THE RELATIONSHIP BETWEEN MANAGERIAL COMPOSITION AND FIRM PERFORMANCE: A QUANTITATIVE STUDY ON KENYAN LISTED COMPANIES.

BY

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MAY 2012
DECLARATION

This project is my original work and has never been submitted for a degree in any other University.

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SUPERVISORS APPROVAL

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DEDICATION

This project report is dedicated to the Almighty God, who gave me the physical, spiritual and mental strength to undertake and accomplish this project. It is also dedicated to my entire family especially my dear parents Mr. and Mrs. Peter Achira and my beloved son Lance Magoma for the love, support and prayers throughout my M.B.A program. God bless you.
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ABSTRACT

Due to various corporate scandals and failures, there has been a renewed interest on the role of boards in the performance of firms. In the light of Third world countries’ financial crisis, the effectiveness of good governance in African economies has been a confronting issue. Agency problems arise when ownership is separated from management. In developing markets like East Africa, investors are eager to improve the governance mechanism. Researches on this topic worldwide have increased in recent years; however, many of these studies have obtained inconclusive findings because of various reasons such as fast changing of the market, management methods and different approaches. Board of directors as the monitors for management and trustee for shareholders play an important role. This situation has raised a key issue in corporate governance of how to effectively monitor managers and to exercise control so that managers act in the best interest of the shareholders. Governed firms have been noted to have good firm performance. There is no gainsaying of the fact that corporate governance structure has a critical impact on the responsive ability of a firm to external factors that impinge on firms’ performance. This study reviewed previous literatures and studies from both advanced markets and Kenyan market. It examined the correlation between board composition and firm’s performance of Kenyan listed companies. A quantitative approach was adopted to examine the correlation between managerial composition and firm performance of listed companies in NSE. The research population was 55 companies listed in NSE. Sample size of 60% was derived through stratified sampling method. Secondary data was used for this study and data sourced from annual audited financial statements of the listed companies in NSE. Empirical analysis was undertaken using Generalized Least Squares analyses. Softwares that were used included SPSS and STATA. Results of data analysis were interpreted in line with the research objectives and findings recommendations and conclusions reported. The findings of the study showed that board characteristics such as board size, board independence and gender diversity were positively related with firm performance, while the number of board members with PhD level education was found to be negatively related to firm performance. The findings also provide partial evidence to different governance theories, further indicating the need for theoretical pluralism to gain insights into boards’ functioning.
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OPERATIONAL DEFINITION OF TERMS

Corporate governance: Corporate Governance refers to the manner in which the power of a corporation is exercised in the stewardship of the corporation’s total portfolio of assets and resources with the objective of maintaining and increasing shareholder value and satisfaction of other

Firm performance: Firm performance can be viewed in two different perspectives; financial performance and non-financial performance. Financial performance is measured by the proxies, ROA.

Stock market: According to Saunders and Cornett (2009) a stock market is where the price of a firm stocks are determined or established. There are two basics types of markets; Physical location Exchange like the NYSE and the American Stock Exchange (AMEX), NSE and the several other stock exchanges. And the Electronic or Dealer based markets like the NASDAQ stock markets.

Panel data: Panel data involves the pooling of observations on a cross section of units over several periods and facilitate identification of effects that are not detectable in pure cross section or time series regression.

Fixed Effects Estimation: the term fixed effects estimation in panel data analysis was used to refer to an estimator for the coefficients in the regression model. If fixed effects are assumed time independent effects will be imposed for each entity that are possibly correlated with the regressions.

Error term: the error term in a regression equation represents the effects of the variables that was omitted from the equation
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AMEX</td>
<td>American Stock Exchange</td>
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<tr>
<td>BOD</td>
<td>Board of Directors</td>
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<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>GLS</td>
<td>Generalized Least Square</td>
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<td>NASDAQ</td>
<td>National Association of Security Dealers</td>
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<td>NSE</td>
<td>Nairobi Stock Exchange</td>
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<td>NYSE</td>
<td>New York Stock Exchange</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<td>ROA</td>
<td>Return on assets proxy for firm performance</td>
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CHAPTER ONE:  

1.0 : INTRODUCTION

1.1: Background of the study

The contemporary business environment is characterized by uncertainty and risk, making it increasingly difficult to forecast and control the tangible and intangible factors, which influence firm performance (Bettis & Hitt, 1995; Kuratko & Morris, 2003). Customers are becoming more demanding, necessitating increased focus on managerial professionalism and quality of service delivery (Lai & Cheng, 2003). In response to the external pressures, firms resort to different strategic responses such as restructuring, downsizing, business process reengineering, benchmarking, total quality management, and management by objectives etc, to improve and sustain their competitive positions (Mangenelli & Klein, 1994; Jacka & Keller, 2002). In a dynamic environment, 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 (Shleifer & Vishny, 1996; Roberts, McNulty & Stiles, 2005), hiring and firing of management (Hermalin & Weisbach, 1991), provide and give access to resources, (Hillman, Canella & Paetzold, 2000; Hendry & Kiel, 2000), and providing strategic direction for the firm (Kemp, 2006).

Boards also have a responsibility to initiate organizational change and facilitate processes that support the organizational mission (Hill, Green & Eckel, 2001; Bart & Bontis, 2003). Further, the boards seek to protect the shareholder’s interest in an increasingly competitive environment while maintaining managerial professionalism and accountability in pursuit of good firm performance (Hendry & Kiel, 2004; McIntyre, Murphy & Mitchell, 2007). The role of board is, therefore, quite daunting as it seeks to discharge diverse and challenging responsibilities. The board should not only prevent negative management practices that may lead to corporate failures or scandals but also ensure that firms act on opportunities that enhance the value to all stakeholders.
To understand the role of board, it should be recognized that boards consists of a team of individuals, who combine their competencies and capabilities that collectively represent the pool of social capital for their firm that is contributed towards executing the governance function (Linck (2008)). As a strategic resource, the board is responsible to develop and select creative options in advancement of the firm. Given the increasing importance of boards, it is important to identify the board characteristics that make one board more effective from another. The Wealth of Nations suggested that a manager with no direct ownership of a company would not make the same decisions, nor exercise the same care, as would an owner of that company. This view is in line with the agency theory proposed by Jensen and Meckling (1976). According to agency theory, when there is separation of management and ownership, the manager (agent) seeks to act in self-interest, which is not always in the best interests of the owner (principal) and departs from those interests required to maximize the shareholder returns.

The separation of ownership and control discussed by Jensen and Meckling (1976) creates many situations in which the interests of managers and owners may not coincide. Agency theory is based on the notion that the delegation of managerial responsibilities by principal (owners) to agents (managers) requires the presence of mechanisms that either align the interests of principles and agents (such as stock ownership plans and performance contingents compensation) or monitor the performance of managers to ensure that they use their knowledge and the firm's resource to generate the highest possible returns. More specifically agency theory suggests that the best option for owners is to design contracts that align manager/owner interests. When the optimal compensation contracts cannot be achieved managers are reluctant to bear greater risk, and owners must create or utilize existing mechanism to monitor managerial action (Fama, 1983).

It should be noted, however that theories differ significantly regarding their assessment of the effectiveness of board in performing this role (Dalton and Dalton, 2005). Agency theory is based on the premise that management action can be monitored thorough established governance structure. Both the market corporate control, as well as the Board of directors (B.O.D) is seen as good mechanism.
In particular outside directors (individuals who are not current or former employees of an organization) are seen as providing more independent monitoring. Since outside directors are not part of the organization management team, they are not subject to the same potential conflict of interest that are likely to affect the judgments of inside directors.

Corporate governance in firms

Corporate Governance is according to The (OECD) (2004) "a set of relationship between a company's management, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined". Shleifer and Vishny (1996), gave an explanation that corporate governance is required when the suppliers of finance, such as shareholders and the owners of corporate, do not run the firms by themselves, but hire a management team to be responsible for the business and activities of the firms. Under the condition of the separation of ownership and management, the "agency problem" came up. "The issue of corporate governance arises when one departs from an orthodox model of the owner-managed firm, and moves towards the separation of ownership from decision-making control." (Conyon&Peck, 1998).

The separation of ownership and management caused a situation that the goals between owners and managers were not aligned. Managers are supposed to pursue profit only for shareholders, while the separation of ownership and management makes it possible for them to satisfy their own interests. In this case, shareholders need to efficiently monitor behavior of management team so as to ensure that managers peruse profit only for shareholders. Nowadays efficient mechanism of governance is required by both advanced and developing markets. "Economies with efficient economic policies and stable political system are a big draw among the investors" (Dalton and Dalton, 2005). From the definition of corporate governance, we can comprehend what corporate governance do and how it can be helpful to build a better investing environment for investors.
Yuan (2009) defined corporate governance as “institutions that influence how business corporations allocate resources and return” and “the organizations and rules that affect expectations about the exercise of control of resources in firm.” To sum up, according to many books and articles, such as Kim and Nofsinger, Shleifer and Vishny, and other researches, notion of corporate governance may have been defined and discussed by different words, but as a whole, it can be concluded as that under the separation of ownership and management, there is a series of organizations composed by corporations, controlled mechanism, policies, laws, and institutions. “People who sink the capital need to be assured that they will get back the return on this capital”, the corporate governance mechanism provided this assurance. (Shleifer and Vishny, 1996) The mechanism of corporate governance can be categorized into internal corporate governance controls and external corporate governance controls. The function of internal corporate governance controls is usually established to ensure the correctness of important decisions by optimizing the rights of directors, as well as to constitute and bring in effective plans on motivation of management.

Firm performance

Firm performance was an essential concept in this research. Measurement of performance gives indication as to the effectiveness of a firm. Whatever management decision is made within corporation is expected to have a relationship with its performance and hence its effectiveness. However, measuring firm performance has been a major challenge to scholars and practitioners as well. Staw (1986) proposes that performance be staged at the level of individual, group or organization. Peacock (1995) offers that there is no correct definition of performance and suggest that conflicts between managerial perspectives be recognized. The Sink and Turtle model of 1989 proposes that performance of an organization system is a complex interaction among seven performance criteria: effectiveness, efficiency, quality of products, and productivity quality of work life, innovation and profitability. Researches advanced in these area show that board composition might directly affect firm performance.
1.2: Statement of the problem

The issue of board composition and its relationship on firm performance has generated strong debate over the years (Dalton and Dalton, 2005). Studies conducted in USA and China by Yermack (1996) and Linck (2008) found that board composition had a positive relationship with firm performance. Despite the great emphasis on the link between board composition, none of the above studies relates how the board composition variable affect the financial performance collectively. Studies conducted on board composition and firm performance support the inclusion of other variables in order to understand the complexity of the board.

Fama and Jensen (1983) describes the role of board as monitoring the top level decision managers for the share holders. The number of board members has an impact on the monitoring of the board. A boards with a great number of members may have poorer communication and hence poorer decision making. The performance of a smaller board is better than larger boards. According to Yermack (1996) a board with a smaller number of members is more efficient. He concluded that smaller board can efficiently monitor the management. Board competency has a complex of set behaviors’ built on the components of knowledge, skills and attitude. This list depends on the businesses which the company engages in. Some companies prefer directors who are old since they feel that the competency goes with age, while others prefer the professionally qualified directors especially those who have PhDs. Board member gender looks at the male and female percentage in the total number of directors, while the board independence looks at the competency of independent and dependent directors. Increasing the level of the proportion of independent directors should simultaneously increase firm performance as they are more effective monitors of managers (Mehran, H, 1995). Most of the firms’ shareholders have remained in dilemma for a very long time. They are not sure whether they should sacrifice their resource in order to have a board which is going to have a positive impact on their firms’ performance or should they ignore the role played by the boards and invest their resources on other factors which affect the performance of their firms.
While all these studies have looked at board composition and performance of firms, no known study has looked at board size, board competency, and board member gender and board independence simultaneously. This study is an attempt to answer the research questions; whether there is a relationship between board composition and firm performance, and if there is a relationship, which is positive what board characteristics increase or enhance the efficiency of the board, and should the shareholders of companies invest much in terms of compensating the board members or not?

1.3: Objectives of the study

1.3.1: General objectives

The purpose of the study was to derive the relationship between the board compensation and the firms’ performance of Kenyan companies, which were listed in Nairobi Stock Exchange (NSE).

1.3.2: Specific objectives

a) To examine the relationship between board size and performance of a firm.

b) To establish the relationship between board member gender and performance of a firm.

c) To identify the relationship between board independence and performance of a firm.

d) To examine the relationship between board competency and performance of a firm.

1.4: Research questions

The following questions will guide this study

a) How did the board size affect performance of a firm?

b) What was the relationship between board member gender and performance of the firm?

c) What was the impact of board independence on the performance of a firm?

d) What was the impact of the board competency on the performance of a firm?
1.5: Significance of the Study

The Top Management and policy makers.

The study may help the top management and policy makers to realize the importance of the board components and the impact they have in the performance of the firm and the costs of meeting governance requirements.

The Future Researchers

The study may also be of great help to other researchers in the same field, which will act as a resource material to facilitate their study. They could use it as a point of reference during their study as well as fill the gaps that have been left out.

Stakeholders and businesses

Findings of the study may be used by these stakeholders to identify the benefits of a strategic board.

1.6: Limitation of the study

First, this study was conducted within listed companies, because the information that was necessary in this study was available in annual reports of listed companies and some other qualitative data also could be found in financial release. For the data selection, only listed companies in NSE were chosen, so the results of this research may not represent all companies in whole Kenya market.

Second, due to the time limitation and, the time horizon of sample was just within 4years. Even though this choice made a newer data as sample, it would not represent a long durative time period. So the result may be different if data will be selected from some other time period.

Finally, managerial composition is one of most important determinants which can have an impact on firm performance, and characters of board encompass many aspects, for example directors backgrounds such as director's experience, tenure, etc. However, some of these indicators were not easily measured by math or data and information was not available.
CHAPTER TWO:

2.0: LITERATURE REVIEW

2.1: Introduction

This chapter discussed the various views of other researchers who have carried out the study in other parts of the world. The literature review was discussed in two major classification of dependent and independent variables.

Boards are expected to perform different functions, for example, monitoring of management to mitigate agency costs (Eisenhardt, 1989; Shleifer & Vishny, 1997), hiring and firing of management and provide and give access to resources, grooming CEO (Vancil, 1987) and providing strategic direction for the firm. Boards also have a responsibility to initiate organizational change and facilitate processes that support the organizational mission (Hill, Green & Eckel, 2001; Bart & Bontis, 2003). Further, the boards seek to protect the shareholder’s interest in an increasingly competitive environment while maintaining managerial professionalism and accountability in pursuit of good firm performance. The board should not only prevent negative management practices that may lead to corporate failures or scandals but also ensure that firms act on opportunities that enhance the value to all stakeholders. To understand the role of board, it should be recognized that boards consists of a team of individuals, who combine their competencies and capabilities that collectively represent the pool of social capital for their firm that is contributed towards executing the governance function. Given the increasing importance of boards, it is important to identify the board characteristics that make one board more effective from another. This project tried to identify and examine the board characteristics that make it effective and contribute towards good firm performance.

2.2: Board composition

This subsection describes the components of board composition; namely, board size, board independence, board member gender and board competency.
2.2.1: Board size

The earliest literature on board size is by Lipton and Lorch (1992) and Jensen (1993). Jensen (1993) argued that the preference for smaller board size stems from technological and organizational change that ultimately leads to cost cutting and downsizing. Hermalin and Weisbach (2003) argued the possibility that larger boards can be less effective than small boards. When boards consist of too many members agency problems may increase, as some directors may tag along as free-riders. Lipton and Lorch (1992) recommended limiting the number of directors on a board to seven or eight, as numbers beyond that it would be difficult for the CEO to control.

A large board could also result in less meaningful discussion, since expressing opinions within a large group is generally time consuming and difficult and frequently results in a lack of cohesiveness on the board (Lipton and Lorch, 1992). In addition, the problem of coordination outweighs the advantages of having more directors (Jensen, 1993) and when a board becomes too big, it often moves into a more symbolic role, rather than fulfilling its intended function as part of the management (Hermalin and Weisback, 2003). On the other hand, very small boards lack the advantage of having the spread of expert advice and opinion around the table that is found in larger boards. Furthermore, larger boards are more likely to be associated with an increase in board diversity in terms of experience, skills, gender and nationality (Dalton and Dalton, 2005). Expropriation of wealth by the CEO or inside directors is relatively easier with smaller boards since small boards are also associated with a smaller number of outside directors. The few directors in a small board are preoccupied with the decision making process, leaving less time for monitoring activities. The above arguments were empirically tested and a negative association between board size and performance were reported by Yermack (1996), Eisenberg, Sundgren and Wells (1998) and Barnhart and Rosenstein (1998). Yermack (1996) analyzed a sample of 452 large U.S industrial corporations between 1984 and 1991 and consistently found an inverse relationship between board size and firm value even when regressions were carried out using numerous models such as fixed effects and random effects.
Even when firm value represented by Tobin’s Q was substituted with other proxies such as return on assets, return on sales and sales/assets, the negative relation persisted. Following Yermack’s analysis of large firms, Eisenberg, Sundgren and Wells (1998) tested the relationship between board size and profitability on small and midsize Finnish firms. They presented evidence of a negative association between board size and profitability, thus supporting the theory put forward by Lipton and Lorch (1992) and Jensen (1993). Similarly, Barnhart and Rosenstein (1998) found that firms with smaller board size perform better than firms with large board size. Vafeas (2000) reported that firms with the smallest boards (minimum of five board members) are better informed about the earnings of the firm and thus can be regarded as having better monitoring abilities.

A meta-analysis based on 131 studies by Dalton and Dalton (2005) revealed that larger boards are correlated with higher firm performance which is in contrast to the results of an earlier meta-analysis by Dalton, Daily and Johnson (1999). Bennedsen, Kongsted and Nielsen (2004), in their analysis of small and medium-sized closely held Danish corporations reported that board size has no effect on performance for a board size of below six members but found a significant negative relation between the two when the board size increases to seven members or more. In investigating the changes in board size over time, Wu (2000) discovered that on average, board sizes of corporations decreased over the 1991-95 periods. Wu argued that the cause of the decrease could partly be due to pressure from large active investors. This implies that the market generally is more confident if monitoring is carried out by smaller boards. While Yermack (1996) and others found significant negative association between board size and performance, Bhagat and Black (2002), found no solid evidence on the relationship between board size and performance, although there are hints of an inverse correlation between the two. Thus their results do not fully support Yermark’s findings. They explained that board size is often taken to be endogenously related to other control variables that may correlate with performance and although Yermark included other control variables in his analysis, the approach taken might cause the difference in results.
In an attempt to compare the effects of board structure on firm performance between Japanese and Australian firms, Bonn, Yokishawa and Phan (2004) found that board size and performance (measured by market-to-book ratio and return on assets) was negatively correlated for Japanese firms but found no relationship between the two variables for its Australian counterpart. However, contrary to the Japanese firms the ratios of outside directors and female directors to total board numbers have a positive impact in the Australian sample (Bonn, 2004).

Adam and Mehran (2005) found a positive relationship between board size and performance (measured by Tobin’s Q) in the U.S banking industry, which is contrary to the findings of Yermack (1996) and Eisenberg, Sundgren and Wells (1998) in US non financial firms. Adam and Mehran’s results suggest that such performance relationship may be industry specific, indicating that larger board. The Malaysian Code and the KLSE Listing Requirement were silent on the number of directors that should sit on board. However, it was recommended that the board size should not be too big nor too small but sufficient enough to allow for active and effective participation and that they should be able to perform their duties effectively. As cross-directorship is legally recognized in Malaysia, the KLSE listing requirement in 2002 place restrictions on the number of directorships that a director may hold. So as to ensure that directors are able to perform and participate effectively in all the boards with which they are involved, a maximum of 10 directorships in public listed companies and a maximum of 15 directorships in private companies are allowed.

In summary, empirical research on board size suggests that greater board size in most cases is negatively associated with firm performance, although a meta-analysis by Dalton and Dalton (2005) found positive correlations between the two variables. Since very few studies examine board size and its effect on firm performance, a study on the size of boards of firms listed in NSE, would shade a light on this issue.
Boards with a large number of directors can have a disadvantage and can be expensive for the firms to maintain. Planning, work coordination, decision-making and holding regular meetings can be difficult with a large number of board members. The effectiveness of the board does not depend on how many directors sit on it, although a minimum number of directors with adequate experience and knowledge are vital to ensure tasks are carried out efficiently.

2.2.2: Board Independence

A board is generally composed of inside /dependent and outside independent members. Inside members are selected from among the executive officers of a firm. Outside directors are members whose only affiliation with the firm is their directorship. The role of the independent director on the board of directors is to effectively monitor and control firm activities in reducing opportunistic managerial behaviors and expropriation of firm resources.

While the board of directors consists of a composition of outside/independent directors and inside/ executive directors, discussions on board of directors are always centered on the advantages and disadvantages of outside directors. Thus, evidence on the beneficial role of inside directors is scarce. Inside directors are expected to play their role as a governance agent safeguarding between the firm and shareholders' interest and at the same time safeguarding the contractual relation between the firm and the board (Williamson, 1985). With regards to their monitoring role, inside directors are expected to provide first-hand information on the firm's operation to other board members (Boumosleh & Reeb, 2005). Since inside directors are active participants in the firm’s overall decision making process, they have access to all pertinent information that facilitates the decision making on the firms’ activities. This is in contrast to outside directors who does not hold any executive powers and who usually sit on the boards of other firms too. Therefore, as suggested by Anderson and Reeb (2004) when outside directors posed questions on the firm’s operation during board meetings, inside directors are expected to provide them with satisfactory explanation. Apart from channeling pertinent information to outside directors, inside or outside directors also play a role in monitoring the CEO.
While this monitoring role maybe indirect as inside directors themselves are under the evaluation of the CEO, inside directors may channel relevant information to outside directors if there are prove of CEO entrenchment. In other words if inside directors play an effective monitoring role and alleviates information asymmetries, this may increase the corporate governance structure of the firm which will eventually lead to a better firm performance. Nevertheless, in the actual corporate scene inside directors are usually aligned with the CEO. The CEO who is the highest-ranking executive in the organization has full power in appointing executives that will remain loyal to him/her. Due to their implicit relationship with the CEO, inside directors may not contribute towards effective monitoring of the CEO. Therefore boards with more executive directors do not necessarily lead to enhancing firm performance. The above studies showed there that there exists a relationship between firm performance and the proportion of independent directors which was positively correlated to the firm Performance. (Agrawal and Knoebe, 1996). Increasing the level of the proportion of independent directors should simultaneously increase firm performance as they are more effective monitors of managers (Mehran, H, 1995). Some researchers found that although the proportion of independent directors on the board is high, the performance was low (Klein, 1998 and Yermack, 1996). It has been further argued that there is no relationship between the proportion of independent directors and superior firm performance (Hermalin and Wesbach, 2003).

Yermack (1996), show that firms are more valuable when the CEO and the chairman of the board positions are occupied by different persons. However, (Daily and Dalton, 1992 does not find a positive relation on the separation of the position of CEO and board chair. Many available theories and researches agree with the opinion that independent board is a determinant of good board. For example, Patra (2005) found the results that outside independent directors have a tendency to strengthen the efficiency of board of directors. Some evidence suggests that there is a negative correlation between independency of board and firm’s performance. Linck (2008) think that smaller and less independent boards are more suitable for companies with high growth opportunities, high Research and Development spending and high stock return volatility. However, large firms usually have larger boards.
with more independent directors. They also make a point that companies have more independent directors in boards when it is easier for insiders to extract private benefits or when the CEO has a greater influence on the board. Even in OECD countries where corporate governance has already come into being a mature theory and formed practical mechanism, it is still not clear that how much value of independent board is.

2.2.3: Board competency

Reviewing a number of the literatures shows definition that, when synthesized and simplified, describes a competency as a complex set of behaviors built on the components of knowledge, skills and attitudes and the ability to apply them effectively (Kim and Nofsinger, 2007). According to Yermack (1996), age is used as a proxy for competency. People of certain age are presumptively competent and they competency may be challenged for cause. It is believed that knowledge is gained through age. A profile of type types of skills needed is created as a first step for nominating a committee. This list depends on the business which the company engages and the strategy it expects to employ. Furthermore, it includes functional expertise, such as accounting, finance, marketing, operations management, and industry expertise, along general business experience applicable to the activities of the firm (Lipton and Lorsch, 1992).

The demographic characteristics on top management team (TMT) includes age, functional background, education, tenure, (Hambrick & Mason, 1984), who dialed with diversity within top management and its impact on firm performance that is strongly linked to the Upper Echelon Theory.) influence the decisions that they make and therefore the actions adopted by the organizations that they lead.

It occurs because demographic characteristics are associated with many cognitive bases, values and perceptions that influence the decision making of top management. Top management members could with greater demographic diversity, influence decision making process in the top management and positively contribute to firm performance. The basic foundation of this theory could be linked to the earlier concepts on the characteristics at the top management and competitive behaviours (Cyert & March, 1963). Thus, firm performance could be positively impacted by the competitive behaviours at top level of an organization.
2.2.4: Board member gender

According Carter et al. (2003), a more diverse board of directors or managers is capable of making decisions based on different opinions from different people that have different experience, i.e. different working and non working experience of men and women may improve the decision making process. Furthermore more women in management most likely affects the career aspirations of younger women in lower positions positively and as a consequence the pool of potential candidates for top positions within the firm is increased, which in the longer run may affect firm performance positively Linck (2008).

Gender representation has been extensively studied in relation to BOD effectiveness. In one of the most comprehensive studies of the impact of racial minority and female BOD composition on firm performance, Carter et al. (2003) found that when controlling for size, industry and other corporate governance measures, significant positive relationships exist between the fraction of women and minorities on the board and firm value. The authors found that women are more likely to sit on boards with longer tenure and that the proportion of women and minorities on boards increases with firm size, but decreases relative to the number of inside directors. Similarly, Carpenter and Westphal (2001) found a positive relationship between the ratio of female directors and firm performance in Australian firms.

Mehran, H, (1995) reviewed the poor state of women’s representation on boards and summarize the potential roles women can play in helping boards achieve their full potential. LePine et al. (2002) found that all male teams may constitute the worst configuration of gender composition, especially in contexts characterized by low situation strength. Consistent with Social Role Theory. LePine et al. (2002) the authors found that as the percentage of males on a team increases, there is an exponential increase in the tendency to make decisions that are overly aggressive. Despite the systemic issues that women may face, Weisback, (2003) found a positive relationship between organization size and having at least one woman on the board. During the latest decade, there has been an increasing focus on the gender of top executives and boards of directors of firms.
The proportion of women reaching top positions is still very low in most countries, though it has been increasing in for instance the US and in some European countries. Some governments, like in Sweden and Norway, have even introduced regulations of the gender composition of the boards of directors of private firms in order to improve equal opportunities. In Norway, the government has decided that for large Norwegian firms at least 40% of the members of the boards of directors must be women in 2005. This seems to have had a major impact on the recruitment practices for Norwegian board members, see Hoel (2005). According to Hoel, the proportion of women in Norwegian listed firms increased from about 6% in 2000 to 22% in 2005. One of the aspects of good corporate governance is diversity management. If it is actually the case that more women (or minority groups) as top executives or members of boards of directors have a positive effect on shareholder value and firm performance, this may be a strong argument for having more women in top management.

In this study, we analyze whether female top executives and women on boards of directors have any significant effect on firm performance measured by performance measures (ROA). Women among the highest ranking CEOs in firms and on boards of directors. We estimate various panel data models of firm performance and control for factors that are traditionally found to affect firm performance e.g. firms’ age, size, sector, government participation and location. Mehran, H, (1995) found that after controlling for these observed factors, the proportion of women among top executives and on boards of directors tends to have a significantly positive effect on firm performance. A large part of this effect is attributed to the female managers with the best qualifications in terms of education, and for the female board members it appears that the ones representing the staff have the largest positive impact on firm performance. However, when controlling for unobserved firm-specific factors, the effect often turns insignificant.
2.3: Theoretical literature

2.3.1: Agency Theory

The most reorganized theoretical perspective applied in corporate governance is the agency, Theory (Dalton, Daily Ell strand and Johnson 1998.) To be able to survive in this competitive market, small private firms grow beyond the financial capability of a single owner, thus going public as an easy way of raising capital for the expansion of business. As a result big modern corporations have multiple owners of shareholders. These owners are regarded as the principals when they enter into a contract with managers to manage the firm on their behalf. These managers are morally obligated to work towards maximizing the principals (shareholders) value.

However this delegation of power may provide opportunities to the managers to expropriate the shareholders wealth. In order to better align the agent–principal interests agency theorists (Fama and Jensen 1983 suggested having an effective governance system which amongst others involve the appointment of a board of directors. The theory suggests that managers should be monitored by this board of directors whose principal tasks is to ensure that managers carry out their duties in the best interest of shareholders. Thus board composition becomes an issue to be given special attention.

2.3.2: Stewardship Theory

While Agency theory assumes that principals and agents have divergent interests and that agents are essentially self-serving and self-centered, Stewardship theory takes an opposite perspective. It suggests that the agents (directors and managers) are essentially trustworthy and good stewards of the resources entrusted to them, which makes monitoring redundant (Donaldson 1998; Donaldson & Davis, 1998). Donaldson and Davis (1998) observe, “Organizational role-holders are conceived as being motivated by a need to achieve, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and bosses”.

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The stewardship perspective views directors and managers as stewards of firm. As stewards, directors are likely to maximize the shareholders’ wealth. Davis et al. (1998) post how stewards derive a greater utility from satisfying organizational goals than through self-serving behavior. Davis et al. (1998) argue that the attainment of organizational success also satisfies the personal needs of the stewards. Stewardship theory suggests that managers should be given autonomy based on trust, which minimizes the cost of monitoring and controlling behavior of the managers and directors. When managers have served a firm for considerable period, there is a “merging of individual ego and the corporation” (Donaldson & Davis, 1998). Stewardship theory considers that manager’s decisions are also influenced by non financial motives, such as need for achievement and recognition, the intrinsic satisfaction of successful performance, plus respect for authority and the work ethic. Davis et al. (1998) suggest that managers identify with the firm and it leads to personalization of success or failure of the firm. Daily et al. (2003) argue that managers and directors are also interested to protect their reputation as expert decision makers. As a result, managers operate the firm in a manner that maximizes financial performance, including shareholder returns, as firm performance directly impacts perception about managers’ individual performance. Fama (1980) suggests that managers who are effective as stewards of the firm are also effective in managing their own careers.

Supporting this view, Shleifer and Vishny (1997) suggested that managers, who bring good financial returns to investors, establish a good reputation that allows them to re-enter the financial markets for the future needs of the firm. From the stewardship theory perspective, superior performance of the firm was linked to having a majority of the inside (executive) directors on the board since these inside directors (managers) better understand the business, and are better placed to govern than outside directors, and can therefore make superior decisions (Donaldson, 1990; Donaldson & Davis, 1991). Stewardship theory argues that the effective control held by professional managers empowers them to maximize firm performance and corporate profits. Consequently, insider-dominated boards are favored for their depth of knowledge, access to current operating information, technical expertise and commitment to the firm.
2.3.3: Resource dependence theory

Resource dependence theory provides a theoretical foundation for the role of board of directors as a resource to the firm (Johnson et al., 1996; Hillman et al., 2000) (Hillman, 2000), stressed the importance of unique bundles of resources a firm controls that are crucial for its growth. Such resources include all assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by a firm, in order to improve efficiency and effectiveness. From this point of view, firm governance structure and the board composition is viewed as a resource that can add value to the firm. A key argument of the resource dependence theory is that organizations attempt to exert control over their environment by co-opting the resources needed to survive ((Mehran, H, 1995).

Accordingly, boards are considered as a link between the firm and the essential resources that a firm needs from the external environment for superior performance. Appointment of outsiders on the board helps in gaining access to resources critical to firm success (Johnson et al., 1996). In the resource dependence role, outside directors “bring resources to the firm, such as information, skills, access to key constituents (e.g., suppliers, buyers, public policy decision makers, social groups) and legitimacy” (Hillman et al., 2000). Board directors also function as boundary spanners, and there by enhance the prospects of a firm’s business. Pearce and Zahra (1992) observe “when an organization appoints an individual to a board, it expects the individual will come to support the organization, will concern himself or herself with its problems, will favorably present it to others, and will try to aid it “Appointment of outside directors and board interlocks can be used to manage environment contingency.

In an earlier study, Postma (2001) showed that the board size and background of outside directors are important to managing an organization’s needs for capital and the regulatory environment. Pearce and Zahra (1992) underscore the importance of board composition as it facilitates resource exchange between a firm and its external environment, which is essential for organizational survival and effective financial performance.
Pearce and Zahra (1992) found that in the presence of higher environmental uncertainty, board size and presence of outsider directors is associated with more efficient and effective strategy development and execution. Carpenter and Westphal (2001) show how the social context of external ties helps businesses. Thus, boards serve as a mechanism whereby a firm links with its external environment to secure resources and, to protect itself against environmental uncertainty. Scholars have also used resource dependence theory to explain the composition of boards, especially in terms of outsider representation. Kaplan and Minton (1994) found that poor financial or stock market performance of a firm often leads to appointment of financial directors to the board. Muth and Donaldson (1998) argue for the importance of network connections, which, according to resource dependence theory, enhance firm performance. Thus, the resources dependence theory views the board as a resource that can not only supplant its need for other resources, but also influence the environment in its favor, and thereby improve firm performance.

2.4: Empirical review

There is a view that larger boards are better for corporate performance because they have a range of expertise to help make better decisions, and are harder for a powerful CEO to dominate.

However, recent thinking has leaned towards smaller boards. Jensen (1993) and Lipton & Lorsch (1992) argue that large boards are less effective and are easier for a CEO to control. When a board gets too big, it becomes difficult to co-ordinate and process problems. Smaller boards also reduce the possibility of free riding by individual directors, and increase their decision taking processes. Empirical research supports this. For example, Yermack (1996) documents that for large U.S. industrial corporations, the market values firms with smaller boards more highly. Eisenhardt et al. (1998) also found negative correlation between board size and profitability when using sample of small and midsize Finnish firms. In Ghana, it has been identified that small board sizes enhances the performance of firms.
In a Nigerian study, LePine et al. (2002) found that, firm performance is positively related with small, as opposed to large boards. Though the issue of whether directors should be employees of or affiliated with the firm (inside directors) or outsiders has been well researched, no clear conclusion is reached. On one hand, inside directors are more familiar with the firm’s activities and they can act as monitors to top management if they perceive the opportunity to advance into positions held by incompetent executives. On the other hand, outside directors may act as “professional referees” to ensure that competition among insiders stimulates actions consistent with shareholder value maximization (Fama, 1980). John and Senbet (1998), argue that boards of directors are more independent as the proportion of their outside directors increases. Though it has been argued (Fama & Jensen 1983, Baysinger and Butler 1985, Baysinger 1990) that the effectiveness of a board depends on the optimal mix of inside and outside directors, a number of empirical studies on outside directors support the beneficial monitoring and advisory functions to firm shareholders (Hickman 1992).

Brickley et al (1994) found a positive relation between proportion of outside directors and stock-market reactions to poison pill adoptions, also Kyereboah-Coleman found a positive relationship between proportion of outside board members and performance of firms in Ghana. Hermalin & Weisbach (1991) and Bhagat & Black 2002 found no significant relationship between board composition and performance. Yemack (1996) also showed that, the percentage of outside directors does not significantly affect firm performance. This was also confirmed by Kyereboah-Coleman and when studying nontraditional export firms in Ghana. Agrawal & Knoeber (1996) suggest that boards expanded for political reasons often result in too many outsiders on the board, which does not help performance. Considerable attention has been given to the role of boards in monitoring managers and in removing non-performing CEOs. Jensen (1993) voices his concern that a lack of independent leadership makes it difficult for boards to respond to failure in top management team. Fama & Jensen (1983) also argues that concentration of decision management and decision control in one individual reduces board’s effectiveness in monitoring top management. Thus, the literature reveals a board structure typology, the one-tier system and the two-tier system.
In the one-tier system the Chief Executive Officer (CEO) is also chairman of the board, whilst the two-tier system has a different person as the board chairman and is separate from the CEO. It has been noted though that the one-tier board structure type leads to leadership facing conflict of interest and agency problems thus giving preference for the two-tier system. Agency problems tend to be higher when the same person holds both positions. Yermack (1996) argues that, firms are more valuable when the CEO and board chair positions are separate.

2.5: Conceptual framework.

The researcher drew the conceptual framework from the literature review.

Figure 1.1 conceptual framework

- Board size
- Board member gender
- Board independence
- Board competency

<table>
<thead>
<tr>
<th>External</th>
<th>Internal factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition</td>
<td>firm age</td>
</tr>
<tr>
<td>Government</td>
<td>firm size</td>
</tr>
<tr>
<td>Participation</td>
<td>location</td>
</tr>
<tr>
<td>Type of industry</td>
<td>Ownership</td>
</tr>
<tr>
<td>Structure</td>
<td></td>
</tr>
</tbody>
</table>

Source: Researcher (2012)
2.5.1: Definition of variables

**Firm performance**

According to Yarmck (1996), Firm performance can be viewed in two different perspectives; financial performance and non-financial performance. Financial performance in this research was measured by, ROA (return on assets).

**Board size**

According to Hermalin and weisbach (1991), board size refers to the total number of directors on the board of each sample firm which is inclusive of the CEO and Chairman for each accounting year. This included outside directors, executive directors and non-executive directors and "grey" directors. These grey directors are directors whose status is questionable, such as family members of employees, lawyers, investment bankers and former company officers. The directors, who are initially elected by the committee, will be asked to retire from office every few years, depending on the Company’s Memorandum of Association, and must submit themselves for re-election at least once in every three years (Finance Committee on Corporate Governance, 2000). There is no restriction on the number of board members stipulated under the Kenyan Code on Corporate Governance (2000) although the board is required to include a balance of executive and non-executive directors to avoid the board being dominated by one individual. However under the Best Practices in corporate Governance (Finance Committee on Corporate Governance, 2000) it is recommended that every board examine its size so as to ensure optimum effectiveness.

**Board member gender**

According Carter et al. (2003), and Smith et al (2006), a more diverse board of directors or managers is capable of making decisions based on different opinions from different people that have different experience, i.e. different working and non working experience of men and women may improve the decision making process.
Furthermore more women in management most likely affects the career aspirations of younger women in lower positions positively and as a consequence the pool of potential candidates for top positions within the firm is increased, which in the longer run may affect firm performance positively.

**Board independence**

A board is generally composed of inside and outside members. Inside members are selected from among the executive officers of a firm. Outside directors are members whose only affiliation with the firm is their directorship. The role of the independent director on the board of directors is to effectively monitor and control firm activities in reducing opportunistic managerial behaviors and expropriation of firm resources. The proportion of independent directors is positively correlated to the firm Performance (Agrawal and Knoebe, 1996). Increasing the level of the proportion of independent directors should simultaneously increase firm performance, as they are more effective monitors of managers (Mehran, H, 1995).

**Board competency**

Competency is a complex set of behaviors built on the components of knowledge, skills and attitudes and the ability to apply them effectively (Kim and Nofsinger, 2007). This research concentrated on the members of the board with PhDs.

**Intervening Variables**

In order to identify the specific effect of board characteristics on firm performance, the research controlled for the effect of firm size, firm age, and competitive pressure, type of industry, government participation, location and organizations structures.

**Firm Size**

Carter et al. (2003) and Pablo (2003) have suggested that internal governance structures are substitutable and the firms can choose appropriate governance options based on what is right for them.
For example, as the complexity of the firm increases, board size may increase due to need for advice and environment monitoring (Zahra & Pearce, 1989). As the firm complexity changes, the board characteristics also may vary. Pablo et al. (2003) found that as firms become larger and more diversified, the size of the board increases. Firm size is, therefore, taken as a proxy for the complexity of the firm and the need for higher amount of advice to the board (Fama & Jensen, 1983). Large size of the firm is often associated with complex operations of the firm as it seeks to perform its strategic role more actively. Dalton et al. (1998) found that small firms have better impact of board size than large firms. Similarly, Lehn et al. (2004) found that board size is positively related to firm size but negatively related to growth opportunities. Hence the firm size was included as a control variable in this study to examine the effect of board characteristics on firm performance. Two of the most widely used proxies for firm size are sales revenue and number of employees (Muth & Donaldson, 1998). For this study, sales revenue was used as a proxy for firm size.

**Firm Age**

Firm age refers to the number of years for which a firm has been in operation. Firm age has been linked to many decisions of the firm (Gregory, Rutherford, Oswald & Gardiner, 2005). For example, Berger and Udell (1998) and Gregory et al. (2005) demonstrate that firms go through financial growth cycle and their capital structures vary with the age. Newer firms are expected to have smaller earnings than older ones because they have less experience in the market, are still building their market position, and normally have a higher costs structure. Gregory et al. (2005). On the other hand older firms may be reaching the end of their product life cycle.

Further, Gregory et al. (2005), also suggest that complexity increases with firm age. In view of the uncertain relationships of firm age on board characteristics as well as firm performance, it is decided to control for firm age. Firm age is measured by the number of years from the time the firm was incorporated.
Competitive pressure

The definition of competitive pressure used here is geared to subject: innovation. Competitive pressure is defined in terms of its effect on a firm’s incentives to undertake product and process innovations. The result of product innovation is a new product to introduce into the market. Hence the incentive for product innovation is determined by the profit level associated with this new product. The result of process innovation is a reduction in a firm’s cost level. The steeper the slope of the firm’s profit function with respect to its own cost level, the larger the firm’s incentive to reduce costs. The definition is shown to hold in six examples of parameterizations of pressure. The examples are chosen with the idea in mind that a rise in competitive pressure makes firms more exposed to each others’ actions. Since firms’ efficiency levels determine their actions (here, the choice of output or price level) a rise in pressure brings out cost differences more clearly.

Government participation

Majority of studies have shown negative result when looking on government Ownership and performance or firm valuation. There are many reasons that explain why government ownership results in poor financial performance. First, the government is guided by social altruism, which may not be in line with the profit motive. Second, the government is not the ultimate owner, but the agent of the real owners – the citizens. And it is not the real owners who exercise governance, but the bureaucrats. There is no personal interest for bureaucrats in ensuring that an organization is run efficiently or governed well since they do not have any benefits from good governance. Government-controlled companies may respond to signals from the government to enhance national welfare or other non-profit considerations, which may not relate well to a goal of value maximization.

(Agrawal and Knoebe, 1996). A government corporation or government-owned corporation is a legal entity created by a government to exercise some of the powers of the government. It may resemble a not-for-profit corporation as it is not necessarily required to provide the shareholders with return on their investment through price increase or dividends.
Location and type of industry

The results from various researches confirm that firm performance is influenced by the firm’s country of headquarters and by the firm’s principal industry affiliation. The headquarters country and industry affiliation also have important and direct influences on firm performance through their interaction. In particular, countries tend to host high-performance firms clustered by industry as well as low-performance firms clustered by industry Gregory et al. (2005). Similarly, high-performance industries tend to be clustered in countries with particular patterns of firm activity. The implication is that country identity and industry affiliation interact in important ways that are of central interest to executives, regulators, and policymakers. Tripping off a virtuous circle of development may depend on supporting firms in achieving superior performance in a critical set of industries within an international business landscape and a contextual fit given the country’s characteristics and competitive environment. A central point is that the set of strategically important industries differs by country in ways that are observable and even predictable.

Ownership structure

The connection between ownership structure and performance has been the subject of an important and ongoing debate in the corporate finance literature. The debate goes back to the Berle and Means 1932.Thesis, which suggests that an inverse correlation should be observed between the diffuseness of shareholdings and firm performance. Their view has been challenged by Carter et al. (2003) argues that the ownership structure of a corporation should be thought of as an endogenous outcome of decisions that reflect the influence of shareholders and of trading on the market for shares. When owners of a privately held company decide to sell shares, and when shareholders of a publicly held corporation agree to a new secondary distribution, they are, in effect, deciding to alter the ownership structure of their firms and, with high probability, to make that structure more diffuse. Subsequent trading of shares will reflect the desire of potential and existing owners to change their ownership stakes in the firm.
CHAPTER THREE:

3.0. RESEARCH METHODOLOGY.

3.1: Introduction
The focus of this chapter was to describe the methods, which were used to collect data, sample and sampling procedure, research instruments for data collection, data collection procedures and data analysis techniques and presentation.

3.2: Research Design
According to Mugenda A. & Mugenda O. (2003) a research design guides the researcher in collecting analyzing and interpreting observed facts. This study used an empirical study whereby data recorded in financial statements for 4 years (2005-2008) was used to investigate the relationship between the board composition and the firm performance of all companies listed in N.S.E. Correlation analysis was also used to determine if correlation existed between the dependent and independent variables.

3.3: Target Population and sampling design
Population of the study consisted of all the 55 publicly quoted corporations in the Nairobi Stock Exchange (NSE) and included both local and foreign organizations operating in Kenya (Appendix B) these organizations were specifically targeted for the research as they represented the various sectors of the Kenyan economy which include agriculture commercial and services finance and investment. The companies’ act (486) provides that companies should publish audited financial statements (complying with the international accounting standards) for every accounting period in operation. A sample of 60% of the total population was used through stratified sampling as shown in table 3.1. Below.
Table 3.1: Companies listed in N.S.E

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>NO. OF COMPANIES</th>
<th>% TO BE SAMPLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Finance and investment</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Commercial and services</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Industrial and allied</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Alternative investment market segment</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

*Source: Author (2012)*

### 3.4: Data collection

As the sample companies are publicly listed, information pertaining to their directorship and financial statements are made available in their individual annual reports. In fact, the annual report of each company was the main source of information for this research. Whilst annual reports for some companies were available online at the NSE website, the hard copies for each Annual Report could also be viewed at the CMA library.

Information collected from the annual reports included: the firms’ board size, board member gender, compliance on corporate governance issues, profiles of directors, financial statements, which were reported in accordance with the approved international accounting standards, and which included directors’ interest in the company; analysis of shareholdings which contained the equity structure; lists of major shareholders and lastly list of properties owned by directors together with descriptions and book values.
3.5 :Data analysis and presentation.

The researcher employed quantitative data analysis approach in this study. According to Creswell (1994) quantitative research focuses on examining a problem based on testing a theory and analyzing it using statistical techniques. In this study univariate bivariate and multivariate data analysis were done using descriptive analysis. The following section described the key characteristics and terms of measurement for each variable. Dependent and independent variables were grouped into components; namely, independent variables which consisted of managerial composition and dependent variables which consisted of performance indicators. The terms of measurement used are described as shown in Table 3.2.

Table 3.2: Measurement of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS(Board size)</td>
<td>Total number of directors in the board</td>
<td>Ratio scale BS=LOGTA</td>
</tr>
<tr>
<td>Board independence</td>
<td>Number of executive directors</td>
<td>Dummy variable which takes 1 if the director is independent and 0 if otherwise</td>
</tr>
<tr>
<td>Board member gender</td>
<td>Number of women in the board</td>
<td>Natural logarithm of this count variable after adding 1 to make the distribution more normal</td>
</tr>
<tr>
<td>Board competency</td>
<td>Number of members with PhDs in the board</td>
<td>Take a natural logarithm of this variable after adding 1.</td>
</tr>
<tr>
<td>Return on equity (ROA)</td>
<td>The ratio of earnings before tax to total assets</td>
<td>Ratio scale ROA=EBIT/TA</td>
</tr>
</tbody>
</table>

Source: Author (2012)
3.6: Study Model

The general study model for testing the relationship between firm performance (as measured by Return on Assets) and the four key managerial composites, which are, board size; board independence; board member gender and board competency was therefore given as follows.

\[
\text{ROA}_{it} = \alpha + \beta_1(\text{BS})_{it} + \beta_2(\text{BIND})_{it} + \beta_3(\text{BGENDER})_{it} + \beta_4(\text{BCOMPE})_{it} + E_{it}
\]

Where:

\( \text{ROA}_i \) = Return on Assets for firm i at time t

\( \text{BS}_{it} \) = The size of the Board (log of total number of directors) for firm i at time t

\( \text{BIND}_{it} \) = Number of executive directors in a board (natural logarithm) for firm i at time t

\( \text{BGENDER}_{it} \) = Number of women in the board (natural logarithm) for firm i at time t

\( \text{BCOMPE}_{it} \) = Number of directors with PhD (natural logarithm) for firm i at time t

\( E_{it} \) = the error term.

\( \text{ROA} = \text{EBIT}/\text{TA} \)

\( \text{EBIT} = \text{Earnings before Tax} \) and \( \text{TA} = \text{Total Assets} \)

3.7: Estimation Issues

Panel data was involved in the pooling if the observations on a cross section of units over several time periods and facilitated the identification of effects that were not detectable in pure cross section or time series regression. The panel regression equation differed from a regular time series or cross-section by the double subscript attached to each variable. The general form of the model was written as:

\[
Y_{it} = \alpha + \beta X_{it} + E_{it}
\]

With the subscript i denoting the cross-sectional dimension and t representing the time series dimension. The left hand variable Y represented the dependent variable in the model which was the firm’s performance. X contained the set of explanatory variables in the estimation model, \( \alpha \) was taken to be the same across units, OLS provided a consistent and efficient estimate of \( \alpha \) and \( \beta \)
CHAPTER FOUR:
4.0: DATA ANALYSIS AND INTERPRETATION.

4.1: Introduction

This chapter presents the results of the study together with a discussion of the findings. The main objective of the study was to find out the relationship between managerial composition and firm performance. The chapter first presents the response rate, after which data on each of the four research objectives are presented.

4.2: Response Rate.

The study targeted 33 firms listed in NSE. Data was collected for four years from (2005-2008). The study had to remove three firms from final analysis due to unavailability of data on key variables. As a result final sample comprised of 30 firms. That brought about a response rate of 90%, as shown in Table 4.1. The response was good and from it, the research achieved its objectives.

Table 4.1: Sampled Firms listed in NSE with complete data

<table>
<thead>
<tr>
<th>Segment</th>
<th>Number of firms with complete data</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Commercial and services</td>
<td>7</td>
<td>90</td>
</tr>
<tr>
<td>Finance and investment</td>
<td>7</td>
<td>90</td>
</tr>
<tr>
<td>Industrial and allied</td>
<td>11</td>
<td>80</td>
</tr>
<tr>
<td>alternative investment</td>
<td>3</td>
<td>90</td>
</tr>
<tr>
<td>market segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>90</td>
</tr>
</tbody>
</table>

Source: survey data (2012)
Table 4.2 presents the sample characteristics.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Board size%</th>
<th>Board independence (executive %)</th>
<th>Board member gender (women%)</th>
<th>Board competency (PhD’s) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-</td>
<td>64.9</td>
<td>66.2</td>
<td>74.9</td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td>17.3</td>
<td>21.4</td>
<td>17.3</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>4.3</td>
<td>5.4</td>
<td>4.9</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>1.2</td>
<td>2.7</td>
<td>1.8</td>
</tr>
<tr>
<td>4</td>
<td>20.8</td>
<td>6.5</td>
<td>5.6</td>
<td>1.4</td>
</tr>
<tr>
<td>5</td>
<td>19.2</td>
<td>5.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>23.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>10.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8-11</td>
<td>19.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12-15</td>
<td>6.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

%percentage

**Source:** survey data (2012)

Table 4.2 above points out that board size ranges from 4 to 15 members in all the sampled firms. Regarding the educational qualification, most of the firms (64.9%) did not have any board member with PhD. Among the firms that had PhDs on their board, most of the firms had only one member (17.3%). Only 8 per cent of the firms had two or more PhD members on their board, the maximum number being five PhDs with a percentage of 5.8. Majority of the firms (66.2%) did not have any representation for women on their boards. Even in the case of firms, which had women members, the numbers were not large with a maximum number of 4 women in any given board. Board independence was not common as firms with only 25.4% of the firms had board members who are independent.
4.3: Data Analysis

Table 4.3: Descriptive Statistics

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>MINIMUM</th>
<th>MAXIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board size</td>
<td>8.81</td>
<td>1.92</td>
<td>2.00</td>
<td>13.00</td>
</tr>
<tr>
<td>% of shares owned</td>
<td>17.93</td>
<td>23.67</td>
<td>20.9</td>
<td>79.14</td>
</tr>
<tr>
<td>by BOD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhDs</td>
<td>11.37</td>
<td>0.77</td>
<td>-3.10</td>
<td>1.23</td>
</tr>
<tr>
<td>Women</td>
<td>0.34</td>
<td>0.66</td>
<td>0.00</td>
<td>3.00</td>
</tr>
<tr>
<td>ROA=EBIT/TA</td>
<td>0.22</td>
<td>0.76</td>
<td>-13.10</td>
<td>10.34</td>
</tr>
<tr>
<td>EBIT</td>
<td>167797</td>
<td>1092829</td>
<td>-6512000</td>
<td>1351900</td>
</tr>
<tr>
<td>TOTAL ASSETS</td>
<td>3077837</td>
<td>2510432</td>
<td>151</td>
<td>39250000</td>
</tr>
</tbody>
</table>

Sample size n=30 firm year observations during the years (2005-2008)

Source: survey data (2012)

Table 4.3 presents the descriptive statistics. The average board size was about 9 members (mean = 8.81). The board size in NSE appeared to be much smaller than the board size in the US (e.g., mean size of 11.45 in Bhagat & Black, 2002) but comparable to the size of boards in Australia (e.g., mean size of 6.6 in Kiel & Nicholson, 2002). The average ROA was 0.22, with a minimum of -13.10 to a maximum of 1.13 and the average size of independent board is 17 while the average of women representation in the board was 12 members.

4.4: The effect of the board size on firm performance.

The first objective of the study was to determine if the board size affects the performance of firms. An empirical study was conducted to test the relationship between the two variables at a confidence level of 95%. The results are shown in the table 4.4 below

34
Table 4.4: Summary of the Regression Results of board size and ROA

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variable</td>
<td></td>
</tr>
<tr>
<td>Log(board size)</td>
<td>0.304</td>
</tr>
<tr>
<td></td>
<td>[1.40]</td>
</tr>
<tr>
<td>Log(total assets)</td>
<td>0.325</td>
</tr>
<tr>
<td></td>
<td>[13.6]</td>
</tr>
<tr>
<td>EBIT</td>
<td>0.262</td>
</tr>
<tr>
<td>constant</td>
<td>0.025</td>
</tr>
<tr>
<td>R²</td>
<td>0.313</td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Wald</td>
<td>13.800</td>
</tr>
</tbody>
</table>

Sample size n=30  firm year observations during the years (2005-2008)


To address this research objective, the data on board size and firm performance was analyzed as shown in table 4.3 and 4.4 above. From the descriptive statistics of board size as shown in table 4.3 suggested that a greater board size in most cases is positively associated with firm performance, although a meta-analysis by Dalton and Dalton (2005) found negative correlations between the two variables. Table 4.4 presents the empirical analysis on board size and firm performance using ROA as the performance proxy. Wald test was used to determine the overall significance of the model and concluded that the model was significant (Wald 2x: 138 P value: 0,00 < 0,05). In other words, independent variables are collectively capable of explaining the dependent variable. The coefficient for log (total assets) is approximately 0.3. This means that 1% increase in log (total assets) will result 0.3% increase in ROA. On the other hand, coefficient for estimated EBIT was 0.262% meaning the increase in EBIT ratio causes an increase of 0.262% at ROA. As a result, findings indicate that there is a significant relation between the board size and firm performance (ROA) (0.304%) which was focused on this study.

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This was interpreted as; if the numbers of board members are increased by 1% then the firm performance will increase by almost 30%. From the analysis, the researcher concluded that the board size has a major role to play in determining the performance of the firms as the members will have manageable responsibilities in running the firms. Furthermore, larger boards are more likely to be associated with an increase in board diversity in terms of experience, skills, gender and nationality (Dalton and Dalton, 2005). The few directors in a small board are preoccupied with the decision making process, leaving less time for monitoring activities. The results of the study are supporting the argument for having larger board size.

4.5: The effect of the board independence to firm performance

The second objective was to establish the relationship between the board independence and firm performance. The measure of board independence was the proportion of outside directors on the board. Two methods of data analysis were employed and the results are therefore divided into two to reflect this categorization. The first type of analysis was descriptive analysis, as shown in table 4.3, which provided some frequencies and averages of relevant variables. The second method of analysis was regression analysis as shown in table 4.5 below

Table 4.5: Summary of the Regression Results of board independence and ROA

\[ ROA = \beta_0 + \beta_1 \text{INDP} + \beta_2 \log \text{assets} + \beta_3 \text{BOD} + \epsilon \]

<table>
<thead>
<tr>
<th>Model A</th>
<th>Sum of Sqs</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variable</td>
<td>regression</td>
<td>0.33</td>
<td>4</td>
<td>0.117</td>
</tr>
<tr>
<td>(constant)D2008 INDEP BOD, D2007,D2006,D2005</td>
<td>residual</td>
<td>4.966</td>
<td>120</td>
<td>0.10</td>
</tr>
<tr>
<td>Dependent variable(ROA)</td>
<td>Total</td>
<td>5.898</td>
<td>124</td>
<td></td>
</tr>
</tbody>
</table>

Sample size n=30 firm year observations during the years (2005-2008)

Source: survey data (2012)
Summary of model above

<table>
<thead>
<tr>
<th>Model A</th>
<th>R</th>
<th>R²</th>
<th>Adj. R Square</th>
<th>Std. Err. of the Es</th>
<th>Durbin Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.344</td>
<td>0.118</td>
<td>0.108</td>
<td>0.09782</td>
<td>11.34</td>
</tr>
</tbody>
</table>

It is observed that the explanatory power of independent variables for changes at ROA is 10.8%. Durbin Watson statistics result below (11.34) was a sign of significant autocorrelation.

Table 4.5.1: Coefficients of Model A

<table>
<thead>
<tr>
<th>Model A</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>0.119</td>
<td>0.19</td>
</tr>
<tr>
<td>Female</td>
<td>0.33</td>
<td>0.37</td>
</tr>
<tr>
<td>Log assets</td>
<td>0.22</td>
<td>0.184</td>
</tr>
<tr>
<td>D2005</td>
<td>0.37</td>
<td>0.12</td>
</tr>
<tr>
<td>D2006</td>
<td>-0.47</td>
<td>0.12</td>
</tr>
<tr>
<td>D2007</td>
<td>0.53</td>
<td>0.13</td>
</tr>
<tr>
<td>D2008</td>
<td>0.67</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Sample size n=30 firm year observations during the years (2005-2008)


The above model observed that there were non-linear effects of ROA and (independent variable) the non-executive directors at 95% confidence level. There was positive relation between the proportion of independent directors and ROA. In three years the increase in the numbers of independent directors lead to an increase in ROA while in one year there was a decrease in ROA as the number of independent directors increased. In general, that brought a positive relationship between the independent directors and the firm performance. Hence the firms should be keen when dealing with the independent directors as they play an important role in managing the firms as they will not have a conflict of interests.
4.6: The effect of the board member gender on firm performance.

The third objective of the study was to determine if the board member gender affects the performance of firms. A correlation analysis was performed and the results are shown below in the table 4.6.

Table 4.6: Summary of the Regression Results of board member gender and ROA

\[ \text{ROA} = \beta_0 + \beta_1 \text{female} + \beta_2 \log \text{assets} + \beta_3 \text{BOD} + \varepsilon \]

<table>
<thead>
<tr>
<th>Model B</th>
<th>Sum of Sqs</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>residual</td>
<td>6.966</td>
<td>120</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7.898</td>
<td>124</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sample size \( n=30 \) firm year observations during the years (2005-2008)

Source: survey data (2012)

The F value with a significance level more than 0.05 clearly shows that the Model B works.

Summary of model B

<table>
<thead>
<tr>
<th>Model B</th>
<th>R</th>
<th>R²</th>
<th>Adj. R Square</th>
<th>Std. Err. of the Es</th>
<th>Durbin Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.344</td>
<td>0.118</td>
<td>0.07</td>
<td>0.09782</td>
<td>10.36</td>
</tr>
</tbody>
</table>

It is observed that the explanatory power of independent variables for changes at ROA is 0.7%. Durbin Watson statistics result below (10.36) was a sign of autocorrelation.
The above model observed that linear effects of ROA and (independent variable) female board members are significant at 95% confidence level. There was a positive relationship between the proportion of female board members and ROA. As the number of female board members increased, the performance of the firm increased as it was measured by ROA. This was evident from the few firms that had female members in their boards. Those firms recorded an increase in the performance of the firms when compared to those years that they did not have any female board member. The role of women, as board directors and top corporate executives in driving firm performance has become a very topical issue. Especially in the current times of economic crisis which is largely attributed to unsound risk management practices, there is debate if the global economic picture would have looked less grim, had there been more women on boards of directors in the distressed financial institutions. The proponents refer in this respect to the fact that women are more risk-averse and claim that more gender diverse corporate teams will help bring the global economy back on track.

It can be concluded from the results that the firms should try to have gender balance in their firms as it has been evidenced that female board members lead to an increase in the firms' performance.
4.7: The effect of the board competency on firm performance.

The fourth objective was to examine the impact of the board competency on the performance of a firm. The research used the criteria of the number of board members having PhD qualification. A correlation analysis was performed and the results were shown in Table 4.7 below.

**Table 4.7: Summary of the Regression Results of board competency and ROA**

\[
\text{ROA} = \beta_0 + \beta_1 \text{PhDs} + \beta_2 \log \text{assets} + \beta_3 \text{BOD} + \epsilon
\]

<table>
<thead>
<tr>
<th>Model C</th>
<th>Sum of Sqs</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant) D2008</td>
<td>regression</td>
<td>9.33</td>
<td>4</td>
<td>0.117</td>
</tr>
<tr>
<td>FEMALEBOD, D2007, D2006, D2005</td>
<td>residual</td>
<td>6.966</td>
<td>120</td>
<td>0.10</td>
</tr>
<tr>
<td>Dependent variable (ROA)</td>
<td>Total</td>
<td>7.898</td>
<td>124</td>
<td></td>
</tr>
</tbody>
</table>

**Sample size n=30 firm year observations during the years (2005-2008)**

**Source:** survey data (2012)

The F value with a significance level more than 0.05 clearly shows that the Model C works.

**Summary of model C**

<table>
<thead>
<tr>
<th>Model 2</th>
<th>R</th>
<th>R²</th>
<th>Adj. R Square</th>
<th>Std. Err. of the Es</th>
<th>Durbin Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.344</td>
<td>0.118</td>
<td>0.108</td>
<td>0.09782</td>
<td>13.34</td>
</tr>
</tbody>
</table>

It is observed that the explanatory power of independent variables for changes at ROA is 10.8%. Durbin Watson statistics result below (13.34) was a sign of significant autocorrelation.
Table 4.7.1: Coefficients of Model C

<table>
<thead>
<tr>
<th>Model c</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>-0.119</td>
<td>0.19</td>
</tr>
<tr>
<td>PhDs</td>
<td>-0.33</td>
<td>0.37</td>
</tr>
<tr>
<td>Log assets</td>
<td>-0.22</td>
<td>0.184</td>
</tr>
<tr>
<td>D2005</td>
<td>-0.37</td>
<td>0.12</td>
</tr>
<tr>
<td>D2006</td>
<td>-0.47</td>
<td>0.12</td>
</tr>
<tr>
<td>D2007</td>
<td>-0.53</td>
<td>0.13</td>
</tr>
<tr>
<td>D2008</td>
<td>-0.67</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Sample size n=30  firm year observations during the years (2005-2008)


With respect to number of PhDs qualified members of board, the study found that their presence was negatively associated with firm performance. As the number of PhDs holders increased in the board, the ROA decreased. Contrary to conventional wisdom, it appears that PhD qualified members, with skills of research and analysis, do not add any value to firm Those firms with board members who were PhD holders did not add any value to the firms; in fact they recorded a negative performance when compared to those firms without members with PhDs. Perhaps, what is necessary is not merely a higher-level academic qualifications but specific skills such as accounting and finance as found by Yermack (2006).

It can be conclude that different qualification apart from the educational background eg the years of experience, and expertise should be catered for when looking at the competency of the directors during appointment.
CHAPTER FIVE:

5.0. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1: Introduction

This chapter presents a summary of the study, conclusions and recommendations arrived at. These were arrived at as a result of the responses and findings in chapter 4 with contributions of this study discussed. The chapter also presents suggestions for further studies.

5.2: Summary of the Study

This study was aimed at determining the relationship between managerial composition and firm performance. The study specifically investigated whether the following variables of the board affect firm performance: board size, board member gender, board competency and board independence. Data for the study was collected from 30 companies listed in NSE. Given below is a summary of the main research findings which implied that all the four variables discussed are affecting the performance of firms. This was as a result of the data collected from the firms which were included in the survey and findings discussed in chapter 4.

5.2.1: Board size

The study established that most of the firms had a minimum number of board members of 4. From the results the performance of the firms improved as the board size increased. This was supported by the resource dependency theory which suggests that the importance of social assets. Large boards have the benefits of having many ideas generated to the firms and hence improve performance.
5.2.2: Board independence

The study established that most firms had few members of the board who were independent. 64.9% of the firms did not have independent directors. The study revealed that those few firms which had some independent directors had an improved firm performance as compared to the firm which did not have the independent directors.

5.2.3: Board member gender

The study established that majority of the firms were gender imbalanced. 66.4% of the firms did not have women in their boards. Those few firms, which had women in their firms, had a great improvement in their performance over the years when a comparison was done.

5.2.4: Board competency

The study established that most of the board members in the firms did not possess a PHD qualification. Out of all the firms under study only 22.3% of the firms had members with the PhD qualification and in most of the firms who possessed the qualification it had a negative influence to the performance.

5.3: Conclusion

Based on the findings of the study, board size was found to be positively associated with firm performance, indicating value of a larger board for the firm. In several instances, board size was found to have a positively moderating relationship between board characteristics and firm performance. Board independence was found to have a positive relationship with firm performance, showing signs of entrenchment when the boards and firms are small. This indicates support for agency theory. Gender diversity was found to be significantly associated with firm performance.

However, the presence of women in a larger board was negatively related to firm performance. The study revealed that members with PhD level educational qualification had negative influence on firm performance relationship. In summary, the board characteristics show significant association with firm performance. This relationship was moderated by other moderating variables as discussed in the literature review, so the context of the firms plays an important role in deciding whether a particular characteristic of a board is beneficial to firms.
5.4: Recommendations

The following recommendations should be considered based on the findings of the study as seen on the tables in chapter 4, which represents the results after analyzing the collected data and the findings discussed on the same chapter:

5.4.1: Board size

Special attention should be taken upon when dealing with the number of board members. The size of the board should match with the size of the firm to avoid scenarios of having too small boards which will be overburdened with the firm's work which will lead to underperforming, and at the same time boards should not be too large as the inefficiency of large boards will also lead to underperforming of the board members.

5.4.2: Board independence

Firms should aim at increasing the ratio of executive directors for they will not have mixed interests. Increasing the level of the proportion of independent directors should simultaneously increase firm performance, as they are more effective monitors of managers.

5.4.3: Board member gender

Firms should ensure that both the genders are well represented. Since most of the boards in the analyzed firms are male dominated boards then the firms should ensure they have the female representatives since the few firms which had female members were showing a progressive improvement in their performances and hence firms should aim for a gender balance in their boards.

5.4.4: Board competency

Since the board competency objective showed a negative correlation with firm performance then it points a need for identifying the importance of firm relevant skill set appropriate for respective boards.
5.5: Suggestions for Further Research

1. A similar study to this research could be conducted in companies not listed in NSE.
2. A similar study on this research could be conducted but looking at different variables of managerial composition.
3. A comparative study of the performance of both listed and unlisted companies in NSE.
REFERENCES


Principles for Corporate Governance in Kenya (2000.)Private sector initiative for Corporate Governance


APPENDIX A: INTRODUCTION LETTER

ACHIRA ELIZABETH
Kenyatta University,
P.O.Box 43844-00100,
March, 2012.

To the Respondent;

Dear Respondent,

RE: REQUEST TO CONDUCT RESEARCH IN YOUR COMPANY.

This is to inform you that the researcher Miss Elizabeth Achira is a student at Kenyatta University pursuing a Masters of Business Administration (M.B.A), (finance) option. The researcher intends to investigate the impact of Managerial composition and firm performance in N.S.E.

In order to complete, the above research paper the researcher would like to kindly request you to allow her to collect accurate data for improving the performance of firms in Kenya. It is also the assurance of the researcher that the information given will be treated with utmost confidentiality and will not be used for any other purpose other than for the purpose of this project. Your positive response will be highly appreciated. Thank You.

Yours Sincerely

Doctorial and MBA coordinator
APPENDIX B: COMPANIES LISTED IN THE N.S.E

**MAIN INVESTMENT MARKET SEGMENT**

**Agriculture**

1. Rea Vipingo ord 5.00  
2. Sasini tea Ltd ord 5.00  
3. Kakuzi Ltd ord 5.00

**Commercial and services**

1. Access Kenya group ord 5.00  
2. Marshalls( E.A) ord 5.00  
3. Car &general(k) ord 5.00  
4. Hutchings Biemer ltd ord 5.00  
5. Kenya airwaysord 5.00  
6. CMC holdings ltd ord 5.00  
7. Uchumi supermarkets ord 5.00  
8. Nation media group ltdord 2.50  
9. TPS EA (Serena) ord 1.00  
10. Scangroup ord 1.00  
11. Standard group ord 5.00  
12. Safaricom ltd ord 0.05

**Finance and investment**

1. Barclays bank of Kenya ord 2.00  
2. Cfc stanbic bank ltdord 5.00  
3. Housing finance ltdord 5.00  
4. Centum investment ltd ord 0.50  
5. Kenya commercial bank ord 1.00  
6. Pan Africa insurance holdings co ltd ord 0.5  
7. Diamond trust bank of Kenya ord 4.00  
8. Jubilee insurance co ltd ord 5.00  
9. Standard chartered bank ltd ord 5.00  
10. NIC bank ltd ord 5.00  
11. Equity bank ord 0.50  
12. Olympia capital holdings ord 5.00  
13. The cooperative bank of Kenya ord1.00  
14. Kenya Re Corporation ord 2.50

**Industrial and allied**

1. Athi river mining ord 5.00  
2. B..O.C Kenya ord 5.00  
3. B.A.T Kenya ord 10.00  
4. Carbacid investment lord 5.00  
5. E.A Breweries ord 2.00  
6. E.A cables ord 0.50  
7. Sameer Africa ltdord 5.00  
8. Kenol Kobil ltd ord 0.50  
9. Mumias Sugar company ord 2.00  
10. Unga group ord 5.00  
11. Bamburi cement ord 5.00  
12. Crown Berger (k) ord 5.00  
15. KP&LC ord 2.50  
16. Total Kenya ord 5.00  
17. Eveready EA ord 1.00  
18. KenGen ord 2.50

**ALTERNATIVE INVESTMENT MARKET SEGMENT**

1. A .Bauman &co ltd ord 5.00  
2. Eaagads ltd ord1.25  
3. Williams tea Kenya ltd ord 5.00  
4. City trust ltd ord 5.00  
5. Express ltd ord 5.00  
6. Kapchorua tea co.ltd ord 5.00  
7. Limuru tea ltd ord 20.00  
8. Kenya orchards ord 5.00

Source: Nairobi stock exchange website:July2011