both industrial and developing countries (Tarawneh, 2006). However, the commercial banks take pride in offering customers a full range of banking services inside and outside of Ethiopia.

The Ethiopian financial sector is dominated by the banking sector. Banks are the important component of any financial system. They play important role of channeling the savings of surplus sectors to deficit sectors. The efficiency and competitiveness of banking system defines the strength of any economy. Like other developing countries in Ethiopia banks plays a vital role in the process of economic growth and development.

The Ethiopian banking sector comprises one development bank, and fifteen commercial banks out of which two banks are state owned.

The Ethiopian banking system has been regulated with its own key regulatory feature. According to Mulugeteta (2010) the key regulatory features were interest rate regulation, credit restrictions, equity market controls and foreign exchange controls. Although some restrictions are still in operation regulations which are affecting banks are being relaxed after implementing the financial liberalization (1992) measures. Consequently, the private sector financial institutions are growing but major commercial banks and specialized institutions still remain within the public sector.

The financial liberalization reform of 1992 allowed the participation of private financial institutions in the economy. Private Banks' participation has increased and hence the share of their banking assets to total commercial banking assets increases. As in most developing countries, financial sector policy in Ethiopia aims at achieving more effective intermediation, and improving soundness and depth (Mulugeteta, 2010). According to Mulugeteta the Ethiopian authorities have chosen to pursue these goals within a distinctive strategic framework for the financial sector, and emphasize the importance of further strengthening corporate governance and accountability of financial institutions, and boosting the capacity of financial sector professionals. Ensuring better corporate governance of corporations, financial institutions and markets is increasingly recognized as a pre-condition for the countries development

The bank corporate governance process is a complex framework. This governance framework encompasses a bank's stockholders, its managers and other employees, and

the board of directors. Banks further operate under a unique system of public oversight in the form of bank supervisors and a comprehensive body of banking laws and regulations. The interaction between all of these elements determines how well the performance of a bank will satisfy the desires of its stockholders, while also complying with public objectives (Adusei, 2011).

In Ethiopia the corporate governance of banks is directed and supervised by the central bank. The National Bank of Ethiopia monitors and controls the banking business and functions as regulators of the country's money supply. Accordingly, national bank of Ethiopia issued directives on the size, composition and competence of board of directors. According to banking business Proclamation (No. 592/2008) the national bank is responsible to issue directives on the qualification and competency to be fulfilled by directors; the minimum number of directors in the membership of the board of a bank; the duties, responsibilities and good corporate governance of the boards of directors of bank; the maximum number of years a director may serve in any bank.

2.5 Corporate governance mechanisms and firms financial performance

Many studies revealed the effect of corporate governance mechanisms on firms' financial performance (See for example Sanda et al, 2005; Aljifri & Moustafa, 2007; Sunday O, 2008; Lupu & Nichitean, 2011; Al-Hawary, 2011; Khan et al., 2011; Al Manaseer et al., 2012). Adopting better corporate governance mechanisms such as an enhanced board and audit committee improves monitoring of management and reduces information asymmetry problems (Aldamen et al., 2011). There is a significant literature that links

size, gender diversity, and other characteristics of the board of directors and audit committees to improved firm performance (Klein, 1998; Aldamen et al, 2011).

Corporate governance mechanisms have been identified as an essential tools needed in managing any corporation including banks. There are different mechanisms that reduce agency cost whereby corporate governance can be measured in an organization. In the corporate governance literature board characteristics (board size, board gender diversity and educational qualification and experience) and audit committee size were used as corporate governance mechanisms.

International organizations such as Organization for Economic Cooperation and Development (OECD) and International Corporate Governance Network (ICGN) have developed corporate governance principles which stressed on the role of boards. According to Bathula (2008), corporate governance principles focus on the importance of corporate governance for long-term economic performance and strengthening of international financial system. A strong board can play a decisive role in improving firm financial performance. The important role of boards is to act as an internal governance mechanisms and monitoring of management (Shleifer & Vishny, 1997). An effective board is likely to help the firm achieve better performance by effectively undertaking their monitoring duties (Bathula, 2008).

Board of directors is an important corporate governance mechanism (Aljifri & Moustafa, 2007). Boards of directors are the agent of the shareholders and their primary task is to monitor and control firm management on behalf of shareholders to reduce agency problem. In modern corporations boards of directors are charged with the task of

monitoring the activities of top management to ensure that the managers act in the best interests of shareholders (Jensen & Meckling, 1976). From the agency theory point of view boards have play decisive role in alleviating agency problems that arising from the separation of ownership and control of firms (O'Connell & Cramer, 2010). In doing so the board of directors need to be effectively supervise the activities of top management. The effectiveness of the board is influenced by factors such as board composition and quality, size of board, , board diversity, board committee effectiveness such as audit committee and information asymmetries ultimately this affects the board oversight performance (Uadiale, 2010). When the board is effective it is expected to drive the company towards better financial achievement (Andres & Vallelado, 2008).

When financial markets are not well developed as an efficient external control mechanism and when the shareholders are not well protected due to weak legal system and poor law enforcement the role of the board of director becomes highly significant as an internal control mechanism (González & Garay, 2003). Boards of director are the heart of corporate governance. However, the effectiveness of the board of directors as shareholders' monitoring mechanism can only be efficient if bounded with appropriate size, composition and sub-committee (Lawal, 2012).

The audit committee is a sub-committee of the board of directors and its primary role is to monitor and review financial statements (Yammeesri & Herath, 2010). An audit committee has a particular role of ensuring that the interests of shareholders are properly protected in relation to financial reporting and internal control (Habbash, 2010). The use of an audit committee is an important part of the decision control system for internal

monitoring by boards of directors (Fama & Jensen, 1983). Monitoring is performed by external audit and audit committees. The existence of an audit committee improves the monitoring of corporate financial reporting and internal control and it helps to promote good corporate governance in turn this improves firms' financial performance by reducing agency cost (Al –Sa'eed & Al-Mahamid, 2011). Size is vital characteristics of audit committees (Habbash, 2010).

2.5.1 Board size

According to Kiel and Nicholson (2003) board size is crucial to achieving the board effectiveness and improved firm performance. According to Lawal (2012), board size affects the quality of deliberation among members and ability of board to arrived at an optimal corporate decisions. Therefore, identifying the appropriate board size is essential because size can be detrimental to corporate governance effectiveness beyond optimal level. However, determining an ideal size of the board has being an ongoing and controversial debate in corporate governance literature (Lawal, 2012). Whether large or small board help improve firm performance it is debatable issue and researchers found mixed result about the relation between board size and firm performance.

Jensen (1993) argues that a larger board leads to less effective monitoring due to coordination and process problems inherent in large board size. Larger boards can be less participative, less cohesive, and less able to reach consensus. Coordination, communication and decision-making problems increasingly impede company performance when the number of directors increases (Yermack, 1996 as cited by Uadiale, 2010). Al-Manaseer et al. (2012) also argues that boards with too many members lead to

problems of coordination in decision making. Small board size was favored to promote critical, genuine and intellectual deliberation and involvement among members which presumably might led to effective corporate decision making, monitoring and improved performance (Lawal, 2012). In contrast Klein (2002) suggested that larger boards able to promote effective monitoring due to their ability to distribute the work load over a greater number of observers. Thus, board size can influence the financial performance of firms.

2.5.2 Board gender diversity

Gender diversity is part of the broader concept of board diversity. Boards are concerned with having right composition to provide diverse perspectives. Greater female representation on boards provides some additional skills and perspectives that may not be possible with all-male boards (Boyle & Jane, 2011). Board diversity promotes more effective monitoring and problem-solving. He suggests that female board members will bring diverse viewpoints to the boardroom and will provoke lively boardroom discussions.

Gender diversity in the boards is supported by different theoretical perspectives. Agency theory is mainly concerned about monitoring role of directors. Representation from diverse groups will provide a balanced board so that no individual or group of individuals can dominate the decision-making of the board (Erhardt et al., 2003). The management may be less able to manipulate a more heterogeneous board to achieve their personal interests. Gender diversity is associated with effectiveness in the oversight function of boards of directors. The oversight function may be more effective if there is gender diversity in board which allows for a broader range of opinions to be considered.

According to Erhardt et al. (2003), diversity of the board of directors and the subsequent conflict that is considered to commonly occur with diverse group dynamics is likely to have a positive impact on the controlling function and could be one of several tools used to minimize potential agency issues.

From stakeholders' theory, diversity also provides representation for different stakeholders of the firm for equity and fairness (Keasey et al., 1997). From resource dependency perspective, the board is a strategic resource, which provides a linkage to various external resources (Walt & Ingley, 2003). This is facilitated by board diversity. On the other hand, Rose (2007) revealed insignificant association between number of women directors on the board and firm performance. However, many scholars now believe that an increase in board diversity leads to better boards and governance on the ground that diversity allows boards to tap on broader talent pools for the role of directors (Bathula, 2008). However, as he stated in corporate world women representation on boards is very limited.

2.5.3 Educational qualification

Director's educational qualifications are central to effectively interpret and utilize the information generated by the management of particular types of business enterprise. Educational qualification is potentially important since the ability to seek and interpret appropriate information is essential for the efficient operation of the modern corporation and the effective control or guidance of management by boards of directors. Educational qualification affects the oversight and monitoring role of boards of directors (Gantenbein & Volonte, 2011).

Board of directors is vested with the responsibility of ensuring that the shareholders' money is not wasted, shareholders have a serious interest in ensuring that the board is staffed with well educated and experienced directors (Gantenbein & Volonte, 2011). The human capital provided by its board of directors is vital given the corporate board is one of the mechanisms for overseeing the firm and it can arguably provide the knowledge needed to function in the new environment. Personal profile factors of directors such as education and experience is important for board efficiency.

2.5.4 Business management experience

Business management experience of directors enables them to have better knowledge and understanding about business and enable to contribute effectively in the decision making process as well as in effectively monitoring the activities of management (Saat et al., 2011). Directors need to be competent and capable of understanding the business operation. Kroll, et al (2008) found that boards rich in appropriate experience are associated with superior returns. He argues that boards comprising directors with appropriate knowledge gained through experience can be not only better monitors, but also more useful advisors to top managers. According to Castanias et al. (2001) differences between firms in the human capital of boards of directors are related to differences in strategic actions and performance. However, empirical studies examining the effect of business experience of board members on firm performance is scarce.

2.5.5 Industry specific experience

Appointing directors with related and relevant skills and knowledge to perform task specific duties such as the firm's internal control and procedures will enhance the quality

of information gathered and the solution to problems and of the views held and judgments made during the decision-making process (DeZoort, 1998 as cited by Saat, et al, 2011). Directors' specialist knowledge will be valuable to the creation of a strong and informed board (Saat et al., 2011). He claimed that experience of directors enables them to guide, steer and monitor the firm more effectively. In other words, their knowledge of the industry, its opportunities and threats and their connections to the industry participants based on their experience enables them to contribute substantively in the firm performance. However, empirical studies examining the effect of business management and industry specific experience of board members on firm performance is scarce in the literature.

2.5.6 Audit Committee Size

According to Jensen and Meckling (1976) the audit committee plays a significant role in the monitoring process carried out by the directors of the firm and auditing is used by firms to reduce agency costs. In addition to that they revealed that most essential board decisions originate at the committee level, and this includes the audit committee. Audit committees thus, represent another internal governance mechanism whose impact is to improve the quality of financial management of a company and hence its performance.

Kyereboah-Coleman (2007) reported a significant positive relation between size of the audit committee and firm performance (ROA and Tobin's q) using the overall sample. Kyereboah-Coleman (2007) describe that size of the audit committee could be an indication of the seriousness attached to issues of transparency by the organization. However, only using Ghanaian sample the size of the audit committee showed a negative

effect on performance. He explained as free-ridership and difficulty in consensus building in large groups leads to low performance. In addition, Lin et al (2006) found significant positive association between audit committee size and occurrence of earnings restatement. It was explained that a certain minimum number of audit committee members may be relevant to the quality of financial reporting. Aldamen et al. (2011) reveals that smaller audit committees with more experience and better educational qualifications are more likely to be associated with positive firm performance.

2.6 Review of previous empirical studies

This section of literature review concentrates on previous studies that have been conducted in relation to this study. There were mixed results concluded by previous studies pertaining to the relationship between corporate governance mechanisms and firms' financial performance. The important empirical studies are summarized below in this section.

The study undertaken by (Erhardt et al., 2003), provide evidence on the relationship between demographic diversity on boards of directors and firm financial performance. The relationship was examined using two years financial performance data and percentage of women and minorities on boards of directors for 127 US companies. Correlation and regression analyses indicate board diversity was positively associated with financial indicators of firm performance (return on asset and return on investment).

Sanda et al. (2005) examined the relationship between corporate governance mechanisms and firm financial performance in Nigeria using pooled ordinary least squares regression analysis for a sample of 93 firms quoted on the Nigerian Stock Exchange for the period

1996 to 1999. The researcher used return on asset, return on equity, price earnings ratio and Tobin Q as performance measure and director shareholding, board size, outside directors, ownership concentration, and role of chief executive officer as explanatory variables and firm size and leverage as control variables of the study. The study points out that leverage, director shareholding, ownership concentration and separation of chief executive officer and board chairman works help promote firm performance. Board size and firm size negatively influence performance. The results find no evidence to support the idea that boards with a higher proportion of outside directors perform better than other firms, he found evidence that firms run by expatriate chief executive officers tend to achieve higher levels of performance than those run by indigenous chief executive officers.

Abu-Tapanjeh (2006) analyze the association between good corporate governance mechanism and firms' operating and financial performance by employing multiple regression models with panel data set based on 39 industrial companies listed in Amman Stock Exchange of Jordan, over the period of 1992 to 2004. The proportion of outside directors, family member on board, general manager duality, gear ratio and firm size was the independent variables of the study whereas the net sales to operating cost ratio and dividend payout ratio were used as a measure of firms' operating and financial performance, respectively. The results showed that proportion of outside directors, general manager duality and firm size positively and significantly influences firms' performance both operating and financial. Moreover, gear ratio had significant positive influence on operating performance but insignificant in case of financial performance. On

the other hand, family members on board have not significant effect on firms' operating as well as financial performance.

Aljifri and Moustafa (2007) provided evidence on the impact of corporate governance mechanisms on firms' performance using 51 United Arab Emirates listed firms by using both accounting and market data for the year 2004. They have employed cross-sectional regression analysis to test whether the selected corporate governance variables have an impact on firms' performance or not after controlling firm size. The results of the study showed that the governmental ownership, the debt ratio, and the payout dividends ratio have a significant impact on the firm performance (Tobin's Q); whereas the institutional investors, the board size, the firm size, and the audit type have insignificant effect on firms' performance. The study was concluded that three of the corporate governance mechanisms; governmental ownership, debt ratio, and the payout dividends ratio were strong enough to affect the performance of United Arab Emirates listed firms.

Rose (2007) examine whether female board representation influence firm performance using all Danish firms listed on the Copenhagen Stock Exchange during 1998–2001 excluding banks and insurance companies with 443 firm-time observations. Its objective was to explore the impact of board diversity on firm performance. Cross sectional data analysis method has been used. Tobin's Q was used as a measure of performance and board gender diversity were measured as percentage of female directors and using dummy variable. In addition the proportion of foreign directors and educational background of directors based on their field of study such as lawyers, economists and engineers also included as an explanatory variables. Payment to the board, growth,

ownership concentration and firm size were the control variables of the study. The study does not find any significant link between firm performance as measured by Tobin's Q and female board representation, members' educational background as well as the proportion of foreign directors. He argued that board members with an unconventional background are socialized unconsciously adopting the ideas of the majority of conventional board members, which entails that a potential performance effect does not materialize.

Bathula (2008) studied the association between board characteristics and firm performance. Board characteristics which were considered in the research include board size, director ownership, chief executive officer duality, gender diversity, educational qualification of board members and number of board meetings. Additionally, firm age and firm size was used as control variables. Firm performance was measured by return on assets. To test the hypothesis a sample of 156 firms over a four year period data from 2004 to 2007 was used. The sample includes all firms listed on New Zealand stock exchange. Empirical analysis was undertaken using Generalized Least Squares analyses. The findings of the study showed that board characteristics such as board size, chief executive officer duality and gender diversity were positively related with firm performance, whereas director ownership, board meetings and the number of board members with PhD level education was found to be negatively related. Firm age and firm size does not have significant influence.

Babatunde and Olaniran (2009) analyze the effects of internal and external governance mechanism on performance of corporate firms in Nigeria. In the study panel data

regression analysis was used with a sample of 62 firms listed on the Nigerian Stock Exchange for a period of five years from 2002 to 2006 to examine the relationship between internal and external governance mechanisms and corporate firms' performance. The researchers found a positive and significant relationship between board size, block shareholders and leverage and the dependent variable Tobin's Q. However, the study revealed an inverse relationship between director's shareholdings, firm size, independence of the audit committee and the numbers of outside directors on board. When the return on asset was used as the dependent variable significant positive relationship of board size, block holders and leverage with return on asset was found. However, there was a negative relationship between the number of outside directors on board, director's shareholdings, independence of the audit committee, firm size and the return on asset. In addition, the study found that the measure of performance matter for analysis of corporate governance studies. In some cases different result were obtained based on the measure used.

Ibrahim et al. (2010) examined the role of corporate governance in firm performance. Their study was a comparative analysis between chemical and pharmaceutical sectors of Pakistan using a sample of five companies from each sector from the year 2005 to 2009. Multiple linear regression models with panel data methodology were used. Return on asset and return on equity was used as a measure of performance and they used three corporate governance variables; board size, board independence and ownership concentration. They found that in both sectors, the impact of corporate governance on return on equity is significant but there is no significant impact on return on asset. In case of sector wise analysis, there is an insignificant impact of corporate governance on return

on asset for chemical and pharmaceutical. On the other hand, there is a significant impact of corporate governance on return on equity in chemical sector, but in pharmaceutical the impact is insignificant.

Amran (2011) empirically studied the association between Corporate Governance Mechanisms and Company Performances. It was expected that corporate governance mechanisms affect company performance. The hypothesis was tested on 424 public listed Malaysian Companies (233 family controlled firms and 191 non-family controlled firms) and the data about corporate governance mechanisms and company's performance was collected from Sultanah Bahiyah Library database from the year 2003 to 2007. Board size, board independence, director's qualification, director's professional qualification, leadership structure were used as a corporate governance mechanisms, debt, firm age and firm size were used as a control variable while Tobin's Q were used as a measure of company performance. Panel data methodology with generalized least square estimation method was used to test the hypothesis. The analysis has been done by classifying the sample as family controlled firm and non-family controlled firm. The researcher revealed that director's qualification measured as the percentage of directors with degree and above divided by total directors helps to enhance the performance of non-family controlled firms but insignificant for family controlled firms. Board size and leadership duality was a significant negative influence on family controlled firms performance but insignificant for non-family controlled firms. Firm age was a significant negative and positive association between the performance of family controlled and non-family controlled firms respectively. On the other hand, there was a significant negative relationship between firm size and performance of both family controlled and non-family

controlled firms. The other variables such as board independence and director's professional qualification were insignificant for both classes of firms.

Yasser (2011) provide evidence on the effect of corporate governance on firm performance using 792 companies listed on Karachi Stock Exchange from 2003 to 2008 in Pakistani. Tobin's Q, return on assets, operating cash flow has been used as a measure of firms' performance; dummy variable for family-controlled firm, Board composition, director's educational qualification, directors Professional qualification, leadership structure and frequency of board meetings were the independent variables of the study. Moreover, debt, firm age and firm size were the control variables of the study. The study revealed that there are significant difference between family and non-family controlled firms' performance when measured by Tobin Q, return on asset and operating cash flow. For non-family controlled companies, the board governance variables such as board composition, director's educational qualification, director's professional qualification, leadership structure have improved the firm performance. In addition, debt, firm size and firm age affect a firm's performance. It was evidenced that corporate governance does play a vital role in influencing Pakistani companies' financial performance.

Khatab et al. (2011) investigated the relationship between corporate governance and firms' performance the case of twenty firms listed at Karachi Stock Exchange. The researchers' used Pooled Ordinary Least Square estimation method with panel data set that covers five years period from the year 2005 to 2009, with a sample of twenty firms. Tobin's Q, return on asset and return on equity were the dependent variables of the study and firm size, leverage and growth were the independent variables of the study. The study

revealed that leverage and growth has positive and significant impact on Tobin's Q and return on asset. Like Tobin's Q and return on asset leverage positively and significantly influence return on equity. However, growth has a negative and significant impact on return on equity. Size of the firms has remained insignificant. The researchers' recommended to extend the study period, increase sample size and to include more profitability ratios for further study.

Aldamen et al. (2011) conducted a study on the effect of audit committee characteristics and firm performance during the global financial crisis. The researchers used logit model analysis with a sample of 120 firms listed on the S&P300 during the period of 2008 and 2009. The study revealed that smaller audit committees with more experience and financial expertise are more likely to be associated with positive firm performance in the market. It also found that longer serving chairs of audit committees negatively impacts accounting performance. However, accounting performance is positively impacted where audit committees include block holder representation, the chair of the board, whose members have more external directorships and whose chair has more years of managerial experience.

Adusei (2011) investigated the relationship between board structure and bank performance with panel data from the banking industry in Ghana by implementing estimation method of regression is pooled OLS. A total sample of 17 out of 26 universal banks was used in the study in this study. The researcher used return on asset and cost income ratio as dependent variable of the study and board size and board independence as independent variable of the study. In addition to this the researcher incorporated bank

age, bank size, funds, and ownership structure and listing status as a control variable of this study. The study found that as the size of a bank's board of directors decreases its profitability increases. In addition to this board independence has a negative, but statistically insignificant correlation with bank profitability. No significant relationship between the size of a bank and its financial performance has been found. He recommended that banks seeking some improvement in their performance should constitute small sized boards of directors composed of few independent directors.

Al-Hawary (2011) examined the effect of banks governance on banking performance by taking all Jordanian commercial banks listed in Amman Stock Exchange i.e. 13 banks. The researcher employed multiple regression models to measure the influence of corporate governance variables on banks performance by controlling bank's size. According to the study executive officer duality and percentage of non-executive directors had statistically significant positive effect on Tobin's Q, whereas leverage value had statistically significant negative effect on Tobin's Q, and capital adequacy, size of board of directors, the largest shareholder, block holders' equity ratio and bank's size had no statistically significant effect on Tobin's Q.

Al-Manaseer et al. (2012) empirically investigated the impact of corporate governance on performance using 15 Jordanian banks listed at Amman Stock Exchange from the year 2007 to 2009 with a total of 45 bank-year observation. The study employed pooled data, and OLS estimation method with panel methodology. Return on asset, return on equity, profit margin (measured as net interest income divided by total asset) and earning per share were the dependent variables of the study and board size, board composition

(independence), chief executive officer status, foreign ownership and bank size were the independent variables of the study. The study revealed a significant negative relation between board size and banks performance as measured by return on equity and earning per share but insignificant negative association of board size with return on asset and profit margin was found. Bank size was negatively related with return on asset, return on equity and profit margin but only significant with profit margin. The study also reveals a positive association between board composition and foreign ownership and bank performance. In addition, chief executive officer status has a negative influence. Finally, the researchers suggest extending the study period.

Finally, as far as the researcher's knowledge concerned there is no research that has been conducted to provide empirical evidence particularly on the impact of corporate governance mechanisms on financial performance of commercial banks in Ethiopia. Given this lack of empirical studies, this study fills the gap and provides empirical evidence on the impact of corporate governance mechanisms on financial performance of selected commercial banks in Ethiopia by taking in to consideration the variables related to the realities of the commercial banks governance mechanism in Ethiopia.

Chapter Three

Methodology

3.1 Research design

The primary aim of this study is to examine the impact of corporate governance mechanisms on firm's financial performance. To achieve this objective explanatory type of research design with a mixed approach, more of quantitative, was employed. The explanatory type of research design helps to identify and evaluate the causal relationships between the different variables under consideration (Marczyk et al., 2005). So that, in this study the explanatory research design was employed to examine the relationship of the stated variables. Mixed methods research provides better (stronger) inferences. Therefore, by using a mixed approach it is able to capitalize the strength of quantitative and qualitative approach and remove any biases that exist in any single research method (Creswell, 2003). A panel data study design which combines the attributes of cross-sectional (inter-firm) and time series data (inter-period) was used. The advantage of panel data analysis is that more reliable estimates of the parameters in the model can be obtained (Gujarati, 2004).

3.2 Source of data and collection methods

The necessary data for this study were collected from both primary and secondary sources. The secondary source of data is the audited financial statements of the sample commercial banks over a period of five years (2007-2011). These data was obtained from National Bank of Ethiopia. The primary data was collected through the use of questionnaires. Data on corporate governance variables was collected by distributing

questionnaire to the board chairman of the sample commercial banks' in each sample banks head office, Addis Ababa. However, the board chairman of commercial bank of Ethiopia was not available and the required data was obtained from assistant to president office. Moreover, the qualitative data about corporate governance mechanisms were also collected by using questionnaire to support the quantitative data.

3.3 Sampling design

The population of the study is all commercial banks operating in Ethiopia. To select sample commercial banks purposive sampling technique was employed. In the sample commercial banks that have complete financial statement for the study period were included purposively i.e. based on the age and availability data for the study period. According to the information obtained from National Bank of Ethiopia there are only 8 commercial banks that have complete financial statements for the study period out of the total commercial banks operating in Ethiopia i.e. 15 banks as of November 2012. Thus, these eight commercial banks were selected as a sample (See appendix III).

3.4 Description of variables and measurements

In this study, the variables were selected based on alternative theories and previous empirical studies related to corporate governance and firm performance. In accordance with the theory and empirical studies, the independent, dependent and control variables of the study were identified in order to investigate the impact of corporate governance mechanisms on firms' financial performance.

3.4.1 Dependent variables

In this study, the dependent variables are variables that are used to measure the financial performance of sample commercial banks. To measure the financial performance of banks Tobin's Q and other market based measures were used by many researchers. However, in Ethiopia there is no secondary market so that it is not possible to use Tobin's Q as well as other market based measures. Therefore, the other most frequently used profitability measures were used i.e. accounting measures of profitability (see for example Erhardt et al., 2003; Abu-Tapajeh, 2006; Bathula, 2008; Ibrahim et al., 2010; Adusei, 2011; Aldamen et al., 2011; Al-Manaseer et al., 2012). Those are;

1. **Return on Asset (ROA)** - measures the overall efficiency of management. It gives an idea as to how efficient management is at using its assets to generate earnings.

$$\text{ROA} = \frac{\text{Profit after Tax}}{\text{Total Asset}}$$

2. **Return on Equity (ROE)** - measures a firm's financial performance by revealing how much profit a company generates with the money shareholders have invested. It shows how well the shareholders funds are managed and used to generate return.

$$\text{ROE} = \frac{\text{Profit after Tax}}{\text{Total Equity}}$$

3. **Net Interest Margin (NIM)** - is a measure of the difference between the interest income generated by banks and the amount of interest paid out to

their lenders. It shows how successful a bank's investment decisions are compared to its debt situations.

$$\text{NIM} = \frac{\text{Net Interest Income}}{\text{Average Asset}}$$

3.4.2 Independent variables

In this study, the independent variables are variables that are used as a determinant of corporate governance of the sample Ethiopian commercial banks. The independent variables of the study are board size, board gender diversity, board members educational qualification, board members business management experience, board members industry specific experience, and size of audit committee. The definition and measurements of the variables are as follows:

1. Board size

It can be defined as the number of directors sitting on the board. According to agency theory limiting board size to a particular level is generally believed to be improving financial performance. The reason is that the benefit of larger boards is outweighed by the poor communication and decision making when the board size is too large. Previous studies found negative effect of board size on performance (Jensen, 2003; Sanda et al., 2005; Aduesi, 2011; Al-Manaseer et al., 2012). In this study board size is expected to negatively influence performance.

2. Board gender diversity

Board gender diversity is measured as the percentage of number of female directors divided by the total number of board members. Due to the varying size of boards, a

percentage variable provides a more accurate and comparable measurement thus the percentage was taken. Board gender diversity is considered to improve company performance since it provides new insights and perspectives (Bathula, 2008; Erhardt et al., 2003). Female board members will bring diverse viewpoints to the boardroom that is not possible with all male directors.

3. Board members educational qualifications

It is measured by the proportion of board members who had college degree or higher to the total number of board members. Educational qualification is an important determinant of board effectiveness. According to Rose (2007) as long as board members have a university degree/or equivalent skills, board members have sufficient human capital in order to understand information that is provided by management. Educational qualifications of individual board members are important for board decision making (Amran 2011; Yasser; 2011). The monitoring role expected to be effectively implemented if the board members are qualified and experienced. Competent board members expected to reduce agency problem.

4. Board members business management experience

It is measured as the percentage of number of directors who had business management experience divided by the total number of board members. Prior researchers measure experience using proxy variables such as industry specific and generic experience (Castanias et al., 2001; Kroll et al., 2008). It is important for firms to have experienced directors on board since it helps them in undertaking their duties of monitoring and controlling managers in effective and efficient way. Directors' experience of managing

business increases their effectiveness since they fully understand the general business situation (Saat et al., 2011). It would appear that if the directors are experienced, their ability to provide effective monitoring increases.

5. Board members industry specific experiences

It is measured as the percentage of number of directors who served in other banks earlier in the same capacity divided by the total number of board members. It is important for banks to have skilled and experienced directors on board particularly prior experience in the same sector and position. The effectiveness of board members monitoring role depends on their expertise to fully comprehend a firm's business situation (Kroll et al., 2008). Thus, industry specific experience of board members expected to improve bank's performance by helping boards effectively reducing agency problem.

6. Audit committee size

Audit committee size refers to the total number of banks' audit committee members. The size of audit committee affects banks' performance. Small size audit committee ensures effective monitoring (Kyereboah-coleman, 2007; Aldamen et al., 2011). It is likely that small size audit committees effectively communicate in the financial reporting process and problems to be resolved easily.

3.4.3 Control variables

In this study three bank specific control variables are included to account their potential influence on banks' financial performance in order to know the selected explanatory variables effect on banks' financial performance. The selected control variables are bank size, bank growth rate and banks' leverage. The control variables are selected based on

previous studies. In most of the previous studies firm size, firm growth rate and firms' leverage were used as control variables (Habbash, 2010; Aljifri & Moustafa, 2007; Al-Hawary, 2011).

Bank size - measured as the natural logarithm of total assets at year-end.

Bank growth - calculated as $[(\text{revenue}_t - \text{revenue}_{t-1}) / \text{revenue}_{t-1}]$

Bank leverage - calculated as the total amount of debt divided by total equity capital.

3.5 Specifications of empirical research model

To estimate the impact of corporate governance mechanisms on the financial performance of sample commercial banks in Ethiopia the following general empirical research model is developed.

$$Y_{it} = \beta_0 + \sum \beta_k X_{it} + \varepsilon_{it}$$

Where:

- ✓ Y_{it} represents the dependent variables (ROA, ROE, and NIM) of bank i for time period t .
- ✓ β_0 is the intercept
- ✓ β_k represents the coefficients of the X_{it} variables
- ✓ X_{it} represents the explanatory variables (BSIZE, FD, BQUAL, BMEXP, INDUEXP, AUDSIZE, BS, BLEV and BG) of bank i for time period t .
- ✓ ε_{it} is the error term

The above general empirical research model is changed into the study variables to find out the impact of corporate governance mechanisms on firms financial performance as follows:

$$\text{ROA}_{it} = \beta_0 + \beta_1(\text{BSIZE}_{it}) + \beta_2(\text{FD}_{it}) + \beta_3(\text{BQUAL}_{it}) + \beta_4(\text{BMEXP}_{it}) + \beta_5(\text{INDUEXP}_{it}) + \beta_6(\text{AUDSIZE}_{it}) + \beta_7(\text{BS}_{it}) + \beta_8(\text{BLEV}_{it}) + \beta_9(\text{BG}_{it}) + \varepsilon_{it} \text{--}(1)$$

$$\text{ROE}_{it} = \beta_0 + \beta_1(\text{BSIZE}_{it}) + \beta_2(\text{FD}_{it}) + \beta_3(\text{BQUAL}_{it}) + \beta_4(\text{BMEXP}_{it}) + \beta_5(\text{INDUEXP}_{it}) + \beta_6(\text{AUDSIZE}_{it}) + \beta_7(\text{BS}_{it}) + \beta_8(\text{BLEV}_{it}) + \beta_9(\text{BG}_{it}) + \varepsilon_{it} \text{--}(2)$$

$$NIMit = \beta_0 + \beta_1(BSIZEit) + \beta_2(FDit) + \beta_3(BQUALit) + \beta_4(BMEXPit) + \beta_5(INDUEXPit) + \beta_6(AUDSIZEit) + \beta_7(BSit) + \beta_8(BLEVit) + \beta_9(BGit) + \varepsilon_{it} \quad (3)$$

Where:

i denote banks ranging from 1 to 8 (cross-sectional dimension).

t denote years ranging from 2007 to 2011 (time-series dimension).

Dependent Variables

ROAit	Return on Asset for i^{th} bank and time period t
ROEit	Return on Equity for i^{th} bank and time period t
NIMit	Net Interest Margin for i^{th} bank and time period t

Independent variables

BSizeit	Board Size for i^{th} bank and time period t
FDit	Female Directors on the board for i^{th} bank and time period t
BQUALit	Board members Educational Qualification for i^{th} bank and time period t
BMEXPit	Board members Business Management Experience for i^{th} bank and time period t
INDUEXPit	Board member's industry specific experience for i^{th} bank and time period t
AUDSIZEit	Audit committee size for i^{th} bank and time period t

Control variables

BSit	Bank size for i^{th} bank and time period t
BLevit	Banks leverage for i^{th} bank and time period t
BGit	Bank growth rate for i^{th} bank and time period t

3.6 Operational definitions

Corporate governance mechanisms- are the methods employed at firm level to solve corporate governance problems and to reduce the agency problem in the firm.

Financial performance -represents profitability which is measured by return on asset, return on equity and net interest margin.

3.7 Methods of data analysis

In this study to analyze the collected data both descriptive, correlation and multiple panel linear regression data analysis method were employed. The descriptive statistics was used to quantitatively describe the important features of the variables using mean, maximum minimum and standard deviations. The correlation analysis was used to identify the relationship between the independent, dependent and control variables using Pearson correlation analysis. The correlation analysis shows only the degree of association between variables and does not permit the researcher to make causal inferences regarding the relationship between variables (Marczyk et al., 2005). Therefore, multiple panel linear regression analysis was also used to test the hypothesis and to explain the relationship between corporate governance variables and financial performance measures by controlling the influence of some selected variables. Qualitative analysis was used for qualitative data collected through questionnaire. Eviews 6 software was used for analysis and the results were presented through tables.

Chapter Four

Results and Discussion

This chapter presents the descriptive statistics, correlation analysis and multiple panel linear regression analysis of the study variables. It has three sections. The first section is the descriptive statistics which summarizes the main features of the study variable such as mean, maximum, minimum and standard deviation. The second section is the correlation analysis which shows the degree of association between the study variables. The third sections of the chapter, regression results report the OLS estimation output of the three regression models.

4.1 Descriptive statistics of the study variables

This section discussed the summery statistics of each variables of the study. The variables include the dependent, independent and control variables. The dependent variables used in this study in order to measure the sample commercial banks financial performance are return on asset, return on equity and net interest margin whereas the explanatory variables are board size, board gender diversity, board members educational qualifications, business management experience of directors, industry specific experience of directors and size of audit committee. In addition to the explanatory variables control variables were included those are bank size, banks leverage and banks growth. Accordingly, the descriptive statistics for all variables are presented below in table 4.1.

Table 4.1: Descriptive Statistics of the study variables

Variables	Mean	Maximum	Minimum	Std. Dev.	Observations
ROA	0.025750	0.040105	-0.018797	0.011553	40
ROE	0.221543	0.381040	-0.037037	0.095173	40
NIM	0.048590	0.082300	0.020800	0.015567	40
BFSIZE	9.675	12	6	1.685344	40
FD	0.062662	0.166667	0	0.060096	40
BQUAL	0.965707	1	0.8	0.063659	40
BMEXP	0.934105	1	0.727273	0.080358	40
INDUEXP	0.139773	0.333333	0.000000	0.130451	40
AUDSIZE	3.1	6	0	1.498717	40
BS	8.690119	11.43644	5.583496	1.193717	40
BLEV	8.067199	15.58	0.97037	2.073216	40
BG	0.360322	1.5939762	0	1.229924	40

Source: Eviews summery statistics result

As presented in table 4.1, the average value of return on asset for the sample Ethiopian commercial banks is 2.56 percent (mean=0.02575) with a maximum and minimum value of 4.01 and -1.88 percent respectively. The standard deviation is 1.16 percent from the average value. On the other hand, the average value of the sample banks return on equity is 22.15 percent (mean=0.221543) and the maximum and minimum value of 38.1 and 3.7 percent respectively. It deviates by 9.52 percent from the mean value of the sample commercial banks. The financial performance of the sample commercial banks on average is 4.86 percent (mean=0.04859) as measured by net interest margin. The maximum value of net interest margin among the sampled commercial banks is 8.23 percent and the minimum value is 2.08 percent. It shows a standard deviation of 1.57 percent from the mean value.

By comparing the three financial performance measures, it seems the sample commercial banks are relatively doing better on the return on equity performance measure. While the

mean value of return on equity is 22.15 percent, whereas net interest margin and return on asset is 4.86 and 2.56 respectively, indicating that the sample banks are better in utilizing shareholders equity capital. From the three indicators of financial performance in table 4.1 above, return on equity is first, net interest margin is second and return on asset is the last, when they are ranked from the highest to the lowest value in terms of their mean and maximum values. On the bases of standard deviation from the mean, return on equity shows higher standard deviation i.e. 9.52 percent. However the deviation of return on asset and net interest margin is 1.16 and 1.56 percent, which is low in comparison with return on equity. Generally, the three financial performance indicators have not the same value in different aspects of descriptive statistics indicators.

It is confirmed in the table above that the average board size for the sample commercial banks is about 10 members (mean = 9.675) with a maximum of 12 and a minimum of 6 directors. The standard deviation indicates that for the sample commercial banks board size varies by 1.69 from the average value of 9.68. The standard deviation of 1.69 suggests that there is no wide dispersion in the board size of the sample commercial banks.

On average, 6.27 percent (mean=0.062662) of the sample commercial banks directors are female as measured by percentage of female directors divided by total number of directors, which is considerably a disappointing figure. It suggests that the diversity of sample Ethiopian commercial bank boards, as measured by proportion of directorship held by women, is low since its mean value is only 6.27 percent during the last five years. The percentage of female directors in the sample commercial banks is range from 0;

banks do not have any representation for women on their boards to 16.67 percent representation with a standard deviation of 6 percent.

It could also be seen that the mean value of board members educational qualifications, as measured by proportions of directors holding college degree or higher, is about 96.57 percent which implies that directors of the sample commercial banks possess the necessary educational qualifications. The proportions of board members educational qualifications shows 6.34 percent standard deviation which is more or less low as evidenced by a maximum and minimum values of 100 and 80 percent.

As it can be seen in the table above that the mean value of board of directors business management experience, as measured by the proportions of directors who had business management experience, is 93.41(mean=0.934105) with a maximum of 100 and a minimum of 72.73 percent. So that, the board of the sample Ethiopian commercial bank consist of directors with the majority of having general business management experience. It varies from the mean value by 8.04 percent.

In terms of industry specific experience, the board of sample commercial banks has a mean industry specific experience of 13.98 percent (mean=0.139773) as measured by the proportion of directors who had industry specific experience. The percentage of directors who had industry specific experience among the sample commercial banks is range from 0 to 33.33 percent with a standard deviation of 13.05 percent. The standard deviation of 13.05 percent indicates the existence of relatively high variation in industry specific experience among the sample commercial banks as compared with business management

experience. The audit committee of the sample banks have a mean size of about 3 members (mean=3.1) and with a maximum of 6 members and a standard deviation of 1.5.

The mean value of bank size as measured by the natural logarithm of total asset is 8.69 (Birr 12747.45 in millions) with having a maximum value of 11.44 (Birr 92636.98 in millions) and a minimum values of 5.58 (Birr 266 millions). The standard deviation of bank size among the sample commercial bank is 1.19. On the other hand, the leverage of selected commercial banks in Ethiopia is 807 percent on average as measured by debt to equity with a range of 97 to 1558 percent. There is higher deviation, 207 percent, from the mean value of financial leverage. Finally, the sample commercial banks growth has 36 percent average value for the study period. The standard deviation of bank growth rate indicates a high variation among the sampled commercial banks. The maximum and minimum values of bank growth rate are 159 and 0 percent respectively among the sampled commercial banks.

4.2 Correlation analysis of the study variables

This section of the study presents the results and discussions of the Pearson correlation analysis. To identify the relationship among the variables of corporate governance and financial performance Pearson correlation coefficients were used. The correlation coefficients show the extent and direction of the linear relationship between corporate governance variables and financial performance measures of the sample Ethiopian commercial banks. The correlation analysis has three sub-sections. The first sub-section shows the relationship between return on asset and selected corporate governance variables. The second sub-section is about the association between return on equity and

corporate governance variables. Finally, the relationship between net interest margin and corporate governance variables were analyzed. The probability is shown in parenthesis with the correlation coefficient for the three correlation matrix below. The significance level also shown that is ***, ** and * for 1%, 5% and 10% level respectively. The correlation coefficients are checked for the presence of high collinearity among regressors. Since the correlation analysis shows only the degree of association, it is followed by multiple regression analysis.

4.2.1 Correlation analysis of ROA and corporate governance

mechanisms

Below in table 4.2, the correlation matrix which shows the relationship of the return on asset with board size, board gender diversity, board members educational qualifications, board members business management experience, directors' industry specific experience, audit committee size, bank size, banks financial leverage and bank growth. This table also shows the linear relationships between each independent variables and control variables used in this study.

Table 4.2: Correlation analysis of ROA and corporate governance mechanisms

Correlation (Probability)	ROA	BSIZE	FD	BQUAL	BMEXP	INDUEXP	AUDSIZE	BS	BLEV	BG
ROA	1 -----									
BSIZE	-0.29994 (0.0601)	1 -----								
FD	0.261589 (0.1030)	0.189792 (0.2408)	1 -----							
BQUAL	0.550994 (0.0002)	-0.17414 (0.2825)	0.027645 (0.8655)	1 -----						
BMEXP	0.654779 (0.0000)	-0.28376 (0.076)	0.158058 (0.33)	0.657756 (0.00)	1 -----					
INDUEXP	0.438717 (0.0046)	-0.47724 (0.0018)	-0.36318 (0.0213)	0.387851 (0.0134)	0.393726 (0.0119)	1 -----				
AUDSIZE	-0.0605 (0.7107)	0.124863 (0.4427)	-0.09034 (0.5793)	0.55646 (0.0002)	0.346995 (0.0283)	0.058251 (0.7211)	1 -----			
BS	0.45769 (0.003)	-0.29371 (0.0658)	0.300843 (0.0593)	0.617894 (0.000)	0.606935 (0.000)	-0.054113 (0.7402)	0.441417 (0.0044)	1 -----		
BLEV	0.365299 (0.0205)	0.100785 (0.5361)	0.376521 (0.0166)	0.151091 (0.352)	0.364292 (0.0208)	-0.29163 (0.0679)	0.075046 (0.6454)	0.665724 (0.000)	1 -----	
BG	-0.28701 (0.0726)	0.106691 (0.5123)	-0.07605 (0.6409)	-0.24226 (0.132)	-0.23869 (0.138)	-0.205308 (0.2038)	-0.033567 (0.8371)	0.004276 (0.9791)	0.405913 (0.0094)	1 -----

Source: Eviews correlation result based on the data obtained from sample commercial banks.

Table 4.2 point out that board members educational qualification, board members business management experience and director's industry specific experience are positively and significantly correlated at 1 percent significance level with return on asset. On the other hand, board size is negatively and significantly correlated at 10 percent significance level with return on asset. However, board gender diversity and audit committee size shows insignificant correlation with return on asset. Even though they are not significant board gender diversity shows a positive coefficient and audit committee size shows a negative coefficient as expected.

As per the correlation result reported in table 4.2 , the Pearson correlation coefficients of board size, board gender diversity, board members educational qualification, board members business management experience, board members industry specific experience and audit committee size are -30 percent, 26 percent, 55 percent, 65 percent, 43 percent, -6 percent respectively. From this it can be understand that board members educational qualification and board members business management experience are a strong association with return on asset. In contrast with board gender diversity and audit committee size, board size and industry specific experience also shows a strong association with return on asset.

Moreover, as it is shown in the above correlation matrix both control variables are significantly correlated with return on asset. Bank size and banks leverage has a significant positive relation with return on asset at 1 and 5 percent significant level respectively whereas bank growth is negatively correlated at 10 percent significant level. As it is observed on the coefficients values, bank leverage and bank growth are weakly

correlated at 37 percent and -29 percent with return on asset in contrast with financial leverage, which is relatively strong correlation, 47 percent.

4.2.2 Correlation analysis of ROE and corporate governance mechanisms

Below table 4.3 presents the Pearson correlations among return on equity and corporate governance mechanisms as well as control variables of the study. Here, also the independent variables are board size, board gender diversity, board members educational qualifications, board members business management experience, directors' industry specific experience, audit committee size. The control variables are bank size, banks financial leverage and bank growth.

As shown in table 4.3 below, board size is negatively related with return on equity at 1 percent significance level. While board members educational qualifications, board members business management experience, and directors' industry specific experiences are positively correlated with return on equity at 1 percent, 1 percent and 10 percent significance level. But board gender diversity and audit committee size does not have a significant relation with return on equity.

Table 4.3: Correlation analysis of return on equity and corporate governance mechanisms										
Correlation (Probability)	ROE	BSIZE	FD	BQUAL	BMEXP	INDUEXP	AUDSIZE	BS	BLEV	BG
ROE	1 -----									
BSIZE	-0.5813 (0.0001)	1 -----								
FD	0.213953 (0.185)	0.189792 (0.2408)	1 -----							
BQUAL	0.620314 (0.00)	-0.17414 (0.2825)	0.027645 (0.8655)	1 -----						
BMEXP	0.657468 (0.00)	-0.28376 (0.076)	0.158058 (0.33)	0.657756 (0.00)	1 -----					
INDUEXP	0.273813 (0.0873)	-0.47724 (0.0018)	-0.36318 (0.0213)	0.387851 (0.0134)	0.393726 (0.0119)	1 -----				
AUDSIZE	0.171303 (0.2906)	0.124863 (0.4427)	-0.09034 (0.5793)	0.55646 (0.0002)	0.346995 (0.0283)	0.058251 (0.7211)	1 -----			
BS	0.780714 (0.00)	-0.29371 (0.0658)	0.300843 (0.0593)	0.617894 (0.00)	0.606935 (0.00)	-0.05411 (0.7402)	0.441417 (0.0044)	1 -----		
BLEV	0.432757 (0.0053)	0.100785 (0.5361)	0.376521 (0.0166)	0.151091 (0.352)	0.364292 (0.0208)	-0.29163 (0.0679)	0.075046 (0.6454)	0.665724 (0.00)	1 -----	
BG	-0.14764 (0.3633)	0.106691 (0.5123)	-0.07605 (0.6409)	-0.24226 (0.132)	-0.23869 (0.138)	-0.20531 (0.2038)	-0.03357 (0.8371)	0.004276 (0.9791)	0.405913 (0.0094)	1 -----

Source: Eviews correlation result based on the data obtained from sample commercial bank

Furthermore, as shown in table 4.3, the Pearson correlation coefficients of board size is -58 percent, board gender diversity is 21 percent, board members educational qualification is 62 percent, board members business management experience is 66 percent, board members industry specific experience is 27 percent and audit committee size is 17 percent with return on equity. This indicates that the association between board members business management experience, board members educational qualification and board size shows a strong correlation with return on equity.

In addition, as it is shown in the above correlation matrix the two control variables such as bank size and bank leverages are positively correlated with return on equity at 1 percent level of significant with correlation coefficients of 78 percent and 43 percent respectively. However, bank growth is insignificant. As it is observed on the coefficients values, bank size is highly correlated with return on equity.

4.2.3 Correlation analysis of NIM and corporate governance mechanisms

Below, Table 4.4 shows, the correlation matrix that predicts the likely relationship of the net interest margin with board size, board gender diversity, board members educational qualifications, board members business management experience, directors' industry specific experience and audit committee size as independent variables and bank size, banks leverage and bank growth as control variables of the study.

Based on the Pearson correlation independent variables; board members educational qualifications and audit committee size are negatively and significantly correlated at 5 percent and 1 percent level of significance with net interest margin respectively.

Table 4.4: Correlation analysis of net interest margin and corporate governance mechanisms

Correlation (Probability)	NIM	BSIZE	FD	BQUAL	BMEXP	INDUEXP	AUDSIZE	BS	BLEV	BG
NIM	1.000000 -----									
BSIZE	0.135429 (0.4047)	1.000000 -----								
FD	0.119251 (0.4636)	0.189792 (0.2408)	1.000000 -----							
BQUAL	-0.360094 (0.0225)	-0.174140 (0.2825)	0.027645 (0.8655)	1.000000 -----						
BMEXP	-0.194988 (0.2279)	-0.283760 (0.0760)	0.158058 (0.3300)	0.657756 (0.0000)	1.000000 -----					
INDUEXP	-0.214549 (0.1837)	-0.477244 (0.0018)	-0.363176 (0.0213)	0.387851 (0.0134)	0.393726 (0.0119)	1.000000 -----				
AUDSIZE	-0.714546 (0.0000)	0.124863 (0.4427)	-0.090337 (0.5793)	0.556460 (0.0002)	0.346995 (0.0283)	0.058251 (0.7211)	1.000000 -----			
BS	-0.392088 (0.0123)	-0.293712 (0.0658)	0.300843 (0.0593)	0.617894 (0.0000)	0.606935 (0.0000)	-0.054113 (0.7402)	0.441417 (0.0044)	1.000000 -----		
BLEV	-0.001048 (0.9949)	0.100785 (0.5361)	0.376521 (0.0166)	0.151091 (0.3520)	0.364292 (0.0208)	-0.291630 (0.0679)	0.075046 (0.6454)	0.665724 (0.0000)	1.000000 -----	
BG	-0.069978 (0.6679)	0.106691 (0.5123)	-0.076050 (0.6409)	-0.242255 (0.1320)	-0.238692 (0.1380)	-0.205308 (0.2038)	-0.033567 (0.8371)	0.004276 (0.9791)	0.405913 (0.0094)	1.000000 -----

Source: Eviews correlation result based on the data obtained from sample commercial banks

On the other hand, board gender diversity, board members business management experience, directors' industry specific experience shows statistically insignificant correlation with net interest margin. Bank size is the only control variable which has a significant association with net interest margin at 5 percent significance level with a correlation coefficient of -39 percent. Bank leverage and bank growth are statistically not significant. As it can be easily understand from the correlation coefficients of the variables both independent and control variable of the study have a weak correlation with net interest margin except audit committee size which shows a strong correlation of -71 percent.

From the correlation coefficients of the three model, shown in table 4.2, 4.3 and 4.4, no high correlation is found among the independent as well as control variables. All the independent and control variables included in the three models are not strongly correlated with each other that results multicollinearity problem since all the coefficients are lower than 0.8.

However, from the Pearson correlation coefficient the highest coefficient is 0.67 between bank size and bank leverage. This result suggests that large banks have the possibility of obtaining and using large amount of debt to finance their operations than small size banks. Another significant and relatively high correlation is 0.66 between board members educational qualifications and business management experience. This is suggesting that qualified directors have business management experience.

Given these relatively high correlations the variance inflation factor (VIF) is checked. It has been verified that there is no multicollinearity between independent factors by using

the variance inflation factor. Therefore, like earlier researchers all these variables are included in the same model since the correlations are not strong (lower than 0.80 and VIF values of not more than 10) as recommend by Gujarati (2004) and this multicollinearity among variables is considered to be harmless. As a result, multicollinearity problem does not exist to create a threat to the interpretation of regression coefficients of the independent and control variables in the three models of this study.

Generally, the correlation analysis shows that the degree and directions of association of some corporate governance mechanisms and financial performance differ depending on the financial performance measure used. The correlation analysis shows only the direction and degree of association between variables and it does not permit the researcher to make causal inferences regarding the relationship between the identified variables. Therefore, it is not possible to explain the relationship between corporate governance variables and profitability measures by controlling the influence of some selected variables using correlation analysis. As a result the main analysis is left for regression analysis that overcomes the shortcomings of correlation analysis.

4.3 Regression Results and Discussion

This section of the study presents the results and discussions of the regression output. In order to examine the impact of corporate governance mechanisms on sample Ethiopian commercial banks financial performance three multiple panel linear regression models were estimated. The regression analysis enables the researcher to empirically test the proposed hypothesis and to achieve the research objective. The method of least squares has some very attractive statistical properties that have made it one of the most powerful

and popular methods of regression analysis (Gujarati, 2004). Thus, by conducting the appropriate diagnosis tests OLS estimation method was used in the three models.

4.3.1 Diagnostic tests of the data set

Before running the three models, the data sets were tested for the classical linear regression model assumptions (See appendix II). Brooks (2008) suggests five critical assumptions that must be met before utilizing OLS estimation in order to validly test the hypothesis and estimate the coefficient. The classical linear regression model assumptions and their diagnostic tests are discussed below.

- 1. The average value of the errors is zero.** If a constant term is included in the regression equation, this assumption will never be violated. So that in the three models of this study a constant term is included. As a result this assumption was not violated.
- 2. Normality assumption.** This assumption requires the disturbances to be normally distributed. Bera-Jarqu normality test which is the most commonly used normality test was conducted for the three models after estimating the regression (see appendix II). Based on the results shown in the appendix II, the p-values is insignificant for the three models and the researcher failed to reject the null hypothesis, which says the residual value is normally distributed. Therefore, there is no normality problem on the data used for this study.
- 3. The assumption of homoskedasticity.** This assumption requires that the variance of the errors to be constant. To check this assumption White test was conducted for the three models (See appendix II). In the first two models there was no

problem of heteroskedasticity or the error variance is constant since the p-value is not significant. This means the null hypothesis was not rejected which says that the error variance is constant. But, in the third model, net interest margin as financial performance measure, there exist a problem of heteroskedasticity since the P-value is significant and the null hypothesis was rejected. Therefore, heteroskedasticity-consistent standard error was used for the third model to minimize the problem of heteroskedasticity.

- 4. No autocorrelation between the disturbances.** It is assumed that the errors are not correlated with one another. If the errors are correlated with one another, it would be stated that they are 'serially correlated'. A test of this assumption is therefore conducted. The first test was Durbin-Watson which is shown in the regression output of the three models separately. As per this test the values of Durbin--Watson for the three models are 2.09, 1.96 and 2.34 all are near to two. Thus, the null hypotheses were not rejected for the three models so there is no problem of autocorrelation. However, Durbin-Watson is a test for first orders autocorrelation. It tests only for a relationship between an error and its immediate previous value. Therefore, in addition to DW test it is desirable to conduct Breusch-Godfrey Serial Correlation LM test to examine a joint test for autocorrelation that will allow examination of the relationship between error term and several of its lagged values at the same time. Thus, Breusch-Godfrey test was also conducted for the three models and found no problem of autocorrelation for the three models (See appendix II).

5. Model misspecification error. With regard to model misspecification error Ramsey reset test was conducted for the three models (See appendix II). The Ramsey regression specification error test results for the three models are insignificant. The researcher fails to reject the null hypothesis. Thus, the results indicate no model specification error in all the three models of the study. Therefore, in this study appropriate functional form has been used.

In addition to the above diagnostic tests, the data set was checked for the problem of multicollinearity. The presence of multicollinearity among explanatory and control variables can be easily detected by looking the correlation coefficient in the correlation matrix as discussed in the correlation analysis section. There is no high correlation among the variables which results multicollinearity problem as it can be seen in the correlation matrices. So there is no problem of multicollinearity.

Fixed effect Versus Random effect

It is also necessary to determine whether the fixed effect or random effect approach is appropriate. A common practice in corporate governance research is to make the choice between both approaches by running a Hausman test. To conduct a Hausman test the number of cross section should be greater than the number of coefficients to be estimated. But, in this study the numbers of coefficients are greater than the number of cross sections so it is not possible to conduct a Hausman test. Therefore, a redundant fixed effects test was conducted to determine whether the fixed effect is appropriate for the first two models (see appendix II).

In the first model the p-value is insignificant in the case of time-fixed effects where only the period fixed effects are allowed. As a result the time-fixed effect approach was used. Hence, with time-fixed effects, the intercept is allowed to vary over time but assumed to be the same across entities (banks) at each given point in time. The dummy variables capture time variation rather than cross-sectional variation and it allow time specific heterogeneity. In the case of the second model the cross section fixed is better so cross section fixed approach was applied. Hence, with cross section fixed effects, the intercept is allowed to vary across entities (banks). It captures bank specific heterogeneity. In the case of the third model, net interest margin as a dependent variable, as stated before heteroskedasticity problem was found and to minimize this problem heteroskedasticity-consistent standard error is used. Therefore, simple pooled multiple regression techniques is used on which fixed or random effect test is not allowed.

All the above tests of basic classical linear regression model assumptions for OLS estimation prove that, the results obtained from the three regression models in this study are consistent, free from bias and efficient since the assumption holds and the next step is analyzing and discussing the outputs of the regressions.

The results of the three regression models that have been estimated to examine the impact of corporate governance mechanisms on the financial performance of selected Ethiopian commercial banks are shown below in table 4.5.

As it is summarized in the table below, the R^2 for the three models is 81 percent, 88 percent, 69 percent for the first (ROA), the second (ROE) and the third model (NIM) respectively. Which means that 81 percent of the variation in return on asset was

explained by the independent and control variables used in this study, only 19 percent of variation in return on asset is due to other factor that are not included in this study. While, 88 percent of variation in return on equity was explained by the variables used in this study where the remaining 12 percent was explained by other factors not included in this study. The R^2 of the third model implies that 69 percent of variation in net interest margin was explained by the study variables and the remaining 31 percent was explained by other factors. The selected variables best explained the variations of return on equity, return on asset and net interest margin orderly. The R^2 results indicate the overall goodness-of-fit of the three models used in this study.

After modification the explanatory power of the three models, adjusted R^2 values, is 71 percent, 80 percent and 60 percent respectively. This indicates that 71 percent, 80 percent and 60 percent of the variation in the Ethiopian commercial banks return on asset, return on equity and net interest margin respectively, was explained by the explanatory variables in each model. The adjusted R^2 measures how well the model fits the data by taking into account the loss of degrees of freedom associated with adding extra variables. Therefore, the three model best fits the data.

Table 4.5 Summary of regression results of the three models

Variables	ROA (Model-1)		ROE (Model-2)		NIM (Model-3)	
	Coefficient (Std. Error)	t-Statistic (prob.)	Coefficient (Std. Error)	t-Statistic (Prob.)	Coefficient (Std. Error)	t-statistic (Prob.)
Intercept	-0.069555 (0.025163)	-2.7642** (0.0103)	-0.447678 (0.392957)	-1.1393 (0.2663)	0.020469 (0.045168)	0.4532 (0.6537)
Bsize	-0.000865 (0.001228)	-0.7042 (0.4876)	-0.024154 (0.010161)	-2.3772** (0.0261)	-0.001086 (0.002045)	-0.5311 (0.5993)
FD	0.033833 (0.023104)	1.4644 (0.1551)	0.234387 (0.238665)	0.9821 (0.3363)	-0.016228 (0.032296)	-0.5025 (0.6190)
BQUAL	0.078718 (0.033030)	2.3833** (0.0248)	0.988908 (0.508711)	1.9439* (0.0642)	0.103607 (0.050916)	2.0349* (0.0508)
BMEXP	0.025304 (0.023157)	1.0927 (0.2845)	-0.032804 (0.177900)	-0.1844 (0.8553)	0.038018 (0.029223)	1.3010 (0.2032)
INDUEXP	0.028913 (0.015588)	1.8548* (0.0750)	0.151648 (0.213820)	0.7092 (0.4853)	-0.054166 (0.019767)	-2.7402** (0.0102)
AUDSIZE	-0.002329 (0.001165)	-1.9994* (0.0561)	-0.004792 (0.019520)	-0.2455 (0.8083)	-0.006904 (0.001858)	-3.7157*** (0.0008)
BS	-0.002369 (0.003110)	-0.7618 (0.4530)	-0.017078 (0.033236)	-0.5138 (0.6123)	-0.010574 (0.004946)	-2.1380** (0.0408)
BLEV	0.003413 (0.001298)	2.6298** (0.0142)	0.013630 (0.011183)	1.2188 (0.2353)	0.003293 (0.001996)	1.6497 (0.1094)
BG	-0.002970 (0.001255)	-2.3660** (0.0257)	-0.006371 (0.013614)	-0.4680 (0.6442)	-0.002566 (0.002821)	-0.9098 (0.3702)
Observations	40		40		40	
R ²	0.806876		0.882163		0.689801	
Adjusted-R ²	0.710315		0.800189		0.596741	
F-statistic	8.356063		10.76152		7.412447	
Prob.(F-stat)	0.0000		0.0000		0.0000	
Durbin-Watson stat	2.089533		1.959458		2.344657	
Effect specification	Period-fixed		Cross-section fixed		Simple pooled reg.	

Source: Eviews regression results based on the data obtained from sample banks

Note: ***, **, * significant at 1%, 5%, and 10% level of significance respectively.

: Model three contains heteroskedasticity-consistent standard error

In addition, the F-statistic shows the overall significance of variables in other words the significance of each models slope parameters jointly. The F-statistics of the three models are 8.36, 10.76 and 7.41 respectively and the null hypotheses of the three models were rejected at 1 percent significance level. Therefore, each model variables are jointly significant. The three models adequately describe the data. Here one can infer from the results of R-squared and F-statistics that the implemented models of this research are well fitted that corporate governance mechanisms have a significant effect on banks' financial performance.

4.3.2 Corporate governance mechanisms: Results and Discussion

Board size

As shown above, table 4.5, this study found a negative and statistically significant association between boards size (BSIZE) and return on equity at 5 percent level of significance. It has also negative relation with return on asset and net interest margin though insignificant. It implies that the numbers of board of directors' are negatively related with commercial banks' financial performance. In other words, the higher the number of board members of commercial banks, the lower their financial performance achievement is and vice versa. The result indicates that small boards are more effective in monitoring and controlling banks management and it help to reduce agency costs.

The finding supports the argument of Jensen (1993) that an increase in board size leads to less effective monitoring due to coordination and process problems inherent in large board size. The result is also consistent with prior studies which argue that coordination, communication and decision-making problems increasingly impede company

performance when the number of directors increases (Sanda et al., 2005; Adusei, 2011; Yermack, 1996; Al-Manaseer et al., 2012). Recall the first hypothesis which states that there is a negative association between board size and financial performance. The finding supports this hypothesis when performance is measured by return on equity. Moreover, it has a negative coefficient in all the three performance measures even if it is not significant in the case of return on asset and net interest margin performance measures.

Subjective question was also asked to qualitatively check as to whether respondents believe the number of board size affects banks performance (Q. No. 7, see appendix I). All respondents said “yes” and they have justified that too large or too small board is not appropriate to run the responsibility of the board. The best justification given is that, if the number of board members is large, it creates conflict of interest between the board members, which erodes the wealth of the bank. Banks need to have reasonable numbers of directors in order to perform the board task effectively. National bank of Ethiopia set the maximum number of director to be 12. The outcome of the analysis of both quantitative and qualitative data indicates that there is a negative relationship between board size and financial performance of sample commercial banks in Ethiopia. Therefore, both the regression and qualitative result support the hypothesis.

Board gender diversity

The relationship between board gender diversity (FD) and all the three financial performance measures are insignificant. However, it has a positive coefficient with return on asset and return on equity. Hypothesis 2 predicts that the number of women directors on the board is positively associated with financial performance. The insignificant

coefficient of the percentage of women directors does not support this hypothesis. Therefore, this study does not support the view that gender diversity leads to superior banks financial performance.

Some previous studies document a positive effect of the role of women on boards and find that women enhance the quality of decision making and firm performance (Bathula, 2008; Erhardt et al., 2003). However, this study does not find a significant positive association between percentage of women directors and banks financial performance. This may be due to the relatively small proportion of board members who are women (as shown in the descriptive analysis section), which does not permit them to be powerful enough to make a difference to monitoring.

This result does not necessarily contradict the notion that women's presence on boards may be useful and positive in general. Nevertheless, the low number of women on the boards of sample Ethiopian commercial banks does not give them sufficient monitoring power. The result is not surprising because other studies that examined the association between proportion of women on boards and firm performance also found insignificant result (for example see Rose, 2007; Habbash, 2010).

In the qualitative question (Q. No. 8 see appendix I) majority of respondents said 'yes' and justified as board gender diversity is important since almost half of the country's population is female, they can represent this significant potential customers and help banks to have links with this potential customers. But, simply the presence of female directors will not improve banks operation and performance unless they are qualified and

competent. Whether gender diversity help improve banks operation and performance it depends on factors such as experience, education and assertiveness of female directors.

Board members educational qualification

Board members educational qualification (BQUAL) has a positive effect on both measures of commercial banks financial performance. Board members educational qualification explains the variations of the financial performance of commercial banks with a coefficient of 0.078718, 0.988908 and 0.103607 and is statistically significant at 5 percent, 10 percent and 10 percent levels of significance for return on asset, return on equity and net interest margin respectively. The result indicate that the increase in the proportions of directors who had college degree or higher have a significant positive influence on the financial performance of commercial banks and vice versa. In other words the higher the number of directors who had college degree or above sitting on the board the higher the financial performance of sample commercial banks in Ethiopia and vice versa. This suggests that the presence of qualified directors on the board plays an important role in carrying out the boards monitoring responsibility and in improving financial performance.

Hypothesis 3 predicts that there is a significant positive relation between board members educational qualification and banks financial performance. Since the null hypothesis is rejected in all the three financial performance measures the result is in line with the proposed alternate hypothesis. Thus, there is a significant positive relationship between board members educational qualification and financial performance of commercial banks in Ethiopia. This result supports the finding revealed by Amran (2011) and Yasser

(2011). They argue that directors with higher education are better in managing the business operation and controlling agency problem than less educated counterparts this reduce agency cost. Educational qualification affects the oversight and monitoring role of boards of directors. The result support the view that educational qualification is potentially important since the ability to seek and interpret appropriate information is essential for the efficient operation of banks and the effective control or guidance of management by boards of directors. The qualification of directors as measured by the percentage of directors who had college degree or higher significantly influences bank performance.

Respondents were asked to reflect their view as to whether they feel that educational qualification of directors have any significant effect on their monitoring and controlling efficiency (Qn. No. 9). All of the respondents said "yes". The best justification given is that directors need to have a minimum of college degree in order to understand the reports given by the banks management. Boards of directors make decision after analyzing and carefully understanding the technical documents submitted by management as a report. In addition, they stated that education plays a key role not only in the banking sector but also in any other sector of the economy. Thus, educational qualifications of directors play a great role in board decision making. Both the regression result and the qualitative analysis indicate that educational qualification of directors is important factor to improve financial performance of the sampled commercial banks in Ethiopia. Thus, the hypothesis is supported.

Business management experience of directors

Hypothesis 4 predicted that business management experience of directors (BMEXP) positively influence banks financial performance. It has a positive coefficient when financial performance is measured by return on asset and net interest margin but insignificant in all the three models. It is therefore business management experience is insignificant in explaining the variation in return on asset, return on equity and net interest margin. The result is inconsistent with this study expectation. A possible explanation of this result is that the nature of banking industry is different from other industry and banks are generally more opaque than non-financial firms. Thus, the general business management experience of directors may not be that much relevant (significant) in improving financial performance due to the complex and special nature of banks corporate governance. It means that it requires directors to deeply understand banking business to influence the banks performance significantly rather than general business understanding.

In the qualitative part (Q. No. 10), respondents was asked whether business management experience of directors enables to promote better monitoring and good governance. Respondents said "yes" and they have replied that, experienced directors will apply their experience of managing business to the banking industry and this is believed to promote better monitoring and good governance and help improve the performance of banks. However, they should be assigned in committee based on their practical background to make them to contribute more in promoting good governance. Otherwise the general experience of directors may not be relevant for banks corporate governance since banks are highly regulated and are somewhat sensitive and special than other sectors.

Industry specific experience of directors

Hypothesis 5 expected that industry specific experience of directors (INDUEXP) is positively associated with banks financial performance. As expected, a positive association is found between industry specific experience and return on asset and return on equity but only significant at 5 percent level with return on asset. However, contrary to the hypothesis industry specific experience has a negative association with net interest margin at 5 percent significance level. When the banks performance is measured by return on asset industry specific experience of directors has a positive influence. It means the higher the proportions of directors who had earlier working experience in the banking industry the higher the financial performance (as measured by return on asset) of sample commercial banks in Ethiopia and vice versa. On the other hand, industry specific experience of directors has a negative influence on the financial performance of banks when it is measured by net interest margin. Therefore, industry experience has a mixed effect depending on the measure used. The result is somewhat inconclusive.

Respondents were asked a subjective question (Q. No. 11) about directors' prior experience in banking industry. The respondents in which the board consists directors who had prior experience in banking industry said "yes" and justified that directors who had an experience in the banking industry is highly important because they knows what is undertaken in the banking business and that play a great role in the board decision making. The qualitative result and regression result based on return on asset performance measures support this variable hypothesis.

Audit committee size

The effect of audit committee size (AUDSIZE) on banks financial performance is negative in all the three measures with a coefficient of -0.002329, -0.004792 and -0.006904 for return on asset, return on equity and net interest margin respectively. The negative effect is significant for return on asset and net interest margin with p-values of 0.05 and 0.01 respectively. Which means that the larger the audit committee is the lower will be the financial performance of commercial banks as measured by return on asset and net interest margin.

The result is consistent studies conducted previously (Jensen & Meckling, 1976); Kyereboah-Coleman, 2007; Aldamen, et al., 2011). Kyereboah-Coleman (2007) point out that the size of the audit committee negatively influence performance using Ghanaian sample firms. This study result supports the notion that a certain minimum number of audit committee members may be relevant to the quality of financial reporting and to enhance financial performance. Free-riding and difficulty to reach in consensus in large groups inversely affect financial performance. Therefore, the outcome of this variable is in line with the proposed alternate hypothesis, when financial performance is measured by return on asset and net interest margin.

For the subjective question (Q. No. 12) majority of the respondents said "no". They justified that increasing the size of audit committee will not improve performance because it is difficult to reach consensus and make timely decisions due to lack of communications as audit committee size become large. Limiting audit committee size to

reasonable number improves audit committee effectiveness. So the proposed hypothesis is supported.

4.3.3 Control variables: Results and Discussion

In addition to what has been discussed above, table 4.5 depicts the result of the regression analysis between the three control variables and financial performance indicators of sample Ethiopian commercial banks, which are interpreted below.

Bank size

There is a negative relationship between the size of a bank (BS) and all the three financial performance measures, yet this is statistically significant only with net interest margin with $p\text{-value} < 0.05$. The finding support previous studies and arguments made in which bank size negatively influences performance (Sanda et al, 2005; Babatunde & Olaniran, 2009); Amran, 2011; Al-Manaseer, et al, 2012). Al-Manaseer et al. (2012) found a significant negative relation between bank size and net interest margin but insignificant negative relation was found with return on asset and return on equity. It can be explained as large banks have economies of scale and scope from this point it is supposed to influence bank performance positively. However, at the same time agency problem increase this may out weight the efficiencies of large banks efficiency achieved through economies of scale and scope this may lead to bank inefficiencies. This may be also because banks may not be able to fully control and monitor the business as the companies become larger in size. The result implies size of a bank measured by its asset does not necessarily enhance performance if this is not put to efficient use. Therefore, sample Ethiopian banks are not utilizing their size to enhance their financial performance.

The insignificant negative relationship of return on asset and return on equity and size also supported (Khatab et al., 2011; Al-Manaseer et al., 2012). They have found insignificant negative association between size and return on asset and return on equity.

Bank leverage

The regression results also shows that bank leverage (BLEV) has significant positive influence on bank performance measured by return on asset ($p\text{-value} < 0.05$) and it is only marginally insignificant with net interest margin. In addition, although no statistically significant relationship is detected, a positive directional sign of the coefficient is observed in return on equity. It implies that an increase in the debt position is associated with increase in performance. The result indicates that banks with higher levels of debt as a proportion of equity is to perform better than those having lower proportion of debt. According to the agency theory, the monitoring provided by debt financing reduces management's incentive to misuse free cash flows, and consequently leads to a better firm performance. The finding is consistent with the literature and with the study conducted earlier (Khatab, et al, 2011; Sanda et al., 2005; Babatunde & Olaniran, 2009). Habbash (2010) also argues that highly leveraged firms are found to be less involved in fraudulent practices.

Bank growth

Finally, banks growth (BG) has a negative coefficient in all the three models but it is not statistically significant when performance is measured by return on equity and net interest margin. It is only significant with return on asset at $p < 0.05$. The negative relation implies that banks can grow without necessarily being profitable. This may be explained by

ineffective supervision of operations as a bank expands, giving room for resource dissipation this will negatively influence performance. The result is not surprising because Khatab et al. (2011) also found a significant negative association between growth and return on asset.

In conclusion, results indicate that the direction and the extent of impact of some corporate governance mechanisms are dependent on the performance measure being examined. All corporate governance variables do not influence the three financial performance indicators in the same direction and their degrees of association may also differ. This is because financial performances indicators are not equally indicate the performance of banks, because financial performance indicators used different formulas with their limitations to indicate the banks performance. For example return on asset indicates the overall efficiency of management and reflects whether the bank uses assets effectively in order to produce its income. Return on equity provides information as to how well managers are using the funds invested by the shareholders without considering the effect of liability of the firm. Net interest margin shows how successful a bank's investment decisions are compared to its debt situations. Due to this the direction and the extent of relationship between corporate governance mechanisms and financial performance are not the same for all performance measures.

Chapter Five

Conclusion and Recommendations

In the final chapter to this study conclusion of the study is made which is followed by recommendations. Directions for future research also laid down.

5.1 Conclusion

This study investigates the impact of corporate governance mechanisms on firms' financial performance using eight Ethiopian commercial banks with a data set covering five years period from the year 2007 to 2011. Based on the results of the descriptive statistics, correlation and regression analysis the researcher made the following conclusions.

Based on the descriptive statistics the financial performance of sample commercial banks are 2.56 percent, 22.15 percent and 4.86 percent as measured by return on asset, return on equity and net interest margin respectively. It is therefore the sample commercial banks are performing better in utilizing shareholders capital. The sample commercial banks board is characterized by the presence of qualified directors and majority of directors having business management experience. But, the board is dominated by male and consists of low numbers of directors who had prior experience in the banking industry.

The correlation analysis indicates that most of the corporate governance mechanisms significantly correlated with the financial performance of sample Ethiopian commercial banks. But, the correlations of some corporate governance mechanisms differ depend on the indicator used to measure financial performance.

The regression result show that board size has a significant negative effect on return on equity but its negative effect on return on asset and net interest margin was insignificant. Board size does not have a significant effect on return on asset and net interest margin. Accordingly, the researcher concludes that board size significantly and negatively influence sample commercial banks financial performance as measured by return on equity.

No statistically significant relation was found between percentage of female directors and financial performance. However, this is due to very small numbers of female directors as observed in the descriptive statistics which does not permit them to be powerful enough to make a difference to monitoring. Moreover, the qualitative analysis revealed that qualified and competent female directors help improve banks operation and monitoring performance. Therefore, only the presence of qualified and competent female directors helps improve banks performance.

Board members educational qualification significantly and positively influences the financial performance of sample commercial banks. The presence of qualified directors on the board plays an important role in carrying out the boards monitoring responsibility and in improving financial performance. Thus, board members educational qualification has a significant positive effect on banks financial performance.

Even though it has a positive coefficient with return on asset and net interest margin, statistically insignificant relation was found between board members business management experience and financial performance of sample commercial banks. However, as per the qualitative result if directors are assigned in committee based on

their practical background they can contribute more in promoting good governance. Otherwise the general experience of directors may not be relevant for banks corporate governance since the banks are highly regulated and are somewhat sensitive and special than other sectors.

Whereas industry specific experience of director positively and significantly influence return on asset. Contrary to this negatively and significantly related with net interest margin. But it has not significant relation with return on equity. The result is somewhat inconclusive.

Audit committee size has a negative relation with all the three financial performance of commercial banks but not statistically significant with return on equity. It implied that audit committee size negatively and significantly influence commercial banks performance as measured by return on asset and net interest margin. Thus, small size audit committee is effective to improve financial performance of commercial banks.

In general, the findings suggest that banks with effective corporate governance mechanisms improve financial performance depending on the financial performance measure being used. Although not all corporate governance variables support the stated hypotheses, the study has achieved its objective by identifying the attributes that help to test the research hypothesis. This study, therefore, finds that agency theory offers a generally good explanation of the associations between corporate governance mechanisms with financial performance.

5.2 Recommendations

This study examined the impact of corporate governance mechanisms on firms' financial performance by taking evidence from selected commercial banks in Ethiopia. On the basis of the findings and conclusions reached, the following recommendations were forwarded.

- Attention should be given for the board size of banks to be small in number to optimal level with better educational qualification since small board size with better educational qualification is more effective in monitoring managers and help to improve performance.
- This study revealed that the boards of banks are dominated by male and board gender diversity is very limited in Ethiopian commercial banks. Thus, there is much to be done to improve the gender balance of boards in Ethiopian banks with a great care about their qualification and competency.
- Business management experienced directors should be assigned in committee based on their practical background to make them to contribute more in promoting good governance. Because the general experience of directors is only relevant for banks corporate governance when they are assigned to committee based on their prior experience as revealed in the qualitative analysis.
- Finally, the researcher recommends that Ethiopian commercial banks should make their audit committee size small to improve their performance. Because, as this study revealed large size audit committee negatively influences performance.

5.3 Avenue for future research

By taking this study as a standing point, it could be possible to come up with a better insight and several extensions to this study are possible. Considering the available time and resource the outcome of this study can be more robust, if future researchers conduct a study on this area. First, by further increasing the study population and the sample size to the whole financial sector. Second, by taking evidence from other industries and increasing the number of observations through the use of large sample size and long years data. The relationship between corporate governance mechanisms and firms' financial performance can also be further explained if future researchers conduct study including more corporate governance variables.

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APPENDICES

Appendix I: Research Questionnaire

ADDIS ABABA UNIVERSITY
SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION
MBA PROGRAM
RESEARCH QUESTIONNAIRE

Dear respondents this questionnaire is designed to gather data for research to be conducted on the *impact of corporate governance mechanisms on firms' financial performance in Ethiopian banking industry*. Its aim is only for educational value. So you are highly requested to respond genuinely.

Thank you in advance for your cooperation!!!

Part: One

➤ *For the table questions fill the number only for each period.*

No	Items	Fiscal Year in Gregorian Calendar				
		2006/07	2007/08	2008/09	2009/10	2010/11
1	Total number of directors sitting on the board					
2	Number of female board of directors					
3	Number of board members who had college degree or higher					
4	Number of board members who had business management experience					
5	Number of board members who served in the same capacity in other banks earlier					
6	Total number of audit committee members					

7. Do you believe that board size affects banks performance?

Yes No

How? Please justify it-----

-----.

8. Does the presence of female board of directors' (in terms of board diversity) helps improve the banks operation and performances?

Yes No

Why? -----

-----.

9. Does the educational qualification of directors have any significant effect on their monitoring and controlling efficiency?

Yes No

Give your reasons-----

-----.

10. Does business management experience of directors' enables to promote better monitoring and good governance?

Yes No

How?-----

-----.

11. Are there any board members who had earlier working experience on banking business now in your company?

Yes No

In what ways do these members contribute better than other directors?-----

-----.

12. Do you believe that increasing the size of audit committee improve their effectiveness?

Yes No

How?-----

-----.

Thank You Once Again!!!

February, 2012

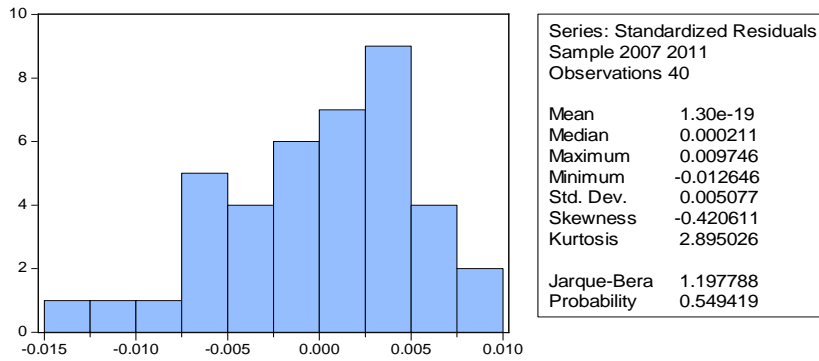
Appendix II: Diagnostic tests results for OLS Assumptions

1. Normality test

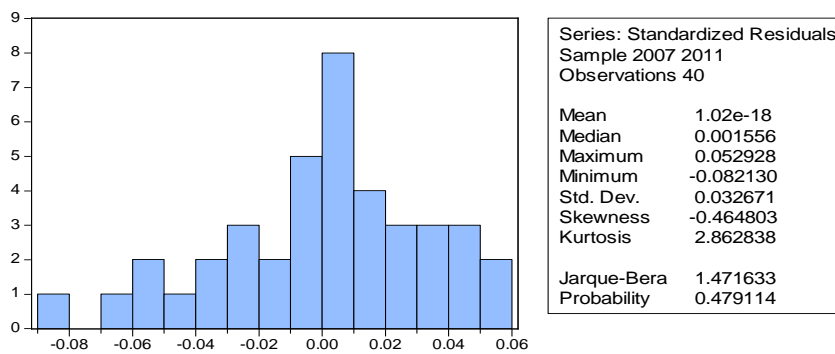
H₀: Residuals are normally distributed

H_a: Residuals are not normally distributed

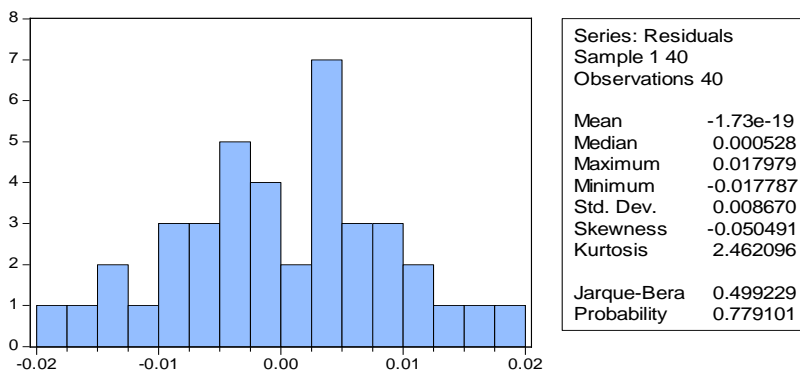
Model-1: Return on Asset



Model- 2: Return on Equity



Model-3: Net Interest Margin



2. Heteroskedasticity test

Ho: The variance of the error is constant

Ha: The variance of the error is heteroscedastic

Model-1: Return on Asset

Heteroskedasticity Test: White

	Statistic	d.f.	Prob.
F-statistic	1.599614	Prob. F(9,30)	0.1604
Obs*R-squared	12.97086	Prob. Chi-Square(9)	0.1639
Scaled explained SS	9.127422	Prob. Chi-Square(9)	0.4256

Model-2: Return on Equity

Heteroskedasticity Test: White

	Statistic	d.f.	Prob.
F-statistic	0.963632	Prob. F(9,30)	0.4882
Obs*R-squared	8.970352	Prob. Chi-Square(9)	0.4400
Scaled explained SS	5.270031	Prob. Chi-Square(9)	0.8102

Model-3: Net Interest Margin

Heteroskedasticity Test: White

	Statistic	d.f.	Prob.
F-statistic	3.781641	Prob. F(9,30)	0.0028
Obs*R-squared	21.26018	Prob. Chi-Square(9)	0.0115
Scaled explained SS	8.742496	Prob. Chi-Square(9)	0.4614

There is problem of heteroskedasticity

3. Autocorrelation test

Ho: The errors are uncorrelated with one another

Ha: The errors are correlated with one another

Model-1: Return on Asset

Breusch-Godfrey Serial Correlation LM Test:

	Statistic	d.f.	Prob.
F-statistic	0.100942	Prob. F(2,28)	0.9043
Obs*R-squared	0.286341	Prob. Chi-Square(2)	0.8666

Model-2: Return on Equity

Breusch-Godfrey Serial Correlation LM Test:

	Statistic	d.f.	Prob.
F-statistic	0.153445	Prob. F(2,28)	0.8585
Obs*R-squared	0.433662	Prob. Chi-Square(2)	0.8051

Model-3: Net Interest Margin

Breusch-Godfrey Serial Correlation LM Test:

	Statistic	d.f.	Prob.
F-statistic	0.713630	Prob. F(2,28)	0.4986
Obs*R-squared	1.940051	Prob. Chi-Square(2)	0.3791

4. Model specification error (linearity) test

Ho: The models functional form is appropriate

Ha: The models functional form is inappropriate

Model-1: Return on Asset

Ramsey RESET Test

	Statistic	d.f.	Prob.
F-statistic	0.529324	Prob. F(1,29)	0.4727
Log likelihood ratio	0.723519	Prob. Chi-Square(1)	0.3950

Model-2: Return on Equity

Ramsey RESET Test:

	Statistic	d.f.	Prob.
F-statistic	0.211863	Prob. F(1,29)	0.6487
Log likelihood ratio	0.291163	Prob. Chi-Square(1)	0.5895

Model-3: Net Interest Margin

Ramsey RESET Test

	Statistic	d.f	Prob.
F-statistic	0.547128	Prob. F(1,29)	0.4654
Log likelihood ratio	0.747629	Prob. Chi-Square(1)	0.3872

5. A redundant fixed effects test

Ho: Fixed effect is appropriate

Model-1: Return on Asset

Redundant Fixed Effects Tests

Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	0.996973	(4,26)	0.4269
Period Chi-square	5.707886	4	0.2221

Model-2: Return on Equity

Redundant Fixed Effects Tests

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.301986	(7,23)	0.2935
Cross-section Chi-square	13.351794	7	0.0640

Appendix III: List of sample commercial banks

1. Awash international bank
2. Dashen bank
3. Bank of Abyssinia
4. Wegagen bank
5. United bank
6. Commercial bank of Ethiopia
7. Nib international bank
8. Lion international bank