THE RELATIONSHIP OF CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE OF MANUFACTURING FIRMS LISTED IN THE NAIROBI SECURITIES EXCHANGE

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ABSTRACT

Kenya requires resources to achieve and maintain an economic growth of 10% as envisaged in the national development blueprint vision 2030. This can be achieved through a vibrant manufacturing sector that mainly converts agricultural and raw natural resources into finished goods. As a matter of policy, the institutions charged with oversight need to make corrective action if the conduct of these firms is not consistent with market trends. Research has been scanty on this segment particularly on the links between firm-level performance governance structures and corporate financial performance. This paper explores this issue and in particular the relationship between manufacturing firms which were in operation as at December 2012listed in the Nairobi Securities Exchange and the board structure. The performance of firms was measured using the Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q. The study adopted a descriptive research design. The population included all firms listed in manufacturing segment of the NSE. The study made use of secondary data from audited and published company annual reports for the period 2007 to 2012, both years included and the data analyzed using a Panel Data Regression framework. The key results are that the board size is inversely related to firm performance variable of Return on Assets and Return on Equity for listed manufacturing firms in Kenya. A larger proportion of outside directors lead to a higher shareholders' value but does not explain why listed manufacturing firms exhibit a high market price to Net Assets Value.

1. INTRODUCTION

1.1 Background

The recent financial crisis mainly hit the west, but the waves did not escape the developing countries. Kenya too did not escape the flurry of the world's almost financial collapse; an example could be quoted of Blue Shield Insurance Company going under receivership for reasons doubted for corporate governance. The improvement of corporate governance practices is widely recognized as one of the essential elements in strengthening the foundation for the long-term economic performance of countries and corporations (Ibrahim, Rehman, & Raoof, 2010).

Corporate governance has become important for companies as they play the role of reducing systemic risk in the economy (Kaur & Vij, 2014). The subject has received new urgency because of global financial crises and major corporate failures that shock major financial centers of the world (Imam & Malik, 2007). Corporate failures and regulatory initiatives have placed corporate governance systems under closer scrutiny than ever for instance, CMC Motors and NHIF, in Kenya

Management and policies of companies during the recent financial crisis were put into the radar of the analysts. JP Morgan, Bear Steers (both mortgage lenders), Fannie Mae and Freddie Mac (investment banks), and American Insurance Group (AIG) served to prove that corporate governance was by and large the cause of the crisis; some decisions were not made right when it mattered the most. As a result, several countries embarked on to tie the loose ends and most authorities enhanced their policies. The Basel III Accord was borne out of this to help avert a similar crisis in future. In Kenya the Capital Markets Authority as well as regulatory authorities like The Central Bank of Kenya and the Insurance Regulatory Authority enhanced their corporate governance policies to avert such a crisis in Kenya. Specifically, firms were required to form audit committees which stringent measures to ensure non-complicity, the percentage of the CEO's equity was reduced and reporting standards were further scrutinized.

It is therefore necessary to point out that the concept of corporate governance of very large firms has been a priority on the policy agenda in developed market economies for over a decade. Further to that, the concept is gradually warming itself as a priority in the African continent. Indeed, it is believed that the Asian crisis and the relative poor performance of the corporate sector in Africa have made the issue of corporate governance a catchphrase in the development debate (Berglof & Von Thadden, 1999).

There are several events that are responsible for the heightened interest in corporate governance especially in both developed and developing countries (Ranti, 2011). The subject of corporate governance leapt to global business limelight from relative obscurity after a string of collapses of high profile companies. Enron, the Houston, Texas based energy giant and WorldCom the telecom behemoth, shocked the business world with both the scale and age of their unethical and illegal operations. These organizations seemed to indicate only the tip of a dangerous iceberg. dWhile corporate practices in the US companies came under attack, it appeared that the problem was far more widespread. Large and trusted companies from Parmalat in Italy to the multinational newspaper group Hollinger Inc., Adephia Communications Company, Global Crossing Limited and Tyco International Limited, revealed significant and deep-rooted problems in their corporate governance. Even the prestigious New York Stock Exchange had to remove its director (Dick Grasso) amidst public outcry over excessive compensation (La Porta, Lopez-de-Silanes, & Shleifer , 1999).

Corporate governance has traditionally been associated with the "principal-agent" or "agency" problem. A "principal-agent" relationship arises when the person who owns a firm is not the same as the person who manages or controls it. For example, investors or financiers (principals) hire managers (agents) to run the firm on their behalf. Investors need managers' specialized human capital to generate returns on their investments, and managers may need the investors' funds since they may not have enough capital of their own to invest. In this case there is a separation between the financing and the management of the firm, i.e. there is a separation between ownership and control (Maher & Andersson, 1999).

(Bairathi, 2009), noted "Corporate governance is not just corporate management; it is something much broader to include a fair, efficient and transparent administration to meet certain well-defined objectives. It is a system of structuring, operating and controlling a company with a view to achieve long term strategic goals to satisfy shareholders, creditors, employees, customers and suppliers, and complying with the legal and regulatory requirements, apart from meeting environmental and local community needs. When it is practiced under a well-laid out system, it leads to the building of a legal, commercial and institutional framework and demarcates the boundaries within which these functions are performed." Good corporate governance should help local companies to gain access to foreign capital and foreign companies tend to gain investment opportunities providing portfolio diversification opportunities. According to (La Porta, Lopez-de-Silanes, & Shleifer , 1999)"Evidence suggests that firms in emerging economies (compared with their counterparts in developed countries) are discounted in financial markets because of weak governance".(Rajagopalan & Zhang, 2009), firmly felt that investors gain confidence in those firms that practice good corporate governance and these firms are at added advantage in accessing capital compared to firms that lack good corporate governance.

A country's capacity to achieve sustainable prosperity, which is progressive economic growth and social development over a prolonged period of time, depends on decisions about the allocation, utilization and investment of resources. In the liberalized global market, a country's capacity to create and produce wealth is closely related to the process by which corporate resources are allocated, utilized or invested. Strategic decisions about the allocation and utilization of corporate resources are the foundations of investments in productive capacities that can make innovations and economic development possible(Centre for Corporate Governance , 2005).

Efficient Corporations can only be established and developed by responsible, creative and innovative Boards. Indeed, without efficient business enterprises, a country will not create and produce wealth or generate adequate employment opportunities. Without credible, stable and sustainable corporations, investors will not invest their resources into productive capacity. Without investment, business will stagnate and collapse. If there are no corporations that prosper, there will be no economic growth, no employment, no taxes paid and invariably there will be no development in a country (Centre for Corporate Governance , 2005).

An argument has been advanced time and again that the governance structure of any corporate entity affects the firm's ability to respond to external factors and that has some bearing on its performance(Donaldson W. , 2003). In this regard, it has been noted that well-governed firms largely perform better and that good corporate governance is of essence to firms (Miring'u & Muoria, 2011).

1.2 Corporate Governance in Kenya

In 2002, the Capital Markets Authority introduced corporate governance guidelines for all public listed companies in the Nairobi Stock Exchange. These guidelines derive their legal basis from the Capital Markets Authority Act under Section 12 which mandates the Capital Markets Authority to formulate rules guidelines and regulations as may be required for the purpose of carrying out its objective to regulate activities in the stock market. These principles were further strengthened by Kenya's adoption of Organization of Economic Co-operation and Development's (OECD) principles of corporate governance.

In Kenya, the corporate governance principles in the capital markets are enforced through the "comply or explain" principle. In essence this principle is to the effect that listed companies are required to comply with the rules, regulations and laws laid down by parliament or the CMA, it being the regulatory body. Failure to comply, the company, through its directors must explain the reasons for non-compliance or risk facing serious sanctions.

For instance the capital markets authority requires that all listed companies and brokering firms so authorized to act as agents to file annual returns on their financial base. Where a company fails to do so, the company through its directors is required by law to give sound reasons as to the failure to file the returns and in the event it fails to do so then the company or the agent may be suspended from activities at the stock market until it complies with this requirement (Capital Markets, Regulations 2011).

According to (Wachudi & Mboya, 2009), corporate governance has gained prominence in Kenya as is the case in other countries. This has been caused partly by corporate failure or poor performance of public and private companies (Barako, Hancock, & Izan, 2006). Corporate governance framework in Kenya is advocated by the Centre for Corporate Governance Kenya which is an affiliate of the Commonwealth Association for Corporate Governance.

It is well understood that the first attempt to bring into focus the corporate governance framework in Kenya started in 1999 when the Centre for Corporate Governance Kenya developed a framework which was voluntary for companies to adopt. The framework developed was further taken up by the Capital Markets Authority (CMA) in 2000 as draft corporate governance practices for listed companies in Kenya. In later years the CMA made it mandatory for the listed companies to adopt those corporate governance practices. These corporate governance practices mainly dealt with the issues of the board such as board composition, role of audit committee, separation of the role of Chief Executive Officer (CEO) and the chair. In addition, they focused on the rights of the shareholders.

1.3 Statement of the Problem

Few studies have attempted to unearth array of issues, such as (Barako, Hancock, & Izan, 2006), where the authors' main concern was the voluntary disclosure. (Wachudi & Mboya, 2009)investigated the effects of board gender diversity on the performance of commercial banks in Kenya. The variables for these studies showed that corporate governance has a great implication on the overall wellbeing of economic system in a country, since they have far reaching ramifications on the result and performance of the companies studied.(Amba, 2013), reported the same findings for corporate governance and financial performance in Bahrain.

A number of these studies have based their findings on the banking sector, especially in Kenya. (Wanyama & Olweny, 2013) studied the Effects of Corporate Governance on Financial Performance of

Listed Insurance Firms in Kenya.. The market and macroeconomic environment demanded the most out of corporate governance arrangements; boards had a key responsibility in defining and managing the strategy of the company in a fast changing framework, both new opportunities and challenges which were wider in scope and scale than before.

Kenya has a large manufacturing sector contributing 9.2% of the country's Gross Domestic Product (GDP) as of 2012 and serving both the local market and exports to the Eastern Africa Region (KIPPRA, 2013). The sector is also poised for improved growth with the Government implementing a number of strategies like increasing the capacity in power supply, opening up of the East Africa Customs Union, treaties with the Common Market for East and Southern Africa, exemption from duty on manufacturing machinery, manufacturing under bonds and removal of restrictions on foreign capital repatriations especially for subsidiaries of multinationals. Hence its healthy existence and progressive growth is key to the achievement of the government's ambitious development blueprint Vision 2030.

Therefore, despite the importance of corporate governance and the manufacturing sector being key in a country's growth, no study has been done specifically oncorporate governance of the manufacturing firms listed in the Nairobi Securities Exchange. Policy makers in Kenya appreciate that accelerated investments is required in the manufacturing sector and that the ability of the board of directors to ensure their profitability is instrumental if the country is to achieve Vision 2030's target of the manufacturing industry delivering 30% of the GDP.

1.4 Objectives of the Study

The main objective of this study is to find out the effects of corporate governance on the financial performance of manufacturing firms listed in the Nairobi Securities Exchange. Specifically, the study shall establish the following objectives;

1. Determine the relationship between board size and financial performance of manufacturing firms listed in the NSE.
2. Determine the effects of the proportion of non-executive directors on the financial performance of the manufacturing firms listed in the NSE.

1.5 Research Hypotheses

Consistent with the research objectives, this study will address the following Research Hypotheses;

1. Hypothesis 1

H_0: There is a significant relationship between board size and performance of manufacturing firms listed at the Nairobi Securities Exchange;

H_1: There is no significant relationship between board size and performance of manufacturing firms listed at the Nairobi Securities Exchange.

2. Hypothesis 2

H_A: There is a significant relationship between the proportion of non-executive directors and performance of manufacturing firms listed at the Nairobi Securities Exchange.

H_B: There is no significant relationship between the proportion of non-executive directors and performance of manufacturing firms listed at the Nairobi Securities Exchange.

1.6 Justification of the Study

Corporate decisions on whether to invest, when to invest, how soon to invest, what to produce, and whether to employ ultimately affect the incomes, employment and indeed livelihoods of the entire society. When it comes to the performance of companies and the ability to make the right decisions in a seemingly ever-changing environment, the buck stops with the board of directors. These decisions are made by or await the judgment of the boards of corporations. The national capacity to compete in the borderless and liberalized global market increasingly depends on the competitiveness of individual corporate entities and their ability to produce goods and services that meet the test of international competition. Corporate competitiveness depends on the ability of Board to apply focused intelligence to generate innovative ideas, acquire and apply the knowledge and know-how to push and integrate their corporation into the competitive global market. Therefore, the current study will benefit the entire Kenyan society, the government, The Kenya Association of Manufacturers, the Capital Markets Authority, the Kenya Private Sector Alliance, institutional and individual investors. The study also is important generally for prudent, result oriented management and competency in corporate decisions which ultimately affect the returns realized by the companies undertaken in this study.

The paper contributes to literature in three major ways; first, it will combine a range of factors by investigating the influence of ownership and management structures in manufacturing firms, and board size on the financial performance indicators such as, the Tobin's q, the return on assets, and the return on equity. Second, it will investigate seven firms from the manufacturing industry segment listed in the stock market comprising of(BOC gases, British American Tobacco (K) Ltd., Carbacid Investment Lts, East African Breweries Ltd, Eveready Batteries Ltd, Mumias Sugar Company Ltd and Unga Group Ltd). Third, the study covers, the period before and after the 2008 financial crisis. Most importantly, since majority of Fast Moving Consumer Goods (FMCGs) belong in this sector which also supports directly and indirectly all other market segments and also a major player in the exports market, this study will give an insight into the corporate governance mechanisms of this largely ignored segment.

2. LITERATURE REVIEW

2.1 Introduction

The current economic crisis has put the spotlight on corporate governance practices of companies around the world. Governance is increasingly recognized by the business community, regulators and capital market authorities as a fundamental driver of corporate performance. Corporate governance systems differ throughout the world but there is a common view among stakeholders that certain mechanisms must be present in order to minimize the issues of misconduct, bribery and corruption by ensuring corporate disclosure and transparency. Corporate governance is thus framed to perform a system of supervision that uses techniques like board structure, duality, reporting, and remuneration to provide shareholders with the necessary information necessary to hold management liable for their decisions.

2.2 Corporate Governance and Relevant Theories

Corporate governance is an important factor affecting the firm performance which in turn leads to an increase or decrease in the value of the firm (Al-Malkawi & Pillai, 2012). It lacks any accepted theoretical base or commonly accepted pattern till date (Carver, 2000; Tricker, 2000). However, most of the

researchers support their studies by following three prominent theories to further explain the determinants of corporate governance. These are the Stewardship Theory, Institutional Theory, and the Agency Theory.

2.2.1 The Stewardship Theory

The stewardship theory suggests that there is no agency cost between principals (owners) and the agents (managers). There is a consensus in the interests of the shareholders and managers thus minimizing the necessity to monitor the management for increasing shareholders wealth. The theory also comments that the board should have a significant proportion of inside directors to ensure more effective and efficient decision making. This is because inside directors (Executive Directors) know the business better and thus make better decisions than outside directors (Non-Executive Directors). It is also assumed that enhanced firm performance is closely related with the decisions of inside directors as they work for the maximization of shareholders wealth (Davis, Schoorman, & Donaldson, 1997). There are also arguments that these directors are very cautious about their relationship with shareholders as they feel that any anomalies will tarnish their reputation about their relationship with shareholders as they feel that any anomalies will tarnish their reputation. Under this theory CEO duality is seen as a positive force leading to enhanced performance as there is a clear leadership for the company (Donaldson & Preston, 1991). This theory is largely seen as in direct conflict with the Agency Theory.

2.2.2 The Institutional Theory

The institutional theory relates to the influence of those norms, values, beliefs, judicial, and regulatory systems on the firms structure and behaviour. (North, 1990), mentioned that firms regulate economic activities through formal and informal rules throughout their business dealings. This can further be argued that firms operate in a somewhat rule of the game principle. The institutional governance variables like organizational values, politics and principles will influence the behaviour of a bureaucratic leader (Carpenter & Feroz, 2001). The theory looks at firms who are functioning amidst norms, values, ethics and assumptions as to what is appropriate or inappropriate behaviour.

2.2.3 Agency Theory

The theory is concerned with the problems arising as a result of conflict of interest between principal and agent. Agency theory basically explains how the unhealthy relationship between managers and shareholders generate costs of inefficiencies thus affecting the firm performance. (Morck, Shleifer, & Vishny, 1988), argued that although the traditional agency problems due to the separation of ownership and control is minimized by greater levels of ownership, new problems may still creep in. This is mainly due to two reasons. Firstly, the outrageous increase in managerial shareholding may lead to entrenchment effects and be less subjected to internal and external governance mechanisms. Secondly, these large block holdings convert the ancient principal agent problem into a new problem involving multiple principals with different goals. These dissimilarities between principal-principal goals have also become a major concern in emerging nations as they lead to expropriation of minority shareholders and bondholders (Dharwadkar, George, & Brandes, 2000). This feature allows managers to follow their area of interest at the expense of shareholders, avail huge perks, make faulty investment decisions or engage in fraudulent practices (Henry, 2004). These managers are, however, under the threat of a hostile takeover or may be taken over by dominant shareholders. This assumes the fact that shareholders are interested in scrutinizing managerial behaviour.

According to a useful scheme proposed by (Villalonga & Amit, 2006)), conflicts between the owner (widely dispersed shareholders) and manager leads to an incentive alignment problem and is called Type I agency problem. The conflicts arising between a large shareholder and minority shareholders can be referred to as Type II agency problem. The interconnection between these two varieties of agency problems results in four categories of firms which are featured by the presence or absence of Type I or Type II agency problems.

Under the dominant paradigm, the agency relationship between shareholders (principals) and managers (agents) is thwarted by conflict. The agency problem arises primarily from the principals' desire to maximize shareholder wealth and the self-interested agents attempt to expropriate funds. Contracts partly solve this misalignment of interest. In a complex business environment, contracts covering all eventualities are not attainable. Where contracts fail to achieve completeness, principals rely upon internal and external governance mechanisms to monitor and control the agent. Writing and enforcing contracts and the operation of governance mechanisms give rise to agency costs. Further, the inherent residual loss, arising when the agent does not serve to maximize shareholder wealth, adds to the agency costs.

In relation to the research objectives, this study will adopt the agency theory because, it focuses on the board of directors as a mechanism which dominates the corporate governance literature. The theory, further explains the association between providers of corporate finances and those entrusted to manage the affairs of the firm.

2.3 Conceptual Framework
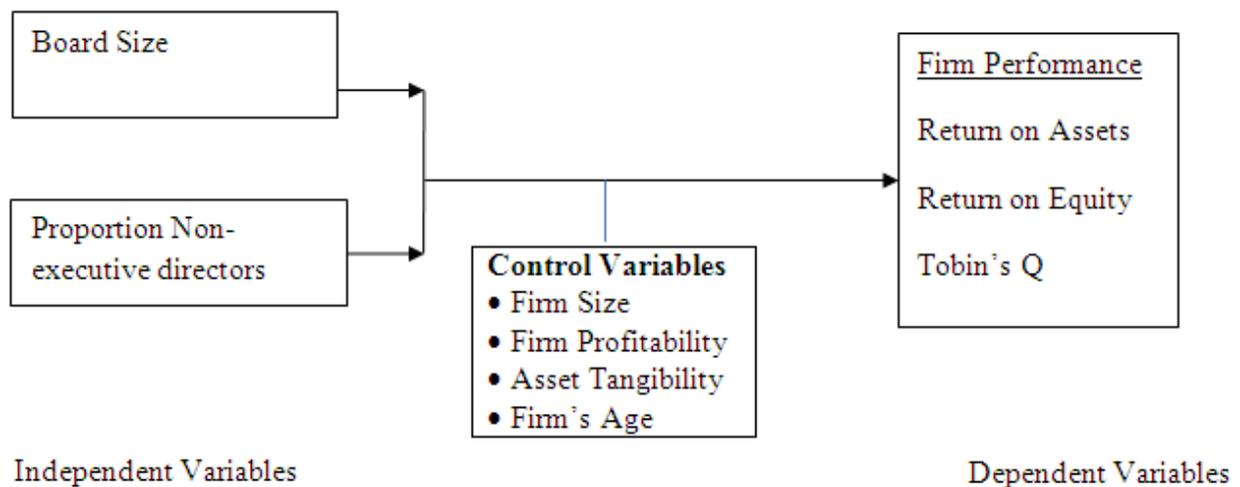
Figure 2.1: Conceptual Framework

2.4 Empirical Review

(Chiang, 2005), explores the relationship among indicators of corporate governance, including transparency and operating performance measures, and whether or not the indicators could be predictors of operating performance. This study supplemented the Standard & Poor criteria with information gathered from all public materials in order to obtain more comprehensive transparency information. The

results indicated that corporate transparency had a significant positive relationship with operating performance and it was one of the most important indicators for evaluating corporate performance. This study concluded that companies with good corporate governance also had a significant positive relationship with operating performance.

As such, a company might devote resources to improving corporate structure in order to improve performance, and outsiders could rely on the information provided by the company to make their decision. In addition, laws and regulations requiring transparency in the ownership structure might be modified in order to achieve more transparency.(Fauzi & Locke, 2012)find that board size, board ownership, institution ownership, information disclosure, board and management structure and process had significant relationships with operating performance.

(Klein, Shapiro, & Young, 2005),investigates the relationship between firm value as measured by Tobin's Q, and newly released indices of effective corporate governance Reports on Business (ROB) for a sample of 263 Canadian firms. The ROB index has a maximum value of 100 and was obtained by summing four sub-indices; a) board composition. b) Shareholding policies. c) Shareholder rights policies. d) Disclosure policies. The study used four control variables, which were size, advantage, growth and profit variability. The results indicated that corporate governance does matter in Canada, and that size was consistently negatively related to performance while advantage, growth and performance were positively related. However, they found no evidence that a total governance index affected firm was performance, because they found no evidence that board independence had any positive effects on performance, and it was negatively related for family owned firms.

(Bocean & Barbu, 2005)Attempt to develop the understanding of corporate governance and its effects on corporate performance and economic performance. In doing so, the study addressed some of the underlying factors that promote efficient corporate governance and examined some of the economic implications associated with various corporate governance systems. The study provides a framework for understanding how corporate governance can affect corporate performance. It was found that corporate governance matters for economic performance, insider ownership matters the most, outside ownership concentration destroys market value, direct ownership being superior to indirect. Three main approaches to firm level performance were found in social science research: research based on market prices, accounting ratios and total factor profitability. Finally, Measuring performance by Tobin's Q and operationalizing it as market to book is consistent with agency theory and the study found that Large outside owners destroy market value, while inside owners create it unless the stakes are unusually big, and that direct ownership is more beneficial than indirect.

(Brown & Caylor, 2004) examined whether firms with weaker corporate governance perform more poorly than firms with stronger corporate governance was found firms with weaker corporate governance to perform more poorly. They also examined if firms with weaker corporate governance are at more financial risk and pay out fewer dividends, than firms with stronger corporate governance. Finally, they examined which of the four corporate governance factors considered by Institutional Shareholder Services (ISS) is the driving factor of their results. The four factors they examined are board composition, compensation, takeover defenses, and audit. They identified that the Board composition is the most important factor and that the least important factor is takeover defenses.

In Uganda,(Rogers, M, 2005)conducted a cross sectional and correlation investigation on corporate governance and performance in Ugandan commercial banks. The target population included depositors in the banks. Other stakeholders considered included 16 officials in charge of financial institutions. In their sample, 4 commercial banks were selected based on their dealings with both retail and corporate customers. The author selected a sample size of 388 respondents using the stratified random sampling methods. The data was analyzed using Pearson's correlation statistical technique to test and establish whether there exists a relationship between corporate governance variables and bank performance.

Another study was also conducted by the Egyptian Banking Institute in 2007 in determining the extent of the Egyptian banks' compliance with the applicable corporate governance best practices, using the Organization for Economic Cooperation and Development and the Basel Committee on Banking Supervision code of corporate governance to determine the compliance level of 25 Egyptian banks.

(Rogers, 2006), explores the relationship between the core principles of corporate governance and financial performance in commercial banks of Uganda. Findings indicate that Corporate Governance predicts 34.5 % of the variance in the general financial performance of Commercial banks in Uganda. However the significant contributors on financial performance include openness and reliability. Openness and Reliability are measures of trust. On the other hand credit risk as a measure of disclosure has a negative relationship with financial performance. It was obvious that trust has a significant impact on financial performance; given that transparency and disclosure boosts the trustworthiness of commercial banks. It is recommended that firms both local and international should enforce full disclosure practices and transparency practices thereby enhancing trust in order to survive in the competitive financial landscape. While studying the evolution of corporate governance mechanisms (Jandik & Rennie, 2008) found out that corporate governance mechanisms ensure high levels of innovation for ammunition manufacturing firm Sellier and Bellot.

2.4.1 Size of Board of Directors

Amongst the core principles for corporate governance board composition and in particular the size of the board is core (OECD, 1999). It is expected that limiting the board size is aimed at improving firm performance. This so as it is depicted as benefits by larger boards of increased monitoring are outweighed by the poorer communication and decision-making of larger groups (Lipton & Lorsch, 1992). (Yermack, 1996) found an inverse relation between board size and profitability, asset utilization, and Tobin's Q ratio. (Anderson, 2004) shows that the cost of debt is lower for larger boards, because creditors view these firms as having more effective monitors of their financial accounting processes. (Brown & Caylor, 2004)add to this literature by showing that firms with board sizes of between 6 and 15 members yield higher returns on equity and higher net profit margins compared to firms of other board sizes.(Sanda, Mikailu, & Gurba, 2005)found out that within a certain range, the larger the size of the board the better the performance. As expected, a larger board is expected within it to have experts from an array of different fields and would be instrumental in advising the CEO and the management.

(Hermalin & Weisbach, 1991)while investigating firms listed at the Stock Exchange of Singapore found that the sign and significance of the relationship between the board size and performance is sensitive to the method of estimation. They also concluded that board characteristics are endogenous and failing to account for their endogeneity into account may yield a significant relationship with performance, which may not exist in reality. On the contrary, (Booth and Deli 1999) presented that firms with larger board

sizes have a lower ratio of debt to assets. Therefore, the size of the board of directors is an important element of board composition. A reasonably sized board is expected to be effective in its statutory function of monitoring and giving direction to the management.

2.4.2 Proportion of Non-Executive Directors

These are board members that are not employees of the company and are not involved in its day to day running. Usually Non-Executive directors have full time jobs elsewhere or may be nominees of government due to the fact that they hold public offices with vested interests in companies/firms. (Rosentein & Wyatt, 1990) show that the market rewards firms for appointing outside directors. Non-executive directors provide a balance to help minimize conflicts of interest and Agency costs and particularly 1) Contribute to the Strategic Plan 2) Scrutinize performance of executive directors 3) Provide external perspective on risk management and 4) Deal with people issues e.g. future shape of board and resolution of conflicts(OECD, 1999).

When considering independence, the factors to consider include business and financial commitments, other shareholding and directorships and involvement in business connected to the company. Non-executive directors should therefore be personalities of high ethical standards and act with integrity and probity. They should be in a position to support the executive and management while monitoring its conduct and demonstrating a willingness to listen, question, debate and challenge pertinent issues.

2.5 Corporate Governance Choices of Firms

The ability to adapt governance structures to changes in external environments is found to be crucial to the survival of firms (Morck & Steier, 2005). The absence of such adaptability increases the likelihood of firm extinction (Grosfeld & Hashi, 2003).(Denis & Sarin, 1999), find that a substantial fraction of firms in their study exhibit large changes in ownership and board structure over time. Their findings suggest that the determination of corporate governance is more dynamic than previously understood. Examples include (Hillier & McColgan, 2006). This study finds that the structure of corporate boards has changed considerably over time in order to implement the recommendations of the Cadbury Report as well as subsequent governance reports.

Governance structure could also evolve in response to structural change in a firm's business environment. Agency problems vary across firms and change over time. Hence the costs and benefits of different governance mechanisms also vary depending on firms' operational and monitoring characteristics (Cremers & Nair, 2005), factors such as firm's liquidity, earnings per share, and the diversity of operations determine firms' operational characteristics, while growth prospects, stock price volatility, and leverage affect firms' monitoring needs (Boone, Field, Karpoff, & Rah, 2006)

Managerial ownership is determined by key variables in the contracting environment. (Klapper & Love, 2004), extend the research of Himmelberg et al. (1999) by examining broad governance using an index. They suggest that asymmetric information and a contracting environment are important determinants of corporate governance. Some studies demonstrate how governance evolves in response to changes in firm characteristics by examining changes in a particular governance mechanism such as ownership, board size and board composition. Specifically, they argue that changes in a firm's growth opportunities, firm size, leverage, the status of a founder/manager, identity of top executive, past performance, information asymmetries and restructuring are plausible forces that drive changes in ownership and control.

(Boone, Field, Karpoff, & Rah, 2006) find that increases in earnings per share and firm liquidity ratio will lead to increases in stock price of the firm and also market price of the firm which is attributed to market to book value. Similarly, (Lehn, Patro, & Zhao, 2004) also find changes in board decisions regarding the firms leverage levels are significantly associated with changes in price to earning rations of the firm. Firms adjust board size in response to past poor performance. Past poor performance could be due to agency problems. The board size is adjusted in order to control the agency problem and to improve cash flow. However, they also reckon that the increase in board size could represent the mature of young, previously high-risk firms with more outside directors sitting on the board. (Hillier & McColgan, 2006), find that changes in ownership-specific characteristics are strong predictors of changes in board dependence and separating the roles of the chairman and CEO. When agency problems do not exist, all individuals in an organization can be instructed to maximise profit or net market value or to minimize costs (Hart, 1995). Hart also explains that these individuals will be prepared to carry out instructions since they do not care per se the outcome of the organization's activities as effort and other types of costs can be reimbursed directly and so incentives are not required to motivate them. This also means that governance structures are not required to solve conflicts since there will be none.

These studies provide empirical evidence on determinants of changes in governance mechanisms. However, most of them examine individual governance instruments, ignoring the interaction between the different instruments in the governance structure. Firms nowadays actually adopt multiple governance mechanisms in order to comply with the increasing statutory and regulatory requirements in comprehensive governance-related recommendations all over the world. It is necessary to use a comprehensive measurement of governance structure that allows the interaction of different mechanisms.

2.6 Corporate Governance and financial Performance

(Chhaochharia & Grinstein, 2005), argue that "…optimal governance structure depends on firms' monitoring needs and on the costs and benefits of different governance mechanisms. To the extent that these costs and benefits vary across firms and over time, optimal governance structure should also vary. This argument identifies two dimensions of governance differences: the cross-sectional and time series dimensions. Along the cross-sectional dimension, firms may encounter different levels of agency problem due to firm characteristics. They thus develop various levels of corporate governance to meet their monitoring requirements. In other words, the level of governance is endogenously determined by firm characteristics. Hence, firms with higher level of governance do not necessarily have better performance than firms with relatively lower level of governance.

Along the time series dimension, governance structure is likely to change in response to changes in conventional wisdom or legal requirements. The assumption for Kenyan governance reform is that the strengthening of internal governance structure would reduce potential agency problems. Raising the governance level shall result in more efficient operation, less management expropriation, and therefore higher operating performance and market value. The benefits of improving corporate governance shall outweigh the costs of such changes.

2.7 Critique of Literature

Previous researches on the governance-performance relationship have focused on the cross-sectional aspect. So far, there is no study examining the relationship between change in corporate governance measured by a comprehensive governance score and firm performance. However, there is some empirical

evidence of the positive effect of change in governance on firm performance. (Jandik & Rennie, 2005), for example, investigate the evolution of corporate governance and firm performance in the Czech Republic based on the case of the ammunition manufacturer Sellier & Bellot (S&B) between 1993 and 2003. They find that S&B's profitability has been dramatically improved through the adoption of monitoring and incentive mechanisms known to mitigate owner-manager agency conflicts in developed countries.

These studies have been focused on the relationship between the change in a single governance mechanism and firm performance. The current study will extend previous by offering important contributions to the literature in this regard. We combine a range of these factors by investigating the influence the ownership and management structures in manufacturing institutions, proportion of non-executive directors, and board size on the financial performance indicators such as, Tobin's Q, the return on assets, and the return on equity.

Based on the aforementioned theoretical argument and empirical findings, I conjecture that improvement in corporate governance, proxied by increases in governance score will reduce agency costs. Lower agency cost would result in higher market valuation. In other words, I expect a positive relationship between changes in governance score and firm valuation, hence an attractive ROA, ROE and Tobin's Q.

2.8 Research Gap

A number of studies have examined the relationship between a variety of governance mechanisms and firm performance. However, the results are mixed. Some examine only the impact of one governance mechanism on performance, while others investigate the influence of several mechanisms together on performance. There is a wanting gap to this extent since majority of them either concentrate on the banking (Wachudi & Mboya, 2009; Mang'unyi, 2011; Nyamongo & Temesgen, 2013; Miring'u & Muoria, 2011). Suffice to say that the Manufacturing sector supports all the other sectors directly or indirectly, it is paramount that an investigation on how they are governed is done. Vision 2030 intends the country to be a regional leader in this important sector. This calls for insight and information that would further lead to the scrutiny that is deserves

Policy makers rely on information in order to provide remedies. Amongst the proposals that been put forward for the manufacturing sector include efforts to increase supply of agricultural products for agro processing, Value added tax remission, increased efforts to renew the African Growth and Opportunity Act and to expand increased markets in Sub-Saharan Africa through the East Africa Community and the Common Market for East and Southern Africa. Before examining other variables, it is necessary to investigate the top management and establish if their corporate governance mechanisms affect performance. It is against this background we found it necessary to carry out a study on the relationship of corporate governance of the manufacturing firms listed in the NSE.

3.   RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that will be used in the study. It includes the research design, population of the study, specification of the empirical model, definition and measurement of variables and the econometric procedures.

3.2 Research Design

Research design is the plan and structure of investigation of a phenomenon so conceived as to obtain answers to research questions. The plan refers to the overall scheme or program to be conducted during research. It includes an outline of what the investigator will do from writing hypotheses and their operational implications to the final analysis of data. The method of study adopted in this study is descriptive research design (Cooper & Schindler, 2008). As (Dooley, 2007) notes, a research design is the structure of the research; it is the glue that holds all the elements in a research project together. `The current study will investigate all the listed manufacturing firms in the Nairobi Securities Exchange. In line with the objectives, the study will evaluate the contents of corporate annual reports of the firms deposited at the Capital Markets Authority as stipulated by law to determine the corporate governance mechanisms and their effects as manifested in the reports.

In line with these prior studies, we adopt panel data regression analysis in analyzing the relationship of the corporate governance proxies on the performance of the listed manufacturing firms.

3.3 Population of the Study

The population for this study consists of all the listed manufacturing firms composed of seven companies in the NSE from 2007 to 2012. The time frame considered for this study envisaged to capture the period before the new CMA regulations on corporate governance and after the new regulations were enforced in 2010. This is also intended to see the effect of policy stance of the new regulations of 2010. The period also acts a pointer to the lessons learnt from the intrigues of corporate governance in the recent financial crisis.

3.4 Sampling Frame

A census approach of all the firms listed under the manufacturing segment was used. This is because the firms are not many in number. "A complete enumeration of all items in the 'population' is known as a census inquiry. It can be presumed that in such an inquiry, when all items are covered, no element of chance is left and highest accuracy is obtained." (Kothari, 2004).The firms' records were also readily available and very convenient in terms of resources like time and cost.   Thus the sampling frame consisted of all the seven firms listed on the NSE as at 1st January 2013. Firms that were delisted, merged or new listed between the study period were left out.

3.5 Data Collection Methods

Secondary data obtained from the listed firms was used. This information was acquired from published and audited annual reports deposited with the CMA as required by law. If the information required could not be found in the CMA library, such was derived from the company's website or www.nse.co.ke ; the NSE website.

3.6 Empirical Model

To reveal the effects of corporate governance on the manufacturing firms listed in the NSE on firm performance variables we adopt the estimation procedure used by Kuznetsov and Muravyev (2001) and modified as

$$Y_{it} = \alpha_i + \beta_1 GOV_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.1$$

Where Y_{it} is the performance measures namely Tobin's Q, ROA and ROE; α_i is an unobserved manufacturing-specific time-invariant effect that allows for heterogeneity in the means of the Y_{it} series across the manufacturing firms I in time t, GOV is a vector of governance variables which are the independent variables, and ε_{it} is the idiosyncratic error term. Governance in this study is proxied by board size and proportion of non-executive directors.

From this general equation, the dependent variables are then modeled using the multivariate regression equations to represent each of the financial performance indicators outlined below:

$$Tobin's Q_{it} = \beta_0 + \beta_1 BOS_{it} + \beta_2 NED_{it} + \beta_3 Z_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.1$$

$$ROA_{it} = \beta_0 + \beta_1 BOS_{it} + \beta_2 NED_{it} + \beta_3 Z_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.2$$

$$ROE_{it} = \beta_0 + \beta_1 BOS_{it} + \beta_2 NED_{it} + \beta_3 Z_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.3$$

Where;

ROA = Profit after tax (Net Income)

       Book Value Total Assets

ROE = Profit after tax (Net Income)

       Total Shareholder's Equity

Tobin's Q= Total Market Value

       Total Asset Value

are the Financial Performance variables (Return on Assets, Return on Equity and Tobin's Q respectively. BOS and NED are the Board Size and proportion of Non-Executive Directors respectively. β are the coefficients while Z_{it} is a vector of control variables and ε is the error term. For these models, the study assumes that the control variables of Firm's Size, Profitability, Asset tangibility and Age affect the performance of the listed manufacturing firms. To control for these time specific effects we adopt dummy variables which should be less by one the total time period under examination. This means that our study will adopt six (6) dummy variables with a constant of 1. These help to capture heterogeneity or individual effects as constants. Hence Z_{it} contains a set of individual or group specific individuals which may be unobserved or observed all of which are taken to be constant over time t resulting in a more effective model that is linear and fit by least squares(Greene, 2011).

As advanced in theory and evidence, the board of directors is a key mechanism to monitor managers' behavior and to advise them. Directors' specific knowledge of the complexity of the business enables them to monitor and advise managers efficiently, and also to avoid any conflict of interest with the regulator (De Andres & Vallelado, 2008).

3.7 Data Analysis Method

In analyzing the relationship between corporate governance and financial performance of listed manufacturing firms in Kenya, the panel data methodology is adopted. This is because the study combined time series and cross sectional data. *Panel Data Regression Analysis* as mentioned by (Westham , 2009) is a type of regression analysis that involves panel data analytical technique. Panel data are said to be repeated observations on the same cross section, typically of individual variables that are observed for several time periods. Longitudinal data and repeated measures are other terminologies used for the kind of data mentioned above. Panel data analysis is an important method of longitudinal data analysis because it allows for a number of regression analyses in both spatial (units) and temporal (time) dimensions. It also provides a major means to longitudinally analyze the data especially when the data are from various sources and the time series are rather short for separate time series analysis. Even in a situation when the observations are long enough for separate analyses, panel data analysis gives a number of techniques that can help examine changes over time common to a particular type of cross-sectional unit.

For us to consider whether we will use the Fixed Effects Regression (LSDV) or Random Effect Regression model, we will apply the Hausman Test to check which model is appropriate. Fixed Effects Model allows for heterogeneity or individuality among the different manufacturing firms by allowing each of them to have its own intercept and value. However, although the intercept may differ across companies, it does not vary over time. On the other hand, Random Effects Model will allow the firms to have a common mean value of the intercept. Hypothesis testing will allow us to use the Fixed Effect Model if we get a significant P-value, otherwise we will employ the Random Effects Model.

4. RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of secondary data obtained from the NSE Handbook 2013, audited financial reports of manufacturing firms deposited at the CMA and the specific firms' websites. The data from these sources are presented using tables and charts outlining the descriptive statistics. Data analysis using E-Views 7.2 as well as testing of hypotheses is also covered in this chapter.

Descriptive statistics and inferential analysis were both employed in the analysis of data. Descriptive statistics is important to describe the relevant aspects of the phenomena under investigation and to provide detailed information about each relevant variable. For the inferential analysis, we use the correlation matrix, panel data regression analysis and the t-test statistics. While the Pearson's correlation measures the degree of association between the variables under investigation, the regression estimates the corporate governance variables on performance proxied by ROA, ROE and Tobin's Q.

4.2 Analysis of Results

4.2.1 Descriptive Statistics

Descriptive statistics for financial performance variables for manufacturing firms were computed and summarized as below.

Table1: Descriptive Statistics on Financial Performance of Manufacturing Firms listed at the Nairobi stock exchange

Statistic	ROA	ROE	TOBQ
Mean	17.01922	23.08527	2.257188
Median	12.98821	18.16537	1.810000
Maximum	46.43960	128.0000	6.950000
Minimum	-12.19324	-44.37787	0.000000
Std. Dev.	13.34973	24.17055	2.021395
Skewness	0.333186	1.591887	0.795725
Kurtosis	2.305107	10.67850	2.469375
Jarque-Bera	1.622125	120.9177	4.924979
Probability	0.444386	0.000000	0.085223
Sum	714.8071	969.5814	94.80191
Sum Sq. Dev.	7306.826	23952.84	167.5275
Observations	42	42	42

Table 1 above displays the descriptive statistics of the variables of interest used to proxy financial performance across all the firms in the population sample. It can be seen that manufacturing firms enjoy a ROA of 17.02%, ROE of 23.09% and a Tobin's Q of 2.25. These results are consistent with previous findings that the ROE of firms should be higher than ROA. The Tobin's Q ratio that is a measure of investor confidence provides that if the Tobin's Qratio is greater than 1.0, then the market value is greater than the value of the company's recorded assets. This suggests that the market value reflects some unmeasured or unrecorded assets of the company. A high Tobin's Q value encourages companies and investors to invest more in capital because they are "worth" more than the price they pay for them.

The standard deviation represents variation from the mean and this translates how manufacturing firms perform financially from the average. Hence the variations of firms for ROA is 13.35%, ROE is 24.17% and 2.02% for Tobin's Q. This means the sector is highly dynamic with fluctuations in their performance. The performance of manufacturing firms is higher than the stock average of 16.5% for ROA, 16.7% for ROE and 1.319 for Tobin's Q (NSE, 2013).

For normally distributed data, the skewness should be zero and kurtosis should be three. The above data indicates that data for ROA and Tobin's Q is largely normal with a skewness of 0.33 and 0.80, kurtosis of 2.31 and 2.45 with a p-value for Jarque-Bera statistic of 0.44 and 0.08 respectively. From these preliminary tests, ROE does not exhibit normality in its distribution. Considering that the sample is small (n=7, 42 observations), we may not reject the normality assumption until we subject the data to further tests (Gujarati, 2004).

Descriptive statistics for the levels of corporate governance variables were computed and summarized as below.

Table 2: Descriptive Statistics on corporate governance variables of Manufacturing Firms listed at the Nairobi stock exchange

Statistic	BOS	NED
Mean	9.428571	7.523810
Median	9.000000	8.000000
Maximum	12.00000	10.00000
Minimum	5.000000	4.000000
Std. Dev.	2.199145	1.770188
Skewness	-0.76652	-0.693926
Kurtosis	2.986994	2.992440
Jarque-Bera	4.113169	3.370834
Probability	0.127890	0.185367
Sum	396.0000	316.0000
Sum Sq. Dev.	198.2857	128.4762
Observations	42	42

As shown in Table 2 above, the largest board has 12 directors and the smallest board had a composition of 5 members with an average of 9.42 (9) members and a variability of 2.2. The highest proportion of non-executive directors is 9 while the lowest proportion of non-executive directors is 3 with an average of 7.17 and a variability of 1.89. In comparison, these figures indicate that manufacturing firms' average size of boards is above the stock market averages of 8.5 members.

The kurtosis for the board size data is 2.99 while for the non-executive directors is 3.0. Usually, the kurtosis of a normal distribution is around 3. If the distribution exhibits a thicker tail than does the normal distribution, its kurtosis will exceed 3 and is said to be abnormal. Further, the Jacque–Berra statistic which tests whether the series is normally distributed is between 4.11 and 3.37 with a p-value of 0.128 and 0.185 for the board size and proportion of non-executive directors respectively. In this case the p-value is above 5%. This can be construed to mean that largely our data is normally distributed. This implies that board size and proportion of non-executive directors is normally distributed.

4.2.2 Correlation Analysis

To ascertain the effects of the corporate governance variables under investigation on the financial performance of manufacturing firms listed at the NSE, the study carried out a correlation analysis. To

address this objective pooled regression analyses on the correlation were conducted on the various variables were conducted and the results summarized in the table below.

Table 3: Results of Correlation Analysis

	ROA	ROE	TOBQ	BOS	NED
ROA	1				

ROE	0.613201	1			
	(0.0001)	-----			
TOBQ	0.328904	0.222369	1		
	(0.0502)	(0.1924)	-----		
BOS	-0.45695	-0.42501	0.028242	1	
	(0.0051)	(0.0098)	(0.8701)	-----	
NED	0.554077	0.259247	-0.37481	-2.98E-14	1
	(0.0005)	(0.0126)	(0.0243)	(1.0000)	-----

Note: Statistics shown on the first row of each respective variable are the estimated coefficients while those in parentheses are their respective p-values at 5% significance values

Table 3 above represents the correlation matrix amongst the variables of interest. The matrix analysis provides information on the hypothesis tests that the study wishes to establish. It can be observed that there is significant correlation between the variables. Board size is negatively correlated with ROA and ROE with significant p-values of 0.0051 and 0.0098 respectively. This indicates that the values are highly significant.

There is also a positive relationship between the proportion of non-executive directors with ROA and ROE having values of 0.554 and 0.259 with p-values of 0.0005 and 0.0126 respectively. Also, the NED has a negative correlation with TOBQ with a coefficient of -0.374 and a p-value of 0.0243 which is significant. This means that we cannot reject the null hypotheses that there is no significant relationship between board size and performance of manufacturing firms listed at the Nairobi Securities Exchange and that there is no significant relationship between proportion of non-executive directors and performance of manufacturing firms listed at the Nairobi Securities Exchange.

4.2.3 Hausman Test

The Hausman test was used to identify whether the fixed effects or random effects model was the most appropriate to employ. The fixed effects or LSDV model allows for heterogeneity amongst the firms. Different firms operate under different scenarios and employ different strategies in their day to day operations. The Fixed effects regression model allows the intercept to vary but it does not change over

time. On the other hand the Random Effects model clusters the firms and produces a common mean value for the intercept. Hypothesis formulation was used to guide the identification of the appropriate model. The results for the Hausman test are as displayed in the table below.

Table 4: Hausman Test Summary Results

	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.34955	2	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BOS	-5.66409	0.170732	1.603342	0.0000
NED	7.508241	-0.14619	2.670862	0.0000

From Table 4 above the cross-section random effects both variables have a probability of 0.0000 which implies we cannot accept the Null Hypothesis of the Hausman test that Random Effects model is appropriate. We therefore accept the Alternative Hypothesis that the Fixed Effects model is the most appropriate model to estimate our variables. To make the model effective six dummy variables were adopted to estimate the fixed effects and pooled regression models and to choose the most appropriate model. The results indicated that there was no difference in both the coefficients and probability when estimation was done with the inclusion of dummy variables as in appendix 4. Hence the Hausman test indicated in both cases that the fixed effects model was the most appropriate model to use.

4.2.4 Data and Unit Root Tests

The study employed panel data analysis of seven firms spanning over 2007 to 2012. The data panel was subjected to unit root tests to establish whether it was stationary or not. In case a series is found to be non-stationary, it should be differenced until it becomes stationary. In particular, this study employed Levin, Lin and Chu (LLC), Im, Pesaran and Shin (IPS) and the Fisher Type - PP test for testing for unit roots. The results were summarized and presented in the Tables 5 and 6 below.

Table 5: Unit Root Tests of Firm Performance Variables

Variable	Levin, Lin & Chu (LLC)	Im, Pesaran& Shin (IPS)	PP-Fisher	Conclusion
Return on Assets (ROA)	-9.53330 (0.0000)	-2.60701 (0.0046)	50.0139 (0.0000)	I(0)

Return on Equity	-8.27432	-2.01046	36.1267	I(0)
(ROE)	(0.0000)	(0.0046)	(0.0010)	
Tobin's Q	-14.4724	-3.35638	42.6468	I(0)
(TOBQ)	(0.0000)	(0.0004)	(0.0001)	

NB: The statistics in the first row represent the estimated coefficients of the variables while the second row in parentheses represents their respective p-values.

While testing for stationarity, the study tested for the existence of unit roots at level and for the test equation used the individual intercept as the benchmark for each of the performance variables. The results above indicate that all variables are integrated of order zero. This means that they are stationary at level. These results are consistent with (Mule, Mukras, & Oginda, 2013) who conducted a study of firms listed at the NSE and found out that ROA, ROE and Tobin's Q were stationary at level.

Table 6: Unit Root Tests of Corporate Governance Variables

Variable	Levin, Lin & Chu (LLC)	Im, Pesaran& Shin (IPS)	PP-Fisher	Conclusion
Board Size	-8.1250	-3.26602	8.70398	I(0)
BOS	(0.0000)	(0.0005)	(0.0129)	
Non-Executive Directors NED	-21.3889	-2.76596	15.3309	I(0)
	(0.0000)	(0.0028)	(0.0005)	

NB: The statistics in the first row represent the estimated coefficients of the variables while the second row in parentheses represents their respective p-values

From Table 6 above, it can be seen that both corporate governance variables are stationary at level. These results seem to support previous studies that corporate governance variables in the NSE are largely stationary at level (Aduda, Chogii, & Magutu, 2013; Mang'unyi, 2011).

4.2.5 Econometric Estimation

This study employs panel data analysis to analyze firm specific effects as outlined in the 3 equations in the previous chapter. The model was estimated using Panel Least Squares of Fixed effects which are an unbiased estimator especially where the error terms are likely to be auto-correlated (Baltagi 2001). This accounts for heteroskedasticity which may be present given that there were significant variations of the firms being investigated.

4.2.6 Panel Least Squares Regression Results

This section represents the econometric results obtained by empirically testing the three sets of equations outlined in the previous chapter for a panel of seven firms between 2007 and 2012. The analysis was carried out using the Fixed Effects Model of a balanced panel. The panel data consisted of i cross-sectional units where $i = 1, 2, \dots 7$ firms observed at each of t time periods where $t = 1, 2, \dots 6$ (2007 through 2012). Hence we estimate equations 3.1, 3.2 and 3.3 and their results are posted in the table below.

Table 7: Summarized results of Panel Least Squares Regression Results

Variable	Return on Assets				Return on Equity				Tobin's Q			
	Co-efficient	Standard Error	t-statistic	Probability	Co-efficient	Standard Error	t-statistic	Probability	Co-efficient	Standard Error	t-statistic	Probability
C	0.2793	0.4455	-0.6269	0.535	2.038	1.4242	-1.431	0.1617	13.0585	8.2312	1.5864	0.1222
BOS	-5.6640	1.2727	-4.4502	0.0001	-6.613	4.0684	-1.625	0.1136	0.11945	0.6822	0.1750	0.8621
NED	7.5082	1.6414	4.5742	0.0001	9.009	5.2468	1.717	0.0953	-1.58530	0.6822	-2.3235	0.0265
R Squared		0.873247				0.604925				0.847170		
Adjusted R-Squared		0.842519				0.50915				0.810120		
Durbin Watson		1.848500				2.032441				1.868990		
Prob (F-Statistic)		0.000000				0.00005				0.000000		

Table 7 above represents summarized results obtained from running the equations. Individual regression results are displayed in appendices 4, 5 and 6.

The Adjusted R squared measures the success of the regression model in predicting the values of the dependent values within the sample (Kothari, 2004). A regression that fits perfectly will be one and zero if it does not. The Return on Assets has an Adjusted R squared of 84.25% meaning that 82.45% of the dependent variable is well explained by the size of the board and proportion of Non-Executive Directors. The remaining variation of 17.55% is the error term and is unexplained and attributed to other factors not included in the model. The Return on Equity model has an Adjusted R squared of 50.91% % meaning that 50.91% of the dependent variable is well explained by the size of the board and proportion of Non-Executive Directors. The remaining variation of 49.09% is the error term and is unexplained and attributed to other factors not included in the model. The Tobin's Q model Adjusted R squared of 84.72% % meaning that 84.72% of the dependent variable is well explained by the size of the board and proportion of Non-Executive Directors. The remaining variation of 15.28% is the error term and is unexplained and attributed to other factors not included in the model.

The Durbin-Watson test seeks to establish where there exists autocorrelation. A good model is one that previous periods have zero disturbances from the observation period. A Durbin Watson statistic of 2 is preferred and may be assumed to have no first-order autocorrelation(Gujarati, 2004). This implies that the closer the Durbin-Watson is closer to 2 the better. The ROA model reports a Durbin-Watson statistics of 1.84, ROE of 2.03 and Tobin's Q of 1.87. These values are all close to 2 and it can be deduced that there is no autocorrelation in the three models.

Further, The Wald Test was used to check whether the explanatory variables jointly have a significant effect on our dependent variable. The results are as displayed in Appendix 7. Wald test reports that chi-square and F-Statistics have coefficient values of 18.82 and 37.64 respectively with both having a p-value of 0.00.According to (Gujarati, 2004) the Null hypothesis for this test is that the two explanatory variables do not jointly explain our dependent variables. Since we get a resulting p-value equaling zero for the coefficient of board size and the proportion of non-executive directors we reject the null hypothesis and

conclude that the variables do have a jointly significant effect on our dependent variables.

4.2.7 Investigation of Results and Findings

Hypothesis 1

H_0: There is a significant relationship between board size and performance of manufacturing firms listed at the Nairobi Securities Exchange;

H_1: There is significant relationship between board size and performance of manufacturing firms listed at the Nairobi Securities Exchange.

From the above results, it can be observed that board size is negatively related to two measures of performance. The coefficient of ROA is -5.6640, for ROE is -6.613. These results are also in agreement with the correlation analysis that larger boards are negatively related with ROA and ROE. We cannot deduce from the model the effects of board size on the Tobin's Q ratio as the p-value is insignificant. This implies that the positive Tobin's Q might be explained by other market related variables like the firm's public image to investors. Previous studies have different views on the effect of board size with performance but most indicate that the board size is inversely related to performance. These results seem to support (Yermack, 1996) that a smaller board yields better asset to market value. However, these results differ with (Hermalin & Weisbach, 1991) who found out that larger boards have a larger asset to market value.

Hypothesis 2

H_A: There is a significant relationship between the proportion of non-executive directors and performance of manufacturing firms listed at the Nairobi Securities Exchange.

H_B: There is no significant relationship between the proportion of non-executive directors and performance of manufacturing firms listed at the Nairobi Securities Exchange.

From the above results, it can be observed that the proportion of NED is positively related to ROA and ROE and negatively related to TOBQ measures of firm performance. The coefficient of ROA is 7.5082, for ROE is 9.009. We also find that the proportion of Non-Executive directors is the most significant variable to explain ROE. This means that the higher number of outside directors the more the shareholders' value increases. The coefficient of Tobin's Q is -1.58530 with a p-value of 0.0265 which is significant. This means that the larger the proportion of NED the lower the Tobin's Q financial performance of manufacturing firms. These results are also in agreement with the correlation analysis that larger boards are negatively related with ROA and ROE. These results, however support (Aduda, Chogii, & Magutu, 2013) who found out that board size is a significant variable to explain performance on ROA and Tobin's Q   and outside directors an important variable to explain Tobin's Q. However these results differ in that for manufacturing firms, although the Tobin's Q is significant, it is inversely related to the proportion of Non-Executive Directors. This is an interesting strait for the manufacturing sector as it deviates from the stock market averages (Mule, Mukras, & Oginda, 2013; Nyamongo & Temesgen, 2013).

As explained earlier, Tobin's Q is a measure of market value to the net assets of the company. It remains an item of investigation why the Tobin's Q ratio on manufacturing firm deviates from the norm. It means that investors value the manufacturing firms more than they value other firms. This could be an area of

further research to find out whether advertising, firm's age, monopolistic attributes or other factors could be the cause.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The objective of this chapter is to discuss the findings, make a conclusion and make recommendations from all the qualitative and quantitative analysis presented in chapter four.

The chapter is structured into five sections as follows: Section 5.2 summarizes the research objectives and the analysis; 5.3 covers the conclusion while section 5.4 covers the recommendations.

5.2 Summary

The purpose of this study was to empirically test the relationship of corporate governance on financial performance of listed manufacturing firms in the NSE. In summary, the following are the findings:

There were seven firms listed under the manufacturing segment of the NSE. This segment is highly dynamic having been shelved off from the Industrial and Allied Sector. With regards to corporate governance, the study found out that manufacturing firms disclosed their mechanisms of corporate governance and all of them complied with the Corporate Governance Guidelines.

We find that there is a significant relationship between board size and performance of manufacturing firms listed at the Nairobi Securities Exchange. There is an inverse relationship between the size of the board of directors and firm performance variables of ROA and ROE. The board size cannot adequately explain the Tobin's Q ratio. The proportion of Non-Executive directors explains all the three variables of performance. Specifically, a higher proportion of non-executive directors lead to higher ROA and ROE and a lower Tobin's Q ratio for manufacturing firms.

5.3 Conclusions

The study set out to investigate the relationship between two corporate governance variables of size of the board of directors and the proportion of non-executive directors and firm performance of manufacturing firms listed at the Nairobi Securities Exchange. The measures of performance used were ROA, ROE and Tobin's Q ratios. The study used a balanced panel of seven firms of all the 7 firms listed at the NSE for a period of 6 years (2007 to 2012) both years included to estimate equation 3.2, 3.3 and 3.4 in chapter 3. The results indicate that there is a significant relationship between corporate governance variables of board size and proportion of Non-Executive directors and firm performance of manufacturing firms.

The board size is negatively related to ROA and ROE and cannot adequately explain the Tobin's Q ratio. This means that a leaner board is more desirable as it seems to provide better performance and steer companies to more profitability. The proportion of non-executive directors is positively related to ROA and ROE and negatively related to the Tobin's Q ratio. This means that a higher proportion of outside directors lead to a higher shareholders' value. The Tobin's Q ratio is not consistent with previous studies exhibited in the NSE despite it being higher than the average over relatively the same time period. This means that investor confidence of the manufacturing firms could be explained by other variables other than corporate governance variables.

5.4 Recommendations

Based on the above conclusions we can recommend that for manufacturing firms in Kenya to improve their performance there is need limit the size of the board of directors. In line with the agency theory, more agents will lead to increased agency costs and in particular directors' remuneration that might not be commensurate with performance. The school of thought that a larger board will effectively monitor the management is not true in the manufacturing firms' context. A larger board may take a longer time to react to market dynamics and eventually affect the performance of companies. Larger boards may also be a source of confusion to the CEO and management by giving diffuse advisories to the management. The results of the current study have therefore shown that there is need to regulate board sizes to improve performance.

The proportion of non-executive directors needs to be encouraged to improve firm performance especially on the ROA and ROE. To ensure the shareholders' returns and in particular the Kenyan public, there is need to have more outside directors in the board of directors. This means that more outside directors will mitigate the conflicts that may arise with the inside or executive directors. Investor confidence will also be enhanced with larger outside directors.

There is need to establish why the Tobin's Q ratio is inversely related with the corporate governance variables under investigation. As the country seeks to strengthen the manufacturing sector in the economic pillar of the development blueprint vision 2030, investors will surely be paramount in its success. The market value to assets value is what makes companies attractive to potential investors. The regulator, CMA needs to establish what factors influence the Tobin's Q hence their attractiveness to investors in order to further growth prospects of this important industry segment. We propose that further research on this phenomenon and in particular the critical levels of board size and proportion of non-executive directors of manufacturing firms in Kenya.

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APPENDICES

Appendix 1. Manufacturing firms listed in the NSE as at December 2012.

S/No.	Name of Company
1.	BOC Gases Limited
2.	British American Tobacco Limited
3.	Carbacid Limited

4.	East Africa Breweries Limited
5.	Eveready Batteries Limited
6.	Mumias Sugar Company Limited
7.	Unga Group Limited

Appendix 2. ROA Unit Root histogram

Panel unit root test: Summary

Series: ROA

Date: 09/03/14   Time: 23:57

Sample: 2007 2012

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-9.53330	0.0000	7	35
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.60701	0.0046	7	35
ADF - Fisher Chi-square	33.8341	0.0022	7	35
PP - Fisher Chi-square	50.0139	0.0000	7	35

** Probabilities for Fisher tests are computed using an asymptotic Chi

Appendix 3. ROE Unit Root

Panel unit root test: Summary

Series: ROE

Date: 09/03/14   Time: 23:58

Sample: 2007 2012

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				

			Cross-sections	Obs
Levin, Lin & Chu t*	-8.27432	0.0000	7	35
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.01046	0.0222	7	35
ADF - Fisher Chi-square	28.7439	0.0113	7	35
PP - Fisher Chi-square	36.1267	0.0010	7	35

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

Appendix 3. TOBQ Unit Root

Panel unit root test: Summary

Series: TOBQ

Date: 09/03/14   Time: 20:43

Sample: 2007 2012

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-15.9137	0.0000	7	35
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-4.40289	0.0000	7	35
ADF - Fisher Chi-square	42.1611	0.0001	7	35
PP - Fisher Chi-square	49.6864	0.0000	7	35

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

Appendix 4. ROA with dummy variables

Dependent Variable: ROA

Method: Panel Least Squares

Date: 08/31/14   Time: 15:48

Sample: 2007 2012

Periods included: 6

Cross-sections included: 7

Total panel (balanced) observations: 42

ROA=C(1)+C(2)*BOS+C(3)*NED+C(4)*D2+C(5)*D3+C(6)*D4+C(7)*D5
    +C(8)*D6+C(9)*D7

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-1.473407	0.372223	-3.958395	0.0004
C(2)	-5.664086	1.272770	-4.450205	0.0001
C(3)	7.508241	1.641429	4.574209	0.0001
C(4)	-1.641277	0.372851	-4.401964	0.0001
C(5)	7.454562	1.486692	5.014193	0.0000
C(6)	2.224809	0.540174	4.118690	0.0002
C(7)	-1.609976	0.336588	-4.783232	0.0000
C(8)	1.982636	0.548339	3.615714	0.0010
C(9)	-0.052157	0.030586	-1.705230	0.0975

R-squared	0.873247	Mean dependent var	0.170192
Adjusted R-squared	0.842519	S.D. dependent var	0.133497
S.E. of regression	0.052977	Akaike info criterion	-2.850512
Sum squared resid	0.092616	Schwarz criterion	-2.478154
Log likelihood	68.86075	Hannan-Quinn criter.	-2.714028
F-statistic	28.41860	Durbin-Watson stat	1.848500
Prob(F-statistic)	0.000000		

Appendix 5. Panel Least Squares Regression results of ROE

Dependent Variable: ROE

Method: Panel Least Squares

Date: 08/31/14   Time: 15:37

Sample: 2007 2012

Periods included: 6

Cross-sections included: 7

Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.038732	1.424228	-1.431465	0.1617
BOS	-6.613292	4.068406	-1.625524	0.1136
NED	9.009747	5.246827	1.717180	0.0953

| | Effects Specification | | | |

Cross-section fixed (dummy variables)

R-squared	0.604925	Mean dependent var	0.230853
Adjusted R-squared	0.509150	S.D. dependent var	0.241706
S.E. of regression	0.169341	Akaike info criterion	-0.526400
Sum squared resid	0.946316	Schwarz criterion	-0.154042
Log likelihood	20.05439	Hannan-Quinn criter.	-0.389916
F-statistic	6.316063	Durbin-Watson stat	2.032441
Prob(F-statistic)	0.000058		

Appendix 6. Panel Least Squares Regression results of TOBQ

Dependent Variable: TOBQ

Method: Panel Least Squares

Date: 09/03/14   Time: 21:39

Sample: 2007 2012

Periods included: 6

Cross-sections included: 7

Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.05850	8.231252	1.586453	0.1222
BOS	0.119450	0.682286	0.175074	0.8621
NED	-1.585308	0.682286	-2.323523	0.0265

| | Effects Specification | | | |

Cross-section fixed (dummy variables)

R-squared	0.847170	Mean dependent var	2.257188
Adjusted R-squared	0.810120	S.D. dependent var	2.021395
S.E. of regression	0.880828	Akaike info criterion	2.771500
Sum squared resid	25.60331	Schwarz criterion	3.143858

Log likelihood	-49.20151	Hannan-Quinn criter.	2.907984
F-statistic	22.86569	Durbin-Watson stat	1.868990
Prob(F-statistic)	0.000000		

Appendix 7. Wald Test of Explanatory Variables

Wald Test:

Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	18.81872	(2, 39)	0.0000
Chi-square	37.63744	2	0.0000

Null Hypothesis: C(2)=C(3)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(2)	15.78553	2.744099
C(3)	-18.48376	3.242664

Restrictions are linear in coefficients.

Appendix 8: Panel Co-integration test of firm performance variables

Pedroni Residual Cointegration Test

Series: ROA ROE TOBQ

Date: 08/20/14   Time: 05:44

Sample: 2007 2012

Included observations: 42

Cross-sections included: 6 (1 dropped) in non-parametric (PP) test; 0 (7
    dropped) parametric (ADF) test

Null Hypothesis: No cointegration

Trend assumption: No deterministic trend

User-specified lag length: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-1.258925	0.8960	-1.280359	0.8998
Panel rho-Statistic	1.754869	0.9604	1.441448	0.9253
Panel PP-Statistic	-1.620401	0.0526	-1.723534	0.0424
Panel ADF-Statistic	NA	NA	NA	NA

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	2.620534	0.9956
Group PP-Statistic	-1.653143	0.0492
Group ADF-Statistic	NA	NA

Appendix 9: Panel Co-integration test of corporate governance variables

Pedroni Residual Cointegration Test

Series: BOS NED

Date: 09/03/14   Time: 22:29

Sample: 2007 2012

Included observations: 42

Cross-sections included: 6 (1 dropped)

Null Hypothesis: No cointegration

Trend assumption: No deterministic trend

Automatic lag length selection based on SIC with a max lag of 0

Newey-West automatic bandwidth selection and Bartlett kernel

Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-2.84E+26	1.0000	-1.105945	0.8656
Panel rho-Statistic	-0.342061	0.3662	-0.342061	0.3662
Panel PP-Statistic	-1.164069	0.1222	-1.164069	0.1222
Panel ADF-Statistic	-1.175428	0.1199	-1.175428	0.1199

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	0.186253	0.5739
Group PP-Statistic	-1.012535	0.1556
Group ADF-Statistic	-1.026019	0.1524

Appendix 10.Histogram of residuals
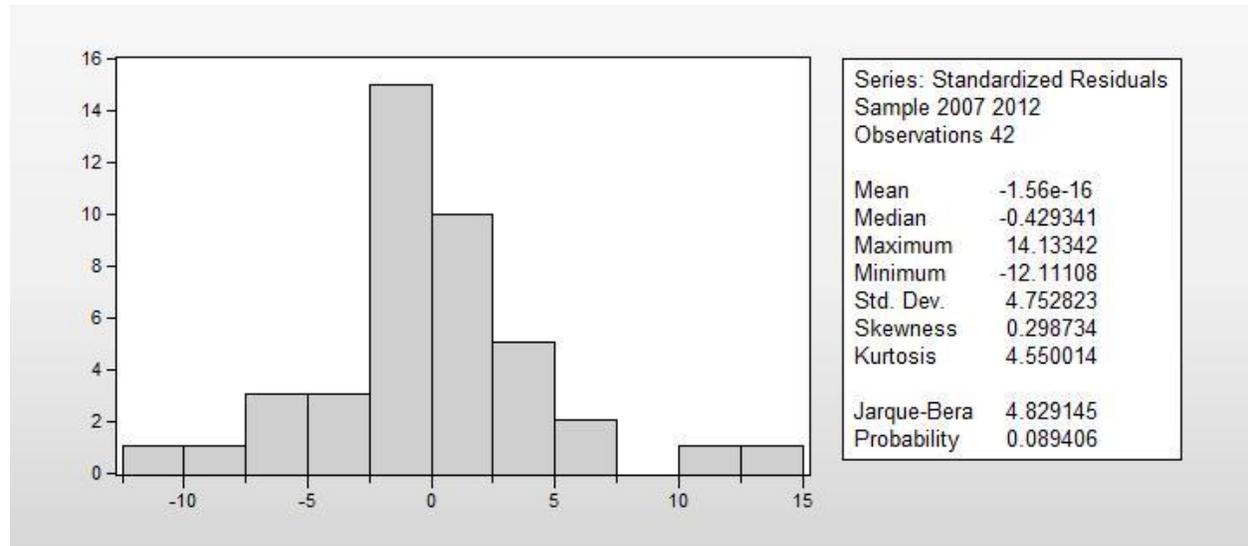
Appendix 11.

 Graph of residuals
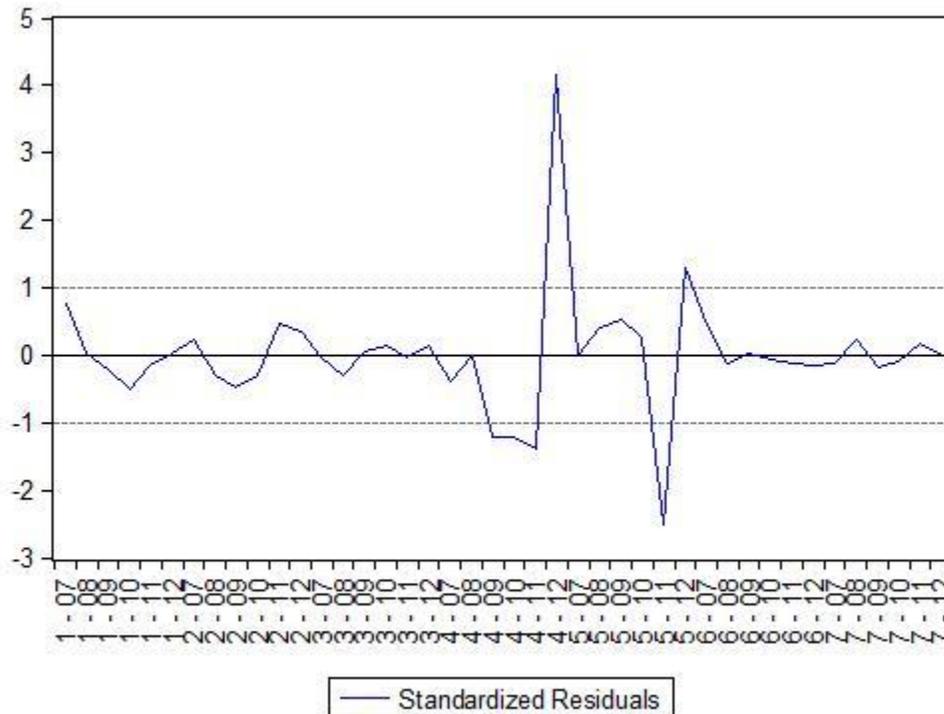
LIST OF ACRONYMS AND ABBREVIATIONS

CCG	Center for Corporate Governance
CEO	Chief Executive Officer
CMA	Capital Markets Authority
HFCK	Housing Finance Corporation of Kenya
ISS	Institutional Shareholder Services
NHIF	National Hospital Insurance Fund
NSE	Nairobi Securities Exchange
OECD:	The Organization for Economic Cooperation and Development
ROA	Return on Assets
ROB	Reports on Business
ROE	Return on Equity

DEFINITION OF TERMS

Agency theory:	Agency theory is directed at the ubiquitous agency relationship, in which one party (the principal) delegates work to another (the agent), who performs the work.
Board Composition:	This is defined as the proportion of representation of non-executive directors on the board.
Board Size:	This is defined as the number of directors both executive and non- executive directors on the board of the bank.
Corporate Governance:	The methods by which suppliers of finance control managers in order to ensure that their capital cannot be expropriated and that they earn are turn on their investment.
Earnings per Share:	Total earnings divided by the number of shares outstanding companies often use a weighted average of shares outstanding over the reporting term
Executive directors:	Directors that are currently employed by the firm, retired employees firm, related company officers or immediate family members of firm employees.
Financial Performance:	This is a measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time.
Governance Structure:	Governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, share holders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs.
Independent Director:	A person whose directorship constitutes his or her only connection to the corporation.
Non-executive directors:	They are members of the Board who are not top executives, retired executives, former executives, relatives of the CEO or the chairperson of the Board, or outside corporate lawyers employed by the firm.
Return on Assets:	A measure of a company's profitability, equal to a fiscal year's earnings divided by its total assets, expressed as a percentage.
Return on Equity:	A measure of how well a company used reinvested earnings to generate additional earnings, equal to a fiscal year's after-tax income(after preferred stock dividends but before common stock dividends) divided by book value, expressed as a percentage.
Stewardship theory:	A steward protects and maximizes shareholders" wealth through firm performance, because, by so doing, the steward's utility functions are maximized.
Shareholders:	Shareholders are people who have bought shares in a limited liability company. They own a part of the company in exact proportion to the proportion of shares they own.