THE RELATIONSHIP BETWEEN CORPORATE BOARD STRUCTURE AND FINANCIAL PERFORMANCE OF COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE

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DECLARATION

This research project is my original work and has not been presented for any degree award in any University.

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DEDICATION

This project work is dedicated to my family for their encouragement and support and for bearing with me during the many months that I was absent from home.
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My appreciation goes to the Almighty God for granting me courage, good health and inspiration that was essential for this demanding study. Special thanks go to my supervisor, Mr. Cyrus Mwangi Iraya, who despite his busy schedule was always readily available to advice and guide me professionally throughout the study. I would also like to acknowledge the guidance and advice from Mr. Herick Ondigo, The chairman, department of Finance and Accounting and all the lecturers at the University of Nairobi.
ABSTRACT

Boards of directors have been largely criticized for the decline in shareholders’ wealth and corporate failure. Thus, corporate governance affects firms’ financial performance as companies with better corporate governance guarantee the payback to the shareholder and limit the risk of the investment. This study examined the relationship between corporate board structure and the financial performance of companies listed at the NSE. It investigated the composition of boards of directors in the listed firms and analyses whether board structure has an impact on financial performance, as measured by return on assets (ROA). The study took a causal research design approach and focused on the firms listed between 2009 and 2013. The study used secondary source data collected from the firm’s financial reports filed at the NSE and CMA library. It specifically looked at four board characteristics (board independence, board size, gender of the board of directors and number of board committees) which were set as the independent variables. The Ordinary Least Squares (OLS) regression was used to estimate the relationship between corporate performance measures and the independent variables. Findings from the study show that there is strong positive association between board size and corporate financial performance. Evidence also exists that there is a positive association between board independence and corporate financial performance. Good positive association was observed between number of the board committee and gender of the board members, and firm financial performance. The study suggests that large board size should be encouraged and the composition of outside directors as members of the board should be sustained and improved upon to enhance corporate financial performance.
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LIST OF ABBREVIATIONS

CBK - Central Bank of Kenya
CDSC - Central Depository and Settlement Corporation
CEO - Chief Executive Officer
CMA - Capital Markets Authority
DPS - Dividends Per Share
EPS - Earnings Per Share
GoK - Government of Kenya
IFC - International Finance Corporation
IPO - Initial Public Offer
NEDs - Non Executive Directors
NSE - Nairobi Securities Exchange
ROA - Return On Assets
ROAM - Return On Assets Managed
ROCE - Return On Capital Employed
ROE - Return On Equity
ROS - Return On Sales
TMT - Top Management Teams
USA - United States of America
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The corporate board is made up of three important characters namely the CEO, the inside directors who are in most cases senior managers of the firm, and outside directors, and all these have the knowledge of what a good and a bad project is. The main responsibility of the board is to offer vision and direction for any corporate entity. Indeed, the board is about the one most important constituency of a corporate entity. Every corporate board has at least one outside director. All outside director’s benefit from enhanced performance of the firm. The fundamental question that has escaped the needed attention is what determines a corporate board structure and its composition. The structure, role and impact of Board on Firm performance has been studied by scholars from different disciplines such as law, economics, finance, sociology, and organizational theory (Kiel, 2010) resulting to a number of contrasting theories and greater the difficulty of coordination and this adversely affects a firm’s performance.

The board of directors is charged with oversight of management on behalf of shareholders. Agency theorists argue that in order to protect the interests of shareholders, the board of directors must assume an effective oversight function. It is assumed that board performance of its monitoring duties is influenced by the effectiveness of the board structure. Firms are regarded as consisting of cognitive, normative and regulative structures and activities that give meaning to social behaviour (Ayogo, 2005). Societal norms have been seen to influence Board decisions regarding CEO selection and
executive compensation (Klein, 2008) and how Boards explain the adoption of CEO incentive plans to shareholders. Institutional theory argues that Board composition will be determined largely by the prevailing institutionalized norms in the organizational field and society.

1.1.1 Corporate Board Structure
According to Mayer (2007), corporate governance is concerned with ways of bringing the interests of (investors and managers) into line and ensuring that firms are run for the benefit of investors. Corporate governance is therefore, concerned with the relationship between the internal governance mechanisms of companies and society’s conception of the scope of corporate accountability (Deakin and Hughes, 2007). It has also been defined by Keasey, Thompson and Wright (1997) to include ‘the structures, processes, cultures and systems that engender the successful operation of organizations. Corporate governance is also seen as the whole set of measures taken within the social entity that is an enterprise to favour the economic agents to take part in the productive process, in order to generate some organizational surplus, and to set up a fair distribution between the partners, taking into consideration what they have brought to the organization (Maati, 2009).

In a dynamic environment, however, boards become very important for smooth functioning of organizations. Boards are expected to perform different functions, for example, monitoring of management to mitigate agency costs Eisenhardt (2009), Shleifer & Vishny (2007), Roberts McNulty & Stiles (2005). The board is also the initiator of measures to steer the organization from a foreseeable bad times ahead. A study by
Mangenelli & Klein (1994), Jack & Keller (2002) found out that the board in response to the external pressures, resort to different strategic responses such as restructuring, downsizing, business process reengineering, benchmarking, total quality management, management by objectives and other interventions mechanisms; to improve and sustain their competitive positions in the industry.

The core reason for undertaking this study is because internationally there is a growing recognition of the importance of boards for the success of a firm. Several countries have issued guidelines and recommendations for best governance practices and board composition Cadbury, (2002), OECD Principles (2009), ICGN Principles (2009), Preda Code (2002), Higgs Report, (2003), Combined Code (2003). However, whether firms following the best practice recommendations regarding board structure will indeed perform better is a question to be examined empirically in the Kenyan context. Indeed these failures are a manifestation of a number of structural reasons why corporate governance has become more important for economic development and more importantly, for policy issues in many countries (Rashid, De Zoysa, Lodh, and Rudkin, 2010).

1.1.2 Financial Performance

Finance is always being disregarded in financial decision making since it involves investment and financing in short-term period. Further, it also acts as a restrain in financial performance, since it does not contribute to return on equity (Rafuse, 2006). A well designed and implemented financial management is expected to contribute positively to the creation of a firm’s value (Padachi, 2006). The dilemma in financial
management is to achieve the desired trade-off between liquidity, solvency and profitability (Lazaridis, 2006). The subject of corporate financial performance has received significant attention from scholars in the various areas of business and strategic management. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization’s health and ultimately its long term survival. High performance reflects management effectiveness and efficiency in making use of company’s resources and this in turn contributes to the country’s economy at large (Naser and Mokhtar, 2011).

There have been various measures of financial performance. For example return on sales reveals how much a company earns in relation to its sales, return on assets determines an organization’s efficiency in ability to make use of its assets and return on equity reveals the return investors expect to earn for their investments. The advantages of financial measures are the simplicity of calculation and also that their definitions are agreed worldwide. Traditionally, the success of a company has been evaluated by the use of financial measures (Tangen, 2012).

Liquidity measures the ability of the business to meet financial obligations as they fall due, without disrupting the normal, ongoing operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to balance sheet measures of the relationships between assets and liabilities and operational liquidity refers to cash flow measures. Solvency measures the amount of borrowed capital used by the business relative to the amount of owner’s equity capital invested in the business. In
other words, solvency measures provide an indication of the business’ ability to repay all indebtedness if all its assets were sold. Solvency measures also provide an indication of the business’ ability to withstand risks by providing information about the operation’s ability to continue operating after a major financial adversity (Harrington and Wilson, 2009).

Profitability measures the extent to which a business generates a profit from the factors of production: labor, management and capital. Profitability analysis focuses on the relationship between revenues and expenses and also on the level of profits relative to the size of investment in the business. Four useful measures of profitability are the rate of return on assets (ROA), the rate of return on equity (ROE), operating profit margin and net income (Hansen, Holthausen and Mowen, 2005). Repayment capacity measures the ability to repay debt from both operating and non-operating income. It evaluates the capacity of the business to service additional debt or to invest in additional capital after meeting all other cash commitments. Measures of repayment capacity are developed around an accrual net income figure. The short-term ability to generate a positive cash flow margin does not guarantee long-term survival ability (Jelic and Briston, 2011).

Financial efficiency measures the degree of efficiency in using labor, management and capital. Efficiency analysis deals with the relationships between inputs and outputs. Because inputs can be measured in both physical and financial terms, a large number of efficiency measures in addition to financial measures are usually possible (Tangen, 2012).
1.1.3 Effect of Board Structure on Financial Performance

There is mixed evidence in the empirical literature linking board structure to corporate performance. Large boards could provide the diversity that would help companies to secure critical resources and reduce environmental uncertainties (Pfeffer, 2007). But, as Yermack (2006) said, coordination, communication and decision-making problems increasingly impede company performance when the number of directors increases.

Thus, as an extra member is included in the board, a potential trade-off exists between diversity and coordination. Jensen (2003) appears to support Lipton and Lorsch (2002) who recommend a number of board members between seven and eight. However, board structure recommendations tend to be industry-specific, since Adams and Mehran (2003) indicate that bank holding companies have board structure significantly larger than those of manufacturing firms.

Researchers have investigated the usefulness of a board of directors as a monitoring devise as they communicate the shareholders’ objectives and interests to managers. They posit that external board membership ensures proper management supervision and limit managerial opportunism (Munter and Kren, 2005). Empirical research has found that increased outsiders on the board are likely to promote decisions that are in the interests of external shareholders (Brickley et al., 2007). This view has however been challenged by managerial hegemony theory, which views boards as passive instruments who hold allegiance to the managers who select them, lack knowledge about the firm and depend on top executives for information (Coles et al., 2001).
Bathala and Rao (2005) and Hutchinson (2002) found a negative relationship between the proportion of outside directors and the firm’s growth rate. In contrast, Hossain et al. (2000) found that the percentage of outside directors is positively related to firms’ investment opportunities. Anderson et al. (2003) found that growth firms incurred higher monitoring costs (in terms of directors and auditors fees) than non-growth firms.

Board composition refers to the number of independent non-executive directors on the board relative to the total number of directors. An independent non-executive director is defined as an independent director who has no affiliation with the firm except for their directorship (Clifford and Evans, 1997). There is an apparent presumption that boards with significant outside directors will make different and perhaps better decisions than boards dominated by insiders. A number of studies, from around the world, indicate that non-executive directors have been effective in monitoring managers and protecting the interests of shareholders, resulting in a positive impact on performance, stock returns, credit ratings, auditing, etc. A study by O’ Sullivan (2000) examines a sample of 402 UK quoted companies and suggests that non-executive directors encourage more intensive audits as a complement to their own monitoring role while the reduction in agency costs is expected. However, there is also a fair amount of studies that tend not to support this positive perspective. Some of them report a negative and statistically significant relationship with Tobin’s Q (e.g. Agrawal and Knoeber, 1996; Yermack, 1996) while others find no significant relationship between accounting performance measures and the proportion of non-executive directors (e.g. Vafeas and Theodorou, 1998; Weir, Laing and mcknight, 2002; Haniffa and Hudaib, 2006).
Furthermore, based on a large survey of firms with non-executive directors in the Netherlands, Hooghiemstra and van Manen (2004) conclude that stakeholders are not generally satisfied with the way non-executives operate.

The effect of managerial or board ownership on board structure is generally explained by the “incentive alignment argument” Board ownership reduces manager–shareholder conflicts in stock ownership by board members (both executive and non-executive). To the extent that executive board members own part of the firm, they develop shareholder-like interests and are less likely to engage in behavior that is detrimental to shareholders. Therefore, managerial ownership is inversely related to agency conflicts between managers and shareholders. In contrast to this notion, Demsetz and Lehn (1985) find no link between ownership structure and firm performance, and assert that there is little support for the divergence of interests between managers and shareholders. In empirical contrast to the Demsetz and Lehn (1985) findings, and in line with the beneficial effects of ownership, Morck, Shleifer and Vishny (1988) find that firm performance first rises as ownership increases up to 5%, then falls as ownership increases up to 25% and then rises slightly at higher ownership levels. They support the theory that managers tend to allocate the firm’s resources in their own best interests, which may conflict with those of shareholders.

A review of the empirical evidence on the impact of board size on performance shows mixed results. Dehaeneet al. (2001) find that board size is positively related to company performance. However, the results of Haniffaet al.(2006) are inconclusive.
Using a market return measure of performance, their results suggest that a large board is seen as less effective in monitoring performance, but when accounting returns are used, large boards seem to provide the firms with the diversity in contacts, experience and expertise needed to enhance performance. Yermack (1996) finds an inverse relationship between board size and firm value; in addition, financial ratios related to profitability and operating efficiency also appear to decline as board size grows. Connelly and Limpaphayom (2004) argued that board size does not have any relation with firm performance.

Healy (2003) studying firms in developing world identified a number of prominent disadvantages, among them included; Lack of commitment by directors to creation of shareholder wealth, Remuneration mainly linked to size of the company rather than its performance, Lack of adequate institutional shareholder activism, High proportion of dividend payments rather than reinvestment in research and development.

1.1.4 Nairobi Securities Exchange

NSE was formed in 1954 as a voluntary organization of brokers and today it is one of the most active markets in Africa. It has played a very vital role in championing the increase in investor confidence by modernizing its infrastructure. It has led to promotion and enhancement of culture of thrift and saving by providing alternatives avenues for investment and assists in the transfer of these savings to investment in productive enterprises and quoted stocks.
The Kenyan government realized the need to design and implement policy reforms to foster sustainable economic development with an efficient and stable financial system in the 1980s. It set out to enhance the role of the private sector in the economy, reduce the demand for public enterprise on the exchequer, rationalize operations of the public enterprise sector to broaden the base of ownership and enhance capital market in the formation of a regulatory body “the capital market authority” in 1989, to assist in the creation of an environment conclusive to the growth and development of country’s capital markets (Statistical Abstract, 2000).

The NSE is poised to play an increasing role in the Kenyan economy and that is why the Government of Kenya (GOK), the Capital Market Authority (CMA) and the Central Bank of Kenya (CBK) have over the years played a principal role in developing and strengthening the NSE to enable it take up the various roles and functions. Measures taken include enactment of legislation, rules, policies and guidelines, adjustment in macroeconomic variables such as taxation rates, interest rates, exchange rates and working towards managing inflation in the economy, setting up institutions such as Central Depository and Settlement Corporation (CDSC) and Investor Compensation Fund (ICF).

In 2006 the NSE initiated the automated trading systems which have resulted in high trading volumes. The implementation of automated trading system provided for longer trading hours, increased trading efficiency and price discovery (Economic Survey, 2007). The growth of NSE in the past five years has been attributed to positive growth rate
registered by the Kenyan economy and the changing international perception of Kenya as a secure investment destination. The effect of post-election violence of the 2008 election outcome that led to slower economic growth and reduced investment has not hampered the growth of NSE. In the beginning of 2010, the NSE introduced the NSE All-share index which is complementary to NSE 20 share index in an effort to provide investors with a comprehensive measure of the performance of the stock market. Nairobi Securities Exchange is one of the leading developing markets in the world and investing in stocks has been hyped so much that the mention of the initial public offer (IPO) reflexively elicits expectation of more money.

The regulatory and CG framework influences the way boards function and how effective the board engage with the company shareholders. The regulatory framework for companies at the NSE is centred on the company’s act, capital markets authority act and securities exchange regulations. The companies act is the principal legislation regulating companies and it includes the framework surrounding the formation and duties of directors. The listing rules deal with the requirements for listing and quotation, market information, trading and supervisory matters. These rules apply to all companies listed at the securities exchanges. The Codes of Corporate Governance (CCG) compliments the statutory law requirements and it gives guidelines on reporting and encourages a “comply or explain” type of reporting.

1.2 Research Problem

between corporate structure and corporate performance. Research indicates that companies with better corporate governance guarantee the payback to the shareholder and limit the risk of the investment. The association between quality of corporate governance and firms' profitability is a main focus in corporate governance studies, but one cannot predict much on the direction due to contrasting views on the results. Jensen and Meckling (1976) have proven that better-governed firms might have more efficient operations, resulting in a higher expected future cash-flow stream. Klapper and Love (2003) used return on assets as measure for performance found evidence that firms with better governance have higher operating performance. A well-functioning corporate board is an indication of the overall effectiveness of corporate governance system.

Boards of directors have been largely criticized for the decline in shareholders’ wealth and corporate failure (Uadiale, 2010). According to Uadiale, they have been in the spotlight for the fraud cases that had resulted in the failure of major corporations, such as Enron, WorldCom and Global Crossing. In Nigeria, a series of widely-publicized cases of accounting improprieties have been recorded (Wema Bank, NAMPAK, Finbank and Spring Bank) (Uadiale, 2010). The placement of Uchumi under receivership in 2006 and eventual delisting from the NSE is just but an example in Kenya. The responsibility for collapse of Uchumi then was placed right under the board of directors who were accused of ignoring governance structures and engaging in malpractices. When a new board of directors was appointed to the board of Uchumi the company has witnessed improved financial performance and has been listed again at the NSE.
This emphasizes the important role board structure plays in company financial performance and hence my interest in the effect of board structure on financial performance of companies listed in the NSE (Ongore and K’Obonyo, 2011).

There are some studies that have been conducted in Kenya on stock market focusing on various aspects of corporate governance of listed companies. For instance, Mwangi (2007), looked at corporate governance in developing countries, Gitobu (2000), studied the relationship between corporate governance and firm’s performance, Munene (2007), did a study of the relationship between board structure and firms performance, a case study of the NSE while Munga (2012), examined the impact of board diversity on Nairobi Security Exchange and Kenya’s manufacturing firms among others.

Majority of the studies have examined the composite stock indices in relation to board structure of companies listed at the Nairobi Securities Exchange and examined whether companies incorporate available information, but did not determine what tasks the companies respond to in relation to board structure and to how important these tasks are to the financial performance of firms listed in Nairobi Securities Exchange and also did not establish the direction and magnitude of the interaction between board structure tasks and firms financial performance at the Nairobi Securities Exchange. In spite of all these alternative studies that have been carried out, a gap in the literature relating examining the effect of board structure on financial performance of firms listed in Nairobi Securities Exchange exist because there are still no conclusive results that have been arrived at.
Therefore, this study sought to fill this gap by critically evaluating the effect of board structure and firms’ financial performance of companies listed at the Nairobi Securities Exchange and determining what tasks in relation to board structure the companies respond to and how important these tasks are to the financial performance of firms listed at Nairobi Securities exchange by answering the following research question: What is the relationship between corporate board structure and financial performance of companies listed at Nairobi Securities Exchange?

1.3 Objectives of the Study

The general objective of the study was to establish the relationship between corporate board structure and financial performance of companies listed in Nairobi Securities Exchange. The specific objectives were

a) To establish the relationship between the board size and corporate financial performance.

b) To determine the relationship between gender and corporate financial performance.

c) To establish the effect of the number of board committees on corporate financial performance.

d) To establish the relationship between board independence and corporate financial performance.

1.4 Value of the Study

This study sought to provide an understanding of the linkage between board structure and financial performance in Nairobi Securities Exchange listed companies which is paramount to the need to have a robust team of decision makers with a broad range of
perspectives and abilities, crucial to their financial success and in building trust among companies’ stakeholders.

To policymakers, the findings of the study provides a basis upon which relevant decision and policymakers in the listed companies may re-evaluate and adjust their board membership to meet the fundamentals of firm management for improved financial performance, sustainability and longevity of the unique roles the sector plays in providing a sense of calmness amidst vast economic uncertainties. Studies may build on the findings of this study as a source of empirical information regarding the relationship between board structure and the financial performance in the Nairobi Securities Exchange listed companies in Kenya.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter is organized into four parts. Section 2.2 discusses the theoretical literature specifically discussing the theories the study is based on. Section 2.3 details empirical literature on the board structure and seek to establish the effect of board structure on corporate financial performance in NSE listed firms in Kenya. Lastly section 2.4 presents a summary of the literature review.

2.2 Theoretical Review
The following theories guided the relationship between board structure and corporate financial performance literature.

2.2.1 Agency Theory
Separation of control from ownership implies that professional managers manage a firm on behalf of the firm’s owners (Kiel & Nicholson, 2003). Conflicts arise when a firm’s owners perceive the professional managers not to be managing the firm in the best interests of the owners. According to Eisenhardt (1989), the agency theory is concerned with analyzing and resolving problems that occur in the relationship between principals (owners or shareholders) and their agents or top management. The theory rests on the assumption that the role of organizations is to maximize the wealth of their owners or shareholders (Blair, 1995).
The agency theory holds that most businesses operate under conditions of incomplete information and uncertainty. Such conditions expose businesses to two agency problems namely adverse selection and moral hazard. Adverse selection occurs when a principal cannot ascertain whether an agent accurately represents his or her ability to do the work for which he or she is paid to do. On the other hand, moral hazard is a condition under which a principal cannot be sure if an agent has put forth maximal effort (Eisenhardt, 1989). According to the agency theory, superior information available to professional managers allows them to gain advantage over owners of firms. The reasoning is that a firm’s top managers may be more interested in their personal welfare than in the welfare of the firm’s shareholders (Berle & Means, 1967). Donaldson and Davis (1991) argue that managers will not act to maximize returns to shareholders unless appropriate governance structures are implemented to safeguard the interests of shareholders. Therefore, the agency theory advocates that the purpose of corporate governance is to minimize the potential for managers to act in a manner contrary to the interests of shareholders.

Proponents of the agency theory belief that a firm’s top management becomes more powerful when the firm’s stock is widely held and the board of directors is composed of people who know little of the firm. The theory suggests that a firm’s top management should have a significant ownership of the firm in order to secure a positive relationship between corporate governance and the amount of stock owned by the top management (Mallin, 2004). Wheelen and Hunger (2002) argue that problems arise in corporations because agents (top management) are not willing to bear responsibility for their decisions unless they own a substantial amount of stock in the corporation.
The agency theory also advocates for the setting up of rules and incentives to align the behaviour of managers to the desires of owners (Hawley & Williams, 1996). However, it is almost impossible to write a set of rules for every scenario encountered by employees. Consequently, the Australian Stock Exchange Corporate Governance Council (2003) associates good corporate governance with people of integrity.

Carpenter and Westpal (2001) argue that the agency theory is mainly applied by boards of profit making organizations to align the interests of management with those of shareholders. Dobson (1991) argues that the demands of profit making organizations are different from those of stakeholders such as shareholders, local communities, employees and customers. The conflicting demands can be used to justify actions that some may criticize as immoral or unethical depending on the stakeholder group.

According to this theory, people are self-interested rather than altruistic and cannot be trusted to act in the best interests of others. On the contrary, people seek to maximize their own utility. The agency theory presents the relationship between directors and shareholders as a contract (Adams, 2002). This implies that the actions of directors, acting as agents of shareholders, must be checked to ensure that they are in the best of the shareholders.

### 2.2.2 Stewardship Theory

The stewardship theory, also referred to as the stakeholders’ theory, adopts a different approach from the agency theory. It starts from the premise that organizations serve a broader social purpose than just maximizing the wealth of shareholders.
The stakeholders’ theory holds that corporations are social entities that affect the welfare of many stakeholders where stakeholders are groups or individuals that interact with a firm and that affect or are affected by the achievement of the firm’s objectives (Donaldson & Preston, 1995; Freeman, 1984). Successful organizations are judged by their ability to add value for all their stakeholders. Some scholars consider the natural environment to be a key stakeholder (Starik & Rands, 1995; Dunphy et al., 2003). Stakeholders can be instrumental to corporate success and have moral and legal rights (Donaldson & Preston, 1995; Ulrich, 2008). When stakeholders get what they want from a firm, they return to the firm for more (Freeman, 1984; Freeman & McVea, 2001). Therefore, corporate leaders have to consider the claims of stakeholders when making decisions (Blair, 1995) and conduct business responsibly towards the stakeholders (Manville & Ober, 2003; White, 2009). Participation of stakeholders in corporate decision-making can enhance efficiency (Turnbull, 1994) and reduce conflicts (Rothman & Friedman, 2001).

According to Kaptein and Van Tulder (2003), corporations adopt reactive or proactive approaches when integrating stakeholders’ concerns in decision making. A corporation adopts a reactive approach when it does not integrate stakeholders into its corporate decision making processes. This results into a misalignment of organizational goals and stakeholder demands (Mackenzie, 2007). Some authors attribute scandals such as those of Enron and WorldCom to the failure to consider stakeholder concerns in decision making (Currall & Epstein, 2003; Turnbull, 2002; Watkins, 2003; Zandstra, 2002). Following these scandals, some governments set up new regulations to align the interests
of stakeholders with corporate conduct. For example, the Sarbanes-Oxley Act (SOX) was passed as a result of the Collapse of Enron and WorldCom.

Adams (2002) argues that the stewardship theory remains the theoretical foundation for much regulation and legislation. A proactive approach is used by corporations that integrate stakeholders’ concerns into their decision-making processes and that establish necessary governance structures (de Wit et al., 2006).

In summary, the stewardship theory suggests that a firm’s board of directors and its CEO, acting as stewards, are more motivated to act in the best interests of the firm rather than for their own selfish interests. This is because, over time, senior executives tend to view a firm as an extension of themselves (Clarke, 2004; Wheelen & Hunger, 2002). Therefore, the stewardship theory argues that, compared to shareholders, a firm’s top management cares more about the firm’s long term success (Mallin, 2004)

2.2.3 Restitution Theory

Diane Gossen (2004), developed the restitution by integrating the concepts of Reality Therapy by Glasser (2006) with the science of Perceptual Control Theory by Powers (2005) his theory is based upon creating an environment free of fear, anger, and guilt to self-evaluate problems. Internal Control Theory is based on the belief that all behavior is internally motivated. When management maintains a business environment that emphasizes an appropriate level of control consciousness, a company is likely to have an effective internal control system. According to Bedard and Chi (1993), the internal control environment is reflected by management’s policies that have control implications.
Examples of such policies are: a well-publicized statement on corporate conduct, enforcement of corporate policies, tight budgetary controls, support of an effective internal auditing function and practices for hiring personnel with competence and integrity. Top management, the board of directors, and its audit committee are influential in creating an appropriate internal control environment through effective organization structure, sound management practices, adherence to appropriate standards of ethical conduct, and compliance with applicable laws and regulations (PCAOB, 2004).

2.2.4 The Control Theory

According to Bierstaker (1999), the basics of control theory is that for business or system to stand, one individual should authorize the purchase and the selling of products, while another should take custody of the sale and the third individual should account for the number of products sold. (Bierstaker, 1999). The better the running of a system operations, the less the cost and greater the benefit associated with.

Likely course of events, but deviations from the most likely outcome. The advantage of planning is that it forces management to take account of possible decisions from anticipated path. According to the AICPA Audit Committee Toolkit (2004), it will be found that while all of an organization’s people are an integral part of internal control, certain parties merit special mention. This management, the board of directors (including the audit committee), internal auditors, and auditors. The primary responsibility for the development and maintenance of internal control rests with an organization’s management.
Bierstaker and Wright (2004), says that, with increased significance placed on the control environment, the focus of internal control has changed from policies and procedures to an overriding philosophy and operating style within the organization. Emphasis on these intangible aspects highlights the importance of top management’s involvement in the internal control system. If internal control is not a priority for management, then it will not be one for people within the organization either. As an indication of management’s responsibility, top management at a publicly owned organization will include in the organization’s annual financial report to the shareholders a statement indicating that management has established a system of internal control that management believes is effective. The statement may also provide specific details about the organization’s internal control system (Bierstaker 1999).

According to Kopp and Bierstaker (2006), internal control must be evaluated in order to provide management with some assurance regarding its effectiveness. Internal control evaluation involves everything management does to control the organization in the effort to achieve its objectives. Internal control would be judged as effective if its components are present and function effectively for operations, financial reporting, and compliance. The board of directors and its audit committee has responsibility for making sure the internal control system within the organization is adequate. This responsibility includes determining the extent to which internal controls are evaluated. Two parties involved in the evaluation of internal control are the organization’s internal auditors and their external auditors (Roth, 1997).
According to Bonner (1990), internal auditors’ responsibilities typically include ensuring the adequacy of the system of internal control, the reliability of data, and the efficient use of the organization’s resources. Internal auditors identify control problems and develop solutions for improving and strengthening internal control. Internal auditors are concerned with the entire range of an organization’s internal controls, including financial statement audit. In contrast to internal auditors, external auditors focus primarily that affect financial reporting.

2.3 Determinants of Financial Performance

There are various measures of financial performance. For example return on assets (ROA) determines an organization’s efficiency in ability to make use of its assets and return on equity (ROE) reveals the return investors expect to earn for their investments and return on sales (ROS) reveals how much a company earns in relation to its sales. The advantages of financial measures are the simplicity of calculation and also that their definitions are agreed worldwide. Traditionally, the success of a company has been evaluated by the use of financial measures (Tangen, 2003). Four useful measures of profitability are the rate of return on assets (ROA), the rate of return on equity (ROE), operating profit margin and net income (Hansen and Mowen, 2005).

Liquidity measures the ability of the business to meet financial obligations as they fall due, without disrupting the normal, ongoing operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to balance sheet measures of the relationships between assets and liabilities and operational liquidity refers to cash flow measures.
Solvency measures the amount of borrowed capital used by the business relative to the amount of owner’s equity capital invested in the business. In other words, solvency measures provide an indication of the business’ ability to repay all indebtedness if all its assets were sold. Solvency measures also provide an indication of the business’ ability to withstand risks by providing information about the operation’s ability to continue operating after a major financial adversity (Harrington and Wilson, 1989).

Profitability measures the extent to which a business generates a profit from the factors of production: labor, management and capital. Profitability analysis focuses on the relationship between revenues and expenses and also on the level of profits relative to the size of investment in the business.

Repayment capacity measures the ability to repay debt from both operating and non-operating income. It evaluates the capacity of the business to service additional debt or to invest in additional capital after meeting all other cash commitments. Measures of repayment capacity are developed around an accrual net income figure. The short-term ability to generate a positive cash flow margin does not guarantee long-term survival ability (Jelic and Briston, 2001).

Financial efficiency measures the degree of efficiency in using labor, management and capital. Efficiency analysis deals with the relationships between inputs and outputs. Because inputs can be measured in both physical and financial terms, a large number of
efficiency measures in addition to financial measures are usually possible (Tangen, 2003).

2.4 Empirical Literature

Parker, Peters and Turetsky, (2002) Investigated various corporate governance attributes and financial survival 176 financially stressed firms 1988-1996 were sampled and analysed using Regression analysis. The findings showed that Firms that replaced their CEO with an outside director were more than twice as likely to experience bankruptcy. Larger levels of insider ownership are positively associated with the likelihood of firm survival. Kiel and Nicholson (2003) Examine the relationship between board demographics and performance 348 public listed companies using ASX 1996 SPSS analysis Tobin’s Q the results showed positive relationship between the proportion of inside directors and the market-based measure of firm performance. Board size is positively correlated with firm value.

O’Sullivan and Diacon (2003) examined whether mutual insurers employ stronger board governance than their proprietary counterparts and also examined the impact of board composition on the performance of proprietary(stock) and mutual companies using regression analysis among 53 life insures operating in the UK over the period 1984-1999 the results showed that mutual insurers had greater non-executive representation on their boards and that there is lack of consistent evidence on non-executive monitoring and impact on performance.
Dulewicz and Herbert (2004) investigated whether there is any relationship between board composition and behaviour, and company performance using data based on original study of 134 responses from a cross-section of companies. Follow up data based on 86 listed companies (1997-2000) using SPSS analysis CFROTA (cash flow return on total assets) ratio used for performance analysis. The findings indicated that board practices on identified tasks not clearly linked to company performance Limited support that companies with independent boards are more successful than others. Uzun, Szewczyz and Varma (2004) examined the relationship between fraud and board composition, board size, board chair, committee structure and frequency of board meetings by constructed database for a sample of 266 companies (133 that were accused of committing fraud and 133 no-fraud) during the period 1978-2001 using regression analysis. The findings showed that board composition and structure of oversight committees are significantly related to the incidence of corporate fraud. A higher proportion of independent directors indicated a less likelihood of fraud. Dalton, Daily, Ellstr and Johnson (1998) reviewed research on the relationships between board composition, leadership structure and financial performance using meta-analysis of 54 empirical studies of board composition, 31 empirical studies of board leadership structure. No meaningful relationship between board composition, leadership structure and financial performance.


The findings indicated low-profitability firms increase the independence of their boards. Firms with more independent boards do not perform better than other firms.

Local studies have also concentrated on the influence of board structure on financial performance. According to Ayogo, (2005) in his study on Corporate Governance in Kenya and the Record and Policies for good Governance” argued that corporate governance is concerned with the relationship between the internal governance mechanisms of corporations and society’s conception of the scope of corporate accountability. Many researchers, such as Musila (2007), in his study on Leadership Structure: Separating the CEO and Chairman of the Board” have argued that the erosion of investor confidence in Kenya has been brought about by companies’ board structure standards and a lack of transparency in the financial system.

Murage (2010), in his study on the Relationship between Corporate Governance and Financial performance of Parastatals in Kenya, concluded that large boards enhanced corporate performance and that when such boards were dominated by non-executive directors, it enhanced firm value. While the CEO duality did not significantly impact on financial performance measure of ROA, in his study, it had a positive relationship with financial performance in conflict with other studies. Ongore and K’Obonyo (2011), in their study on Effects of Selected Corporate Governance Characteristics on Firm Performance concluded that the role of boards was found to be of very little value, mainly due to lack of adherence to board member selection criteria.
Rashid, (2011) in his study on Board Structure Board Leadership Structure and Firm Performance: states that “corporate governance literature debated within two extreme streams of board practices examining whether the board structure in the form of representation of outside independent directors and structural dependence of the board influence the firm financial performance. He further argues that board structure and corporate performance jointly influence each other rather the board structure influencing corporate performance or corporate performance influencing board structure. He noted that board structure and financial performance influence each other but the effect is not immediate.

Aosa and Machuki, (2012) in their study on Board Diversity and Performance of Companies Listed in Nairobi Stock Exchange concluded that when using the Ordinary Least Squares (OLS) regression, their results show that there is a weak positive association between board diversity and financial performance. On overall, their results indicate a statistically not significant effect of board diversity on financial performance except for the independent effect of board study specialization on dividend yield.

2.5 Summary of the Literature Review

The available literature on the relationship between the board structure and firm performance reflects mixed results. The idea of endogenous relationship between board structure and corporate financial performance was advanced by Hermalin & Weisbach (2010), that is, board structure and corporate performance jointly influence each other rather the board structure influencing corporate performance or corporate performance
influencing board structure. Davidson & Rowe (2004) note that board structure and financial performance influence each other but the effect is not immediate.

There are some studies that have been conducted in Kenya on stock market focusing on various aspects of corporate governance of companies listed companies. They include Munga (2004), Mwangi (2007), Gitobu (2000), Munene (2007) among others. In spite of all these alternative studies that have been carried out, a gap in the literature relating examining the effect of board structure on financial performance of firms listed on Nairobi Securities Exchange exist because there are still no conclusive results that have been arrived at. Majority of these studies have examined the composite stock indices in relation to board structure of companies listed at the Nairobi Securities Exchange and examined whether companies incorporate available information, but did not determine what tasks the companies respond to in relation to board structure and to how important these tasks are to the financial performance of firms listed on Nairobi Securities Exchange and also did not establish the direction and magnitude of the interaction between board structure tasks and firms financial performance at the Nairobi Securities Exchange. Therefore, this study sought to fill these gaps.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methods that the researcher employed to facilitate execution of the study to satisfy study objectives. These steps include; research design, population of interest, sample and sampling techniques, data collection instruments, procedures and data analysis.

3.2 Research Design

Research design is the plan and structure of investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or program of the research (Robson, 2002). A descriptive research design was used in this study. The major purpose of descriptive research design provides information on characteristics of a population or phenomenon (Mugenda & Mugenda, 2003). Descriptive research was used as a pre-cursor to quantitative research designs as it provides the general overview giving some valuable pointers as to what variables are worth testing quantitatively.

3.3 Population of the Study

A population is an entire group of individuals, events or objects having common characteristics that conform to a given specification (Mugenda & Mugenda, 2003). The population of interest in this study constituted all listed companies quoted at the NSE for the period of five years from 2009 to 2013. The study was limited to listed companies due to lack of readily available data from private companies not listed in NSE. By December 2013 there were a total of sixty three firms listed in NSE (Appendix1).
3.4 Data Collection Techniques

Secondary financial data sources was used for the study, where annual financial reports of individual listed firms’ were analysed over the five year period where profitability was extracted and used as a measure of financial performance. Board structure data was obtained from corporate governance disclosure of individual listed firms in NSE. The data is filed by NSE and CMA library that also files details of the board of directors like the age, name, position and whether independent or dependent director was obtained which is a requirement by the companies listed to file with them is readily accessible and reliable.

3.5 Data Analysis Techniques

Being a comparative study, multivariate and univariate analysis models were used. Univariate analysis involved summary or descriptive statistics such as mean, frequencies, test of normality, mode, median, quartiles among others. This basically helps in characterizing different board structure across listed firms. Test of significance, $R^2$, ANOVA and T-test was used to establish the significance of the difference in financial performance means between the boards over the five-board term period.

3.5.1 Analytical Model

Despite several weaknesses in both financial and market-based measures, more and more studies now rely on market-based measures. For instance, Demsetz et al. (1985) used accounting measures, but Demsetz et al. (2001) shifted to market-based measures. As a result, there is a that believe higher reliance on market-based measure is justifiable for two reasons. First, market-based measure is less prone to accounting variations, and secondly, it reflects investor perceptions about the firm’s future prospects. The study used
multiple linear regression model which sought to establish the relationship between board structure and performance measured by return on equity. The regression model was:

\[ ROA = \alpha + \beta_1 \log (BS) + \beta_2 (Ratio) + \beta_3 (G) + \beta_4 (BC) + [\beta_5 (FZ) + \beta_6 (FA)] + \epsilon_i \]

Whereby \( \alpha \) is the y-intercept, \( \beta_1 - \beta_4 \) are the coefficients of the independent variables and \( \epsilon_i \) is the model significance established by the f-significance from Analysis of Variance (ANOVA).

**ROA** - return on assets; measure of net profit after tax divided by total assets of firm

**BS** - board size; number of the company’s board

**Ratio** - Board independence (ratio of non-executive to executive directors)

**Gender** - gender of the board of directors

**BC** - number of board committees of the firm

\([\beta_5 (FZ) + \beta_6 (FA)]\)-represents the influence of control variables on the model where

**FZ**-Firm size

**FA**-Age of the firm

The study used the regression coefficients to test the magnitude of the relationship between board structure and firm performance. The study applied F and t-significance from ANOVA and regression to establish the significances of such relationships.

**3.5.2 Diagnostic Test**

Diagnostic tests determine the goodness of the multiple linear regression models. Thus, the regression model was preceded by diagnostic tests. The diagnostic tests included: Durbin Watson (DW) test, multicollinearity tests, Breusch-Pagan test for heteroskedasticity and White Heteroskedasticity Test (LM) for constant variance of residual over time.
CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The current chapter presents the outcome of data analysis and findings in line with the objectives of the Study. The data were analyzed using the Statistical Program for Social Sciences (SPSS) version 18, by use of both descriptive and inferential statistics. Descriptive statistics such as mean, median, maximum, minimum, standard deviation, Skewness and Kurtosis were used. The regression model was preceded by diagnostic tests.

4.2 Descriptive Statistics

Table 4.1 gives the summary statistics of the main variables that have been included in the model including: minimum, maximum, mean, standard deviation, skewness, kurtosis and Jarque-Bera test for normality.

Table 4.1: Descriptive Statistics Results

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>Tobin’s Q</th>
<th>Board Size</th>
<th>Board independence</th>
<th>Gender</th>
<th>Board committee</th>
<th>Size</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.11</td>
<td>1.53</td>
<td>8.00</td>
<td>0.4994</td>
<td>2.043</td>
<td>3.319</td>
<td>391.64</td>
<td>13.44</td>
</tr>
<tr>
<td>Median</td>
<td>0.12</td>
<td>1.22</td>
<td>9.00</td>
<td>0.913</td>
<td>0.646</td>
<td>1.213</td>
<td>36.97</td>
<td>12.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.38</td>
<td>7.35</td>
<td>12.00</td>
<td>0.312</td>
<td>4.831</td>
<td>4.183</td>
<td>8,881.52</td>
<td>37.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.47</td>
<td>0.43</td>
<td>7.00</td>
<td>0.191</td>
<td>0.000</td>
<td>1.224</td>
<td>0.91</td>
<td>0.00</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.12</td>
<td>1.07</td>
<td>2.62</td>
<td>0.331</td>
<td>0.078</td>
<td>0.238</td>
<td>6.71</td>
<td>9.44</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.453</td>
<td>0.651</td>
<td>0.045</td>
<td>0.829</td>
<td>0.9979</td>
<td>0.698</td>
<td>0.787</td>
<td>0.877</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.045</td>
<td>3.004</td>
<td>2.034</td>
<td>3.223</td>
<td>3.567</td>
<td>2.314</td>
<td>3.312</td>
<td>3.456</td>
</tr>
<tr>
<td>Observations</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
</tr>
</tbody>
</table>
Table 4.1 above reports summary statistics for the sample, ROA is the ratio of operating profit before depreciation and provisions divided by total assets. Tobin’s Q is book value of total assets plus market value of equity minus book value of equity divided by book value of total assets. The results showed that board size had a mean of 8.00 with a minimum of 7.00, a maximum of 12.00, skewness 0.045 and kurtosis of +2.034. Comparatively, Board independence had a mean of .4994, minimum of .312, maximum of .191, skewness of 0.829 and kurtosis of +3.223. Gender had a mean of 2.043, minimum of 0.000, maximum of 4.831, skewness of 0.698 and kurtosis of +3.567. Board committee had a mean of 3.319, minimum of 1.224, maximum of 4.183, skewness of 0.698 and kurtosis of +2.314.

Analysis of skewness shows that all the variables are asymmetrical to the right around its mean. Additionally, ‘gender and board independence’ are highly peaked compared to other regressors. Jarque-Bera is a test statistic for testing whether the series is normally distributed. It measures the difference of the skewness and kurtosis of the series with those from the normal distribution using the null hypothesis of a normal distribution. A small probability value leads to the rejection of the null hypothesis of a normal distribution. Jarque-Bera test for normality shows that all variables are normally distributed.

4.3 Diagnostic Tests for Regression Assumptions

The preferred regression model was subjected to a number of diagnostic tests to evaluate the validity of the model. The diagnostic tests included: Breusch-Pagan test for heteroskedasticity and White Heteroskedasticity Test (LM) for constant variance of
residual over time, the ARCH (Autoregressive conditional heteroscedasticity) test which detects the problem of heteroscedasticity and Ramsey RESET test for the specification of the regression. Further regression and correlation analysis were used to establish the relationship between the independent and the dependent variables. Control variables i.e. age and size of the firm were incorporated to determine the changes in coefficient of determination (R^2 change). The results were presented in Table 4.2 below.

**Table 4.2: Diagnostic Tests**

<table>
<thead>
<tr>
<th>Test</th>
<th>F-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramsey RESET Test:</td>
<td>1.760507</td>
<td>0.163014</td>
</tr>
<tr>
<td>White Heteroskedasticity Test:</td>
<td>2.125333</td>
<td>0.079932</td>
</tr>
<tr>
<td>ARCH Test:</td>
<td>1.185552</td>
<td>0.324352</td>
</tr>
<tr>
<td>Breusch-Pagan Test for Heteroskedasticity</td>
<td>1.12472</td>
<td>0.573265</td>
</tr>
<tr>
<td>LM Test:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 shows that the parameters of the regression analysis were stable and the model can be used for estimation at 5 percent confidence level. The Ramsey RESET Test for model specification, ARCH Test and White Heteroskedasticity Test for constant variance of residuals and Breusch-Godfrey Serial Correlation LM Test for serially correlated residuals used the null hypothesis of good fit (specification, heteroskedasticity, and non-auto correlated against the alternative hypothesis of model mis-specification, heteroskendasticity, and auto correlated respectively. All the probability values were less than F-statistics coefficients at 5 percent level of significance and therefore the null hypothesis was not rejected. The diagnostic test outcomes were therefore satisfactory.
4.4 Pearson’s Correlation Coefficient Analysis for Corporate Board Structure and Firms’ Financial Performance

Correlation analysis was used to measure the degree of association between different variables under consideration. In this section, the study measured the degree of association between the corporate board structure variables and firms financial performance i.e. if the board structure proxies (board size, board independence, and gender and board committee) and firm’s financial performance. From the a priori stated in the previous chapter, a positive relationship is expected between the measures of corporate board structure and firms financial performance. Table 4.3 and 4.4 presents the correlation coefficients for all the variables considered in this study.

**Table 4.3: Correlation Analysis Results**

<table>
<thead>
<tr>
<th></th>
<th>Board independence</th>
<th>Board size</th>
<th>Gender</th>
<th>Board committee</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Board independence</strong></td>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board size</strong></td>
<td>Pearson Correlation</td>
<td>.624(***)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Pearson Correlation</td>
<td>-.447(***)</td>
<td>.409(***)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board committee</strong></td>
<td>Pearson Correlation</td>
<td>.528(***)</td>
<td>-.496(***)</td>
<td>-.225</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td></td>
</tr>
<tr>
<td><strong>ROA</strong></td>
<td>Pearson Correlation</td>
<td>.669(***)</td>
<td>.657(***)</td>
<td>.132(***)</td>
<td>.453(***)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.032</td>
<td>.005</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
<td>315</td>
</tr>
</tbody>
</table>

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

*Source: computed by researcher using data extracted from annual reports of listed firms*
From the correlation result for the study model in table 4.3, board independence has a strong positive correlation with ROA (.669, p=.000), the study further indicated that board size has also a strong and positive relationship with ROA (.654, p=0.000). The study also indicated that gender has a weak insignificant relationship with ROA (.132, p=0.32). Further the results indicates that board committee has a moderate and significant relationship with ROA (.453, p=0.21). This implies that board independence and board size influences performance of firms strongly, board committee influences firm performance to a moderate extent whereas gender has insignificant influence on firm’s financial performance.

4.5 Regression Analysis

Regression analysis was used to determine the impact of the corporate board structure variables on firms’ financial performance.

Table 4.4: Regression Coefficients of the Corporate Board Structure Variables and Firm’s Financial Performance Indicators

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>7.13</td>
<td>0.443</td>
</tr>
<tr>
<td>Board size</td>
<td>0.444</td>
<td>0.254</td>
</tr>
<tr>
<td>Board independence</td>
<td>0.738</td>
<td>0.262</td>
</tr>
<tr>
<td>Gender</td>
<td>0.612</td>
<td>0.372</td>
</tr>
<tr>
<td>Board committees</td>
<td>0.223</td>
<td>0.242</td>
</tr>
</tbody>
</table>

*Source: Research Findings*

The regression model

\[ ROA = \alpha + \beta_1(BS) + \beta_2(BI) + \beta_3(G) + \beta_4(BC) + \epsilon_i \]

Becomes \[ ROA = 7.13 + 0.444BS + 0.738BI + 0.612G + 0.223BC \]
According to the regression equation established, taking all factors into account (board size, board independence, gender and board committee financial performance measured by ROA is 7.13. The Standardized Beta Coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this predictor variable has a large effect on the criterion variable. The t and Sig (p) values give a rough indication of the impact of each predictor variable – a big absolute t value and small p value suggests that a predictor variable is having a large impact on the criterion variable. At 5% level of significance and 95% level of confidence, board size had a 0.000 level of significance, board independence had a 0.002 level of significance, gender had a 0.000 level of significance and board committees had a 0.003 level of significance.

4.5.1 Regression Model Summary

From the results shown in Table 4.5, the model shows a goodness of fit as indicated by the coefficient of determination (R²) with a value of 0.7338. This implies that the independent variables gender of the board of directors; Board independence, board size and board committee explain 73.38 percent of the variations of financial performance of companies listed on NSE.

The study therefore identifies gender of the board of directors; Board independence, gender distribution and board committee as critical factors for enhancing financial performance of the companies listed on NSE.
Table 4.5: Regression Model Summary of Corporate Board Structure Variables and Financial Performance Indicators

<table>
<thead>
<tr>
<th>Model Summary</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>R</td>
<td>R Square</td>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>1</td>
<td>0.8566</td>
<td>0.7338</td>
<td>0.7011</td>
</tr>
</tbody>
</table>

Source: Research Findings

Predictors: (Constant), gender of the board of directors; Board independence, board size and board committee.

The study then incorporated in the effect of control variables i.e. age of the firm and size of the firm. The results are summarized in Table 4.6.

a) The Goodness-of-fit

Table 4.6: Regression Results

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>R² Change</td>
</tr>
<tr>
<td>1</td>
<td>.653(a)</td>
<td>.856</td>
<td>.7338</td>
</tr>
<tr>
<td>2</td>
<td>.873(b)</td>
<td>.901</td>
<td>.811</td>
</tr>
</tbody>
</table>

Predictors

a. Gender of the board of directors; Board independence, board size and board committee.

b. Gender of the board of directors; Board independence, board size, board committee, age and size.
The results in Table 4.6 show that corporate board structure explain 73% of the variation in firms financial performance ($R^2 = .7330$). At step 2, age and size of the firm adds significantly to the corporate board structure towards firms financial performance as the variation increased from .730 to .811 ($R^2$ change=.081 p-value=.000). The results reveal that the variance explained by age and size of the firm as control variables is significant ($F=12.313$, p-value=.001). The results revealed that the regression coefficients for corporate board structure increased from .653 to .873 when age and size of the firm were added to the regression suggesting that age and size of the firm are exerting a strong control effect.

**Table 4.7: Analysis of Variance (ANOVA)**

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>F-statistics</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>52.55</td>
<td>4</td>
<td>14.93</td>
<td>18.33</td>
<td>88.33</td>
</tr>
<tr>
<td>Residual</td>
<td>3.34</td>
<td>19</td>
<td>4.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>55.89</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NB:** F-critical Value 88.33 (statistically significant if the F-value is less than 88.33: from table of F-values).

a. **Predictors:** (Constant), board size, board independence, gender and board committee.

The value of the F statistic, 18.33 indicates that the overall regression model is significant hence it has some explanatory value i.e. there is a significant relationship between the predictor board size, board independence, gender and board committee (taken together) and financial performance of companies listed at the NSE.
4.5 Chapter Summary

This chapter presented data analysis and interpretation. Descriptive statistics such as mean, median, maximum, minimum, standard deviation, Skewness and Kurtosis were used. The regression model was preceded by diagnostic tests of regression assumption which included the Ramsey RESET Test for model specification, ARCH Test and White Heteroskedasticity Test for constant variance of residuals and Breusch-Godfrey Serial Correlation LM Test for serially correlated residuals. These tests used the null hypothesis of good fit (specification, heteroskedasticity, and non-auto correlated) against the alternative hypothesis of model mis-specification, heteroskedasticity, and auto correlated respectively. Further correction and regression analysis were performed to determine if the variables were significant in explaining the dependent variable financial performance. ANOVA was also used to determine if the model has explanatory value i.e. the influence of the independent variables on the dependent variable.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This chapter summarizes the study and makes conclusion based on the results. The implications from the findings and areas for further research are also presented. This section presents the findings from the study in comparison to what other scholars have said as noted under literature review.

5.2 Summary
The main objective of the study was to establish the effect of corporate board structure on financial performance of companies listed in Nairobi Securities Exchange. Therefore a descriptive research design was used to study whether there is an effect of corporate board structure on financial performance of firms listed in Nairobi Securities Exchange. The population of interest in this study constituted all listed companies quoted at the NSE for the period of five years from 2009 to 2013. Secondary financial data sources was used for the study, where annual financial reports of individual listed firms was used over the five year period where profitability was extracted and used as a measure of financial performance.

The findings showed that corporate board structure variables considered in the model are significantly associated with financial performance as indicated by the positive mean values and their respective standard deviations. From skewness, the study observed that all the variables are positively skewed which clarified that the variables are asymmetrical.
Skewness value of all the variables is very near to zero so it is relatively symmetrical. Kurtosis values indicated that all variables have platy-kurtic distribution and it is concluded that variables are normally distributed.

The descriptive statistics of the variables used in the analysis of the sample was very crucial for the study. The study presents the descriptive statistics of the variables used in the analysis: gender of the board of directors; Board independence, board size, board committee and return on asset ratio (ROA). The findings show that corporate board structure is significantly associated with firm’s financial performance as indicated by the positive mean values and their respective standard deviations. From skewness, the study revealed that all the variables are positively skewed which clarified that the variables are asymmetrical. Skewness value of all the variables is very near to zero so it is relatively symmetrical. Kurtosis values indicated that all variables have platy-kurtic distribution and it is concluded that variables are normally distributed.

The study further determined the correlation between the independent variables used in the study i.e. corporate board structure variables and firms financial performance indicators. For this analysis Pearson correlation was used to determine the degree of association within the independent variables and also between independent variables and the dependent variable. The analysis of these correlations seems to support the hypothesis that each independent variable in corporate board structure has its own particular informative value in the ability to explain firm’s financial performance. The significance of the coefficients was calculated at the level of 95%.
The study findings indicate that corporate board structure variables i.e. board independence, board size and board committee are statistically significance to firms’ financial performance indicators as indicated by the positive and strong Pearson correlation coefficients whereas gender is statistically insignificant with financial performance indicators as indicated by their weak Pearson correlation coefficients. This implies that gender distribution may not influence financial performance of companies listed on NSE.

According to the regression equation established, taking all factors into account (gender of the board of directors; Board independence, board size and board committee financial performance measured by ROA will be 7.13. The Standardized Beta Coefficients gave a measure of the contribution of each variable to the model. A large value indicated that a unit change in this predictor variable has a large effect on the criterion variable. The t and Sig (p) values gave a rough indication of the impact of each predictor variable – a big absolute t value and small p value suggests that a predictor variable is having a large impact on the criterion variable.

From the results, the model showed a goodness of fit as indicated by the coefficient of determination $R^2$ (0.7338). This implies that the independent variables gender of the board of directors; Board independence, board size and board committee explain 73.38 percent of the variations of financial performance of companies listed on NSE. The study therefore identified these as critical factors for enhancing financial performance of the companies listed on NSE.
Further the study carried out the hypothesis testing between corporate board structure variables and financial performance. A Pearson coefficient measure showed a strong, significant, positive relationship between corporate board structure and financial performance of companies listed on NSE in Kenya. Therefore basing on these findings the study rejected the null hypothesis that there is no relationship between corporate board structure and financial performance of companies listed on NSE in Kenya and accepted the alternative hypothesis that there exists a relationship between corporate board structure and financial performance of companies listed on NSE in Kenya.

5.3 Conclusion
The analysis of the correlations results seemed to support the hypothesis that each independent variable in corporate board structure has its own particular informative value in the ability to explain financial performance. The significance of the coefficients was calculated at the level of 95%. The study findings indicate that corporate board structure variables i.e. gender, board independence and board committee are statistically significant to firms’ financial performance indicators as indicated by the positive and strong Pearson correlation coefficients whereas gender is statistically insignificant with financial performance indicators as indicated by their weak Pearson correlation coefficients.

According to the regression equation established, taking all factors into account (gender of the board of directors; Board independence, board size and board committee, financial performance measured by ROA will be 7.13. A Pearson coefficient measure showed a
strong, significant, positive relationship between corporate board structure and financial performance of companies listed on NSE in Kenya. Therefore basing on these findings the study rejected the null hypothesis that there is no relationship between corporate board structure and financial performance of companies listed on NSE in Kenya and accepted the alternative hypothesis that there exists a relationship between corporate board structure and financial performance of companies listed on NSE in Kenya.

The findings showed that corporate board structure variables considered in the model are significantly associated with financial performance as indicated by the positive mean values and their respective standard deviations. From skewness, the study observed that all the variables are positively skewed which clarified that the variables are asymmetrical. Skewness value of all the variables is very near to zero so it is relatively symmetrical. Kurtosis values indicated that all variables have platy-kurtic distribution and it is concluded that variables are normally distributed.

5.4 Policy Recommendations

The study recommends that stakeholders in listed companies should take in to account the corporate board structure variables i.e. gender, board size, board independence and board committee when electing board of directors. That is the body should have equal distribution in terms of gender, board size, board committee and board independence to minimize stakeholders conflicts and improve on overall firm performance.

The study recommends that corporate board structure should be based on skills, experience and professional qualifications to steer managerial functions as opposed to
gender as it is insignificant in explaining firms financial performance. Requirements for one to be elected to the board of directors should be well stipulated in terms of gender balance. This will facilitate satisfaction in management and therefore improved management of the NSE listed companies in Kenya.

The variables considered in the study explained 73% of the variation in firm financial performance implying that there are other important factors not included in the model and therefore the study recommends that the management should put in to consideration such factors in order to enhance the effectiveness of corporate governance index. The study also recommends that policy makers should set an index on corporate governance to act as a base to all companies listed at the NSE so that the efficiency of governance committees can be enhanced. This will create a management momentum among the committees mandated for corporate governance issues.

There should be continuous revision of policies governing the committees on the corporate governance boards so that the ineffective clauses can be improved since the governance index keep on changing as a result of prevailing economic conditions. This will enable policy makers in the listed firms to decide on the possible best guidelines that will enhance the overall management issues as far as corporate governance is concerned.

5.5 Limitations of the Study

Although this study helped to shed light on the dynamics of corporate governance on financial performance of companies listed at the NSE, it was subject to a number of limitations.
These mainly related to the setup of the study relative to the resources available within the research period. As such the constraints influenced the scale of the study but did not affect the conduct of the research once the design was arrived at.

The findings of this study may not be generalized to all listed firms but can be used as a reference to listed firms in developing countries since they face almost the same challenges due to the same prevailing economic situations as opposed to listed firms in developed countries. The results thus cannot be generalized to all listed companies in NSE. This is because different companies may have different strategies for managing corporate board structure issues.

Since the main purpose of this study is to identify the relationship between corporate board structure and financial performance of NSE listed companies in Kenya, NSE considered some information sensitive and confidential and thus the researcher had to convince them that the purpose of information is for academic research only and may not be used for any other intentions.

Corporate board structure keep on changing from period to period depending on prevailing economic situations and demand on the capital market. The findings therefore may not reflect the true effect of corporate board structure across the companies listed for a period of 5 years since some companies are delisted and listed again depending on their performance on NSE.

Due to time, cost and operational constraints the study used a cross-sectional research design and focused on all listed companies at the NSE. Data were collected from the companies’ publications at the NSE and capital market authority.
This is helpful in getting insight about the dynamics of the study variables at a particular point in time. For this reason there are opportunities for longitudinal and wider studies in the same area of research. The study focused on a limited number of variables and constructs but firm’s financial performance is influenced by many more factors. Other variables can provide additional insights and explanations concerning the performance indicators in the companies.

5.6 Suggestions for Further Research

The study suggests that more studies to be carried out taking in to account the prevailing macroeconomic variables as the control variables since they play major roles in decision making among the board of directors. More studies should also be carried out taking in to account other performance variables such as leverage and Return on equity as opposed to the current study which only considered Return on Assets as a measure of financial performance. A similar study should also be carried out on relationship between firms’ financial performance and corporate board structure in Kenya incorporating more corporate governance variables as opposed to the current study which took into consideration only four corporate board structure.

The findings add to the existing conceptual and empirical evidence that corporate governance influences firms financial performance. In addition, the findings add to the existing conceptual and empirical evidence that this relationship is controlled by other factors such as size and age of the respective firms. The inclusion of additional factors not covered in this study could bring more insights into the corporate governance and financial performance of the firms listed at the NSE. The factors used to measure the
study variables, namely; board size, board independence, board committee and gender on firm’s financial performance are not exhaustive. A further review of both corporate governance and firm’s financial performance would identify additional factors that contribute to the concept of firms performance. The additional factors could enhance the robustness of the study models and generalizability and validity of the results.

Future studies on corporate governance on firm financial performance should use both subjective and objective measures of performance so that the relationship between the two can be investigated. Balakrishnan (1996) contends that there is a strong relationship between subjective and objective measures of firm financial performance; however, this relationship has not been tested in the context of the all the listed firms at the NSE. It may be useful for future studies to develop constructs that combine both subjective and objective firm financial performance measures.

The replication of this study in other sectors of the economy such as private sector, other firms in the service industry, the manufacturing sector can give a more detailed view of the nature of the relationship identified in the study. It would be appropriate to study the relationship between corporate governance and firm’s financial performance of the different company categories. The replication of this study in other countries especially in the Sub-Saharan region would demonstrate the universality and significance of the corporate governance relationship in general and on the financial performance of companies in particular.

With only secondary data, triangulating the data is complex. Future research should consider combining both secondary and primary data. Finally, examining the relationship
between corporate governance and other strategic business orientations, marketing and competitive strategies would contribute to a better understanding of the determinants of firms’ financial performance.
REFERENCES


APPENDICES

APPENDIX I: COMPANIES LISTED ON THE NSE AS AT 31ST DECEMBER 2013

Kapchorua Tea Co. Ltd
Kakuzi
Limuru Tea Co. Ltd
Rea Vipingo Plantations Ltd
Sasini Ltd
Williamson Tea Kenya Ltd

COMMERCIAL AND SERVICES
Express Ltd
Kenya Airways Ltd
Nation Media Group
Standard Group Ltd
TPS Eastern Africa (Serena) Ltd
Scangroup Ltd
Uchumi Supermarket Ltd
Hutchings Biemer Ltd

TELECOMMUNICATION AND TECHNOLOGY
AccessKenya Group Ltd
Safaricom Ltd  

**AUTOMOBILES AND ACCESSORIES**  
Car and General (K) Ltd  
CMC Holdings Ltd  
Sameer Africa Ltd  
Marshalls (E.A.) Ltd  

**BANKING**  
Barclays Bank Ltd  
CFC Stanbic Holdings Ltd  
Diamond Trust Bank Kenya Ltd  
Housing Finance Co Ltd  
Kenya Commercial Bank Ltd  
National Bank of Kenya Ltd  
NIC Bank Ltd  
Standard Chartered Bank Ltd  
Equity Bank Ltd  
Co-operative Bank of Kenya Ltd.

**INSURANCE**  
Jubilee Holdings Ltd  
Pan Africa Insurance Holdings Ltd  
Kenya Re-Insurance Corporation Ltd
INVESTMENT

City Trust Ltd
Olympia Capital Holdings ltd
Centum Investment Co Ltd

MANUFACTURING AND ALLIED

B.O.C Kenya Ltd
British American Tobacco Kenya Ltd
Carbacid Investments Ltd
East African Breweries Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd
Eveready East Africa Ltd
Kenya Orchards Ltd
A.Baumann CO Ltd

CONSTRUCTION AND ALLIED

Athi River Mining
Bamburi Cement Ltd
Crown Berger Ltd
E.A.Cables Ltd
E.A.Portland Cement Ltd
ENERGY AND PETROLEUM

KenolKobil Ltd

Total Kenya Ltd

KenGen Ltd

Kenya Power & Lighting Co Ltd

Source, NSE report, 2013
APPENDIX 1I: RAW DATA

Data collection sheet for the relationship between corporate board structure and financial performance of companies listed at Nairobi security exchange

<table>
<thead>
<tr>
<th>Company</th>
<th>Board independence</th>
<th>Gender</th>
<th>Board Size</th>
<th>Board Committee</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eaagads Ltd</td>
<td>NSE 4</td>
<td>34.05</td>
<td>8</td>
<td>3</td>
<td>0.321</td>
</tr>
<tr>
<td>Kapchorua Tea Co. Ltd</td>
<td>NSE 3</td>
<td>34.05</td>
<td>7</td>
<td>3</td>
<td>0.422</td>
</tr>
<tr>
<td>Kakuzi</td>
<td>NSE 2</td>
<td>39.85</td>
<td>9</td>
<td>3</td>
<td>0.212</td>
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<tr>
<td>Limuru Tea Co. Ltd</td>
<td>NSE 5</td>
<td>34.94</td>
<td>9</td>
<td>2</td>
<td>0.321</td>
</tr>
<tr>
<td>Rea Vipingo Plantations Ltd</td>
<td>NSE 4</td>
<td>32.23</td>
<td>8</td>
<td>4</td>
<td>0.512</td>
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<td>44.25</td>
<td>6</td>
<td>3</td>
<td>0.412</td>
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<td>49.10</td>
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<td>30.94</td>
<td>9</td>
<td>3</td>
<td></td>
</tr>
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<td>Company Name</td>
<td>Exchange</td>
<td>Market Cap</td>
<td>P/E</td>
<td>Dividend</td>
<td>Price-to-Book</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------</td>
<td>------------</td>
<td>-----</td>
<td>----------</td>
<td>---------------</td>
</tr>
<tr>
<td>Kenya Airways Ltd</td>
<td>NSE L</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>0.413</td>
</tr>
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<td>Nation Media Group</td>
<td>NSE</td>
<td>4</td>
<td>9</td>
<td>3</td>
<td>0.372</td>
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<tr>
<td>Standard Group Ltd</td>
<td>NSE</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>0.321</td>
</tr>
<tr>
<td>TPS Eastern Africa (Serena) Ltd</td>
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<td>9</td>
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<td>Dividend</td>
<td>EPS</td>
<td>P/E Ratio</td>
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<td>Diamond Trust Bank Kenya Ltd</td>
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<td>5</td>
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</tr>
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<td>Company</td>
<td>Exchange</td>
<td>Price</td>
<td>Volume</td>
<td>Turnover</td>
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<td>----------------------------------------------</td>
<td>----------</td>
<td>-------</td>
<td>--------</td>
<td>----------</td>
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<td>5</td>
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<td>43.02</td>
<td>2</td>
<td>6</td>
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</table>

*Source, NSE report, 2013*