CORPORATE GOVERNANCE, FINANCIAL CHARACTERISTICS, MACROECONOMIC FACTORS AND PERFORMANCE OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

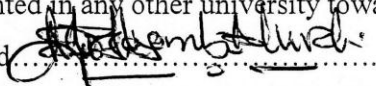## MOSES ODHIAMBO ALUOCH

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS OF THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION UNIVERSITY OF NAIROBI
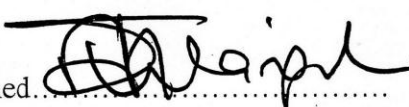
2019

DECLARATION

I, declare that this thesis is my original work and that it has not been previously been presented in any other university towards the award of a degree.

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DEDICATION

I dedicate this Doctoral thesis to my dear parents Silvia Atieno and the late John Charles Aluoch for giving me the foundation and motivation to seek great heights in education and to my immediate family wife Rose Adoyo and children Stanley Ochieng', Silvia Akumu and Charles Omondi who supported me tirelessly and encouraged me during my studies to ensure that this work comes to successful conclusion.

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ABBREVIATIONS AND ACRONYMS

ANOVA Analysis of Variance

CAMEL Capital Adequacy Asset Quality Management Earnings Liquidity

CBK Central Bank of Kenya

CEO Chief Executive Officer

CG Corporate Governance

CGPR Corporate Governance Principles and Recommendations

CLRM Classical Linear Regression Model

CMA Capital Markets Authority of Kenya

ETR Effective Tax Rates

FC Financial Characteristics

FE Fixed Effects

FGLS Flexible Generalized Least Squares

FP Firm Performance

GDP Gross Domestic Product

IFR Inflation Rate

IN Investment

IT Interaction

INR Interest Rate

IOS Investment Opportunity Set

KNBS Kenya National Bureau of Statistics

KSHS Kenya Shillings

LE Firm Leverage

LI Firm Liquidity

MF	Macroeconomic Factors
NPV	Net Present Value
NSE	Nairobi Securities Exchange
PROB	Probability
RDT	Resource Dependency Theory
RE	Random Effects
ROA	Return on Assets
STD	Standard
UK	United Kingdom
USA	United States of America

ABSTRACT

Performance of firms listed at the Nairobi Securities Exchange has varied since the introduction of corporate governance regulatory framework in the year 2002. Some firms have posted excellent results in terms of profitability, while others have forwarded dismal performance.This study examined the relationships among corporate governance, financial characteristics, macroeconomic factors and performance of firms listed at the Nairobi Securities Exchange. The specific objectives were to establish the effect of corporate governance on performance of firms listed at the Nairobi Securities Exchange to determine the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms, to establish the moderating effect of macroeconomic factors on the association between corporate governance and performance of firms and to determine the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms. The study was anchored on wealth maximization and agency theories and was based on positivism philosophy. The study employed census method and a target population of sixty five companies that were listed from year 2002 to 2016 were included. The study used longitudinal descriptive research design. Panel data was extracted from annual reports of individual companies firms and economic reports. A panel data regression analysis was employed using random effects model. In the descriptive analysis the study revealed that listed firms in Kenya had different manifestations in terms of independent, intervening, moderating and dependent variables. Correlation analysis disclosed that board independence, gender diversity and board occupational expertise were significantly relationship with Return on Assets. On the other hand board tenure, board ownership and board committee meetings had negative relationship with Return on Assets. Similarly, board ownership, number of board committees, board independence, and committee meetings had negative, weak and insignificant relationship with Tobin's Q. In regression analyses the study established that there is significant relationship between corporate governance and firm performance as measured by Tobin's Q, but no relationship as measured by Return on Assets; the intervening effect of financial characteristics on the relationship between corporate governance and firm performance is significant; the moderating effect of macroeconomic factors on the relationship between corporate governance and firm performance is significant; and the joint relationship was also established that there is significant relationship among corporate governance, financial characteristics, macroeconomic factors and firm performance. The study resolved that there is significant effect on corporate governance and firm performance, financial characteristics and macroeconomic factors have intervening and moderating significant effects on the relationship between corporate governance and firm performance. Based on the findings the study made various conclusions: listed firms in Kenya embraced corporate governance policies to meet the requirements of the regulating authority and had effect on firm performance; corporate governance practices adopted by listed firms in Kenya had significant effect of the firm performance. This study supplements to the existing knowledge by establishing that the association between corporate governance and performance of firms heavily relied on the context under study and listed firms respond to poor performance by strengthening their corporate governance.

CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

Performance of listed firms in Kenya has been varied since the introduction of corporate governance policies and guidelines in the year 2002. This has compounded the issues in corporate governance which has remained contentious for a long time after great world corporate failures (Dang & Nguyen, 2016). Good corporate governance policies and practices by firms have greater potential to influence better firm performance. This is normally inspired by financial characteristics and macroeconomic factors (CMA, 2015). Financial characters normally intervene in the association between corporate governance and firm performance given their specific effects. Financial characteristics like investments, leverage and liquidity when managed properly normally impact positively to firm performance (Okiro, Aduda & Omoro 2015). Increase in investment implies that firms have identified lucrative opportunities that they seek to exploit which determines financing decisions and the level of leverage (Aivazian, Ge & Qiu, 2005). Macroeconomic factors universally affect all firms. Macroeconomic factors such as Growth Domestic Product growth rate, interest rate and inflation rate have moderating effect on the relationship between corporate governance and firm performance (Ghabayen, 2012).

The above conceptualization on the relationships among corporate governance, financial characteristics, macroeconomic factors and firm performance is explained by Wealth Maximization theory by Posner (1983), Agency theory by Jensen and Meckling (1976),

Stewardship theory by Donaldson and Davis (1981), Stakeholders' theory by Freeman (1984) and Resource Dependency theory by Preffer and Salanuk (1978). Wealth maximization is a primary norm of corporate governance that encourages firms' board of directors to implement all major financial and non-financial decisions with the only interest of shareholders (Ponsor, 1981). The Agency theory is an agreement between principals and agents, in a firm it deals with various relationships between shareholders and various agents. These agents work on behalf of their shareholders (Jensen & Meckling, 1976). The Stewardship theory deals with directors as stewards of a business, with interest to protect and enhance shareholders' wealth through superior firm performance (Davis & Donaldson, 1997). The Stakeholder theory proposes a network of relationship of all stakeholders of a firm. This group of network is significant for a firm to attain a healthier firm performance (Freeman, 1999). The Resource Dependency theory focuses on the roles of top management and directors in providing resources needed by the firm to achieve and improve firm performance (Hillman, Canella & Paetzold, 2000).

1.1.1 Corporate Governance

Corporate governance deals with board activities of an enterprise and its relationship with shareholders, managers and legitimate stakeholders. It defines how power is exercised over corporate affairs (Tricker, 2015). Corporate governance is a mixture of policies and best practices used by firms to realize their goals in expectation to their shareholders (Millin, 2007). Corporate governance is the trend of directors to govern within conventional moral standards (Fourier, 2006). Corporate governance encourages transparent and proficient running of organizations to achieve define goals through best practices and structure (Abu-Tapanje, 2005). Through good corporate governance

investors to companies assure themselves of better return from their investments (Shleifer & Vishny, 1997).

Corporate governance policies and practices used in this study included: board composition which comprises both executive and non-executive directors, gender and ethnicity (Carter, Simkins, & Simpson, 2003); board skills, experience and occupational expertise (Kesner, 1998); board age, how young or old the board members are (Rose, 2007); board size, is how small or big the board is in terms of numbers. (Jensen, 1993; Khanchel, 2007); board tenure which is the years directors complete in a firm (Mathew, Paul, Kamel & Cherif, 2010); board tools, are necessary tools and aids in place to enable discharging of responsibilities of the board (CMA, 2015); board ownership, number of share held by board members(Brickley, Lease & Smith, 1988; board meetings comprise statutory and non-statutory meetings of board members (Lipton & Lorch, 1992) and board committees meetings for deliberations of board activities (Klein, 2002). Board compensation is the remuneration to board members (Murphy, 1984).

Board composition should reflect the company's shareholding structure and provides a mechanism for representation of minority shareholders. They may take decisions which benefit self-interest (Wright, Ferris, Sarin, & Awasthi, 1996: Fama & Jensen, 1983). Board diversity includes individual of different ethnicities, races, women and other marginal groups widen by resources of firms. Board diversity brings bundles of ideas, experience, knowledge, and proficient contacts which are used to solve business

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problems and achieve higher firm performance (Ruigrok, Peck & Tacheya, 2007; Carpenter, Geletkanycz & Sanders, 2004).

Board occupational expertise deals with the background, education and experience of board members. Occupational expertise influences the board members in understanding complicated business transactions and gives better decision making. Firms' directors' differences are perceived widely given their experience, expertise, background, and education (Baysinger & Butler, 1985). Board age is average age of the board members. Average older corporate boards have accumulative experience which might be related with securer sturdier corporate performance. Given modern education younger boards normally have higher and technical knowledge (Rose, 2007; Bantel & Jackson, 1989). Younger directors are normally destined to change given dynamics in business environment. They are receptive to adventurous and risk taking a situation which is widely accepted to achieve business developments. Board age have significace effect on firm performance (Grimm & Smith, 1991; Bantel & Jackson, 1989). The average age of retirement of directors in Kenya and Denmark is 70 (CMA, 2015).

Complexities and challenges in a company environment normally defines the board size as this further influences board's cohesiveness and capability to supervise corporate governance (Sanders & Carpenter, 1998). Smaller boards are preferred on their effectiveness in monitoring the activities of managers than larger boards (Lipton & Lorsch, 1992). Large board size often display dysfunctional characteristics, it hinders the

ability to reach a compromise; less involved in long term decision and is difficult to make long term changes (Khanchel, 2007; Golden & Zajac, 2001).

Board tenure is the duration the executives take in an organization. Board tenure has material effect in decision making process and increases director independence. Most empirical studies explain that a new director will require sufficient time at least three year to get full knowledge of the firm. This is because every new responsibility or task has a learning curve (Kesner, 1988). Board tenure significantly influences decision making process (Kosnik, 1987). Shorter tenure is good to a firm experiencing poor performance (Mathew, Paul Kamel & Cherif, 2010). Longer tenure increases directors' independence and firm performance (Westphal & Khanna, 2003).

Board ownership is the holdings in a firm's stock by board members. Stock ownership by board members is significant in provision of incentive to motivate them and ensure that managers run firms efficiently to meet their objectives (Brickley *et al.,* 1988). Boards having more significant ownership, their pronouncements influence their own wealth creation in a firm. Given conflict of interest board members should be independent and take actions that are of benefit to the whole company by increasing shareholders' wealth. Empirical studies show mixed results in board stockholding and outcomes of firms. There are empirical results giving strong significant relationship between board stockholding and firm performance (McConnell & Serves, 1990) while others indicated insignificant association on board ownership and firm performance (Demsetz & Lehn, 1985; Nath, Islam & Saha, 2015).

Board tools are necessary tools and aid to enable the board to be effective in discharging their roles and responsibilities. They include code of ethics and conduct, board charter, annual board work plan and board evaluation toolkit. The association between board tool kit and firm performance was established in the study (CMA, 2015). Board meetings are sessions of boards which are statutory and non-statutory (Lipton & Lorch, 1992). Boards not meeting regularly are not in a position to endure any significant effect over corporate performance (Mace, 1986; Useem, 2006). Boards meeting regularly without proper objective normally result in meaningless action because they are basically cosmetic in nature (Baldwin, Bagley & Quinn, 2003). A board activity, measured by board meeting frequency, is a significant aspect of board operations (Vafeas, 1999).

Board committees are constituted to deliberate board activities. Firms can establish audit, risk, nomination, remuneration and governance committees among others. The relationship between executive directors in finance and investments committees and firm performance is significant (Klein, 1998). The association between audit committee's members with financial and corporate knowledge and firm performance is positive and significant. Board committees meeting frequently are also associated higher firm performance (Xie, DavidsonIII & DaDalt, 2003). The association on women board members and firm performance is positive (Green & Homroy, 2018).

Board remuneration is the amount of money paid to board members. There are two conflicting empirical views on board remunerations. Under the first augment is boards

are paid remunerations to allow oversee corporate governance practices for the firms to achieve higher firm performance (Bebchk & Fried, 2004; Bertrand & Mullainthan, 2001; Jesnsen & Muphy, 1990). The other argument is there is a need for competitive compensation to retain managerial talent within a firm (Rosen, 1981; Gabaix & Landier, 2008). The association between board remuneration and firm performance also varies. Firms with many non-executive directors pay higher remunerations compared with firms with a few non-executive board members (Fernades, 2008). There is excess board compensation of firms with a non-family CEO compared to boards with family ties. Family boards have significant influence to firm performance (Wu, 2013). Jensen and Murphy (2010) argue states that boards remunerations have impact on firm performance. However some empirical studies give contrast argument (Frydman & Jenter, 2010; Jackson, Lopez & Reitenga, 2008).

1.1.2 Financial Characteristics

Financial characteristics relates to financial functions or financial activities of a firm. There are four major financial characteristics of a firm which encompasses investing function, financing function, dividend function and liquidity function. These financial characteristics are used by directors to create wealth for the firm (Brigham & Davis, 2018). Financial characteristics or its elements normally intervene in the relationships between corporate governance and firm performance (Mun'im & Mauludin, 2018; Okiro, 2015; Debby, Mukhataruddin, Yuniarti, Saputra & Abukosim, 2014; Waweru & Rio, 2013). The financial characteristics used in this study included investment, leverage and

liquidity. Dividend normally depends on profitability which is an outcome of other financial characteristics of a firm and therefore was ignored in the study.

Investment measures the efficient allocation of capital on viable ventures to generate wealth for an entity. It involves the acquisition of capital assets to generate profit for the entity. Investment makes an entity remain competitive, generates wealth, creates new ideas through innovations, reduces operating cost and survives (Hillie, Jaffe, Jordan, Ross & Westerfield, 2010). Investment in long term assets such as land and buildings, plant, equipment and securities also guarantees a good firm's performance in profitability and value (Mudida & Ngene, 2010). The overall investment of a country depends on aggregate demand and therefore facilitates economic growth. Real investment in a country should help increase the productive capacity of a country and the firms. Investment in capital goods and new technologies can facilitate the productivity capacity of the country and increases long run trend rate of economic growth. Investment also increases the efficiency and effectiveness of a country (Koori, 2015).

Capital investments require equivalent large financial commitment. If equity capital is not enough, the firm must source for external finance in terms of debt capital to achieve the projects. Financial constrained to a firm may limit investment activities (White, 2006). The existence of financial constraints prevents the possibilities to exploit prospects for growth (Angelini & Generale, 2008). A firm can experience circumstances of under-investment and over-investment subject to the expected investment targets in a given year (Richardson, 2006; Zhang, 2009). Firms having excess cash flows can expand their businesses by allocating funds to ventures with less returns, when all the positive Net

Present Values (NPV) ventures are exhausted resulting to over-investment. Over-investment may be motivated by low performance as managers need to expand the business despite lack of viable ventures (Koori, 2015). In this study investment is one of financial characteristics intervening variable.

Leverage is the benefit accruing to the firm as a result of using fixed interest cost securities. It measures the ability of the company to deal with capital fluctuations which relates to firm performance. Firms use debt capital as a means of increasing firm's value; however excessive use of debt capital leads to increase in cost of a firm and reduces its value. A company with more debt than equity is more geared (Miesing & Kang, 2010). Leverage impact positively on financial performance by increasing a firm's value through reduction aggregate cost of capital. Optimum leverage reduces bankruptcy and agency costs relating to free cash flows. Determination of optimum capital structure is important for managers to optimize the use of debt capital to create wealth to the firm. Debt capital has a major advantage over equity capital in the capital structure given the benefits from interest tax savings (Modigliani & Miller, 1963).

Leverage adjustments and market timings are important for firm performance. Firms must issue stock in time to invest in growth opportunities (Lucas & McDonald, 1992). Interest obligations, debt agreements and debt maturity can put pressure on management to meet cash obligations through debt capital. Enough cash flows can assist the firm to meet short to medium cash obligations without prejudicing firm's operations (DeAngelo et *al.*, 2002). Optimal capital structure is significant for a firm to balance proportion of

debt and equity and allows firms to capture the business opportunities in the market. In this study leverage is one of financial characteristics intervening variable.

Liquidity is blood of a firm. It involves management of the cash cycle. How fast the firm converts debtors and stock into cash to accomplish its operational activities (Barine, 2012). It involves management of current capital to meet current obligations. It involves elimination of liquidity risk as well as to avoid excess liquid assets. It requires managers to work at optimal operational efficiency (Eljelly, 2004). Liquidity plays is important in evaluating success or failure of a firm. It influences a firm's profitability and value (Vahid, Mohsen & Mohammadreza, 2012).

Liquidity is one of the pillars of firm performance. Firms must have an optimal level liquidity in order to maximize their performance. Large inventories and favourable trade credit policies normally lead to higher turnover and cash inflows to meet operational and long term obligations of a firm (Deloof, 2003). Firms' existence significantly depends on the efficient management liquidity. Accounts payable must be managed reasonably to avoid additional finance cost due to delay in payments. Liquidity management has significant influence on firm performance (Barine, 2012). In this study liquidity is one of financial characteristics intervening variable in the relationship between corporate governance and firm performance.

1.1.3 Macroeconomic Factors

These are general economic factors having universal effect on a nation or a region and affect a large population. They are indicators of the overall state of a country's economy. They impact on performance of all firms in an economy. They affect macroeconomic environment and determine the level of firm performance due to cost of capital benefits arising from favorable interest rates prevailing in the country. Macroeconomic factors include Gross Domestic Product (GDP), interest rate, taxation rates, money supply, inflation rate and exchange rate (Deraso, 2012). Macroeconomic factors however influence one another in an economy directly or indirectly which might lead to higher collinearity in the study. Exchange rate is normally influenced by interest rates and inflation rates locally and abroad according to interest rate parity theory and purchasing power parity theory respectively and therefore was ignored from the study (Brigham & Davis, 2018). Money supply is mostly influenced by the inflation rate, given high relationship with inflation rate; it was ignored from the study (Schwartz, 1987). Taxation being the main source of public revenue is influenced by several factors with an economy and has both direct and indirect effects to other macroeconomic factors was ignored from the study.

The macroeconomic factors used in the study are: GDP growth rate, interest rate and inflation rate. GDP is a measure of total production for a country for a given economic year. GDP is equal to total investment, consumption, government spending, and exports less value of imports (Maclennan & Pryce, 1996). The real GDP portrays economic performance in a country. During periods of economic boom, firms demand more external financing for investment to expand their business portfolios. Economic growth

strengthens firms' alteration of their leverages. The growth in GDP affects the cost of finances and hence the future firm performance. Growth in GDP provides more business opportunities for the firms. Moreover, favorable levels of inflation increase the purchasing power of the citizens and firms thereby enhancing the output and profitability of firms. On the other hand, when macroeconomic environment becomes hostile, factors of production become scarce and expensive causing a decrease in business prospects. This condition makes firms to operate in a state of uncertainty which often results in poor firm performance (Njagi, 2017).

Interest rate is the price of capital. It is the price of money in the money market. It is the return to debtholders in a firm. It denotes the price using borrowed capital for a given time. It is influenced by both risk and time. It is the fee paid for the use of borrowed assets. It should reflect all information regarding future changes in the purchasing power and the risk undertaken. A high rate of interest significantly affects a firm's earnings and capital base; and increases the operating expenses (Keynes, 1936; Lazonick & O'Sullivan, 2000). Increase in interest rate drives cost of debt capital affecting investment, leverage, liquidity and firm performance (Koori, 2015).

Inflation is general rise in price levels for a basket of products (Gallagher, 2011). Inflation refers to the change in the general level of prices in the economy over given period of time (Santoni, 1986). Inflation rates have effects on the value of money. It is determined by the variations in the consumer price index (CPI) (Liow, Ibrahim & Huang, 2005). Pressures of inflation heavily impact on investment, leverage, liquidity and performance of firms. Higher rate of inflation affect interest rate, borrowing plans,

investments and finally performance (DeAngelo & Masulis, 1980). Njagi (2016) argues that incase of high inflation, the earnings on equity are greater than those on debt financing sources. Macroeconomic environment prevailing in a country influences access to opportunities or exposure to threats with respect to GDP, interest rate and inflation rate thereby moderating effects on the relationship.

1.1.4   Firm Performance

Firm performance is a measure of overall well-being of a firm in terms of wealth creation for a given time. It evaluates how investment in long and short term assets to create revenues (Iraya, 2014). Performance measurement is the procedure of evaluating ability with which reporting firms prospers by economic procurement of resources and the economic placement of resources, in achieving its goals. Performance measure may be based on financial and non-financial information (Murby & Gould, 2005). Performance measure defines ways of evaluating the competence, activities and success of a company (Nelly, Gregory & Platts, 2005). Performance measurement is a way in which corporate managers evaluate their actions in operational, managerial and strategic activities with objectives of the business. It measures if business plans are achieved (Batitic, Carrie & Mcderitt, 1997).

Effective performance measurement is fundamental in ensuring that a firm is successful in implementing its objectives. It is about observing a firm's success in fulfilling its own prearranged goals or stakeholder requirements. A company must do well in terms of quality, flexibility, costs, value and other dimensions (Murby & Gould, 2005).

Performance measurement is important for effective managerial decision making. It evaluates the utilization of a firm's resources in achieving predetermined objectives. It helps management to evaluate and monitors the activities towards the achievement of the ultimate goal. Performance measurement should be performed regularly to guide management into planned path. It plays a major role and not simply quantifications of accounting figures (Demirbag, Totaglu, Tekinus & Ziaim, 2006). Performance is a multidimensional concept and thus, no single measure may be able to offer a inclusive relationship relative to construct of interest (Ondigo, 2016; Chakravathy, 1986). The firm performance can be discussed based on a firm efficiency and profitability. On efficiency the firm performance can be discussed under parametric and non-parametric approaches (Berger & Humprey, 1997). Profitability measures are many and can be discussed under accounting metric and marketing metric approaches (Al-Matari, Al-Swidi & Fadzi, 2014).

This study adopted performance measurements based on profitability. This was achieved using accounting and market metrics with different theoretical foundation (Hillman & Keim, 2001). Each of the two metrics had specific predispositions. Firm performance measures can be established on book value or market value (McGuire, Schneeweis & Hill, 1986). Returns on Assets (ROA) and Tobin's Q were employed as profitability and market measures respectively given their rich underlying on concepts. ROA is sales to its total assets and appraises the capability of the firm's directors to create sales by using firm's assets. ROA indicates how directors use scarce resources of the firm to create sales. A higher ROA indicates that the firm is more effective in using scarce resources to create wealth (Khrawish, 2011). Tobin's Q takes in consideration many factors such as numbers of share issued, historical of liabilities and total historical value of assets, given

the average share price of the company. Most empirical studies consider them as evaluators of financial performance of firms and widely applicable to assess listed firms at Nairobi Securities Exchange (Aduda, Chogi & Magutu, 2013).

1.1.5 Firms Listed at the Nairobi Securities Exchange.

Nairobi Securities Exchange (NSE) was established in the year 1954 as the main stock market in Kenya, with deliberate intentions by brokers of shares traded in listed organizations within the confines of societies act. It rebranded its names from Nairobi Stock Exchange to Nairobi Securities Exchange to reflex its wider functions into a full service organization that aids in commercial exchange, clearance and transfer of equities, among other financial assets and traded instruments. NSE is the main stock market in Kenya having different platforms for the listing and multiple securities trading. The market has an obligation to guarantee effective trading in securities and derivatives and enhances economic development. NSE is one of the leading self-listed publicly traded bourses in Africa (NSE, 2016). As at December 2016, there were sixty five (65) listed companies at the NSE. The firms were grouped into twelve different sectors including automobiles and accessories segment, agricultural segment, banking segment, construction and allied segment, commercial services segment, energy and petroleum segment, investment segment, insurance segment, telecommunications and technology segment, investment services segment, manufacturing and allied segment and real estate investment (Appendix I).

Corporate governance guidelines were introduced in 1999 for companies listed on the NSE Capital Markets Authority (CMA). Under section 12 of the act, CMA developed

policies, rules and principles necessary for performing its objectives. CMA enforced the rules and regulations on the companies listed at the NSE through comply or explain principle and was later made compulsory for all firms (CMA, 2011). Corporate governance guidelines for companies listed at the NSE, was replaced by new code of corporate governance practices for issuers of security to the public, due to increased trend of corporate failures and dismal performance. The new code sets out 19 principles and specific recommendations on structure and processes which companies should adopt in making good corporate governance part of their business dealings and culture (CMA, 2015). Corporate governance principles and practices should assist firms listed at the NSE to achieve superior firm performance. Most empirical studies revealed that policies and practices of corporate governance impact differently on outcomes of companies listed at the NSE. Firms practicing good corporate governance have positive significant relationship with earnings management, investors' confidence, ROE, ROA and Tobin's Q (Aduda *et al*., 2013, Lekeram, 2014). However some empirical studies give contrast argument (Okiro et al, 2015; Rambo, 2013 & Okioga, 2013).

Performance of firms listed at the NSE is diverse in terms of profitability and value since the introduction of corporate governance framework by Capital Markets Authority (CMA, 2002). Some firms posted relatively good such as Safaricom Ltd; Equity bank Ltd, Jubulee Insurance Ltd and Barclays bank Ltd among others over the period of the study, however for most firms in the banking sector, this has been eroded since the introduction of interest rate cap. On the other hand some have posted dismal performance and posted billions of loses in terms of net profit. Kenya Airways Ltd posted a loss of Kshs 26,225 million in 2016; Mumias Sugar Company Ltd posted a loss of Kshs 2,920

million in 2016; Uchumi Supermarkets posted a loss Kshs 2,671 million in 2016; and East Africa Portland Cement Ltd posted a loss of Kshs 2,613 million in 2015 among others. Kenya Airways Ltd, Mumias Sugar Company Ltd and Uchumi Supermarkets called for financial bailout from the Kenya government. Some listed firms in the NSE have faced distressing situations following their miserable performance and have been under relentless pressure to deliver quality services and minimum cost, and also to improve their eroded market value. These enormous loses from listed firms have been blamed on various factors among them poor corporate governance practices, inadequate financial characteristics decisions and unfavorable macroeconomic factors (Lucy, Makau & Kosimbei , 2014; NSE, 2016; Kobuthi, K'obonyo & Ogutu, 2018).

Financial characteristics are internal financial factors of a firm that are expected to bring efficiency and better firm performance. Financial characteristics are driven from wider firm characteristics. Firms listed at NSE manage various financial characteristics to achieve their objectives. Most empirical studies from the NSE have used financial characteristics as independent variable or intervening variable in determining performance of firms. Lekaram (2014) examined corporate and firm performance for list firms in Kenya and established that the size of the board positively influence the outcome of manufacturing listed companies and large number of outside directors influences value of a firm. The study however concentrated on one segment of the market. Okiro *et al.* (2015) study the effect of corporate governance and capital structure on firms listed at the East Africa Community securities exchange using a census survey of 98 listed companies from 2009 to 2013 and found a positive and significant relationship between corporate governance and firm performance. Andreou, Louca and Panayides (2014) investigated

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relationship between corporate governance, financial management decisions and firm performance and found that corporate governance characteristics are positively associated with financial management decisions and firm performance.

Macroeconomic factors have overall effect on all firms listed at NSE. Economic environment of a country affect performance of all firms. Most empirical studies at the NSE indicate significant relationship between macroeconomic factors and performance of firms. Kirui, Wawire and Onono (2014) studied macroeconomic variables, volatility and stock market return: a case study of NSE and found most macroeconomic factors have positive relationship with stock market return except exchange rate. Makori (2015) also examined effects of macroeconomic forces on performance of listed Construction and allied firms in Kenya and established significant effect between macroeconomic forces and firm performance.

1.2   Research Problem

Empirical studies have not solved the contentions problem of the effect of corporate governance and firm performance. The issue has remained unsettled for a long time after and greater corporate failures the world in recent years have complicated the problem (Dang & Nguyen, 2016). According to agency theory there should be positive relationship between corporate governance and firm performance (Jensen & Meckling, 1976). Stewardship theory states that directors as stewards of a firm have interest to protect and enhance shareholders' wealth through superior firm performance (Davis & Donaldson, 1997). However most studies have examined effect of corporate governance on firm performance and results remained conflicting. Some studies of firms (Michelberger, 2017; Ibe, Ugwuanyi & Okanya, 2017; Badriyah *et al*., 2015; Lakaram,

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2014; Rambo, 2013; Aduda et *al*., 2013). Other empirical studies established a negative effect on corporate governance and firm performance (Buvanendra, Sridharan & Thiyagarajan, 2017; Souha & Anis. 2016; Faizul & Thankom, 2016).

There are many conceptual gaps in these studies. Most empirical studies simply tested direct effect within corporate governance and firm performance. Some studies used different corporate governance variables and mechanisms to establish effect of corporate governance on firm performance, while others presented varying intervening and moderating variables, while others used different measures of firm performance. Michelberger (2017) studied corporate governance on performance of firms of German listed companies and found that most corporate governance variables have significant effect to firm performance, though board compensations and executive board have insignificant effect on profitability. Ibe, Ugwuanyi and Okanya (2017) studied corporate boards' activities and policies and outcomes of insurance companies in Nigeria and found positive effect intuitional ownership and board independence with firms' outcomes, while board size and executive payments had insignificant in association with outcomes. Faizul and Thankom (2016) examined corporate governance and financial performance and established significant effect of board structure and activities and its valuation; and no significant association on board activities and firms' operating outcomes. Ahmed and Hamdan (2015) studied board activities on outcomes of firms listed at Bahrain Stock Exchange and established significant positive effect between board activities and companies' outcomes. Nevertheless found insignificant effect between board activities and Earning per Share (EPS).

In Kenya, Iraya, Mwangi and Muchoki (2015) found that earnings management has negative effect to ownership concentration, board independence and board size and board independence but has positive effect on board activity and CEO duality for firms listed at the NSE. Lekaram (2014) found that board size is inversely related to ROA and ROE for listed manufacturing firms at the NSE, on contrary higher number of external directors steered advance equity holders value, however the study failed to establish why firms listed in manufacturing segment expose higher effect on market price and net assets value. The study nevertheless concentrated on one sector of the market and outside directors and board size as the only characteristics of corporate governance. Aduda *et al.* (2013) found that the most profitability and value measures for listed firms in Kenya Returns to Assets and Tobin's Q. The study however included only the agency and resource dependency theories. Ongore and K'Obonyo (2011) found that firms listed at the NSE have positive effect on ownership concentration and firm performance. The study conversely concentrated on a few characteristics of corporate governance.

In determination the link among corporate governance practices and firm performance, most studies have used different methodologies. Most empirical studies used descriptive research design with cross-sectional data and simple regression analyses to determine the casual effect on the link between the variables with varied results (Rambo, 2013; Okioga, 2013). Some studies used longitudinal descriptive research design with panel data and multiple stepwise regression analyses to determine intermediating and moderating relationships between corporate governance and firm performance which gave different outcomes (Ondigo, 2016; Debby *et al*., 2014; Waweru & Riro, 2013). Other studies used descriptive research design and different regression models to establish the effect on the

link among the variables with different results (Jacob, 2015). A few studies used descriptive statistics and pooled estimation regression models on panel data to test the effect between corporate governance and firm performance with different outcomes (Wang, 2014).

There are several conceptual, contextual and methodological arguments in the empirical studies. On the conceptual argument most empirical studies looked at simple causal direct effect on corporate governance and firm performance, others empirical studies introduced various mechanisms of corporate governance and non-financial indicators of performance; and few studies incorporated diverse intervening and controlling variables in establishing their influence on the relationship existing between corporate governance mechanisms and firm performance with different outcomes. On contextual arguments most empirical studies have been done in Europe, USA, Asia and Australia; with a few studies in Africa. In Kenya empirical studies have been carried out to establish the association existing among board policies and practices on firm performance for listed and non-listed firms with different outcomes. On methodological argument most studies used descriptive research design, cross sectional data, correlation analysis and regression analysis to determine the association between board activities and firm performance with different results.

To solve these conceptual, contextual and methodological gaps, this study used longitudinal descriptive research design and multiple regression models to determine the relationships among corporate governance, financial characteristics, macroeconomic

factors and performance of firms listed at the NSE. To achieve the objectives of this study, the study was directed by the following research question: What were the relationships among corporate governance, financial characteristics, macroeconomic factors and performance of firms listed at the NSE?

1.3   Research Objectives of the Study

1.3.1   General Objectives

The general objective of this study was to investigate the relationship among corporate governance, financial characteristics, macroeconomic factors and performance of firms listed at the Nairobi Securities Exchange

1.3.2   Specific Objectives

i)   To examine the effect of corporate governance on performance of firms listed at the Nairobi Securities Exchange.

ii)   To establish the intervening effect on financial characteristics on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

iii)   To determine the moderating effect on macroeconomic factors on the relationship between corporate governance and performance of firms listed the Nairobi securities Exchange.

iv)   To determine the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange.

1.4   Value of the Study

The study added value into the current body of knowledge in the areas firm performance, corporate governance, financial characteristics and macroeconomic factors in many ways. The first major contribution is in the establishing of association corporate governance on outcomes of listed firms in Kenya. Although CMA introduced new codes of corporate governance practices for issuers of security to the public to reduce dismal performance and enhance corporate performance, firm performance has remain varied and others dismal. Some corporate governance characteristics have positive effect on firm performance, while others do have negative relationship. This study is therefore meant to inform different stakeholders on corporate governance structure and policies on how they influence firms' performance. Directors of listed firms should further appreciate the intervening and moderating effects of financial characteristics and macroeconomic factors respectively to influence the association between corporate governance and firm performance.

Secondly, study envisioned to improve building of existing theories by examining theoretical proposition such as wealth maximization theory, agency theory, stewardship theory, stakeholders' theory, and resource dependency theory whose key paradigms are to align corporate governance; financial characteristics and macroeconomic factors to firm performance. The reviews of these theories enhance more studies in this area and assist researchers to develop new knowledge and more theories in the future. Directors of listed firms may also gain from the benefits these theories by maximizing the wealth of shareholders; reducing agency costs; become stewards of listed firms; take into

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consideration expectations of all stakeholders; and to bring resources to the firms with sole purpose to enhance firm performance.

Thirdly, the outcomes of the study are useful to directors, investors, managers, regulators other stakeholders and government. The effects of board policies and firm performance should help directors of companies and investors implement corporate governance policies that enhance firm performance. The government through Capital Markets Authority and Nairobi Securities Exchange should review and develop corporate governance polices that improves outcomes.

Fourthly, finding would enable managerial practitioners to appreciate and integrate corporate governance structure and practices with major financial functions of investment, leverage and liquidity within an erratic macroeconomic environment to improve firm performance. Practicing managers should understand the effects of these relationships and develop strategies to manage these variables and to achieve better firm performance.

Lastly, this study contributes in reducing the controversies corporate governance and firms outcomes showing that the relationship is not straight but rather intervened by financial characteristics and moderated by macroeconomic factors. This can explain the paradox why several researchers who have tested the relationships and found contradicting outcomes, with some results indicate positive relationship. This study has

given a direction of future studies that the relationship between corporate governance and performance is not direct but intervened and moderated by other factors.

1.5   Organisation of the Study

The study has six chapters. Chapter one offers background of the study, explains research problem, research objectives which both general and specific objectivities and value of the study. The background provides conceptual arguments and dimensions of corporate governance, financial characteristics, macroeconomic factors and firm performance. Chapter two of the study explains theoretical foundation that guides the relationship between variables. Five theories including Wealth Maximization theory, Agency theory, Stewardship theory, Stakeholders' theory and Resource Dependency theory are discussed. Selected empirical models that guide the study are included and research gaps identified. The chapter concludes with a conceptual framework and research hypotheses.

Chapter three entails discussion of the research methodology that the study adopted. The chapter encompasses research philosophy, research design, population of the study, data collection instruments, operationalization of research variables, diagnostic tests and data analysis techniques. Chapter four presents the findings of descriptive analysis, trend analysis and correlation analysis. Chapter five presents results diagnostic tests and inferential statistics used to test the research hypotheses. Chapter six finally presents summary of the study findings, conclusions of the study, contribution of study findings, limitations of the study and recommendations for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails study literature on both theatrical and empirical reviews. It encompasses a review of the theories supporting of the study taken in order to place the study into its appropriate perspective. The chapter reviews empirical literature to define research gaps and a statement on how the current study expects to fill the gaps. A conceptual framework is employed with a model demonstrating the relationships among research variables followed by research hypotheses.

2.2 Theoretical Foundation

Corporate governance, financial characteristics and macroeconomic factors are aspects affecting firms' performance. Several theories have advocated on the relationships. In this study, wealth maximization theory, agency theory, stewardship theory, stakeholders' theory and resource dependency theory elucidate how they anchored the study and the variables they support among the relationships.

2.2.1 Wealth Maximization Theory

Wealth maximization theory was developed by Ponser (1983). According to the proponents of this theory, the immediate functional objective and the definitive drive of a public company is to maximize wealth for equity shareholders. Windsor and Boatright (2010) as proponents of shareholder wealth maximization argue that the theory concentrates on the purposes and behaviors of investors. Wealth maximization theory is the main theory anchoring this study. It helps in investigating the direct relationship between corporate governance and firm performance. It further assists in determination

of intervening and moderating effects on the relationship between corporate governance and firm performance. Finally it supports in investigating the joint effect of corporate governance, financial characteristics, and macroeconomic factors to firm performance.

Wealth maximization theory has received criticism from various authors. Majority of the critic argues that if the wealth of a firm is maximized, it would be of benefit to both debenture holders and preference shareholders. Directors' act as agents of shareholders, however their interest towards shareholders wealth may be conflicting. Jones and Felps (2013) also posit that no extant scholarship has systematically analyzed the utilitarian foundations of shareholder wealth maximization.

The theory has wide application in today firms and has linked shareholder wealth maximization and social welfare among firms in UK. The authors found that shareholder wealth maximization has insignificant effect to social welfare maximization. According to Pandey (2001) shareholder wealth maximization has been used to achieve financial goals choices and performance of firms in Malaysia. The study adopted shareholder wealth maximization theory to describe how the boards monitor activities of managers in firm day to day operations, with an aim to maximize shareholders' interests.

2.2.2 Agency Theory

Agency theory was developed by Jensen and Meckling (1976). The theory is grounded on the separation of ownership and relationship between principals and agents. It is based on short term gains where principals delegate decision making authority to their agents; who

are to use resources given by the principals to enhance principals' benefits. Agents however, may commit moral hazard by substituting principals' interest with their own (Fama & Jensen, 1983). Principals normally monitor the activities of agents to ensure that they act on the interest of the firms. Monitoring costs are normally expensive and adversely affect the principals' income (Agrwal & Knoeber, 1996).

The theory however has been criticized on narrow perspective and it ignores other stakeholders. Daily, Dalton and Canella (2003) argue that there are two features that influence the prominence of agency theory. First, the theory is conceptually simple that reduces the corporation to two participants of managers and shareholders. Second, the theory suggests that employees or managers in organizations can be self-interested. However employees and managers must constitute a good governance structure rather than just providing the needs of shareholders.

Agency theory has been applied to today firms since shareholders have realized that firm performance depends crucially on having the right managers at the helm and incentivizing them properly (Anderson, Bustamante, Guibaud, & Zervos, 2018). Todays' firms have adopted various compensation structures to motivate the managers hence avoiding agency costs and conflicts as a result of principal-agency relationships.

This theory is relevant to this study since corporate governance through board policies and board structure to firm performance and provides the link between shareholders and corporate management. Like wealth maximization theory, the agency theory links all the

variables of the study. According to the theory, the board of directors should act in a way to reduce agency conflicts between shareholders and managers. According to principal agency proposition, good corporate governance practices motivate and encourage management hence synchronizing shareholders interest and those of management which results to high firm performance.

2.2.3 Stewardship Theory

Donaldson and Davis (1991) advanced the stewardship theory. The theory was an innovative view in understanding relationship between ownership and management of a firm from the Agency theory. The theory is based on the duties of executives acting as stewards, assimilating their objectives as part of the company and identifies the significance of structure that enables the directors who are stewards and extreme independence based on faith (Donaldson & Davis, 1991).

The critics of steward theory argue that there is no definite indication linking board of directors to performance of firms which have changed researchers' consideration back to the black box of board procedure, and highlighted the element of firm setting in determining the role and value of the corporate governance (Huse, 2003). This implies that board of directors which are components of corporate governance may act as stewards but they do not have direct impact on firm profitability.

Despite the criticisms, stewardship theory has received more attention among scholars in understanding study relationships. The theory is used in today's firms. In majority of the

countries around the world public owned companies have board of directors which act as stewards and they act as founder members and provide direction with regard to operational, tactical and strategic activities of the firm. They are involved in solving challenging problems of the firm in finance, marketing operations and human resource among others (Boussouara & Deakins, 2000). The theory assists this study by linking corporate governance, financial characteristics and firm performance variables by putting emphasis on directors to work more separately so that the equity holders' returns are maximized. It leads to minimizing monitoring costs and controlling behaviors of managers.

2.2.4   Stakeholder Theory

Freeman (1984) advanced stakeholder theory. It takes into account diverse intrinsic interest of all stakeholders of the firm. Stakeholders are different interest individuals or groups having interest in a firm. The theory suggests that directors of a firm have interests of different stakeholders to serve. It is important for directors not to have preference in a group of network they serve in administering the activities of the firm and the main objective of the theory is equal and fair treatment of all stakeholders of a firm (Freeman, 1999). The theory has also faced some criticism among corporate governance researchers. Critics of this theory argue that meeting all stakeholders' interest leads to corruption as it gives chances to divert wealth and directors may use stakeholders' reasons to justify poor performance and provide inadequate explanation of the firm's behavior with its environment (Okiro, 2014).

Companies use the stakeholders' theory to improve the image of the organization and to the overall objective optimizing returns of all stakeholders and to be able sustain growth. Ignoring a section of stakeholders may be detrimental to financial performance in terms of provision of resources and court litigations. According to Roberts and Mahoney (2004) about sixty five percent of firms use the term stakeholder without reference to any category.

This theory is relevant to the study since corporate governance practices adopted by firms heavily depend on interest of stakeholders and their experiences. Stakeholders that have previous bad experience from management errors and improper decision making will advocate for corporate governance practices such as strict board policies among others. Experienced stakeholders will strive to deflate agency conflicts and related consequences that may affect the firm long term and profitability.

2.2.5 Resource Dependency Theory

Pfeffer and Salancik (1978) developed Resource dependency theory. The theory is about how firms acquire external resources to achieve their objectives. External resources are important for any company to achieve both tactical and strategic goals. It is concerned with how directors influence procurement external resources of the company through connections to external business environment. The theory further concentrates on how external resources impact the firm performance (Hillman, Canella & Paetzold, 2000). The theory further gives direction on recruitment of directors who assist in gaining access to vital resources of the company for survival (Johnson, Daily & Ellstrand, 1996).

The critics of this theory have based their arguments concerning the boundary of space; Casciaro and Piskorski (2005) for instance argue that the resource and development theory can be confined to the organization boundaries concerning external resources, Hillman *et al*. (2000) on contrary posit the theory is restricted to the organizational environment and directors' actions are confined to the events with organizational environment. Various firms have adopted the argument of RDT to ensure survival and growth. Based on the RDT, organizations have realized they are subject of attention hence they are always evaluating their actions in the environment. Applying RDT, organizations today attempts to survive in a dynamic environment by reducing any situation of uncertainty and dependency by obtaining resources or creating inter organizational relationships.

This theory is applicable to the study since it links corporate governance, financial characteristics, and firm performance and the proponents argue that companies rely on resources which come from shareholders for growth and sustainability. Therefore, to ensure continuous access to shareholder resources, firms must ensure that shareholders' interests are catered for through effective corporate governance practices.

2.3   Review of Empirical Literature

Review of empirical literature is important in identifying the gaps of the study. The section reviews empirical literature on relationships among corporate governance, financial characteristics, macroeconomic factors and firm performance.

2.3.1   Corporate Governance and Firm Performance

Michelberger (2017) studied corporate governance on firm performance of German listed companies using 13-factors research model of corporate governance and descriptive research design and found that corporate compliance in Germany stable for five years between 2010-2014, none of the of the styles of governance factors indicated high positive significant relationship with firm with profitability, revenue growth and equity holders return. Most corporate governance variables have significant effect to executive board and supervisory compensation and total shareholders return, most corporate governance variables had positive effect on the total shareholder return, supervisory board compensations and executive board have insignificant effect on profitability and revenue growth revenue, existence of strategy committees had positive significant impact on outcomes of firms. The study used a shorter period of five years to determine the effect of corporate governance of firm to shareholder return. The study did not introduce any intervening and moderation variables in establishing impact on study variables. This study used for a longer period between 2002 and 2016; and introduced intervening and moderating variables.

Ibe, Ugwuanyi and Okanya (2017) studied corporate boards' activities and policies and outcomes of insurance companies in Nigeria from the year 2011 to 2015 using panel data and descriptive research design. The study used board independence, executive directors' payments, board size, shareholding intuitional ownership and foreign ownership and found positive effect intuitional ownership and board independence with firms' outcomes, while board size and executive payments have insignificant in association with outcomes. The study used a few corporate governance mechanisms for a short period and

did not introduce the moderating and intervening variables, and concentrated in one area of economy. This study used several corporate governance variables under board structure and board activities, used a long period from 2002 to 2016 and introduced intervening and moderating variables in the study of their effects among relationships. The study further used census of firms listed NSE as at 31st December, 2016.

Faizul and Thankom (2016) studied corporate governance and financial performance; an emerging economy perspective. Study used descriptive research design and questionnaire survey-based corporate governance index comprising financial reporting disclosures, independence, shareholder rights, responsibilities of the board and management and established significant effect of board structure and activities and its valuation; and no significant association on board activities and firms' operating outcomes. Questionnaire survey-based were used to collect data at a given point of time and did not include intervening and moderating variables to determine their effects on the relationship. This study used panel data from the year 2002 to 2016, descriptive, trend, inferential and multiple regression analyses to study the relationships.

Ahmed and Hamdan (2015) studied board activities on outcomes of firms listed at Bahrain Stock Exchange. The study sampled 42 out 48 companies for a period between 2007 and 2011. The study used descriptive research design and regression analyses. The descriptive outcomes established that sample firms fulfill corporate expectation of 61.2% for the study period. The results further established significant positive effect between board activities and companies' outcomes. Nevertheless found insignificant effect

between board activities and Earning per Share (EPS). The study used a few board characteristics in determining the effect of activities of the board and outcome of firms. The study however used (EPS, ROE and ROA). This study however several board structure and board activities variables and two measures of performance.

Vo and Nguyen (2014) studied corporate governance characteristics such as: CEO duality, board independence, ownership concentration and board size, ROA, ROE, Z-score by Altman (1968) and Tobin's Q were use as measures of the outcomes. The study adapted descriptive research design and Feasible generalized Least Squires (FGLS) on 77 listed companies in Vietnam for the study period from the year 2008 to 2012. The study established that most board structure and policies various have significant effect on the results of firms. CEO duality gave positive significant effect while board size gave a contrary result. The study only considered four characteristics of corporate governance, however used four variables measures of performance. This study used several characteristics of corporate governance under board structure and board activities and two measures of performance of firms.

Lekaram (2014) studied the association between board structure and board activities and outcomes of manufacturing listed firms in Kenya. The study used descriptive research design and extracted data from the published and audited company's annual reports. Data was analyzed using a penal data regression framework; and used ROE, ROA and Tobin's financial performance measures. The study established different results: large number of outside directors results to a greater equity holder's value and board size has significant

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effect outcomes of listed firms. The study did not consider all the firms, making inference of the results is difficult to a wider population and used only two variables of corporate governance which is inadequate for drawing a broader conclusion. This study used many corporate governance mechanisms and considered all firms listed at the NSE.

Duc and Thuy (2013) examined board structure and board activeness, the major corporate governance and firms' outcome based on empirical evidence from Vietnam. The study used the following: CEO duality, board size, number of female directors, working experience of the board, independent directors, board ownership, and compensation of the board and block holders. The study used descriptive research design and Flexible Generalized Least Squares (FGLS) method on 77 listed firms from 2006 to 2011. The study found that duality of CEO, number of female directors, board compensation and working experience positively influence firms' results and board size, board members education level, independent directors, board ownership and block holders insignificantly affect firms' outcome. The study used a few corporate of governance characteristics and one measure of performance of firms. This study used many corporate governance variables and introduced the intervening and moderating effects and two measures of firm performance.

Okioga (2013) studied corporate governance practices on the flow of investors into NSE. They used descriptive survey on companies listed at NSE and both quantitative and qualitative data was extracted from the population. The study used regression analysis to find the association between corporate governance and investors' confidence and

developed a forecasting model and tested the accuracy in obtaining predictions and found that the model was moderately significant. Gachoki and Rotich (2013) studied influence of corporate governance on performance of public organizations in Kenya using a descriptive design and multiple regression models and found that board composition has significant positive relationship with firm performance. Similarly, Otchere, Bedi and Kwakye (2012) argue that if the board is independent and observe their responsibility of transparency and accountability to stakeholders, they will disclose in time all the relevant information. Eulerich, Velte and van Uum (2014) also revealed that board diversity is increasing being adopted in corporate governance.

2.3.2 Corporate Governance, Financial Characteristics and Firm Performance

Buvanendra *et al*. (2017) studied corporate governance, firm characteristics and capital structure adjustments in India and Sri Lanka. The study examined most important determinants of speed of adjustment towards optimum capital structure between 2003/2004 and 2012/2013. The study used independent variables comprising both firm specific and corporate governance factors using dynamic adjustment model and found that firms in both countries partly adjust to an optimum capital structure over time and international differences exist. The study found that major determinants as firm size and profitability have significant relationship with capital structure adjustments on Sri Lankan firms whereas firm size, tangibility, non-debt tax shield and profitability act as proxies for Indian firms' optimum debt equity ratio. On corporate governance characteristics CEO–Chairman duality significantly affect capital structure rebalancing for Sri Lankan firms. Contrarily, other perspectives of corporate governance such as family ownership significantly influence Indian firms to reach the target quickly. The study used firm

characteristics and corporate governance variables to determine capital optimum leverage. In this study effects on relationship corporate governance characteristics, financial characteristics including leverage and macroeconomic factors on performance of firms listed at the NSE.

Souha and Anis (2016) examined effect of corporate governance characteristics and firm characteristics on shareholders activism in France. The study was used a sample of 77 firms out of 120 listed firms over the period the year 2008–2012 using descriptive research design and multivariate analysis. The study found that some corporate governance variables have significant effect to shareholding activism. The ownership concentration, board stock holdings, change in leadership, institutional investors control structure, leverage and firm growth high positive changes of activism to take place. The study used shareholder activism as a measure of performance. This study employed profitability and value measures of firm performance and a number of corporate governance variables, financial characteristics and macroeconomic factors.

Okiro *et al.* (2015) study the effect of corporate governance and capital structure on firms listed at the East Africa Community securities exchange using a census survey of 98 listed companies from 2009 to 2013 and found a positive and significant relationship between corporate governance and firm performance. The study further confirmed a positive intervening effect of capital structure (leverage) on the relationship between corporate governance and firm performance. The study however used only one intervening variable, the financial leverage as a measure of capital structure and financing

decision. This study used two additional more financial management decisions, investment and liquidity decisions.

Andreou *et al.* (2014) investigated relationship between corporate governance, financial management decisions and firm performance using descriptive research design and multiple regression models. The study revealed that measures such as insider ownership, board size, presence of corporate governance committees, the percentage of directors serving on the boards of other firms and CEO duality are associated with financial management decisions and firm performance. The association revealed can potentially assist in mitigating agency problems and improving financial management decisions and performance in maritime firms. The study however concentrated in one sector of the economy that is maritime industry. This study however included all industries listed at the Nairobi Securities Exchange.

Debby *et al.* (2014) examined good corporate governance, company's financial characteristics and firm's value of listed banking firms in Indonesian stock exchange. The study employed purposive sampling, descriptive design and multiple regression models to analyze data. The study found insignificant effect on the association among corporate governance variables and firm's outcomes; on the contrary firms' value and firm's size had positive impact on firm's outcome. The study examined a particular sector of the market, the listed banks in Indonesian stock. This study however included all firms listed at the NSE.

Suntraruk, (2013) examined corporate rating and firm characteristics from Mai Thailand. The study employed descriptive research design and regression analysis and established significant effect on corporate governance variables and Returns on Assets and free cash flows concluded that good governed companies have higher profitability. The study used simple association of the variables. This study however introduced financial characteristics and macroeconomic factors as mediating and control variables respectively.

Waweru and Riro (2013) studied corporate governance, financial characteristics and earnings management in Kenya. The study employed descriptive design and regression models. The study found positive significant relationship between equity share holdings and composition of the boards on earnings management. The study found significant effect between leveraged firms and earnings management. This study employed more variables of corporate governance and three variables of financial characteristics.

Elsayed, El-Masry and Elbeltagi (2010) studied corporate governance and financial reporting on listed firms in Egypt. The study used descriptive design and panel regression. The study examined board independence, board size, role duality, institutional ownership, type of auditor, competitive pressure to internet financial reporting and found that non-financial firms that audited by the leading auditing firms in the world have significant relationship to financial reporting and presentations, while big size had significant relationship with presentation. The study used internet financial reporting as measure of performance and a few variables of both corporate governance and firm

characteristics. This study used profitability and value as measures of performance and introduced board structure and board activities mechanisms of corporate governance and three financial characteristics variables.

2.3.3 Corporate Governance, Macroeconomic Factors and Firm Performance

Marinko and Tea (2016) studied corporate governance, firm performance and economic growth-theoretical analysis. The study deliberated on corporate governance to modern economies and its rising importance in an accounting equation. The study found that corporate governance positively influence firms' performance and overall economic growth. Corporate governance is a significant determinant to be reviewed in economic growth models. The study determined the outcome of corporate governance on economic growth.

Jacob (2015), examined effects of macroeconomics factors on corporate governance performance of Indian companies. The study used descriptive design, Ordinary Least Squares (OLS) and Generalized Linear Model (GLM) regressions models. The study found board age and board size positively affect outcomes of Indian firms. The study further found that ordinary least squares analysis of macroeconomic factors on performance of companies indicates positive and significant relationship. Corporate governance performance index made by number variables also indicated different sub sets affect outcomes of Indian companies. The study is not clear on the macroeconomic factors influencing performance. This study used three macroeconomic variables to moderate the relationship among the other variables.

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Wang (2014) studied corporate governance and macroeconomic factors on Taiwanese Green Technology using descriptive statistics and regression models and found positive effect on corporate governance and ROE and stock price. Board size and foreign stock holding have positive effect on stock price. The study further found that large boards and good corporate governance practices Increases Company's stock price. This study used more characteristics of corporate governance, three financial characteristics and three variables of macroeconomic factors.

2.3.4 Corporate Governance, Financial Characteristics, Macroeconomic Factors and Firm Performance.

Ondigo (2016) studied commercial banks in Kenya. The study looked relationships among corporate governance, risk management, firm characteristics and financial performance using CAMEL rating system and descriptive research design and found significant effect on direct association linking board activities and banks outcomes. Risk management on the direct relationship is inconclusive. The moderating effect of firm characteristic to association linking direct relationship is also inconclusive. Joint effect among all variables was found to be significant. The study concentrated in a single segment of the market, however included both listed and non-listed commercial banks. This study was conducted on all sectors on the economy with joint and sectoral analyses.

Wakaisuka, Aduda, Wainaina, Iraya and Ntim (2016) reviewed financial institution performance in Uganda. The review included corporate governance, sternal environment, firm characteristics and outcome of financial institutions and found that good policies and practices of corporate governance reduces investors' risk and attract new investors and

improve outcome of companies.   Firm characteristics are important in defining

performance of companies. External environment influences financial institutions, and

institutions must keep up with tendencies in their external environment. The study

concluded that corporate governance, firm characteristics and external environment

influence performance of financial institutions. The study concluded that joint

relationship among the variables positively influences the outcome of financial

institutions in Uganda. The study reviewed the relationship among the variables..

Ribeiro, Cerqueira and Brandão (2015) study corporate governance, firm characteristics

and effective tax rates for 704 companies on London Stock Exchange from year 2010 to

2013. Study used descriptive research design and Generalized Least Squares (GLS) and

found that firms with higher outcomes have effective tax rates (ETRs). The study also

found that research and development expenses, leverage and capital intensity negatively

influence ETRs. The study further established that managerial shareholding leads to a

lower ETRS; firms with more external directors reveal higher ETRs and firms with large

boards and more non-executive directs lead to higher ETRs. The study was more

concerned with ETRs and the outcome of firms. This study used profitability and value

indicators of performance.

Aghouei and Moradi (2015) studied corporate governance, firm characteristics of effect

declared and final taxes in Iran. Study used longitudinal design, regression model and

generalized panel data from 2004 to 2008. The study found positive and significant effect

on the association between earnings before tax and total assets ratio. The study further

confirmed that there is no effect on declared and final taxes on firm characteristics and corporate governance variables. The study used only taxation as a measure of macroeconomic variables however this study used GDP, Interest rate and Inflation rate as measures of macroeconomic variables.

2.4   Summary of Empirical Literature Review

Although some previous empirical studies have empirically tested relationships between the constructs in this study, their conceptualization, theorization, contextualization and methodologies have varied. A collective acceptable suggestion from the empirical studies on association linking corporate governance characteristics on board structure and board activities on firm is still inconsistent. Most of the reviewed empirical studies have diverse conceptualization, theorization and methodologies. This study aimed at considering corporate governance as one the major factors of performance of firms. The study also enhanced the concept of corporate governance and firm performance by incorporating financial characteristics and macroeconomic factors which have not been used by most studies. The study used census of firms listed at the NSE and a panel data from 2002 to 2016 using descriptive analyses, correlation analyses, trend analysis and multiple regression Models. Table 2.1 is a summary of empirical studies on the research variables of corporate governance, financial characteristics, macroeconomic factors and performance of firms.

Table 2.1: Empirical Evidence and Research Gaps

Author(s) & Year	Context & Focus of Study	Methodology	Key Findings	Research Gaps	Focus of this Study
Aduda, Chogi, and Magutu (2013)	Nairobi, Kenya *Focused on corporate governance theories and financial performance measures.*	The study used panel secondary data from the year 2004 to the year 2007. The study used descriptive statistics and multiple regression models.	Important measures of performance are Tobin's Q and ROA. Companies favour outside directorship over inside directorships.	The study concentrated on profitability and value as indicators outcomes. Resource dependence and Agency theories.	This study incorporated more theories of corporate governance
Aghouei and Moradi (2015)	Tehran Stock Exchange Iran. *Focused on firm characteristics and corporate governance with the difference between declared and final taxes in Iran.*	The study used purposeful sampling technique to collect data from 102 companies from 2004-2008. Used descriptive statistics and Multiple Linear Regression Model (OSL).	No association observed between differences in declared and final taxes. Firm size, debt ratio, ownership percentage, board independence are related to firm performance.	The study used few characteristics of corporate governance and firm characteristics. The study period was short only four years.	This study considered more characteristics of board stricture and board activities for a period of sixteen years.
Badriyah, Sari and Basri (2015)	Indonesia Stock Exchange: *Focused on corporate governance, firm characteristics and firm*	The study used Purposive sampling, Descriptive Statistics and Structured Equation Model based (SEM) on Partial Least Squares (PSL).	Corporate governance and firm characteristics influence firm performance.	The study used risk management as the only intervening variable.	This study used three financial characteristics as intervening variable and three macroeconomic factors as moderating variable.
Buvanendra, Sridharan and Thiyagarajan, (2017)	Sri Lanka and India *Focused on firm characteristics, corporate governance and capital structure adjustments.*	The study used descriptive research design and dynamic adjustment model.	Firm profitability, tangibility, size, and non-debt tax shield affect an association with capital structure in Sri Lanka and India firms.	The study used corporate governance and firm characteristics to determine capital structure (leverage) adjustments.	This study determined the relationships among corporate governance, financial characteristics, macroeconomic factors and performance of firms.
Debby *et al.* (2014)	Banks listed at Indonesian Stock Exchange, Indonesia. *Focused on good corporate governance, firm's characteristics and firm's value.*	The study used purposive sampling to select listed banks. Used descriptive statistics and regression analysis.	Good corporate governance does not affect the firm's value. Firm's characteristics have positive effect on firm's value.	The study examined only banks in the Indonesian market	This study evaluated all listed firms at the NSE from year 2002 to 2016 but ignored delisted firms and introduced measures of profitability and value.

Faizul and Thankom (2016)	Bangladesh *Focused on* corporate governance characteristics and firm performance	The study used descriptive research design and survey-based questionnaire.	Corporate governance quality has impact on valuation of the firm.	The study used survey to determine the association between corporate governance and firm performance.	This study used panel data from the year 2002 to 2016 to determine the relationships among variables.
Gachoki and Rotich (2013)	Mombasa, Kenya *Focused on* effect of corporate on performance of public organizations, in Kenya.	The study used Sample Survey Descriptive Statistics and Multiple Regression Analysis.	Board composition had a greater influence on performance.	The study concentrated on a single firm and included a few characteristics of corporate governance.	This study incorporated all firms listed at the NSE from 2002 to 2016 but ignored delisted firms and included more characteristics of corporate governance.
Ghabayen (2012)	Saudi Arabia *Focused on* board characteristics and firm performance.	The study used Panel data from a sample of 201 non-financial firms and Regression Analysis	Positive effect of board characteristics and outcomes of firms.	The study used a single measure of firm performance ROA.	This study used profitability and value measures of performance and Tobin's Q on firms listed at NSE.
Ibe, Ugwuanyi and Okanya (2017)	Nigeria, Insurance firms *Focused on* corporate governance mechanisms on financial performance.	The study used descriptive research design and time series data.	Executive directors' payments and board size have negative and significant effect on performance. Institutional ownership and board independence affect firm results.	The study used a few corporate governance mechanisms and a The study used short period and introduced intervening and moderating variables.	This used many characteristics of corporate governance for a long period and introduced intervening and moderating variables.
Iraya, Mwangi and Muchoki (2015)	Nairobi, Kenya *Focused on* corporate governance and earnings management of companies listed at the NSE.	The study used secondary data from the year 2010 to the year 2012 and analyzed data using linear regression.	Earnings management is negatively related to ownership concentration, board size and board independence. Earnings management is positively related to board activity.	The study concentrated on earnings management and not firm performance.	The study considered performance of firms listed at NSE.
Jacob (2015)	Indian Companies. *Focused on* macroeconomic factors, corporate governance and outcomes of companies.	The study used descriptive design and regression models.	Board age and Board size affect outcomes of firms. .	The study used one variable of macroeconomic factors and considered age and size as firm characteristics.	This study incorporated three macroeconomic factors and three financial characteristics.

Lekaram (2014)	Nairobi , Kenya *Focused on* corporate governance, financial performance and listed manufacturing firms in Kenya.	The study used descriptive research design and regression Analysis.	A large proportion of outside directors lead to a higher shareholders' value. Board size positively affects firm performance.	The study concentrated in one sector of the in the market and used two characteristics of corporate governance.	This study incorporated all listed firms at the NSE from year 2002 to 2016 but ignored delisted firms and introduced more characteristics of corporate governance.
Mathew, Paul , Kamel and Cherif (2010)	London, UK *Focused on* directors' tenure on firm performance.	The study used Panel data from 1998 to 2004, descriptive analysis, regression analysis and Probit model.	Manager changes were critical to organization performance. Change in short term led to a brief reprieve in poor performance.	The study determined relationship between long term tenure and firm performance.	This study established both short-term and long-term reprieve to financial performance.
Michelberger (2017)	German Stock Exchange *Focused on* corporate governance, firm performance and equity holders return	The study used descriptive research design and 13-factor of corporate governance.	Corporate governance affects firm performance and total equity holders' return.	The study used a short period of five years and a few characteristics of corporate governance.	This study incorporated a longer period of 2002 to 2016. Introduced many characteristics of corporate governance.
Ness and Seifert (2010)	Firms listed at New York Stock Exchange, USA. *Focused on* External directors and firm performance.	The study used descriptive survey design and descriptive statistics, Pairwise Pearson correlations and OLS Multiple Regression analysis.	Duality, occupational expertise, board size, and board tenure were among the significant linkages to financial performance	The study concentrated on the number of external directors.	This study incorporated both internal and external board members.
Okioga (2013)	Firms listed at NSE, Kenya. *Focused on* contribution of good governance practices on the flow of investors	The study used descriptive survey, descriptive statistics including ANOVA, and regression analysis	Corporate governance affects value of a firm.	The study examined the relationships on value only and tested the stock values of listed companies.	The study included measures of profitability both accounting based – ROA and market based Tobins' Q.
Ondigo (2016)	Nairobi, Kenya *Focused on* corporate governance, risk management, firm characteristics and banks financial performance.	The study used CAMEL rating system and descriptive research design.	The joint effect predicts all banks financial performance.	The study concentrated in one sector of the economy.	The study incorporated all sectors of firms listed at the NSE.

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Ongore and K'Obonyo (2011)	Nairobi, Kenya *Focused on* corporate governance variables and firms performance.	The study used descriptive survey and Pearson's Product Moment Correlation and Logistic Regression and stepwise Regression.	Ownership concentration affects firm performance. Role of boards was of very little value to firm performance.	The study concentrated on a few characteristics of corporate performance	This study incorporated on wider range corporate governance characteristics divided into board structure and board activities.
Rambo (2013)	Nairobi, Kenya *Focused on* Capital Markets Authority's corporate governance guidelines and Kenya commercial banks performance.	The study used descriptive research design and ANOVA, Pearson's Correlation and multiple regression models. .	Boards of listed firms and non-listed firms were significantly different. There was a need of legal framework to align CMA to safeguard members of the public.	The study concentrated on performance of commercial bank listed at NSE.	This study considered all listed firms at the NSE from year 2002 to 2016, except delisted firms and incorporated a number of corporate governance characteristics.
Souha and Anis (2016)	French, listed firms. *Focused on* corporate governance, firm characteristics and equity holders' activism.	The used descriptive research design and multivariate analysis.	Some corporate governance characteristics affect shareholding activism and some firm characteristics impact on shareholding activism.	The study used shareholder activism as a measure of performance. Less board structure and board activities variables.	This study incorporated many corporate governance variables and financial characteristics
Wang (2014)	Taipei, Taiwan. *Focused on* macroeconomic factors and corporate governance factors on firm's value.	The study used descriptive research design and pooled estimation regression and Differential Slope Estimation.	Large board size has a positive significant relationship with stock price. ROE and low credit rating affect stock price.	The study used taxation as the only macroeconomic variable.	The study used major macroeconomic factors and included both profitability and value as measures of performance of firms listed at NSE.
Waweru and Riro (2013)	Nairobi, Kenya *Focused on* Corporate governance, firm characteristics and earnings management in an emerging economy, Kenya	The study used panel data from the year 2006 to the year 2010. Used accruals approach to measure earnings management and Descriptive statistics and the OLS multiple regressions.	Highly leveraged firms are more likely to engage in earnings management.	The study used a few firm characteristics, used both listed and non-listed companies and earnings management as measures of permanence.	This study considered all listed firms at NSE from the year 2002 to 2016 except delisted firms and included more financial characteristics.

Source: Author, 2018

2.5   Conceptual Framework

The conceptual framework provides a brief overview of inter linkages between research variables then presents a diagrammatic presentation of the study variables and how they influence each other. The study has four variables captured in the conceptual model on Figure 2.1. Performance of firms is the dependent variable for the study and corporate governance is independent variable. In this conceptual framework corporate governance was measured using board structure and board activities (Kesner, 1988, Carter *et al*., 2003) while financial characteristics were measured using leverage, liquidity and investments (Jensen & Meckling, 1976; Okiro, 2015). On macroeconomic factors that the study focused on GDP growth rate, Inflation rate and Interest rate. Returns on Assets and Tobin's Q ratio were adopted as measures of performance of firms.

H_{01} indicated the relationship between corporate governance and firm performance. Corporate governance policies and practices used in this study include board structure and board activities. The study sought to test the relationship between corporate governance and firm performance. The study expected the existence of a positive relationship between corporate governance and performance of firms of listed firms which measured using returns of assets and Tobin's Q ratio (Michelberger, 2017; Ibe *et al*., 2017; Faizul & Thankom, 2016; Ahmed & Hamdan, 2015; Lekaram, 2014).

H_{02} indicated the intervening effect of financial characteristics in the relationship between corporate governance and performance of listed firms. This hypothesis sought to test whether financial characteristics which included firm leverage, liquidity and investments

had a significant intervening effect on the relationship between corporate governance and performance of listed firms which was measured using ROA and Tobin's Q ratio (Buvanendra *et al*. 2017; Souha & Anis, 2016; Badriyah *et al*., 2015; Debby *et al.,* 2014).

H_{03} presented the moderating effect of macroeconomic factors on the relationship between corporate governance and performance of listed firms. The hypothesis sought to establish whether macroeconomic factors which included GDP growth rate, interest rate and inflation rate were expected to have a strong moderating effect on the relationship. The study expected a moderating significant effect on the relationship (Marinko & Tea, 2016; Jacob, 2015; Wang, 2014).

Lastly, H_{04} showed the joint relationship among corporate governance, financial characteristics, and macroeconomic factors on performance of listed firms. To test this hypothesis, a multivariate regression was adopted. The study expected a significant joint effect on the relationship among the corporate financial characteristics, macroeconomic factors and performance of listed firms (Ondigo, 2016; Ribeiro *et al*., 2015; Aghouei & Moradi, 2015).

Independent Variables

Intervening Variables

Financial Characteristics
- Investment
- Leverage
- Liquidity

Corporate Governance
- Executive Directors
- Non-Executive Directors
- Foreign Directors
- Women Directors
- Occupational Expertise
- Board Age
- Board Size
- Board Tenure
- Board Ownership
- Board Tools
- Board Meetings
- Number of Board Committees
- Committees Meetings
- Board Remuneration

H_{02} H_{01}

H_{04} **Firm Performance**
- Return on Assets
- Tobin's Q

Dependent Variables

Macroeconomic Factors
- Gross Domestic Product
- Interest Rate
- Inflation Rate

Moderating Variables H_{03}

Source: Author, 2018

Figure 2.1: Conceptual Model

2.6   Research Hypotheses

The study sought to test the following null hypotheses:

H_{01a}-   Corporate governance does not significantly affect performance of firms listed at the Nairobi Securities Exchange.

H_{01b}-   Corporate governance does not significantly affect performance of sectorial firms listed at the Nairobi Securities Exchange

H_{02a}-   Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

   H_{02aa}-   Investment does not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

   H_{02ab}- Leverage does not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

   H_{02ac}- Liquidity does not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

H_{02b}-   Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H$_{02ba}$. Investment does not significantly intervene in the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H$_{02bb}$. Leverage does not significantly intervene in the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H$_{02bc}$. Liquidity does not significantly intervene in the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H$_{03a}$- Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

H$_{03aa}$- Gross Domestic Product growth rate does not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

H$_{03ab}$. Interest rate does not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

H$_{03ac}$. Inflation rate does not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.

H_{03b}- Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H_{03ba}- Gross Domestic Product growth rate does not significantly moderate the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H_{03bb}. Interest rate does not significantly moderate the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H_{03bc}- Inflation rate does not significantly moderate the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange.

H_{04a}- Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange

H_{04b}- Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of sectorial firms listed at Nairobi Securities Exchange

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter captures the research philosophy used, research design, population, data collection, diagnostic tests, operationalization of the research variables and data analysis which are informing the study.

3.2   Research Philosophy

Research philosophy is an imperative part of research methodology in order to collect data in effective and appropriate manner. Research philosophy can be classified into positivism, interpretivism and realism and the choice depends on the researcher's philosophical orientation. Positivism philosophy is a structured methodology to enable generalization and quantifiable observations and evaluate results with the assistance of statistical methods. Interpretivism paradigm is related with innervation, action and constructive knowledge. It defines each paradigm in a perfect style and then conducts an evaluation revealing commonalities and differences. Realism philosophy is founded on the values and believes requirements of human beings (Cooper & Schindler, 2011).

This study was based on positivism philosophy since the study involved construction of hypotheses based on empirical and theoretical literature which were tested using statistical analysis of quantitative data. Positivism relies more on quantitative measurement that involves testing the hypothesis. This philosophy facilitated studying relationships among corporate governance, financial characteristics, macroeconomic factors and performance of firms. The philosophy concentrates on facts while also looking for relationships amongst

variables under investigation by testing hypotheses which were eventually verified or rejected.

3.3   Research Design

Longitudinal descriptive research design was employed to undertake relationship among independent, intervening, moderating and dependent variables. Longitudinal descriptive research design encompasses repetitive observations of the similar variables over long periods without external influence being applied. The design allowed researcher to distinguish between short and long-term phenomena, such as firm performance. This design allowed the researcher to track changes in variables of listed firms at the NSE from 2002 to 2016, and it was guided by hypothesis testing and study of relationships between two or more variables and by facilitated by description of trends over the period of study. To increase validity and counter any endogeneity problems, longitudinal research design is preferred (Dalton *et al.,* 1999; Carter *et al.,* 2003).

3.4   Population of the study.

A population is an entire components of a group about which we wish to make some conclusions (Cooper & Schindler, 2011). A census method was employed in this study with a target population being all listed firms at the NSE between the year 2002 and 2016. Six five (65) firms were listed at the NSE as at 31st December 2016 (Appendix I). Companies listed at NSE were targeted because the NSE acts as a country's financial barometer and the market had received empirical studies and financial data that were used to support this study (Ongore & K'Obonyo, 2011). The sixty five (65) firms were vetted against various aspects

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which comprised accessibility of data for the time under study review and the integrity of data.

Five (5) companies were dropped because they were delisted from the NSE and were difficult to get their complete data. The companies included Uniliver Tea Limited in the year 2008, when a decision was passed during the extra-ordinary to revert to a private institution after 36 years at the bourse; Hutchings Biemer Limited failed to adhere to CMA regulatory requirements from the year 2008, when the security for the company was suspended from trading and delisted in the year 2017; Access Kenya Limited was delisted from the NSE after a successful takeover by Dimension Data Holders from South Africa in the year 2013; and Baumann Company Limited failed to adhere to CMA regulatory requirements from the year 2001, when the security of the company was suspended from trading at the NSE and delisted in the year 2017 (NSE, 2016). Rea Vipingo Plant Plantations Limited though delisted in during the year 2016 was included in the considered on the NSE classification of sectors.

Table 3.1: Distribution of the Target Population

	Sectors	Number of listed Companies	Companies meeting the threshold	Percentage
1	Agricultural	7	6	10%
2	Automobiles & Accessories	3	3	5%
3	Banking	11	11	18%
4	Construction and Allied	5	5	8%
5	Insurance	6	6	10%
6	Manufacturing and Allied	10	10	15%
7	Commercial & Services	10	8	15%
8	Investment	5	3	8%
9	Energy and Petroleum	5	5	8%
10	Telecommunication	1	1	2%
11	Investment Services	1	1	2%
12	Real Estate Investment Trust	1	1	2%
	Total	**65**	**60**	**100%**

Source NSE Website (2016)

Table 3.1 presents the target population of listed companies from twelve segments. Ten percent of the firms were from the agricultural segment, while 5 percent were from automobile and accessories sector. Eighteen percent of companies were from banking segment, where as 15 percent from commercial and services segment. Eight percent of the companies were from construction and allied sector. Companies from energy and petroleum sector were 8 percent; companies from insurance and investment sector were 10 percent and 8 percent respectively, while companies from investment services sector were 2 percent. Fifteen percent of the companies were from manufacturing and allied sector and 2 percent from both telecommunication sector and real estate investment trust sector respectively. This distribution shows that most of the listed firms are from the banking segment while the least

number of firms are from investment services, telecommunication and real estate investment trust sectors having one company each.

3.5 Data Collection

To collect and use data for the study the researcher obtained authorization letter from the university and a permit from NACOSTI (Appendix III). Data for corporate governance was collected from 2002 to 2016 from annual reports of listed firms from CMA and published financial statements from NSE. Data for macroeconomic factors was extracted from Kenya national Bureau of Statistics (KNBS) and Central Bank of Kenya (CBK). The data extracted from annual reports included: executive directors, number of non-executive directors, foreign directors, women directors, directors' expertise, board age, board size, board tenure, board meeting, board ownership, board tools, board committees, board ownership, board remunerations and committees meetings. The data collected from published financial statements included: firms' investments, leverage and liquidity. ROA and Tobin's Q were calculated from published financial statements. Additional data on macroeconomic factors in relation to GDP growth rate, interest rate and inflation rate were extracted from CBK and KNBS economic reports.

3.6 Operationalization of Research Variables

There are four variables in the study whose relationships were established. The dependent variable (performance of firms) was operationalized by ROA and Tobin's' Q. The independent variable (corporate governance) was operationalized by corporate governance dimensions of board structure and board policies. The intervening variable (financial characteristics) was operationalized by firm investment, firm leverage and firm liquidity.

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Lastly, moderating variable (macroeconomic factors) was operationalized by GDP growth rate, interest rate and inflation rate. Table 3.2 presents operationalization of the research variables and measurements.

Table 3.2: Operationalization of Research Variables

Type	Variable	Indicators	Operational Definition	Measurement	Supporting Literature
Dependent Variable	Performance of Firms (FP_{it})	Returns on Assets (ROA)	A ratio of net profits to total assets	Net Earnings/Total assets	(Khrawish, 2011; Aduda *et al*., 2013)
		Tobin's Q (TQ)	A ratio of shares issued multiplied by market share price plus book value of liability and to book value of assets.	Total equity multiplied by share price plus book value of liability and divided by book value of assets.	(Lekaram, 2014 ; Aduda *et al*.,2013)
Independent Variable	Corporate Governance (CG_{it})	Executive Directors	Internal directors having executive authorities in managing the firm.	Number of executive directors.	(Carter *et al*., 2003)
		Non-Executive Director	External directors having monitoring roles to a firm.	Number of non-executive directors in the board.	(Liu, 2012)
		Foreign Directors	Non-citizen appointed in the board of directors.	Number of Non-citizen appointed as directors of a firm	(Ruigrok *et al*., 2007; Carpenter *et al*., 2004)
		Women Directors	Women directors appointed in the board of directors.	Number of women directors in the board.	(Green & Homroy, 2018)
		Occupational Expertise	Occupational background, education and experience of board members.	Number of occupational background, educational and experience of board members.	(Baysinger & Butler, 1985; Kesner,1988)
		Board Age	Average age of directors of the board.	The average age of directors.	(Rose, 2007)

		Board Size	The number of directors in a board.	The number of directors instituting a board.	(Jensen, 1993; Khanchel, 2007)
		Board Tenure	Numbers of years' executive directors take in the board.	Years executive directors take in the board.	(Mathew *et al.,* 2010)
		Board Ownership	Number of ordinary shares held directors in aboard.	Ratio of directors' shareholding to total shares.	(Brickley *et al.*, 1988; Morck et al., 1988)
		Board Tools	Tools to enable the board to be effective in discharging their roles and responsibilities.	Numbers aids used by Board.	(Okiro, K.O., 2014; CMA,2015)
		Board Meetings	Sessions of boards which are statutory and non-statutory.	Number of meetings of boards.	(Lipton & Lorch, 1992)
		Number of Board Committees	The committees constituted by the boards for specific deliberations.	Number of committees of the board.	(Klein,2002)
		Committees Meetings	Specific meetings for committee members.	Number of meetings by committees members.	(Xie, DavidsonIII & DaDalt, 2003).
		Board Remuneration	Amount paid to board members.	Amount paid to board members.	(Jensen & Murphy, 1990)

		Investment	Investments efficient allocation of capital. Also refers to the sacrifice of current cash flows for future cash inflows.	Total long term assets/ Total assets.	(Sharp *et al.*, 2005)
Intervening Variable	Financial Characteristics (FC$_{it}$)				
		Leverage	Ratio of Proportion of debt and equity.	Total long term liabilities/ total equity.	(Jensen & Meckling, 1976; Okiro, K.O., 2014; Koori,2015)
		Liquidity	A firm's liquidity is ability of the firm to use current assets to pay current obligations.	Working Capital/Total Assets.	(Barine, 2012; Koori,2015)
Moderating Variable	Macroeconomic Factors (MF$_{it}$)	Gross Domestic Product	GDP measures all finished goods and services for a country in a specific fiscal year.	GDP growth rate.	(Maclennan & Pryce, 1996)
		Interest Rate	Interest rate is the cost of borrowed capital.	Annual CBR lending interest rate.	(Lazonick & O'Sullivan, 2000).
		Inflation Rate	Inflation is general rise in price levels for a basket of products.	Consumer Price Index (CPI)	(Ochieng & Obere, 2014)

Source: Author, 2018

3.7   Diagnostic Tests

Diagnostic tests are necessary when panel data is used. This assists in avoiding violations of Classical Linear Regression Model (CLRM) assumptions before using multiple linear regression models. In this study normality, linearity, autocorrelation, stationarity, multicollinearity, heteroscedasticity and Hausman specification test were done.

3.7.1   Normality

A normality test was used to decide whether research data has been drawn from a normally distributed population. They fall into two broad categories: graphical and statistical. Normality plays a vital role in envisaging the totals of the dependent variable and also knowing shape of the distribution. This study adopted Shapiro Wilk test. The choice the Shapiro Wilk test was justified on the basis that it provides measures of distribution other than normality and provides statistical results compared to visual test such use of quantiles and normality plots (Paul & Zhang, 2009). Under the Shapiro Wilk test the null hypothesis H_0: data is normally distributed while the Ha: Data is not normally distributed. The study rejected the null hypothesis if the p-value was more than, 0.05 significance level, otherwise the study failed to reject null hypothesis.   Non parametric techniques of analysis were to be used in case data was not normally distributed.

3.7.2   Linearity

Linear relationships can be expressed in a graphical format where the variable and the constant are connected via a straight line or in a mathematical format where the independent variable is multiplied by the slope coefficient, added by a constant, which determines the dependent variable (Rencher & Schaalje, 2008). Linearity also refers to the point at which a dependent variable has a linear relationship with one or more

independent variables. This means that the expected value of dependent variable is a straight-line function of each independent variable, holding the others constant.

In this study, linearity test is important because most parts of the General Linear Model such as correlation and regression assume the linearity. The analysis of the variance (ANOVA) table was used in this study to test for linearity. As rule of thumb, if the F significance (i.e. P value) for the non-linear element is below the critical value of (>.05), then there is significant non linearity. If the value of significance of output (P value) is (< 0.05), then the relationship between the independent and dependent variables are linearly dependent.

3.7.3 Test for Stationarity.

Since both cross sectional and times series data was used, preforming stationery test was necessary. The approximation used in time series takes into assumptions that the variables are stationary. Failure to account for non-stationery nature of time series data in estimation models would leads to spurious results (Gujarati. 200). The study used Levin, Lin & Chu for unit root test. By imposing a cross-equation restriction on the first-order partial serial correlation coefficients under the null, this Levin-Lin-Chu test has much higher power than performing a separate unit root test for each individual (Bornhorst & Baum, 2006). The null hypothesis assumed that all the panels had unit roots (Choi, 2001). The null hypothesis was rejected if the p-value was less than 0.05. In case of unit root or non-stationarity the study would have used differencing at first, second and third to make data stationary.

3.7.4 Test for Autocorrelation

Autocorrelation is a method to discover recurring patterns. It is a situation where a variable repeat itself in a series (Verbeek, 2012). A Wooldridge test was used to test for presence of autocorrelation in this study because it is based on a few assumptions, and therefore it is a more robust test for serial autocorrelation (Baltagi & Wu, 1999). The null hypothesis means that no first order auto/serial correlation exists. The null hypothesis was rejected if the p-value was less than 0.05.

3.7.5 Test for Multicollinearity

Multicollinearity is an unacceptable high level of inter correlation among the independent variables, such that effects of independent variables cannot be separated (Garson, 2012).

Variance inflation factor (VIF) is normally used in multiple regression to test for multicollinearity. VIF is a factor that determines how the variance of a given partial regression coefficients by which a variance of a partial regression upsurges given the extent of changes in correlation with other predictor in the model (Dennis, 2011). The preference is normally to lower levels of VIF as higher levels of VIF normally undesirable affect the outcomes associated with multiple regression analysis. Co-linearity is the VIF, and a simple diagnostic is required for each regression coefficient. VIF was adopted because it gives more specific information on the each variables contribution to collinearity (Belsley, Kuh, & Welsch, 1980).

Multicollinearity is a situation where independent variables have a correlation that inclines towards 1, that indicates that the variables are highly correlated and only one to be used by dropping the other (Kock & Lynn, 2012). According to VIF rule of thumb, VIF> 4.0 means multicollinearity is a problem, though researchers consider VIF > 5.0.

This study assumed a VIF value of 10 as the requirement which is allowed by scholars (Garson, 2012). The presence of multicollinearity implied that one of the variables with high correlation was to be dropped.

3.7.6 Test for Heteroscedasticity

Heteroskedasticity is a state where the error terms among different values of explanatory variables do not have a constant variance. Running a regression with heteroskedastic values would lead to unbiased parameter estimates but invalid standard errors (Cooper & Schindler, 2011). The presence of heteroskedasticity was tested using the Log likelihood test as specified by (Breusch & Pagan, 1979). The study adopted this test because it gives good results for Gaussian and fat-tailed data (Breusch & Pagan, 1979). The null hypothesis was that the error term was homoscedastic and the alternative hypothesis was that the error term was heteroskedastic. If the null hypothesis was rejected then it implied that there was presence of heteroskedasticity. The researcher therefore would transform the variables into logs (Brooks, 2008).

3.7.7 Hausman Specification Test

Panel data requires that a researcher should test the favorability of the panel for either a fixed effect or a random effect model. A Hausman specification test is normally conducted to determine which model is appropriate between fixed effect and random effect for a given panel data. A Hausman test is grounded on the consistency and efficiency of various models based on the correlation among individual effects and their repressors. Hausman specification test is meant to determine the existence of any significant correlation between the unobserved firms random effect and regressors. The results is important in making a decision, if it is found that no correlation exist, the

random effects (RE) model will be suitable for the study. In the existence of a correlation in the test, then the fixed effects (EF) model would be the best alternative. In a situation where fixed effect model is appropriate, time inclusion in estimation of fixed effects is important. To determine whether all dummies for all years are equal to zero and reliable, F-test was applied (Green, 2008).

Hausman test further lead to determine whether to run a simple Ordinary Lease Squares (OLS) regression. If Hauesman test results for selection of the RE model then, there is a need RE model or OLS regression. A test of Lagrange was used to select between the simple OLS regression and the RE model. In this study the null hypothesis was assumed that the variance across firms equal is equal to zero; that is, there are no panel effects. The research objectives were realized applying panel regression analysis.

3.8   Data Analysis

This study employed descriptive analyses, trend analyses, correlation analysis and panel data regression in analyzing the relationship between corporate governance and performance of firms listed companies at the NSE. Descriptive analyses were carried out to measure dispersion of variables such as standard deviations and coefficient of variation which was used to disclose the volatility in relationships of the variables under study. A panel data regression analysis was conducted using random effects model which allowed the companies to have a common mean value of the intercept to determine whether corporate governance influence firm performance.

Inferential analysis of variables was done by subjecting the variables to stepwise and multiple regression analysis where applicable using panel data. F-test was used to assess the significance of the overall regression equation. Coefficient of Determination (R^2) and p-values was used to interpret the regression functions at a level of significance of 0.05 (Bryman & Cramer, 1997). The respective individual regression coefficients were also tested for their statistical significance using the t-test.

Following Agrawal and Knoeber (1996) model, a system of simultaneous equations are developed and modified for objectives and hypotheses of the study, where performance of firms measured by ROA and Tobin's Q is regressed on corporate governance, financial characteristics and macroeconomic factors. Null hypotheses were rejected when calculated p-values exceeded 0.05.

3.8.1   Relationship between Corporate Governance and Firm Performance

Simple regression model were used to test hypothesis one: Relationship between Corporate Governance (CG) and Firm Performance (FP).

$FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\varepsilon}_{it}$..Equation 1.

Where;

FP= Firm Performance

CG= Corporate Governance

β_0= Constant

β_1= Regression Coefficients

$\acute{\varepsilon}_{it}$= Error Term

The study null hypotheses were rejected when calculated p-values exceeded 0.05 significance level adopted by the study.

3.8.2 Relationship among Corporate Governance, Financial Characteristics and Firm Performance

Stepwise regression model was used to determine these relationships. The following models were used to test hypothesis two. This was achieved by determining the intermediating effect of firm characteristics by relying on four steps of statistical analysis (Baron & Kenny, 1986).

Step one: Relationship between Corporate Governance (CG) and Firm Performance (FP) holding Firm Characteristics (FC) constant.

$$FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\varepsilon}_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{Equation2 (a).}$$

Where;

FP= Firm Performance

CG= Corporate Governance

β_0= Constant

β_1= Regression Coefficients

$\acute{\varepsilon}_{it}$= Error Term

The study null hypothesis was rejected when calculated p-values exceeded 0.05 significance level adopted by the study.

Step two: Relationship between Corporate Governance (CG) and Financial characteristics (FC), holding Firm Performance (FP) constant.

$$FC_{it} = \beta_0 + \beta_2 CG_{it} + \acute{\varepsilon}_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{Equation2 (b).}$$

Where;

FC= Financial Characteristics

CG= Corporate Governance

β_0= Constant

β_1= Regression Coefficients

$\acute{\epsilon}_{it}$= Error Term

The study null hypothesis was rejected when calculated p-values exceeded 0.05 significance level adopted by the study.

Step three: Relationship between and Financial Characteristics (FC) and Firm Performance (FP), holding Corporate Governance (CG) constant.

$$FP_{it} = \beta_0 + \beta_3 FC_{it} + \acute{\epsilon}_{it\ t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{Equation2 (c)}.$$

Where;

FP=Firm Performance

FC= Financial Characteristics

β_0= Constant

β_1= Regression Coefficients

$\acute{\epsilon}_{it}$= Error Term

The study null hypothesis was rejected when calculated p-values exceeded 0.05 significance level adopted by the study.

Step four: Intermediation among Corporate Governance (CG), Financial Characteristics (FC) and Firm Performance (FP).

$$FP_{it} = \beta_0 + \beta_4 CG_{it} + \beta_5 FC_{it} + \acute{\epsilon}_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{Equation2 (d)}.$$

Where;

FP= Firm Performance

CG= Corporate Governance

FC= Financial Characteristics

β_0= Constant

β_1= Regression Coefficients

$\acute{\epsilon}_{it}$= Error Term

The study null hypothesis was rejected when calculated p-values exceeded 0.05 significance level adopted by the study.

3.8.3 Relationship among Corporate governance, Macroeconomic Factors and Firm Performance

Multiple regression models were used to determine these relationships. The following model was used to test hypothesis three. This was achieved by determining the moderating effect of Macroeconomic Factors (MF) on the relationship between Corporate Governance (CG) and Firm Performance (FP): Null hypotheses were rejected when calculated p-values exceeded 0.05.

$FP_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 INR_{it} + \beta_5 GDP_{it} *CG + \beta_6 INF_{it} *CG + \beta_7 INR_{it} *CG + \acute{\epsilon}_{it}$ …………………………………………………………..…………Equation 3.

Where;

FP= Firm Performance

CG= Corporate Governance

GDP_{it} = GDP Growth Rate

INF_{it}= Inflation Rate

INR_{it}= Interest Rates

GDP_{it} *CG = Interaction between GDP and Corporate Governance

INF_{it} *CG, = Interaction between Inflation and Corporate Governance

INR_{it} *CG= Interaction between Interests rate and Corporate Governance

β_0= Constant

$\beta_{1\ldots7}$= Regression Coefficients

$\acute{\varepsilon}_{it}$= Error Term

The study Null hypotheses were rejected when calculated p-values exceeded 0.05 significance level adopted by the study.

3.8.4 Relationship among Corporate governance, Financial Characteristics,

Macroeconomic Factors and Firm Performance

Panel data regression model of random effects was used to determine the relationship among Corporate Governance (CG), Financial Characteristics (FC), Macroeconomic Factors (MF) and Firm Performance (FP). These models were used to test hypothesis four, the joint effect:

$$FP_{it\,=}\ \beta_0 + \beta_1 CG_{it} + \beta_2 FC_{it-1} + \beta_3 MF_{it-1} + c_i + \acute{\varepsilon}_{it}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{Equation 4.}$$

Where:

FP_{ij} = Firm Performance

CG = Corporate Governance

FC = Financial Characteristics

MF = Macroeconomic Factors;

c_i = unobserved variable; β_0 is the intercept

β_1, β_2, β_3, β_4 and β_5 = regression coefficients for Corporate Governance, Financial Characteristics and Macroeconomic Factors for firm i in time t

$\acute{\mathcal{E}}$ = error term.

The study Null hypotheses were rejected when calculated p-values exceeded 0.05 significance level adopted by the study

CHAPTER FOUR

DESCRIPTIVE DATA ANALYSIS AND PRESENTATION

4.1   Introduction

This chapter presents the descriptive findings on the study variables. The findings presented in this section include findings on descriptive statistics, sectoral trend analysis, and correlation test results. Tables and charts were used in presentation of the findings in this chapter. The results in this section enabled the critical analysis of the study variables to provide a clear understanding of the corporate governance practices in the listed firms in Kenya and how they compare to performance of firms.

4.2   Descriptive Statistics of the Study Variables

This section presents the descriptive statistics on the study variables. The study analysed study variables in terms of the mean, maximum, minimum, standard deviation, skewness and kurtosis. Mean is arithmetic average of data distribution. Standard deviation is a measure of spread from mean. Skewness is a measure distribution from symmetry. Kurtosis is a measure of data distribution's peakedness or flatness relative to normal distribution (Cooper & Schindler, 2011). The overall descriptive statistics are presented in Table 4.1.

4.2.1   Overall Descriptive Statistics of Study Variables

This section presents the findings on descriptive statistics of the study variables. The study analysed the descriptive statistics of all the variables that measured board structure, board activities, financial characteristics, macroeconomic factors and performance of firms.

Table 4.1: Descriptive Statistics of Study Variables

Indicators	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
Executive Director	0	5	1.66	0.858	0.978	0.648
Non-Executive Director	1	15	6.6	2.604	0.156	0.282
Foreign Director	0	9	2.17	2.003	0.767	-0.17
Women Director	0	6	1.13	1.232	0.907	0.034
Occupational Expertise	1	15	5.97	2.059	0.486	0.914
Board Age	37	74	55.09	4.843	0.361	1.387
Board Size	2	16	8.24	2.491	0.068	-0.054
Board Tenure	1	10	2.8	1.07	1.65	12.933
Board Ownership	0	0.78	0.0846	0.17669	2.332	4.543
Board Tools	0	5	3.16	0.768	-1.402	4.098
Board Meetings	0	39	5.52	3.709	3.776	20.893
Number of Board Committees	0	9	3.18	1.645	0.605	0.379
Committees Meetings	0	86	12.27	10.575	2.391	9.26
Board Remuneration	0.613	5.462	0.040	0.5679	9.409	193.862
Investments	0.0384	0.9959	0.635807	0.216542	0.574	-0.648
Leverage	1.644	30.0263	0.990952	1.661592	8.677	134.265
Liquidity	-0.953216	1.2794	0.202459	0.232122	0.665	3.538
GDP Growth Rate	0.2	8.4	4.873333	2.192211	-0.858	0.043
Interest Rate	12.25	19.8533	15.06825	2.248712	0.821	-0.706
Inflation Rate	0.9	15.2	7.421333	3.485355	0.21	0.089
ROA	-1.382	1.798	0.14883	0.235928	-0.03	8.49
Tobin's Q	-1.7528	6.7098	1.390516	0.938131	2.148	5.377

Source: Author, 2018

Table 4.1 shows that listed firms in Kenya had varying board structure for instance some firms had high number of executive directors than others as shown by the maximum value of executive director of 5 however, majority of the firms had an average of 2 executive directors while others had none as shown by the minimum value of 0. The findings also revealed that non-executive directors were more compared to executive directors since the mean of non-executive director was 6 with the maximum being 15. The standard deviation of 2.604 implied that the variation in non-executive directors across listed firms was large.

The findings further indicated that listed firms in Kenya had an average of 2 foreign directors with some having a maximum of 9 foreign directors. The results also exhibited that the number of women directors in listed firms in Kenya is still very low as shown by the mean of 1 implying that majority of the listed firms had just 1 woman directors however some firms had many women directors to about 6 in their board. The study also showed that directors in listed firms in Kenya had adequate occupational expertise as shown by mean of 5 years of experience. The minimum age of the board members was 37 while the maximum was 74 with an average of 55. The firm with lean board size was 2 while that with the largest board size was 16 with the mean being 8. These findings showed that listed firms in Kenya had varying board structure some firms had extensive board structure while others had lean board structure.

The study further sought to analyse the board policies of listed firm in Kenya. Among the board policies that the study focused on include board tenure. The descriptive results on board tenure among listed firms in Kenya showed that majority of the firms had board tenure of 3 years as shown by the mean board tenure. However, some firms had extended board tenure for 10 years while others had shorter tenure of 2 years as shown by the maximum and minimum values. The percentage of board ownership was still very low at an average of 8% while the firms with highest board ownership was at 78%, other firms had zero board ownership as shown by the minimum value of 0. The study further sought to establish the number of aids (board tools) used by board members in listed firms. The results showed that majority of the board members had 3 aids while the maximum had 5, in other firms there were no aids for the board members. The findings on board meetings indicated that the average number of meeting held by boards in listed firms per year was 5 however; the results reveal that some listed firms had a maximum of 39 board meetings

annually. The standard deviation of 3 indicated that the variance in number of board meeting was large.

On the number of board committees, the study revealed that the average number of board committees was 3, but the maximum and minimum values of 9 and 0 respectively indicated that some firms had more board committees compared to others. Similarly, the study revealed that some listed firms had many annual committee meetings compared to other listed firms. Firms with the highest committee meetings had 86 meetings but the average was 12 committee meetings. These results also show that listed firms had varying board activities which implied that corporate governance in listed firms varied from one firm to another.

The descriptive statistics for financial characteristics further showed that different firms had different financial characteristics (investment, liquidity and leverage). The results reveal that some firms had high investments as shown by average ratio of total long term assets to total asset of 0.216542 while others had as low as 0.0384 implying that they had poor long term investments. The results also presented that some firms were highly leveraged compared to others. The firms with the highest total debts to total assets ratio had 30.0263 implying their debts was higher than their total assets while the mean was 0.990952. Other firms had fewer debts compared to totals assets as shown by minimum leverage of 1.644 which indicated that the total debts were negative. On liquidity, the results showed that some firms had more working capital compared to others. The standard deviation of 0.232122 indicates that working capital to totals assets varied largely form one firm to another.

The descriptive statistics of macroeconomic variables also revealed that the period of study experienced varying economic conditions. The maximum and minimum GDP growth rate was 8.4% and 0.2% respectively. The average GDP growth rate was 4.8%. Inflation rate also varied during the study period from a maximum of 15.2% to a minimum of 0.9%; however the average inflation rate was 7.2%. The trend in the interest rate also showed that the highest interest rate was 19.8533% while the lowest was 12.25%. The results revealed that there was a high volatility in macroeconomic environment during the period of the study.

The descriptive results for performance of firms' indicators also showed ROA for listed firms varied significantly from one company to another. The average ROA for all the listed firms was about 0.14883 while better performing firms had a ROA of 1.798 and worst performing firms had a ROA of -1.382. These statistics were also similar for Tobin Q where some firms had a high firm value of 6.7098 with those poor performers having a Tobin's Q of -1.7528 however, the industry average was 1.390516. This was a clear indication that listed firms performed differently during the study period with some firms recording high performance while others recording very poor performance. To further shed more light on corporate governance and performance of firm the following section contains the sectoral descriptive analysis.

4.2.2 Sectoral Descriptive Statistics of Study Variables

This section presents the sectoral descriptive statistics for the study variables. This section was included to compare corporate governance, financial characteristics and performance of firm of listed firms according to their respective sectors.

Table 4.2: Sectoral Descriptive Statistics of Study Variables (Mean)

	Executive Director	Non-Executive Director	Foreign Directors	Women Directors	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Agricultural Sector	1.47	4.07	2.26	0.1	3.9	56.69	5.59	3	0.006	2.61
Automobiles and Accessories Sector	1.64	5.31	1.29	0.02	4.62	53.13	6.78	3.11	0.002	3.33
Banking Sector	2.05	7.84	1.8	1.69	7.14	54.75	9.87	2.79	0.075	3.21
Commercial and Services Sector	1.87	7.1	3.33	1.44	6.45	55.72	9	3.74	0.091	2.54
Construction and Allied Sector	2.19	5.51	2.12	0.41	5.87	53.33	7.69	2.6	0.107	3.31
Energy and Petroleum Sector	1.34	6.9	2.08	1.62	5.75	52.87	8.25	2.84	0.191	3.48
Insurance Sector	0.86	8.25	2.77	1.49	6.88	54.94	9.09	2.05	0.106	3.63
Investment Firms Sector	1.35	6.35	0	1.14	5.72	53.14	7.7	2.91	0.160	3.51
Investment Services Sector	1	9	0	2	7.33	51	10	3	0.000	4
Manufacturing Sector	1.53	7.06	2.19	1.35	6.12	57.64	8.55	2.02	0.080	3.4
Telecommunication Sector	1.11	8.33	6.11	3.78	7.89	55.17	9.44	3	0.000	3.78
Real Estate Sector	2	6	6	1	6	55.55	8	3	0.000	3

	Board Meetings	Number of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	ROA	Tobin's Q
Agricultural Sector	3.35	1.69	4.32	0.03	0.71	0.28	0.19	0.19	1.21
Automobiles and Accessories Sector	4.22	2.36	8.36	0.17	0.43	0.78	0.17	0.03	1.03
Banking Sector	7.2	4.78	21.19	0.05	0.79	2.36	0.35	0.09	1.21
Commercial and Services Sector	4.62	3.04	10.7	-0.03	0.57	0.82	0.04	0.11	1.77
Construction and Allied Sector	5.29	2.65	9.6	0.06	0.57	0.48	0.15	0.2	1.65
Energy and Petroleum Sector	9.11	3.69	20.85	0.07	0.53	1.08	0.08	0.1	0.95
Insurance Sector	6.21	3.67	14.6	0.02	0.79	1.29	0.52	0.1	1.13
Investment Firms Sector	5.56	2.95	8.21	0.1	0.67	0.98	0.08	0.07	1.07
Investment Services Sector	8.67	7.67	31	0.39	0.52	0.08	0.41	0.38	0.08
Manufacturing Sector	4.55	2.9	8.36	0	0.52	0.36	0.19	0.29	1.83
Telecommunication Sector	4	2	8.33	0.01	0.81	0.14	0.12	0.45	2.98
Real Estate Sector	4	1	4	0.08	0.66	0.02	0.3	0.03	1.07

Source: Author, 2018

Table 4.2 shows that firms in agricultural sector score very low on board independence compared to firms from other sectors. Insurance firms and investments services scored highly on board independence among the listed. On board gender diversity, telecommunication sector had the highly gender diversified board while firms in automobiles and accessories industry had the least gender diversified boards.

On the level of occupational expertise telecommunication sector, investment services and banking sector in that order had the boards with high occupational expertise while agricultural sector had boards with less occupational expertise followed by firms in automobiles and accessories industry. Investment services firms had the youngest board members at an average of 51 years while firms in manufacturing and agricultural sectors had averagely older board members. On the size of the board, firms with larger board size fall in manufacturing sector, banking sector and telecommunication sector. Firms from these sectors had an average board size of above 9 members. Firms from agricultural sector and automobiles and accessories sector had the smallest board sizes with less than 6 board members.

On board policies, firms from the automobiles and accessories industry was found to have the longest board tenure compared to firms from other sectors, firms with shortest board tenure were from insurance sector. Energy and petroleum sector had the highest percentage of board ownership followed by investment firms. Firms with the lowest percentage of board ownership were mainly from investment services sector, telecommunication sector and real estate sector in that respective order. The findings also showed that firms in telecommunication sector and energy and petroleum sector had the

highest board tools for board members while board members from agricultural firms and real estate firms had the least tools board tools.

The study findings further revealed that firms in energy and petroleum sector and investment services sector had the highest number of board meetings at an average of 9 meetings annually while agricultural firms had the least number of meetings annually at less than 4 meeting annually. The number of board committees was significantly large at average of 7 in investment services sector firms compared to all other sectors. Similarly, firms in investment services sector had the highest committees meeting compared to firms from other sectors. Firms in banking sector and energy and petroleum sector had the second highest committee meetings at average of 21 and 20 respectively.

On board remuneration, the study established that among the listed firm in Kenya boards in investment services sector, automobiles and accessories sector and investment firms sector are highly remunerated as a percent of profit before tax compared to firms from other sectors. On the other hand, telecommunication sector and real estate sector had a smaller fraction of profit before tax compared to other sectors. The study further analysed the financial characteristics (investment, leverage and liquidity) of firms listed on NSE. The results revealed that firms in telecommunication sector, insurance industry and banking sector had the highest investments while firms in automobiles and accessories sector, investment services sector and manufacturing industry had the least investments.

The results also indicated that automobiles and accessories sector, banking sector, insurance sector and energy and petroleum sector were the most leveraged firms among

the listed firms in Kenya. The least leveraged industries were real estate sector, telecommunication sector and investment services sector. On liquidity, firms in insurance industry (0.52), investment services sector (0.41) and banking industry (0.35) had the highest liquidity while commercial and services sector (0.04). Energy and petroleum sector (0.08) had the lowest liquidity.

Table also presents the firms performance across sectors of listed firms in Kenya. The results showed that telecommunication sector (0.45), investment services sector (0.38), construction and allied sector (0.20) and agricultural sector (0.19) in that order had the highest Return on Assets (ROA) among the listed firms in Kenya. On Tobin's Q, telecommunication sector, manufacturing sector, commercial and services sector and construction and allied sector emerged as top performance in the market. The firms that performed poorly on ROA during the study period were from real estate sector (0.03), automobiles and accessories sector (0.03) and investment firms sector (0.07). On Tobin's Q poor performance were investment services sector and energy and petroleum sector. Individual full sectorial descriptive statistics are in (Appendix VII).

4.3   Trends Analysis of the Study Variables

This section provides the presentations and discussions of trend analysis results. The section enables the researcher to understand the changes in indicators of corporate governance, financial characteristics, macroeconomic factors and indicators of performance for the listed firms in Kenya.

4.3.1 Trends Analysis of the Board Independence

The study computed board independence by computing a fraction of non-executive directors out of the total board size. The yearly average for board independence as measured by executive directors, non-executive director and foreign director for all the listed firms was computed and the resulting data used to draw the trend.
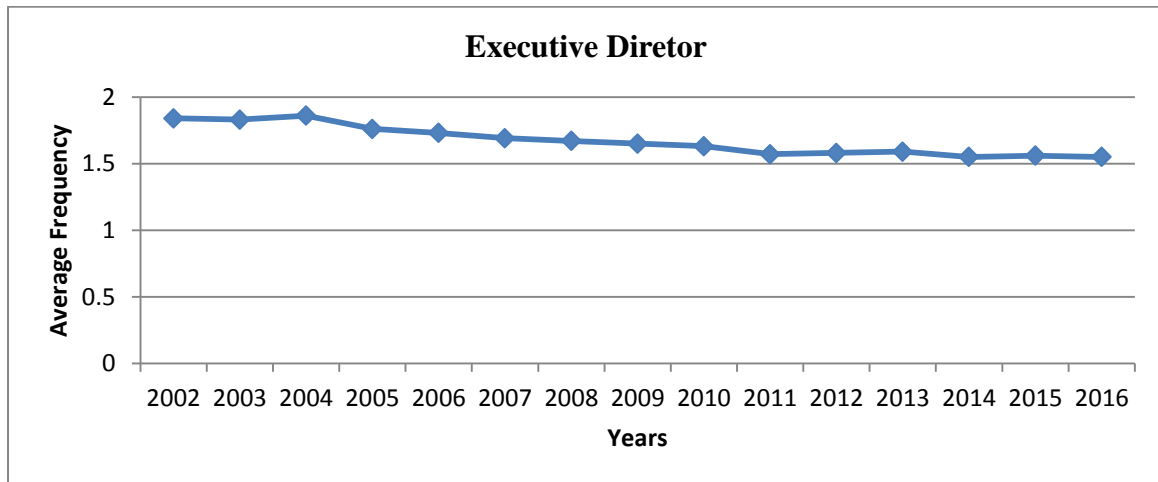
Executive Diretor

Figure 4.1 (a) Trends Analysis of the Executive Directors

The results in Figure 4.1 (a) show that the number of executive directors in listed companies had slightly decreased which imply that listed companies in Kenya increased the independence of the board by decreasing the number of executive directors.

Non-Executive Diretor

Figure 4.1 (b) Trends Analysis of the Executive Directors
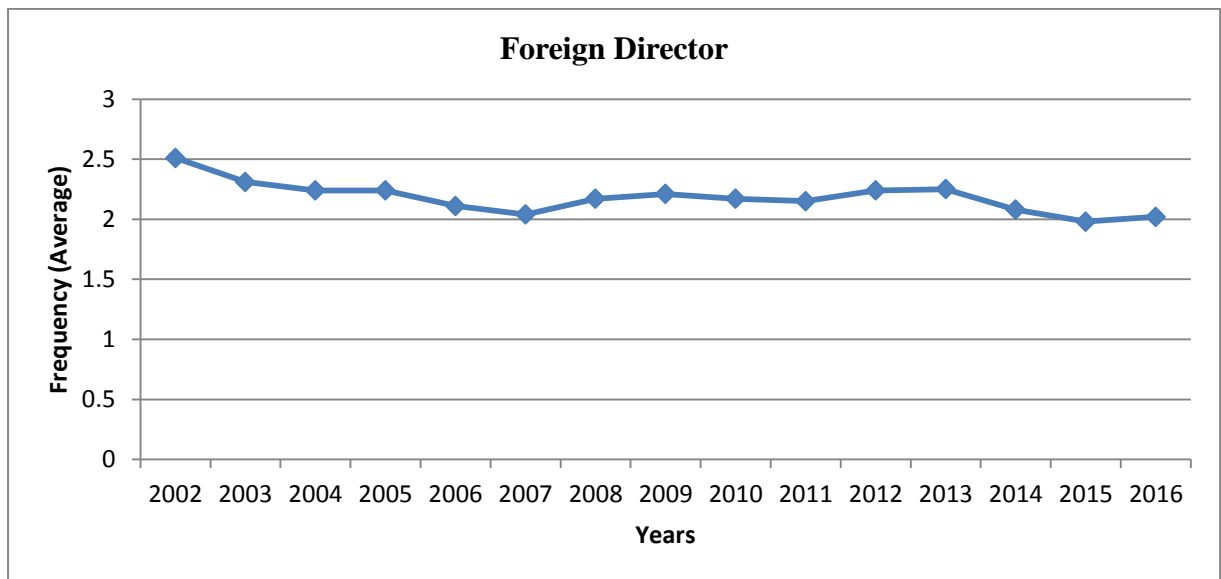
Figure 4.1 (c) Trends Analysis of the Executive Directors

The trend shows that board independence of listed firms in Kenya tremendously increased between 2007 and 2014 as indicated by reduction in the number of executive directors and increase in non-executive directors in the board. Non-executive director are usually included to address the needs of shareholders. However, the number of foreign directors reduced among the listed companies within the study period which implied that foreign directors were replaced by local non-executive directors. This implies that more and more non-executive directors have been added to the board of listed firms. The increase in non-executive directors in an indication of the need to protect the shareholders and other investors from loses that may arise due to conflict of interest within the board.

4.3.2   Trends Analysis of the Board Gender Diversity

The study further sought to analyse the board gender diversity of listed firms in Kenya. Similarly the study analysed gender diversity by the number of women directors in the board of listed companies.
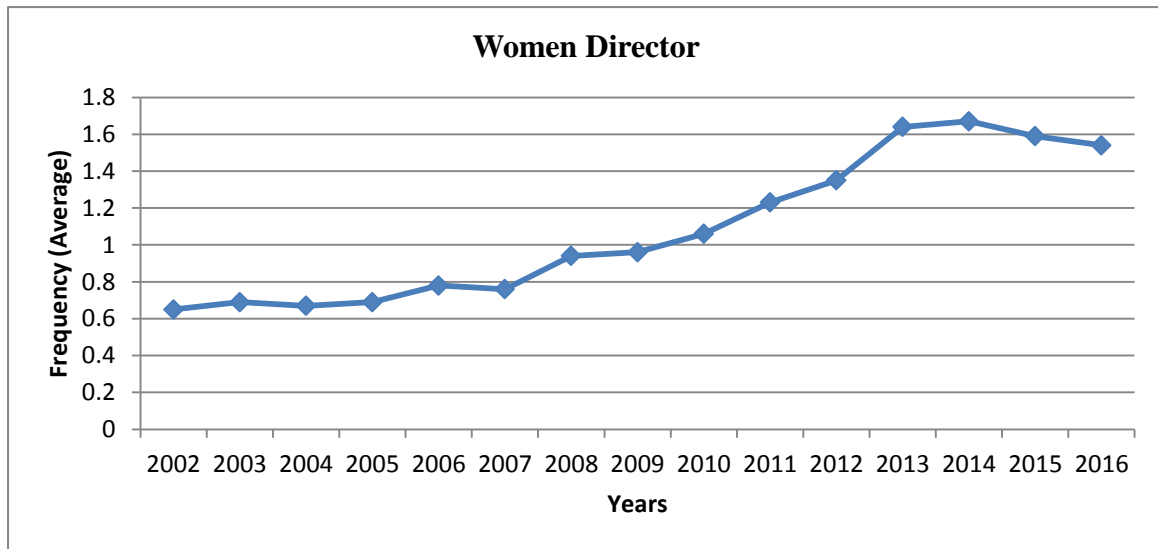
Figure 4.2 Trends Analysis of the Board Gender Diversity

The results also show that although the change in terms of numbers has been very low, the overall trend in board gender diversity increased across the study period. These findings imply that more women are getting into the board of listed firms as compared with the past. The findings further indicate that most of the listed firms had at least a member from the female gender on their board. The increase also seems rapid after the inauguration of the new constitution that demands that workplaces should have gender parity.

4.3.3   Trends Analysis of the Board Occupational Expertise

This section analyses the board occupational expertise based on the years of experience of the board members.
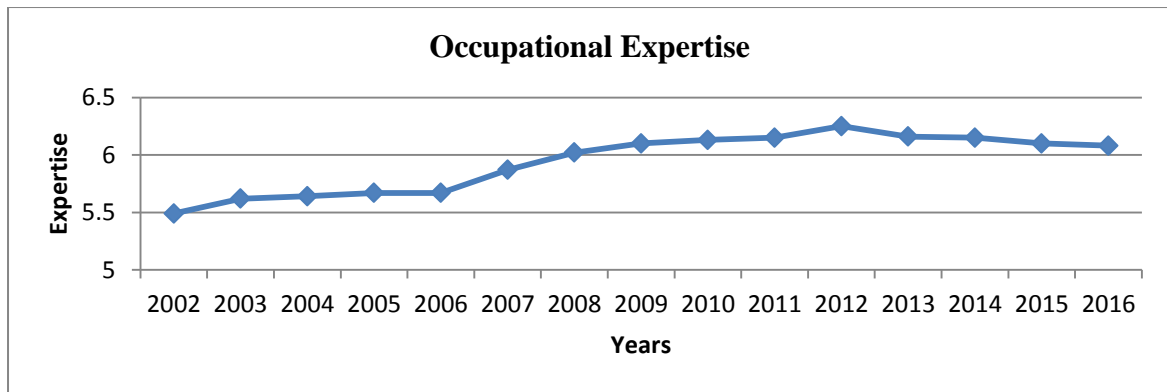
Figure 4.3 Trends Analysis of the Board Occupational Expertise

The findings indicate that occupational experience of the board increased between 2002 and 2016. These findings points to the fact that listed firms have been appointing more experienced individuals on their board. This is to the recognition of the critical role played by corporate governance in steering the firm in the profitability direction.

4.3.4 Trends Analysis of the Board Age

The age of board members is also a critical component of board structures that the study sought to analyse. The study sought to establish trend in age of board members among the listed firms in Kenya.
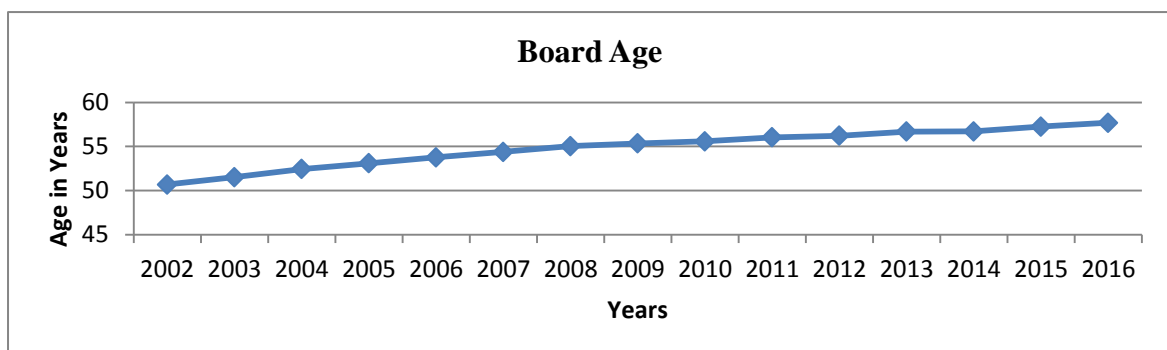
Figure 4.4 Trends Analysis of the Board Age

The results indicate that there was an increase in average age of board members of listed firms in Kenya. This increase in the board members age can be attributed to the fact members at much younger age but advance their age while serving on the board.

Similarly, these findings coincide with the findings that the occupational experienced also increased during the study period indicating a high correlation between age and occupational experience.

4.3.5 Trends Analysis of the Board Size

The study also pursued to establish the trend in the board size of the listed firms in Kenya. This was done to establish the common practice among the listed firms in terms of board size.
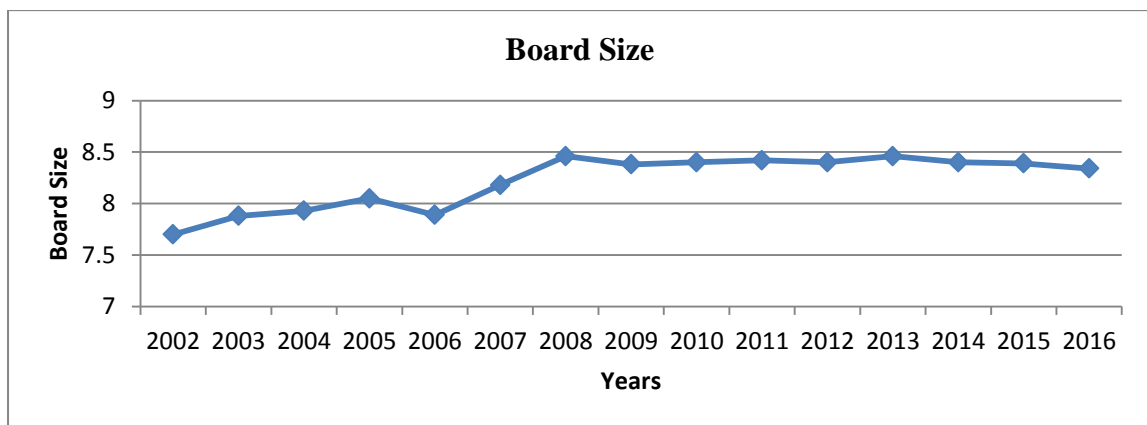
Figure 4.5 Trends Analysis of the Board Size

The results indicate that board size increased or grew between 2002 and 2005, in 2006 the average board size dropped slightly from about 8 members' board toward 7. The years 2007 and 2008 also experienced increase in board since then there was significant change in board size. This implies that on average listed firms maintained their board size between 2008 and 2016. These findings further indicate that majority of the listed firms in Kenya have maintained their board size between 8 and 9 members.

4.3.6 Trends Analysis of the Board Tenure

Among the board activities that the study was interested in is the board tenure. The study sought to establish how long the individuals served on the board of listed firms in Kenya.

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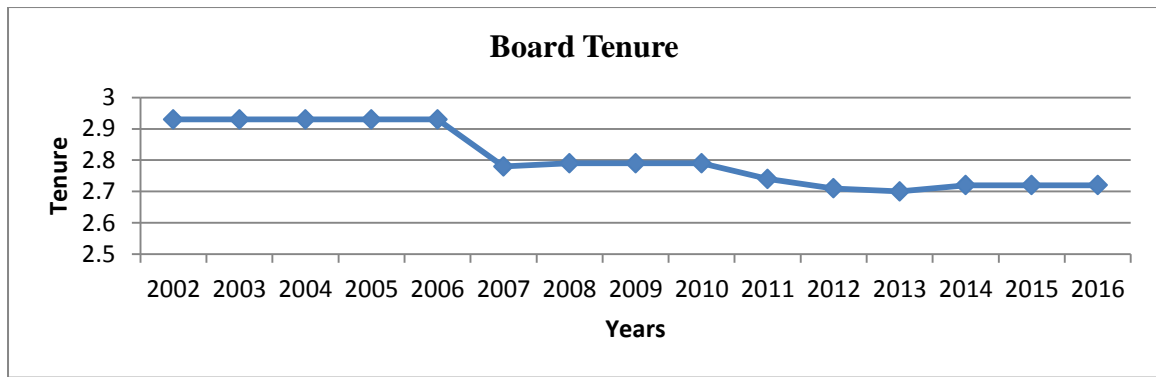
Figure 4.6 Trends Analysis of the Board Tenure

The findings show that there has been a general reducing trend in the board tenure among the listed firms in Kenya. The board tenure reduced from an average of 3 years to about two and half years. This trend however, began to take effect in 2006 as earlier years had almost a constant trend in the board tenure. Reduction in the board tenure indicates the need to eliminate complacency that is frequently witnessed among individuals that stays in the same places for longer.

4.3.7   Trends Analysis of the Board Ownership

The board ownership was computed as percentage of stock held by the individuals that sit on the boards of the listed firms in Kenya.
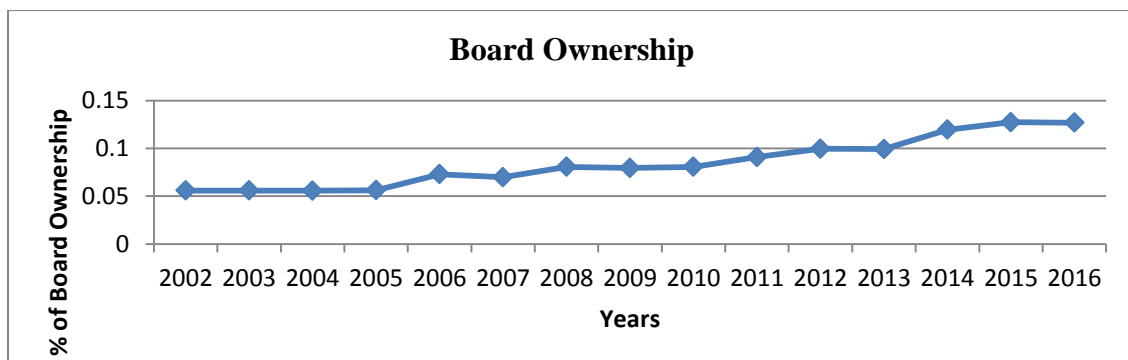
Figure 4.7 Trends Analysis of the Board Ownership

The trend reveals that there was increase in the percentage of the board ownership among the listed firms in Kenya. These findings imply that members of the board continued to increase their ownership in the companies they serve. However, these trends appear to have taken effect in 2005 and increased steadily henceforth. The year 2016 has seen the highest percentage board ownership among the listed firms in Kenya. This also coincided with the year the listed firms performed poorly on return on assets which points to clear negative relationship between board ownership and ROA.

4.3.8   Trends Analysis of the Board Tools

Board tools deals with the numbers of assistants allocated to each board members of the listed firms in Kenya. The trend analysis for board tools for the period between 2002 and 2016.
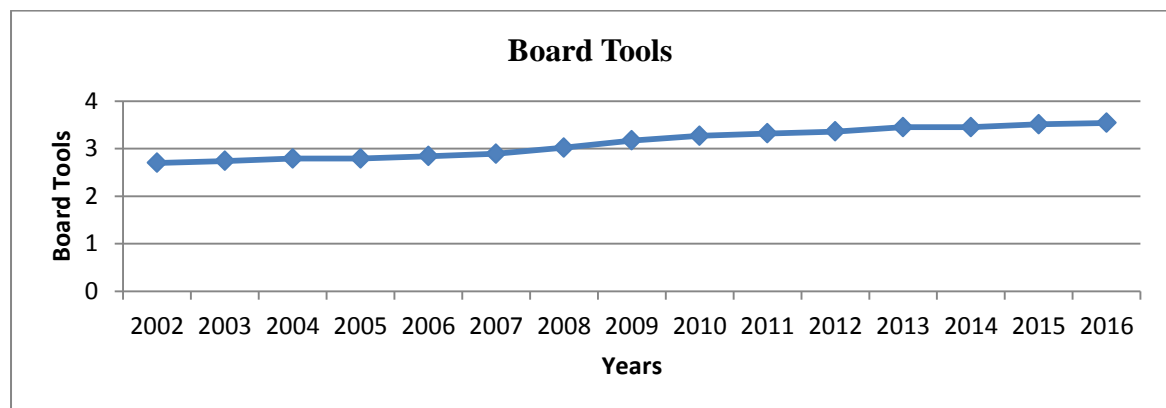
Figure 4.8 Trends Analysis of the Board Tools

The finding shows that there has been a slight increase in the number of aids tools allocated to board members of listed firms in Kenya an average of about 0.5 as the relevance of corporate governance continues to gain attention the role of members of the board continues to increase hence the justification for extra aids tools to assists in additional tasks which justify why there is increase in board tools as the trend indicates.

4.3.9 Trends Analysis of the Board Meetings

The study sought to establish the trend in board meetings among the listed firms in Kenya.
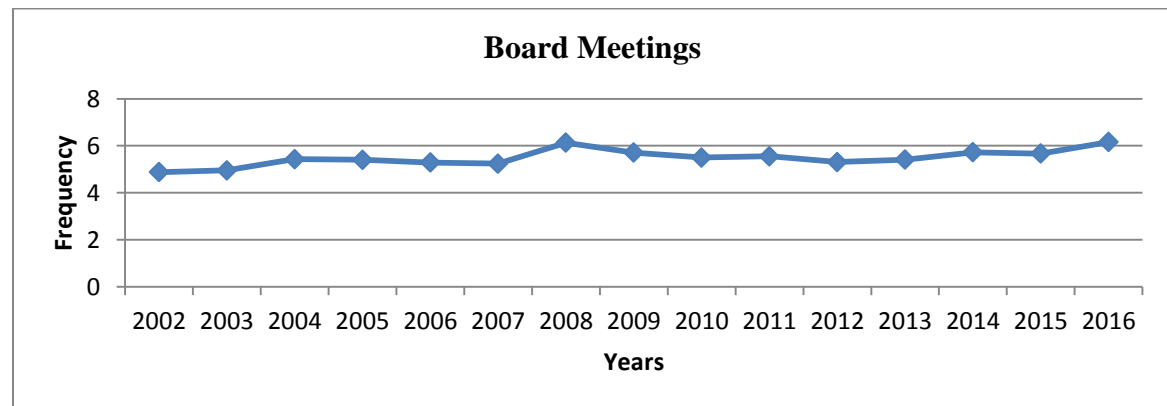
Figure 4.9 Trends Analysis of the Board Meetings

The results shows that in 2002 average number of board meetings was about 5 which increased to about 6 in 2016. These findings are an indication that there has been no significant increase on average in the numbers of board meetings among the listed firms in Kenya. However, as shown in previous section, some companies held a maximum of 9 meetings annually while other had a low as three board meetings annually. This is an indication that the board of listed firms allowed the management adequate space to operate without interference.

4.3.10 Trends Analysis of the Number of Board Committees

The number of board committees is another aspect of board activities that the study sought to investigate. It is imperatively difficult for boards to be operative without board committees assigned various functions. This section sought to analyse the trend in number of board committees between 2002 and 2016 among the listed firms in Kenya.
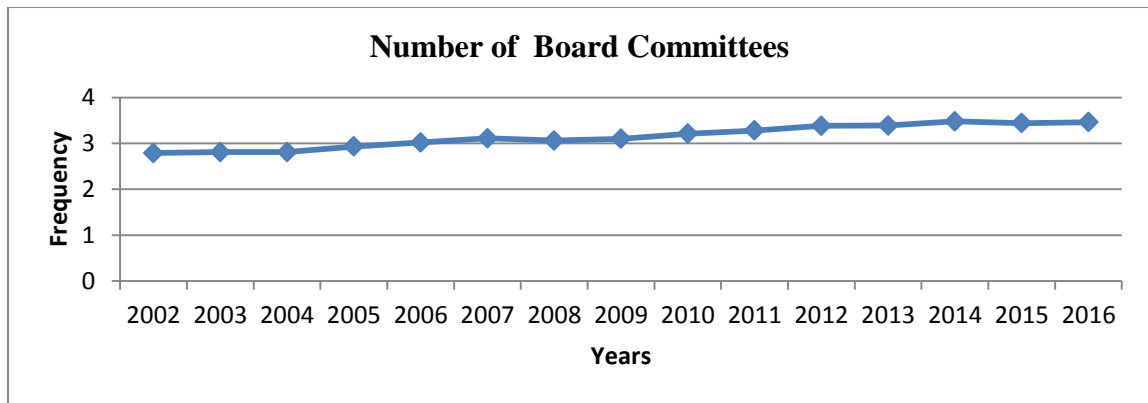
Figure 4.10 Trends Analysis of the Number of Board Committees

Similarly, the study finding shows that there was a slight increase in the number of board committees among the listed firms in Kenya. On average there were about 2 committees in 2002 which increased to about 3 in 2016 which implies that listed firms in Kenya have not adopted the concept of increasing the number of board committees choosing to remain with the traditional numbers of board committees.

4.3.11 Trends Analysis of the Board Committees Meetings

The study analysed the number of committees meeting held by the members of various board committees of listed firms in Kenya.
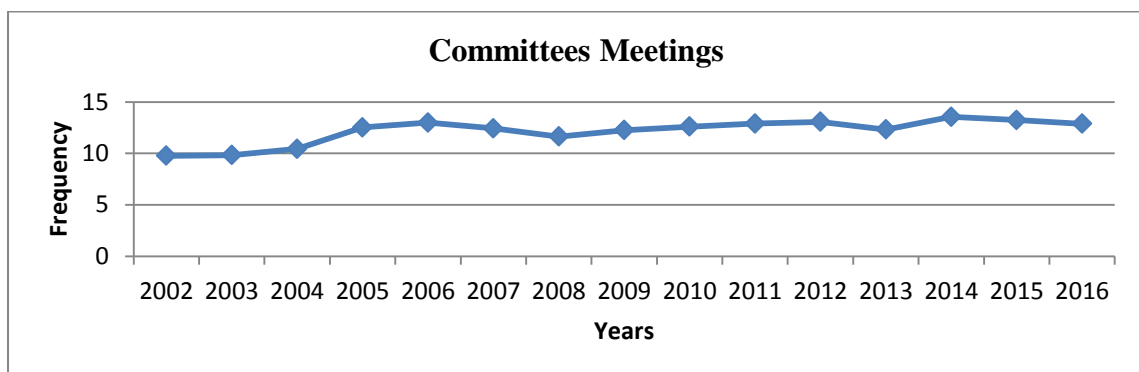
Figure 4.11 Trends Analysis of the Committees Meetings

The trend reveals that on average there was increase in the number of committee meetings across the study period for listed firms in Kenya. However, the findings show that there was slight decrease in the number of committee meetings in 2008 and 2013.

The number of meetings average between 10 and 14 annually.

4.3.12 Trends Analysis of the Board Remuneration

The study also analysed the board remuneration of listed firms in Kenya. The board remuneration was computed as fraction of profit before tax of the listed firms.
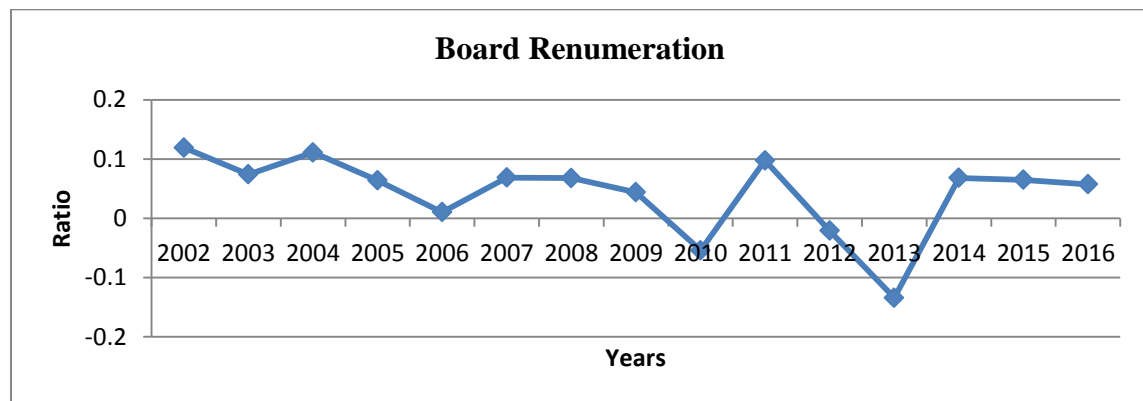
Figure 4.12 Trends Analysis of the Board Remuneration

The findings show that board remuneration was highly volatile across the study period. The results also indicate board remuneration decreased between 2002 and 2016 which further reveals that firms' profits before tax increased during the study period or the amount paid to board through allowances and salaries decreased. The volatility in board remuneration could be justified on the basis of various board activities increase in other board activities positively correlates to fluctuation in board remuneration.

4.3.13 Trends Analysis of the Firms Investments

The study also analysed the trends in financial characteristics of the listed firms. The indicator of financial characteristics adopted include investments which was measure as ratio of total long term assets and total assets, leverage measured by ratio of debts to assets and finally liquidity which was measured by working capital divided by total assets.

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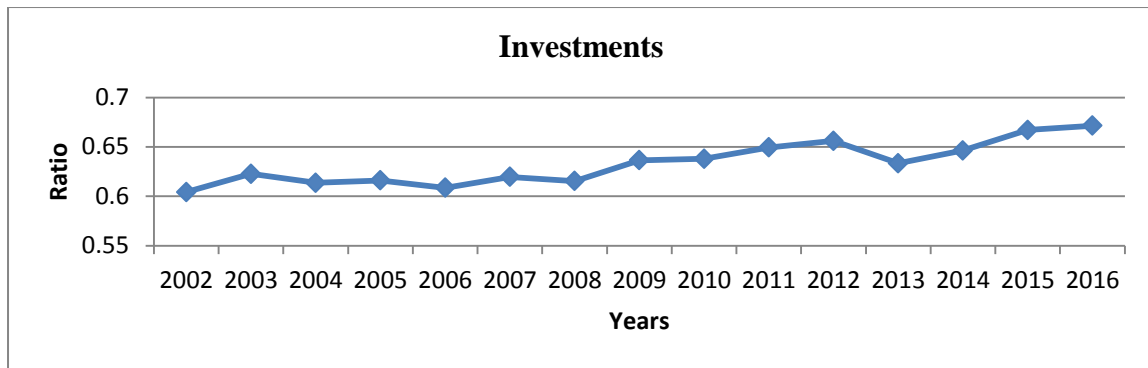
Figure 4.13 Trends Analysis of the Firm Investments

The trend shows that on average firms' investments increased between 2002 and 2016. These findings imply that the listed firms continue to invest in long term assets across the years. However, there was slightly yearly drop and rise in firms' investments as shown by the trend. The years that experienced drops in firms investments were 2004, 2006, 2008 and 2013. These years coincided with elections activities in Kenya which could justify why there was drop in investments in listed firms since the business environment is usually never friendly during elections in Kenya.

4.3.14 Trends Analysis of Firms Leverage

Leverage was computed by dividing the debts by totals assets of the firms. The study sought to establish the extent of leverage among the listed firms in Kenya.
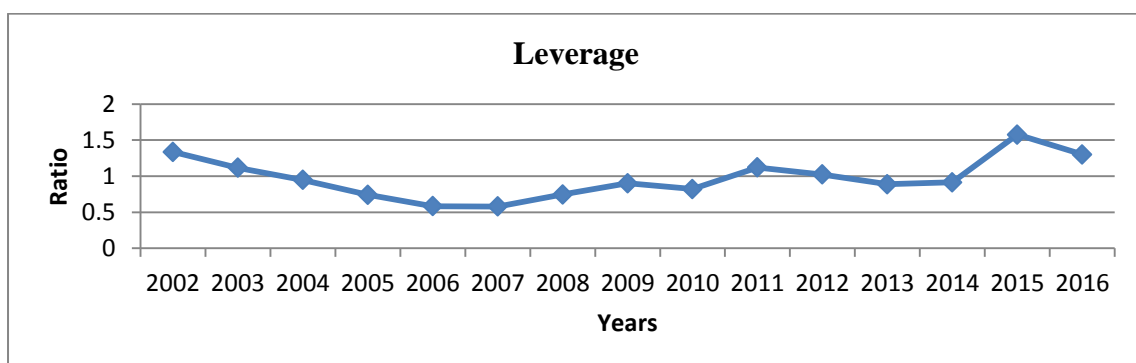
Figure 4.14 Trends Analysis of the Firm Leverage

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On average the study established that there was a slight increase in the extent of leveraging adopted by the listed firms in Kenya. However, the results shows that there was a drop in leverage between 2002 and 2006, between 2007 and 2009 there was slight increase in leverage which dropped in 2010 before increasing again in 2011. Between 2011 and 2013 there was another drop in leverage. The ratio of debts to assets was highest in 2015 implying that the amount of debts among listed firms was maximum in that particular year.

4.3.15 Trends Analysis of the Firms Liquidity

Liquidity was used to indicate the ratio of working to total assets of the listed firms in Kenya. Firms' liquidity is a critical component that determines whether the firms meet its short term financial obligations.
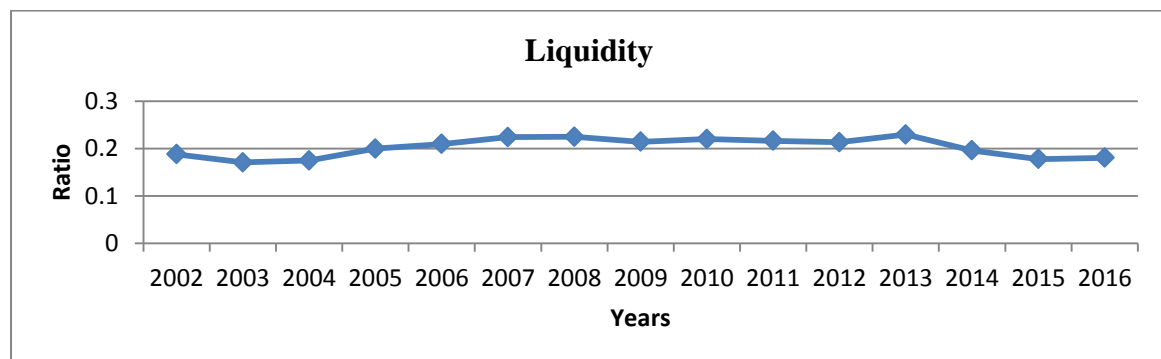
Figure 4.15 Trends Analysis of the Firm Liquidity

The trend reveals that changes in liquidity were not erratic implying on average listed firms experience smooth decrease or increase in their liquidity. The trend further shows that there was slight increase in liquidity between 2004 and 2013 however, liquidity decreased between 2014 and 2016. The results indicate that listed firms in Kenya maintained a liquidity of between 15% and 25% of the total assets.

4.3.16 Trends Analysis of the GDP Growth Rate

This section contains the trend analysis of GDP growth rate for Kenya between 2002 and 2016. The study used macroeconomic variables which included GDP growth rate, inflation and interest rates as moderating variables in this study.
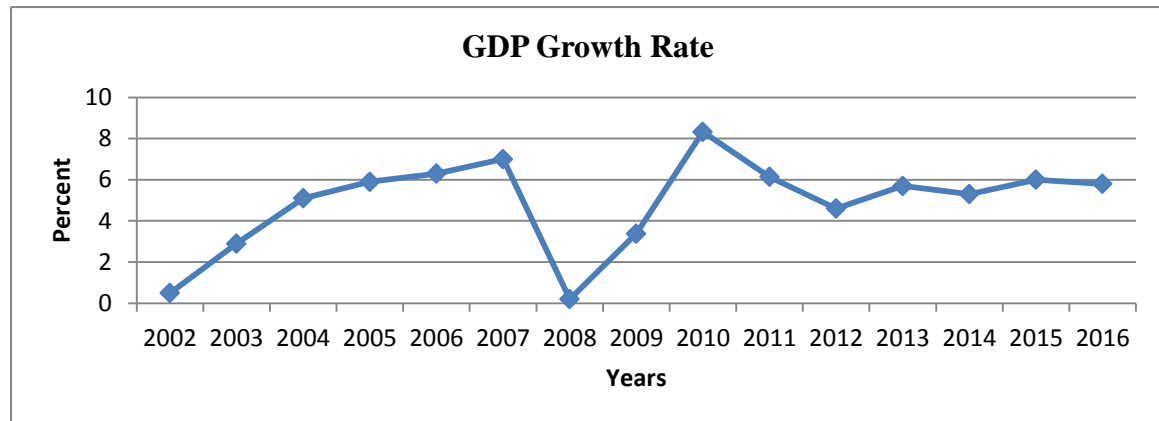
Figure 4.16 Trends Analysis of the GDP Growth Rate

The trend shows that GDP growth rate increased between 2002 and 2007 however, the growth gradient between 2004 and 2007 was slower compared to that between 2002 and 2004. In 2007, there was tremendously drop in the GDP growth rate to almost negative and this was during the disputed 2007 general elections when Kenya almost went to civil war. The GDP growth rate later improved reaching its highest point in 2010 before dropping again in 2011 and 2012. GDP growth rate remained stable between 2014 and 216. The findings imply that during the study period the economy was volatile as results of various events top among the perennial elections disputes that occurs after every general election.

4.3.17 Trends Analysis of the Interest Rate

The study further analysed the interest rates as a key indicators of macroeconomic climate affecting the investments activities of listed firms.
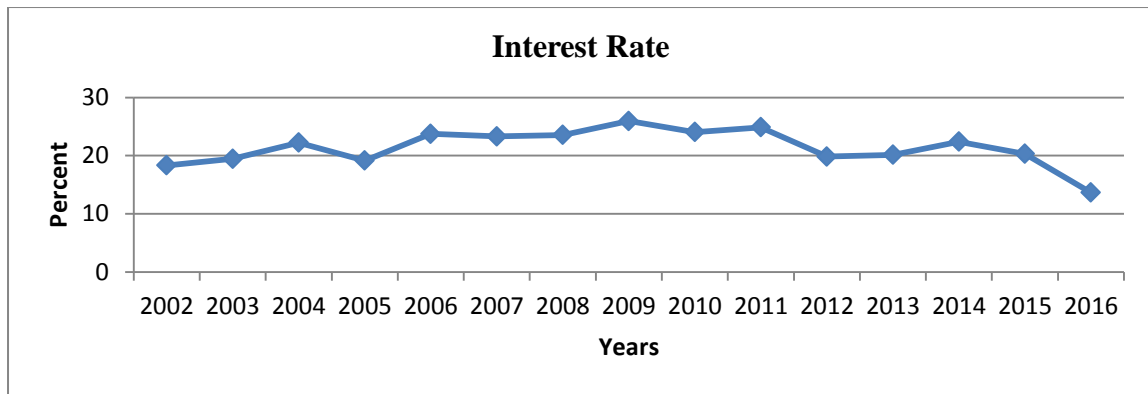
Figure 4.17 Trends Analysis of the Interest Rates

The interest rates charged by commercial banks in Kenya averaged to about 20% between 2002 and 2016 when the interest rate capping came to effect. There was almost a slight increase in interest rate that saw businesses borrow expensively compared to developed countries and other sub-Saharan countries. The adoption of interest rate capping law saw interest rate fall to about 14% as shown by the trend.

4.3.18 Trends Analysis of the Inflation Rate

Finally the study analysed the changes in inflation rate of Kenya across the study period.
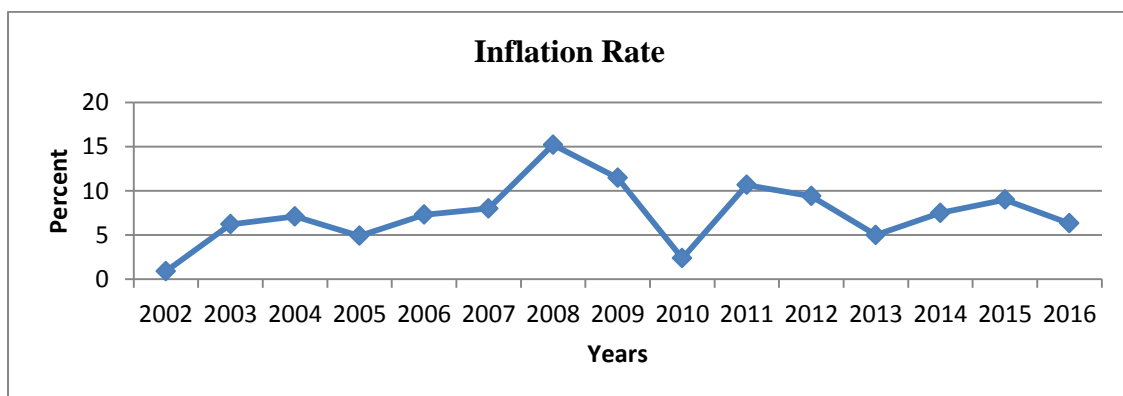
Figure 4.18 Trends Analysis of the Inflation Rates

The results of trend analysis reveals that inflation rate in Kenya were highly erratic during the study period. In 2002, the inflation rate was lower than 2% this however changed quickly in 2003 that saw inflation rate reached 6% and further increased in 2004 before

slightly dropping in 2005. Inflation rate increased in 2006 to reach highest level in 2008 which coincided with poor GDP growth rate as results of disputed general election. The years 2009 and 2010 experienced significant drop in inflation before it increased again in 2011. Inflation rate further dropped in 2013 before slightly increasing in 2014 and 2015 and finally dropping in 2016. These findings confirm that inflation rate in Kenya is very erratic.

4.3.19 Trends Analysis of the ROA

The study analysed the trends in performance of firms of listed firms in Kenya. The indicators of performance analysed include Return on Assets (ROA) and Tobin's Q.
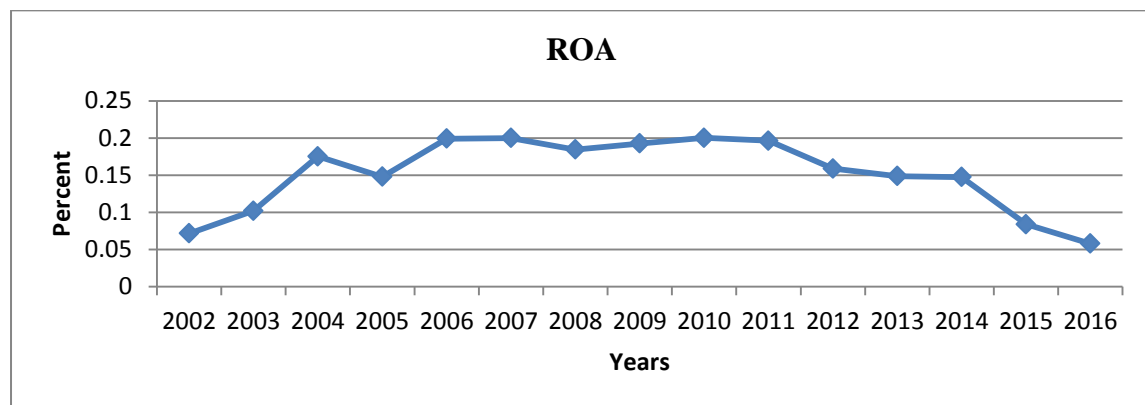
Figure 4.19 Trends Analysis of the ROA

The trend analysis shows increasing trends in ROA of listed firms between 2002 and 2006. The graph reveals that ROA experienced a small drop in 2008 before stabilizing in 2009, 2010 and 2011. From 2012, ROA of listed firms experienced a significant drop which persisted all the way to 2016. The findings imply that from the 2011 to 2016 listed firms on NSE experienced drop in performance as measured by ROA. These findings are unexpected considering that the corporate governance of listed firms in Kenya has been improving as indicated by increased in board independence, board diversity, board size and other aspects of board structures and board activities. These findings could also imply

that corporate governance does not significantly enhance the performance of the listed firms in Kenya.

4.3.20 Trends Analysis of the Tobin's Q

The study also used Tobin's Q to measure the market performance of the listed firms in Kenya. This section presents the trend analysis results on Tobin's Q.
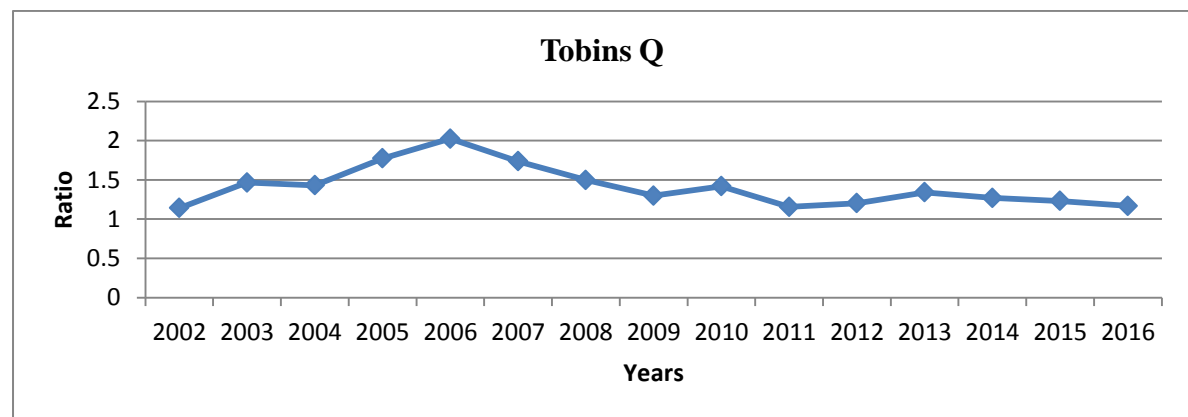
Figure 4.20 Trends Analysis of the Tobin's Q

Similar to ROA, Tobin's Q of the listed firms in Kenya increased between 2002 and 2006 before experiencing a significant drop between 2006 and 2016. The findings indicate that besides the poor financial performance as shown by ROA, listed firms also recorded poor market performance as shown by the trend analysis of Tobin's Q.

4.4 Correlation Analysis

This section contains results of correlation tests conducted to establish the association between study variables. According to Kothari (2014) the importance of correlation is to determine the extent to which changes in the value of an attribute is associated with changes in another attribute. This study used correlation to test the association between the independent variables, intervening variables, moderating variables and dependent variables.

Table 4.3 (a): Overall Correlation Matrix

		Executive Director	Non Exe. Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non Exe. Director	r	-.267**	1								
Foreign Director	r	.108**	.185**	1							
Women Director	r	-0.028	.422**	-0.043	1						
Occupational Expertise	r	0.061	.784**	.428**	.360**	1					
Board Age	r	-.180**	.086*	0.066	-.083*	.076*	1				
Board Size	r	0.058	.942**	.235**	.431**	.835**	0.03	1			
Board Tenure	r	.183**	-.125**	-0.037	.092*	-.129**	-.188**	-0.068	1		
Board Ownership	r	-.216**	.229**	-.377**	.193**	0.018	0.027	.164**	-0.049	1	
Board Tools	r	-.072*	.295**	0.016	.180**	.304**	.113**	.283**	-.238**	.127**	1
Board Meetings	r	-0.04	.296**	-.320**	.265**	.159**	-0.013	.297**	0.002	.528**	.249**
Number of Board Committees	r	-.100**	.538**	-0.017	.320**	.502**	.122**	.530**	-.079*	.242**	.329**
Committees Meetings	r	-.083*	.466**	-.183**	.387**	.385**	0.001	.457**	0.023	.340**	.226**
Board Remuneration	r	.087*	-0.005	0.004	-.081*	0.038	-.080*	0.019	-0.016	-0.014	0.062
Investments	r	-0.002	.231**	-0.062	.196**	.192**	.195**	.240**	0.03	.222**	.095**
Leverage	r	0.011	.144**	-.083*	.158**	.157**	-0.01	.150**	-0.024	.117**	0.041
Liquidity	r	-0.023	0.055	0.039	-.093*	.121**	-0.046	0.055	-.224**	-0.036	.088*
GDP Growth Rate	r	-0.047	0.036	-0.036	.095**	0.035	.182**	0.025	-0.024	0.039	.147**
Interest Rate	r	-0.048	0.034	0.01	.164**	0.044	.121**	0.022	-0.039	0.062	.174**
Inflation Rate	r	-0.037	0.057	-0.024	0.033	0.046	.136**	0.046	-0.027	0.033	0.068
ROA	r	.073*	0.009	.215**	-.078*	.141**	0.033	0.041	-.092*	-.121**	0.062
Tobin's Q	r	.185**	-0.008	.247**	0.031	.122**	-0.05	0.059	-0.021	-.131**	-.232**
	Sig.	0	0.831	0.000	0.402	0.001	0.174	0.106	0.575	0.000	0.000
	N	747	747	747	747	747	747	747	747	747	747

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

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Table 4.3 (b): Overall Correlation Matrix

		Board Meetings	Number of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
Number of Board Committees	r	.457**	1										
Committees Meetings	r	.663**	.808**	1									
Board Remuneration	r	-0.008	-0.024	-0.046	1								
Investments	r	.235**	.234**	.242**	-0.054	1							
Leverage	r	.165**	.248**	.227**	0.007	.150**	1						
Liquidity	r	-0.01	.193**	.122**	0.015	-.148**	0.057	1					
GDP Growth Rate	r	0.003	0.063	0.065	-0.042	0.036	-0.022	0.009	1				
Interest Rate	r	-0.02	0.068	0.024	-0.032	0.037	.082*	0.002	-.151**	1			
Inflation Rate	r	0.048	0.027	0.028	0.025	0.017	-0.018	0.021	-.262**	-.126**	1		
ROA	r	-.134**	-0.035	-.086*	0.059	-.197**	-.240**	.273**	0.046	-0.07	.073*	1	
Tobin's Q	r	-.184**	-.101**	-.112**	0.022	-.212**	-.190**	0.029	0.052	-.138**	-0.005	.402**	1
	Sig.	0.000	0.006	0.002	0.541	0.000	0.000	0.431	0.158	0.000	0.897	0.000	
	N	747	747	745	742	745	747	747	747	747	747	747	747

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Source: Author, 2018

The results of the correlation presented in Table 4.3 show that measure of corporate governance had weak correlation with ROA, executive director had a correlation of r=0.073, Non-Executive Director r=0.009, Foreign Director r=0.215, Women Director r=-0.078, Occupational Expertise r= 0.141, Board Age r= 0.033, Board Size r=0.041, Board Tenure r=-0.092, Board Ownership r= -0.121, Board Tools r=0.062, Board Meetings r=-.134, Number of Board Committees r=-0.035, Committees Meetings r=-.086, and Board Remuneration r= 0.059. The results further show that financial characteristics and macro-economic variables had a weak correlation with ROA. For instance Investments had r=-.197, Leverage r=-.240, Liquidity r=.273, GDP Growth Rate r= 0.046, Interest Rate r= -0.07 and Inflation Rate r= 0.073.

The results of correlation also show a weak correlation between corporate governance indicators, financial characteristics, macro-economic variables and Tobin's Q of the listed companies in Kenya. The results show executive director had a correlation of r= 0.185 with Tobin's Q, Non Exe Director r=-0.008, Foreign Director r= 0.247, Women Director r=0.031, Occupational Expertise r=.122, Board Age r=-0.05, Board Size r=0.059, Board Tenure r=-0.021, Board Ownership r=-.131, Board Tools r=-.232, Board Meetings r=-.184, Number of Board Committees r= -.101, Committees Meetings r =-.112, Board Remuneration r=0.022, Investments r=-.212, Leverage r= -.190, Liquidity r=0.029, GDP Growth Rate r=0.052, Interest Rate r=-.138 and Inflation Rate r=-0.005.

The finding in this section shows that corporate governance measures, financial characteristics and macroeconomic factors had a weak correlation with financial performance of listed companies in Kenya. Financial performance of listed firms is

subject to many factors which explain the weak correlation between individuals'
indicators of corporate governance measures, financial characteristics and macro-
economic variables. The following results show correlation between corporate
governance measures, financial characteristics and macroeconomic factors and
performance of firms in their respectively sectors.

4.4.1   Sectoral Correlation Analysis

The following section presents the discussion of the results of sectoral correlation analysis
for corporate governance, financial characteristics, macroeconomic factors and
performance of listed companies in Kenya. The results of sectoral correlation are shown
in Appendix VII.

4.4.2   Correlation Analysis for Agricultural Sector Firms

This section presents the correlation analysis for firms in agricultural sector. The results
for correlation in agricultural sector show that Executive Director r= -0.049, Non-
Executive Director r= -0.085, Foreign Director r=-0.077, Women Director r=-0.075,
Occupational Expertise r=-0.067, Board Age r= 0.143, Board Size r= -0.121, Board
Ownership r=.310, Board Tools r= -0.186, Board Meetings r= -.237, Number of Board
Committees r= 0.062, Committees Meetings r=-0.074, Board Remuneration r= 0.037,
Leverage r= -0.143, Liquidity r= .447, GDP Growth Rate r= 0.136, Interest Rate r= 0.012
and Inflation Rate r= 0.167 all had a weak correlation with ROA in Agricultural sector.
Only Investments r=-.504 was found to have strongly correlation with ROA listed
agricultural firms.

The results also show that Executive Director r=.249, Foreign Director r=-.362, Women Director r=-0.16, Board Age r=-.215, Board Ownership r=-0.188, Board Remuneration r=-0.022, Leverage r=-.260, GDP Growth Rate r=-0.027, Interest Rate r=-0.086, and Inflation Rate 0.059 had a weak correlation with Tobin's Q listed agricultural firms in Kenya. On the other hand, Non-Executive Director r=-.581 Occupational Expertise r=-.598, Board Size r =-.595, Board Tools r=-.795, Board Meetings r= -0.778, Number of Board Committees r=-0.579, Committees Meetings r=-0.587, Investments r=-0.567 and Liquidity r=0.615 were found to have a strong correlation with Tobin's Q in listed agricultural firms. The findings show that Non-Executive Director, Occupational Expertise, Board Size, Board Tools, Board Meetings, Number of Board Committees and Committees Meetings were strongly associated with Performance of listed agricultural firms.

4.4.3   Correlation Analysis for Firms in Automobiles and Accessories Sector

The results in this section show that Executive director r=.306, Non-Executive director r=-.451, Foreign Director r=0.235, Women Director r=-.383, Occupational Expertise r=-0.105, Board Age r=-.487, Board Size r=-0.172, Board Tenure r=0.272, Board Ownership r=.366, Board Tools r=0.132, Board Meetings r=0.246, Number of Board Committees r=-0.003, Committees Meetings r=-0.097, Board Remuneration r=0.047, Investments r=-0.288, Leverage r=-0.177, Liquidity r= 0.254, GDP Growth Rate r=-0.074, Interest Rate, -0.172 r=-0.016 and Inflation Rate all had weak correlation with ROA of listed Automobiles and Accessories firms.

The correlation analysis between corporate governance, financial characteristics, macro-economic variables and Tobin's Q show that Executive director r=.368, Non-Executive

director r=-0.203, Foreign Director r=-0.227, Women Director r=-0.109, Occupational Expertise r=0.061, Board Age r=-.436, Board Size r=0.097, Board Tenure r=0.167, Board Ownership r=0.265, Board Tools r=-.336, Board Meetings r= 0.065, Number of Board Committees r=-.311, Committees Meetings r=-.299, Board Remuneration r=-0.192, Investments r=0.002, Leverage r=-.298, Liquidity r=0.073, GDP Growth Rate r=-0.008

Interest Rate r=-.350 and Inflation Rate r= -0.174. The findings confirmed that there existed weak association between corporate governance, financial characteristics, macroeconomic factors and Tobin's Q in of listed Automobiles and Accessories firms.

4.4.4   Correlation Analysis for Firms in Banking Sector

This section presents the results for correlation analysis between corporate governance, financial characteristics, macroeconomic factors and performance of listed banking firms in Kenya. The results show that Executive Director and ROA had a correlation r=.214, Non-Executive Director had r=.175, Foreign Director r=0.123, Women Director r= -0.059, Occupational Expertise r= .187, Board Age r=0.144, Board Size r=.330, Board Tenure r=.212, Board Ownership r=-.281, Board Tools r=0.098, Board Meetings r=-.194, Number of Board Committees r= 0.006, Committees Meetings r=-0.119, Board Remuneration=-.246, Investments r= 0.11, Leverage r=-.489, Liquidity r=0.099, GDP Growth Rate r=0.112, Interest Rate r=0.112 and Inflation Rate had r=.171 with ROA. These findings show that all the variables had weak correlation with ROA of listed banking firms in Kenya.

The study further computed a correlation between corporate governance, financial characteristics, macroeconomic factors and Tobin's Q of listed banking firms in Kenya.

The results show that Executive Director had r= .169, Non-Executive Director r=-0.032, Foreign Director r=0.001, Women Director r=-0.057, Occupational Expertise r=-0.07, Board Age r=-.191, Board Size r=0.057, Board Tenure r=0.116, Board Ownership r=-0.157, Board Tools r=0.08, Board Meetings r=-0.109, Number of Board Committees r=0.043, Committees Meetings r=-0.042, Board Remuneration r=-0.107, Investments r=0.036, Leverage r=-.445, Liquidity r=-0.062, GDP Growth Rate r=-0.004, Interest Rate r=-0.067 and Inflation Rate r=-0.109. The findings also confirmed a weak association between corporate governance indicators, financial characteristics, macroeconomic factors and Tobin's Q if listed Banking firms in Kenya.

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4.4.5   Correlation Analysis for Firms in Commercial and Services Sector

A correlation analysis was conducted to test the strength of association between corporate governance, financial characteristics, macroeconomic factors and performance of listed commercial and service firms in Kenya. The results that Executive Director had a correlation r =-0.076 with ROA, Non-Executive Director had r=.227, Foreign Director r=.379, Women Director r=-.203, Occupational Expertise r=.301, Board Age r=-.242, Board Size r=.235, Board Tenure r=-0.081, Board Ownership r=-0.13, Board Tools r=.330, Board Meetings r=-.465, Number of Board Committees r=.369, Committees Meetings r=.229, Board Remuneration r=0.078, Investments r=-.428, Leverage r=-0.128, Liquidity r=.723, GDP Growth Rate r=0.053, Interest Rate r=-0.078 and Inflation Rate r=0.09. The findings show that only Liquidity r=.723 had strong association with ROA of listed commercial and service firms in Kenya. Other corporate governance, financial characteristics and macroeconomic factors had a weak association with ROA of commercial and service firms in Kenya.

The correlation analysis between corporate governance indicators, financial characteristics, macroeconomic factors and Tobin's Q show that Executive Director and Tobin's Q had r=0.055, Non-Executive Director r=0.19, Foreign Director r=.265, Women Director r=-0.117, Occupational Expertise r=.279, Board Age r=-.295, Board Size r=.228, Board Tenure r=-0.127, Board Ownership r=-0.133, Board Tools r=.215, Board Meetings r=-.287, Number of Board Committees r=.431, Committees Meetings r=.248, Board Remuneration r=0.178, Investments r=-.529, Leverage r=-0.155, Liquidity r=.317, GDP Growth Rate r=0.085, Interest Rate r=-0.121 and Inflation Rate r=-0.079. The findings also established that only Investments r=-.529 had strongly association with Tobin's Q of listed of commercial and service firms in Kenya. The rest of corporate governance measures, financial characteristics and macroeconomic factors had a weak association with Tobin's Q of commercial and service firms in Kenya.

4.4.6   Correlation Analysis for Firms in Construction and Allied Sector

This section presents the correlation analysis between corporate governance measures, financial characteristics, macroeconomic factors and performance of listed construction and allied firms in Kenya. The results of Executive Director had correlation r= 0.103 of ROA, Non-Executive Director had r=0.053, Foreign Director r=0.194, Women Director r=.352, Occupational Expertise had r=0.172, Board Age r=-0.163, Board Size r=0.115, Board Tenure r=0.126, Board Ownership r=-0.156, Board Tools r=-0.013, Board Meetings r=-.250, Number of Board Committees r=-.329, Committees Meetings r=-0.149, Board Remuneration r=0.17, Investments r=-0.103, Leverage r=-.615, Liquidity r=.292, GDP Growth Rate r=0.024, Interest Rate r=-0.227 and Inflation Rate r= 0.155. These findings established that corporate governance measures, financial characteristics,

macroeconomic factors had a weak association with ROA of listed construction firms in Kenya.

The results of correction between corporate governance, financial characteristics, macroeconomic factors and Tobin's Q who Executive Director had a correlation r= 0.092, Non-Executive Director r=.271, Foreign Director r=.395, Women Director r=.367, Occupational Expertise r=.346, Board Age r=-0.038, Board Size r=.324, Board Tenure r=.236, Board Ownership r=-.246, Board Tools r=-.255, Board Meetings r=-.318, Number of Board Committees r=-0.177, Committees Meetings r=-0.213, Board Remuneration r= 0.03, Investments r=0.071, Leverage r=-.532, Liquidity r=0.092, GDP Growth Rate r=0.147, Interest Rate r=-.358 and Inflation Rate r= 0.081. The results show only Leverage r=-0.532 had strong negative association with Tobin's Q in listed construction and allied firms. The other measures of corporate governance, financial characteristics and macroeconomic factors had weak association with Tobin's Q of listed construction and allied firms in Kenya.

4.4.7 Correlation Analysis for Firms in Energy and Petroleum Sector

The study further conducted a correlation analysis to test the association between corporate governance, financial characteristics, macroeconomic factors and performance of listed energy and petroleum firms. The results show Executive Director had a correlation r=.268, Non-Executive Director r=-.388, Foreign Director r=.326, Women Director r=-0.207, Occupational Expertise r=-0.196, Board Age r=-0.249, Board Size r=-.352, Board Tenure r=-0.185, Board Ownership r=-.337, Board Tools r=-.273, Board Meetings r=-.263, Number of Board Committees r=-.306, Committees Meetings r=-0.198, Board Remuneration r=0.223, Investments r=-0.228, Leverage r=-.453, Liquidity r=.364,

GDP Growth Rate r=0.099, Interest Rate r=-0.211 and Inflation Rate r=-0.101. The findings show that all the indicator of corporate governance, financial characteristics and macroeconomic factors had a weak association with ROA of listed energy and petroleum firm in Kenya.

The study further conducted a correlation between corporate governance, financial characteristics and macroeconomic factors had a weak association with Tobin's Q of listed energy and petroleum firm in Kenya. The results show that Executive Director had a correlation r=-0.222, Non-Executive Director had r=-.363, Foreign Director r=-0.035, Women Director r=-.268, Occupational Expertise r=-.508, Board Age r=-.266, Board Size r=-.451, Board Tenure r=.541, Board Ownership r=-0.169, Board Tools r=-.459, Board Meetings r=-0.116, Number of Board Committees r=-.485, Committees Meetings r=-.264, Board Remuneration r=0.013, Investments r=-.337, Leverage r=-0.106, Liquidity r=.275, GDP Growth Rate r=-0.081, Interest Rate r=-0.23 and Inflation Rate r=-0.15. These findings show Board Tenure r=.541 had a strong and positive association with Tobin's Q while and Occupational Expertise r=-.508 had strong and negative association with Tobin's Q respectively of listed energy and petroleum firm in Kenya. Other variables had weak association with Tobin's Q of listed energy and petroleum firm in Kenya.

4.4.8   Correlation Analysis for Firms in Insurance Sector

This section presents a correlation analysis between corporate governance measures, financial characteristics, macroeconomic factors and performance of listed insurance firms in Kenya. The results show Executive Director had a correlation of r=-0.021, Non Executive Director r=.422, Foreign Director r=-.516, Women Director r=.482, Occupational Expertise r=0.097, Board Age r=-0.145, Board Sizer=.420, Board Tenure

r=.282, Board Ownership r=.526, Board Tools r=0.143, Board Meetings r=.547, Number of Board Committees r=-0.022, Committees Meetings r=.269, Board Remuneration r=0.079, Investments r=0.141, Leverage r=-.397, Liquidity r=-0.108, GDP Growth Rate r=0.106, Interest Rate r=0.185 and Inflation Rate r= 0.033. The results in this section established that corporate governance measures, financial characteristics, macro-economic variables had weak association with ROA of listed insurance firms in Kenya.

The results for correlation between corporate governance measures, financial characteristics, macroeconomic factors and Tobin's Q show Executive Director had correlation r=-0.222, Non-Executive Director r=-0.195, Foreign Director r=.344, Women Director r=-0.17, Occupational Expertise r=-0.011, Board Age r=0.027, Board Size r=-0.255, Board Tenure r=-0.128, Board Ownership r=.491, Board Tools r=-0.018, Board Meetings r=-.297, Number of Board Committees r=-0.003, Committees Meetings r=-0.202, Board Remuneration r=0.092, Investments r=-.313, Leverage r=-0.005, Liquidity r= 0.071, GDP Growth Rate r=0.144, Interest Rate r=-0.119 and Inflation Rate r= -0.05. These findings show a weak association between corporate governance measures, financial characteristics, macroeconomic factors and Tobin's Q of listed insurance firms in Kenya.

4.4.9 Correlation Analysis for Firms in Investment Sector

Correlation analysis for corporate governance, financial characteristics, macro-economic variables and ROA of listed investment firms show Executive director had a correlation r= -0.038, Non-Executive director r= 0.453, Women Director r = 0.526, Occupational Expertise r= 0.541, Board Age r=-.465, Board Size r=.530, Board Tenure r=0.255, Board Ownership r=0.117, Board Tools r=.608, Board Meetings r=-0.149, Number of Board

Committees r=.414, Committees Meetings r=0.271, Board Remuneration r=0.039, Investments r=.326, Leverage r=-.329, Liquidity r=0.162, GDP Growth Rate r=-0.144, Interest Rate r=-0.154 and Inflation Rate r=-0.049. The findings show that Women Director, Occupational Expertise, Board Size, Board Tools and Liquidity were found to have strong association with ROA of listed investment in Kenya. The findings show these variables had the largest effect on ROA other variable were found to have a weak relationship with ROA of listed investment firms in Kenya.

The results also show Executive director r=-.517 had a strong association with Tobin's Q of listed Investment firms in Kenya. While Non-Executive director r= 0.328, Women Director r=0.031, Occupational Expertise r=0.185, Board Age r=-0.285, Board Size r=0.238, Board Tenure r= -0.334, Board Ownership r=0.242, Board Tools r=-.346, Board Meetings r=0.168, Number of Board Committees r=0.081, Committees Meetings r= 0.174, Board Remuneration r=-.358, Investments r=-0.156, Leverage r=0.081, Liquidity r=-0.005, GDP Growth Rate r=0.065, Interest Rate r=-0.199 and Inflation Rate r=0.329 had a weak relationship with Tobin's Q of listed investment firms.

4.4.10 Correlation Analysis for Firms in Manufacturing Sector

In manufacturing sector, only Leverage r=-.510, had strong relationship with ROA, the remaining variable, Executive director r= 0.434, Non-Executive director r=-0.062, Foreign Director r=0.380, Women Director r=-0.399, Occupational Expertise r=0.453, Board Age r =0.192, Board Size r=0.113, Board Tenure r -0.406, Board Ownership r=-0.318, Board Tools r=.302, Board Meetings r=0.163, Number of Board Committees r=0.125, Committees Meetings r=0.052, Board Remuneration r= 0.093, Investments

r=0.07, Liquidity r=.267, GDP Growth Rate r=0.043, Interest Rate r=-0.125 and Inflation Rate r= 0.044, all had weak association with ROA of listed manufacturing firms in Kenya.

The study further conducted correlation between corporate governance measures, financial characteristics, macro-economic variable and Tobin's Q of listed manufacturing firms in Kenya. The results show Executive director had a correlation r=.444, Non-Executive director r=0.124, Foreign Director r=.524, Women Director r=0.003, Occupational Expertise r=.514, Board Age r=0.014, Board Size r=.286, Board Tenure r=-.281, Board Ownership r=-0.175, Board Tools r=0.184, Board Meetings r= 0.147, Number of Board Committees r=.304, Committees Meetings r=.303, Board Remuneration r=0.038, Investments r=0.117, Leverage r=-.429, Liquidity r=-0.111, GDP Growth Rate r=0.141, Interest Rate r=-0.172, and Inflation Rate r=0.066. The results show only foreign director and occupational expertise had a strong relationship with Tobin's Q of listed manufacturing firms in Kenya.

4.5   Diagnostics Tests of the Study Variables

The study performed tests on statistical assumptions, that is, test of regression assumptions and statistics used. These tests included: normality test, linearity test, panel unit root test, multicollinearity, serial autocorrelation test, heteroscedasticity test and Hausman test for model specification to make sure the data used was adequate to conduct inferential analysis. The tests were conducted to make sure that the statistical analysis conducted adhered to regression assumptions hence avoid spurious and bias findings.

4.5.1 Normality Test

According to Zhou and Shao (2014) the variables are supposed to be roughly normally distributed especially if the results are to be generalized beyond the sample. The study used Shapiro test of normality test. The choice the Shapiro Wilk test was justified on the basis it provide measures of distribution other than normality and provide statistical results compared to visual test such use of quantiles and normality plots (Paul & Zhang, 2009). Under the Shapiro test the null hypothesis H_0: data is normally distributed while the Ha: data is not normally distributed. Since the p-values for all the variables were greater than 0.05, the null hypotheses for all the variables were not rejected hence confirming that data was normally distributed and therefore fit for linear regression analysis.

Table 4.4 Normality Test Results

Tests of Normality	Shapiro-Wilk Statistics	df	Sig.
Executive director	0.802	738	0.094
Non-Executive director	0.979	738	0.211
Foreign Director	0.892	738	0.314
Women Director	0.83	738	0.127
Occupational Expertise	0.962	738	0.298
Board Age	0.981	738	0.358
Board Size	0.979	738	0.199
Board Tenure	0.617	738	0.191
Board Ownership	0.613	738	0.422
Board Tools	0.747	738	0.27
Board Meetings	0.59	738	0.418
Number of Board Committees	0.917	738	0.328
Committees Meetings	0.802	738	0.266
Board Remuneration	0.247	738	0.265
Investments	0.947	738	0.168
Leverage	0.481	738	0.104
Liquidity	0.964	738	0.362
GDP Growth Rate	0.859	738	0.173
Interest Rate	0.854	738	0.383
Inflation Rate	0.955	738	0.146
ROA	0.889	738	0.292
Tobin's Q	0.756	738	0.119

Source: Author, 2018

4.5.2 Linearity Test Results

To show the kind of a linear relationship that existed between the independent variable corporate governance and the dependent variable performance of listed firms. The analysis of the variance (ANOVA) table was used in this study to test for linearity. As rule of thumb, if the F significance (i.e. P value) for the non-linear element is below the critical value of (>.05), then there is significant non linearity. If the value of significance of output (P value) is (<0.05), then the relationship between the independent and dependent variables are linearly dependent. The test revealed f=12.102 (p=0.000) for Tobin's Q and f=10.193 (p=0.000) for ROA which confirmed that the relationship between the independent and dependent variables are linearly dependent. This suggests that there is a strong positive linear relationship between corporate governance, financial characteristics, macro-economic variables and performance of listed firms as measured by ROA and Tobin's Q. The results implied that the data adhered to linearity assumption of regression modeling.

Table 4.5 Linearity Test

ANOVA[a]		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	163.999	20	8.2	12.102	.000b
	Residual	485.834	717	0.678		
	Total	649.833	737			
2	Regression	9.118	20	0.456	10.193	.000b
	Residual	32.068	717	0.045		
	Total	41.186	737			

1 Dependent Variable: Tobin's Q
2 Dependent Variable: ROA

Source: Author, 2018

4.5.3 Panel Unit Root Test

The study conducted Levin, Lin & Chu t* Statistics for all the study variables to establish the existence of panel unit root. The results showed that the null hypothesis that there is a

unit root was rejected for all the variables hence the conclusion that study variables were stationary and adequate for model fitting.

Table 4.6: Panel Unit Root Test Results

Variables	Levin, Lin & Chu t* Statistics	Prob.	Conclusion
Executive Director	-2.11489	0.0172	Stationary
Non-Executive Director	-5.01592	0.0000	Stationary
Foreign Director	-4.60948	0.0000	Stationary
Occupational Expertise	-6.53131	0.0000	Stationary
Board Age	-8.72487	0.0000	Stationary
Board Size	-6.58214	0.0000	Stationary
Board Tenure	-6.58131	0.0000	Stationary
Board Ownership	-16.0366	0.0000	Stationary
Board Tools	-5.59212	0.0000	Stationary
Board Meetings	-9.44131	0.0000	Stationary
Number of Board Committees	-4.41853	0.0000	Stationary
Committees Meetings	-6.57554	0.0000	Stationary
Board Remuneration	-3.26277	0.0006	Stationary
Firm Investment	-3.7206	0.0001	Stationary
Firm Leverage	-5.67339	0.0000	Stationary
Firm Liquidity	-1.68368	0.0461	Stationary
Gross Domestic Product	-28.269	0.0000	Stationary
Interest Rates	-10.1013	0.0000	Stationary
Inflation Rates	-37.0651	0.0000	Stationary
Return on Assets (ROA)	-6.55413	0.0000	Stationary
Tobin's Q (TQ)	-12.495	0.0000	Stationary

Source: Author, 2018

4.5.4   Multicollinearity Test

The study adopted VIF to test for the presence of multicollinearity. Variance inflation factor (VIF) was adopted because it gives more specific information on the each variables contribution to collinearity (Belsley, *et al.* 1980). The results captured in Table 4.6 revealed that all the study variables that were be used to test the relationship between corporate governance and performance of firms had a VIF of less than 10 except Executive director, Non-Executive director and Board Size which implied that these

variables had a problem for multicollinearity. Executive director and non-executive director were excluded from further analysis to solve the problem of multicollinearity. Further analysis showed that none of the variable had tolerance of 0.1 which further implied lack of multicollinearity among the study variables.

Table 4.7: Multicollinearity Test Results

	Collinearity Statistics	
	Tolerance	VIF
Executive director	0.075	13.27
Non-Executive director	0.009	115.675
Foreign Director	0.569	1.758
Women Director	0.667	1.5
Occupational Expertise	0.214	4.672
Board Age	0.752	1.33
Board Size	0.009	109.579
Board Tenure	0.813	1.23
Board Ownership	0.618	1.617
Board Tools	0.722	1.384
Board Meetings	0.405	2.47
Number of Board Committees	0.261	3.838
Committees Meetings	0.211	4.733
Board Remuneration	0.96	1.042
Investments	0.819	1.221
Leverage	0.902	1.109
Liquidity	0.839	1.191
GDP Growth Rate	0.762	1.312
Interest Rate	0.838	1.193
Inflation Rate	0.815	1.227

Source: Author, 2018

4.5.5 Serial Autocorrelation Test

The study used Wooldridge test to test the presence of first order autocorrelation. Wooldridge test for autocorrelation was adopted in this study because the Wooldridge test is based on fewer assumptions, and therefore it a more robust test for serial autocorrelation (Baltagi & Wu, 1999). The null hypothesis of no first order autocorrelation was rejected at 5% since the Wooldridge f-statistic had p=value of 0.0000. The study controlled for autocorrelation by using robust regression estimates during the model fitness.

Table 4.8: Serial autocorrelation Test Results

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
F(1,59) = 49.581
Prob > F = 0.0000

Source: Author, 2018

4.5.6 Heteroscedasticity Test

The study used log likelihood to test for Heteroscedasticity. The study adopted this test because it is shown that the likelihood ratio test for heteroscedasticity, assuming the Laplace distribution, gives good results for Gaussian and fat-tailed data. The likelihood ratio test, assuming normality, is very sensitive to any deviation from normality, especially when the observations are from a distribution with fat tails. Such a likelihood test can also be used as a robust test for a constant variance in residuals or a time series if the data is partitioned into groups (Breusch & Pagan, 1979). In this test the null hypothesis states that the data is homoscedastic implying that error term had a constant variance. Since the p-value =0.107 was greater than 0.000, the null hypothesis that panel is Homoskedastic was not rejected hence the data was free from the Heteroscedasticity.

Table 4.9: Heteroscedasticity Test Results

Log likelihood	
Wald chi2 (5) = 1.06	
Prob > chi2 =0.107	
Panels: Homoskedastic	

Source: Author, 2018

4.5.7   Hausman Test for Model Specification

Hausman Test for Model Specification was conducted to establish whether FE (Fixed Effect) or RE (Random Effect) regression model was adequate. Greene (2008) notes that one must conduct a Hausman specification test to establish which model between fixed effect and random effect is appropriate for specified panel data. The null hypothesis for Hausman test states that the difference between the coefficients is not consistent meaning that a random effect model is the best. Results in the table 5.6 indicated a prob>chi^2 value of 0.4877 which is greater than critical P value at 5% level of significance which implies that the null hypothesis that a random effect model is the best was not rejected. The study fitted a random effect regression model.

Table 4.10: Hausman Test for Model Specification Results

Test: Ho: difference in coefficients not systematic	
chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 10.48	
Prob >chi2 = 0.4877	

Source: Author, 2018

4.6   Chapter Summary

This chapter captured the findings of descriptive analysis of the study variables. Descriptive analysis comprised of overall and sectoral descriptive statistics, trend analysis of the study variables and finally correlation analysis. The purpose of this section was to describe the behaviour of the study variables for the period of the study. This included the analysis of the maximum, minimum values; mean values, kurtosis and skewness statistics

of the study variables. In the descriptive analysis the study revealed that listed firms in Kenya had different number of executive, non-executive and foreign directors which implied that different firms had different board independence.

The descriptive results revealed that firms in investment services sector and insurance sector had the highest non-executive directors which also implied they had more independent board compared to other firms from other sector. Firms in agricultural Sector had the least independent board. The chapter finally analysed, presented and discussed the correlation results between the study variables. Correlation was adopted at this stage to test the association between the study variables. The chapter presented both the overall correlation analysis and sectoral correlation analysis.

CHAPTER FIVE

HYPOTHESES TESTING AND DISCUSSION OF THE FINDINGS

5.1   Introduction

In this chapter, the study tested all the hypotheses and presented the discussion of the findings in details while comparing with the findings of existing studies. Since the data was in panel form, panel regression analysis was conducted which was preceded by thorough analysis of the diagnostics tests to avoid getting spurious results. The study relied on regression results to test the study hypotheses which were conducted using the Stata v13 software.

5.2   Relationship between Corporate Governance and Performance of firms

The first objective of the study was to establish the relationship between corporate governance and performance of firms of listed firms in Kenya. The study fitted four models to address the following hypothesis;

H_{01a}-   *Corporate governance does not significantly affect performance of firms listed at the Nairobi Securities Exchange.*

5.2.1   Overall Model Fitting

The results of diagnostics revealed that the data was adequate to fit a regression model. The results of Hausman specification test further revealed that most appropriate model was a RE regression model hence the study fitted a random effect model to establish the relationship between corporate governance variables and performance of firms. Table 5.1 contains the results of board structure variables and performance of firms.

Table 5.1: Random Effect Model Corporate Governance and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	-0.0082	0.304	0.015765	0.598
Women Director	-0.01807	0.061	-0.01399	0.691
Occupational Expertise	0.014673	0.076	0.035183	0.235
Board Age	-0.00169	0.396	-0.00996	0.166
Board Size	-0.00911	0.212	-0.00456	0.863
Board Tenure	0.00348	0.774	0.034192	0.444
Board Ownership	-0.1156	0.259	-0.14268	0.731
Board Tools	0.002871	0.861	-0.14886	0.013
Board Meetings	-0.00722	0.040	-0.01873	0.138
Number of Board Committees	-0.00629	0.541	-0.02712	0.466
Committees Meetings	0.00271	0.097	0.003358	0.566
Board Remuneration	0.014047	0.244	0.03993	0.350
cons	0.283032	0.019	2.282585	0.000
	Wald chi2(5) = 12.96		Wald chi2 (5) = 18.71	
	Prob > chi2= 0.0423		Prob > chi2 = 0.0022	
	R-sq: within = 0.0103		R-sq: within = 0.0222	

Source: Author, 2018

Table 5.1 presents RE regression models fitted to test the relationship between corporate governance and ROA. The results of Prob > chi2= 0.0423 for model 1 on ROA and Prob > chi2 = 0.0022 for model 2 on Tobin's Q. Both models were statistically significant which further implied that corporate governance measures were significant predictors of performance of listed firms in Kenya as measured by ROA and Tobin's Q.

The coefficient results showed that only board meetings (β=-0.00722, p=0.040) significantly predicted ROA of listed companies in Kenya. The results implied that increase in board meetings would results to increase ROA. Other corporate governance variables such foreign director (β=-0.0082, p=0.304), women director (β=-0.01807, p=0.061), occupational expertise (β=0.014673, p=0.076), board age (β=-0.00169, p=0.396), board size (β=-0.00911,p=0.212), board tenure (β=0.00348, p=0.774), board

ownership (β=-0.1156,p=0.259), number of board committees (β=-0.00629,p=0.541), committees meetings (β=0.00271,p=0.097) and board remuneration (β=0.014047, p=0.244) did not significantly predict ROA. The coefficient results further revealed that board tools (β=-0.01873, p=0.138) had negative and significant relationship with Tobin's Q.

The finding implied that increasing in board tools activities led to reduction in Tobin's Q. Other corporate governance variables such foreign director (β=-0.015765, p=0.598), women director (β=-0.01399, p=0.691), occupational expertise (β=0.035183, p=0.235), board age (β=-0.00996, p=0.166), board size (β=-0.00456,p=0.863), board tenure (β=0.034192, p=0.444), board ownership (β=-0.14268,p=0.731), number of board committees (β=-0.02712,p=0.466), committees meetings (β=0.003358,p=0.566) and board remuneration (β=0.03993, p=0.350) did not significantly predict Tobin's Q

5.2.2 Overall Model Fitting Using CG Composite and Performance of Firms

The study used geometric mean to combine all the components of corporate governance into a composite variable called CG. A regression model was fitted to test whether the corporate variables predicted both ROA and Tobin's Q of listed companies in Kenya.

Table 5.2: Random Effect Model CG Composite and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00455	0.568	-0.0702	0.017
_cons	0.179561	0.01	1.9618	0.000
	Wald chi2(1) =0.23		Wald chi2(1) = 0.23	
	Prob >chi2 =0.6348		Prob >chi2 =0.008	
	R-sq: = 0.0105		R-sq: = 0.0183	

Source: Author, (2018)

Table 5.2 presents the RE regression results of the model fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q). The results of Prob>chi2= 0.6348 for ROA and Prob>chi2= 0.008 for Tobin's Q also revealed that the model fitted for CG predicted ROA was statistically insignificant while model fitted for CG and Tobin's Q was significant. The findings show that CG significantly predicted Tobin's Q (β=-0.0702, p=0.017) of listed companies in Kenya. However, the effect of CG on Tobin's Q was negative. The findings show that corporate governance increased when listed firms' performance decrease. Based on these findings the study rejected $\mathbf{H_{01a}}$- Corporate governance does not significantly affect Tobin's Q of firms listed at the Nairobi Securities Exchange, while fail to reject $\mathbf{H_{01a}}$- Corporate governance does not significantly affect ROA of firms listed at the Nairobi Securities Exchange at the level of significance of 0.05.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = 0.179561 + -0.00455\ CG + \acute{\epsilon}_{it}$

$FP_2 = 1.9618 + 1.9618 CG + \acute{\epsilon}_{it}$

$FP_1 = ROA$

$FP_2 = Tobin's\ Q$

$CG = CG\ Composite$

5.2.3 Sectoral Models Fitting for CG Variables and Firm Performance

This section presents the sectoral analysis of effects of corporate governance variables on performance of listed firms in Kenya. The sectors discussed in this section include agricultural sector, automobile, banking, commercial services, construction and allied, energy and petroleum, insurance, investment and manufacturing.

5.2.4 Relationship between Corporate Governance and Performance of Firms in Agricultural Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01b(a)}$.*Corporate governance does not significantly affect performance of agricultural firms listed at the Nairobi Securities Exchange.*

Table 5.3: CG Variables and Performance of Firms in Agricultural Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	-.0014214	0.972	0.044167	0.658
Women Director	-.0764923	0.650	0.445122	0.284
Occupational Expertise	.1759128	0.043	0.190736	0.373
Board Age	.013589	0.035	0.007012	0.659
Board Size	-.0897128	0.213	-0.23348	0.188
Board Tenure	-.1507205	0.225	1.101152	0.000
Board Ownership	8.17801	0.057	-8.74278	0.409
Board Tools	-.2199084	0.014	-0.34776	0.115
Board Meetings	.0272355	0.566	-0.31549	0.007
Number of Board Committees	.0100104	0.892	-0.06929	0.704
Committees Meetings	.0254509	0.406	0.012576	0.868
Board Remuneration	.0365292	0.748	0.019105	0.946
Cons	0.0000			
	Wald Chi2(11)= 31.38		Wald Chi2(11) = 205.06	
	Prob>Chi2 = 0.0010		Prob>Chi2 = 0.0000	
	R-Sq:= 0.2607		R-Sq:= 0.6973	

Source: Author, 2018

The results presented in Table 5.3 revealed both models used to link corporate governance variables to ROA (Prob>Chi2 =0.0010) and Tobin's Q (Prob>Chi2 =0.0000) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed agricultural firms in Kenya. The findings further revealed that only occupational expertise (β=.1759128, p=0.043), board age (β=.013589, p=0.035), and board tools (β= -.2199084, P=0.014) significantly affected ROA of firms in agricultural sector. However board tools had a significant and negative effect on ROA, the rest of the corporate governance variables had an insignificant effect

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on ROA on listed agricultural firms in Kenya. On the other hand, only board tenure (β=1.101152, p=0.000) and meetings (β=-0.31549, p=0.000) significantly affected the Tobin's Q, the rest of the corporate governance variables had an insignificant effect on Tobin's Q on listed agricultural firms in Kenya.

Table 5.4: Model CG Composite and Performance of Firms in Agricultural Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0421	0.296	-0.34408	0.001
_cons	-0.1062	0.715	3.656805	0.000
	Wald chi2(1)= 2.00		Wald chi2(1) = 12.052	
	Prob > chi2 = 0.1577		Prob > chi2 =0.001	
	R-sq: = 0.0545		R-sq: = 0.0126	

Source: Author, 2018

Table 5.4 presents the RE regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed agricultural firms in Kenya. The results revealed that the model fitted predicting the effect of CG on ROA was statistically insignificant (Prob > chi2 = 0.1577) which implied that CG did not significantly predict ROA. The model for Tobin's Q was found to be statistically significant (Prob > chi2 =0.001) which implied that CG significantly predicted Tobin's Q of listed Agricultural firms in Kenya. The findings show that the effect of CG on ROA was significant while on Tobin's Q was significant. These finding mirrors that of the overall model which established that CG significantly affected Tobin's Q while insignificantly predicted ROA.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = -0.1062 + 0.0421CG + \acute{\epsilon}_{it}$

$FP_2 = 13.656805 + -0.34408CG + \acute{\epsilon}_{it}$

FP$_1$= ROA

FP$_2$= Tobin's Q

CG = CG Composite

5.2.5 Relationship between Corporate Governance and Performance of Firms in Automobiles and Accessories Sector

The study further conducted analysis to test the relationship between corporate governance and financial performance of listed Automobiles and Accessories firms. The study fitted two models to predict whether corporate governance affected ROA and Tobin's Q of listed Automobiles and Accessories Sector.

H$_{01b(b)}$ *Corporate governance does not significantly affect performance of automobiles and accessories firms listed at the Nairobi Securities Exchange.*

Table 5.5: CG Variables and Performance of Firms in Automobile Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	-0.028	0.748	-0.203	0.356
Women Director	-0.564	0.007	0.137	0.791
Occupational Expertise	-0.028	0.705	0.104	0.57
Board Age	-0.022	0.022	-0.059	0.013
Board Size	-0.057	0.229	0.097	0.413
Board Tenure	0.017	0.679	-0.016	0.876
Board Ownership	16.059	0.443	26.836	0.606
Board Tools	0.232	0.187	0.049	0.911
Board Meetings	-0.089	0.322	0.100	0.656
Number of Board Committees	0.064	0.51	-0.168	0.489
Committees Meetings	-0.012	0.639	0.047	0.465
Board Remuneration	-0.006	0.863	-0.166	0.04
cons	1.246	0.086	2.767	0.125
	Wald chi2(12) =37.76		Wald chi2(12) = 26.98	
	Prob > chi2 = 0.0002		Prob > chi2 = 0.0078	
	R-sq: = 0.3952		R-sq: = 0.4461	

Source: Author, 2018

Table 5.5 presents the findings on effects on corporate governance variables on performance of listed automobile firms. The results revealed both models used to link corporate governance variables to ROA (Prob>Chi2 =0.0002) and Tobin's Q (Prob>Chi2 =0.0078) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed automobile firms.

The findings also revealed that women directors (β=-0.564, p=0.007) and board age (β=-0.022, p=0.022) had significant relationship with ROA. Board tenure, board ownership, board tools, and number of board committees and board remuneration were found to have a positive relationship with ROA while foreign directors, women directors, occupational expertise, board age, board size, board meetings and committees meetings were found to be negatively related to ROA of listed automobile firms.

The study also established that board age (β=-0.059, p=0.013) and board remuneration age (β=-0.166, p=0.04) had significant relationship with Tobin's Q. Foreign directors, board age, board tenure, number of board committees, and board remuneration had a negative relationship with Tobin's Q of listed automobile firms in Kenya. On the other hand, the study revealed that women directors, occupational expertise, board size, board ownership, board tools, board meetings, committees meetings had a positive relationship with Tobin's Q of listed automobile firms in Kenya. However, these relationships were found to be insignificant.

Table 5.6: Model CG Composite and Performance of Firms in Automobile Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.1531	0.006	-0.40529	0.001
_cons	1.1551	0.006	4.003331	0.000
	Wald chi2(1) = 0.36		Wald chi2(1)= 2.23	
	Prob > chi2 = 0.002		Prob > chi2= 0.013	
	R-sq:= 0.0472		R-sq: = 0.0464	

Source: Author, 2018

Table 5.6 presents the RE regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed automobile firms in Kenya. The results revealed that the models fitted were statistically significant which implied that CG composite was significant predictors of performance of firms (ROA and Tobin's Q) of listed automobile firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\varepsilon}_{it}$ therefore became;

$FP_1 = 1.1551 + -0.1531CG + \acute{\varepsilon}_{it}$

$FP_2 = 4.003331 + -0.40529CG + \acute{\varepsilon}_{it}$

FP_1 = ROA

FP_2 = Tobin's Q

CG = CG Composite

5.2.6 Relationship between Corporate Governance and Performance of Firms in Banking Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01b(c)}$ *Corporate governance does not significantly affect performance of banking firms listed at the Nairobi Securities Exchange.*

Table 5.7: CG Variables and Performance of Firms in Banking Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	0.0006	0.836	-0.0108	0.692
Women Director	-0.0090	0.082	-0.0769	0.096
Occupational Expertise	0.0008	0.803	-0.0032	0.914
Board Age	0.0016	0.206	-0.0278	0.013
Board Size	0.0093	0.002	0.0118	0.656
Board Tenure	0.0390	0.000	0.1531	0.056
Board Ownership	-0.1029	0.003	-0.2965	0.330
Board Tools	0.0216	0.056	0.1321	0.190
Board Meetings	0.0026	0.230	-0.0040	0.833
Numbers of Board Committees	0.0000	0.995	0.0385	0.364
Committees Meetings	-0.0017	0.016	-0.0079	0.224
Board Remuneration	-0.0715	0.159	-0.4776	0.292
cons	-0.2257	0.004	2.0052	0.004
	Wald chi2(12)=63.38		Wald chi2(12)= 22.77	
	Prob > chi2= 0.0000		Prob > chi2 = 0.0298	
	R-sq:= 0.3277		R-sq:= 0.149	

Source: Author, 2018

Table 5.7 shows the findings on effect on corporate governance variables on performance of listed firms in banking sector. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.000) and Tobin's Q (Prob>Chi2 =0.0298) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed firms in banking sector.

The results showed that occupational expertise, board age (β=0.0016, p=0.206), board size (β=0.0093, p=0.002), board tenure (β=0.0390, p=0.000), board ownership (β=-0.1029, p=0.003) and committees meeting (β=-0.0017, p=0.016) had significant relationship with ROA of listed banking sector firms. However board ownership and committees meetings had negative and significant relationship. Women directors and board remuneration had negative and insignificant relationship with ROA of listed firms in banking sector. Foreign directors, occupational expertise, board age, board size, board

tools, board meetings and number of board committees was found to be positively related to ROA of listed firms in the banking sector.

In the second model, only board age (β=-0.0278, p=0.013) revealed a negative and significant relationship with Tobin's Q of listed firms in banking sector. Foreign directors, women directors, occupational expertise, board ownership, board meetings, committees meetings and board remuneration were found to be negatively related to Tobin's Q of listed firms in the banking sector. However board size, board tenure, board tools and number of board committees was found to be positively related to Tobin's Q of listed firms in the banking sector.

Table 5.8: Model CG Composite and Performance of Firms in Banking Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.012	0.015	-0.037	0.406
_cons	-0.019	0.695	1.675	0.000
	Wald chi2(1)= 3.13		Wald chi2(1)=0.08	
	Prob > chi2 = 0.0068		Prob > chi2 = 0.7757	
	R-sq:= 0.0346		R-sq:=0.0422	

Source: Author, 2018

Table 5.8 presents the RE regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed banking firms in Kenya. The results revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of Tobin's' Q while significant predicted ROA of listed banking firms in Kenya. The findings show that CG significantly predicted ROA of listed banking firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\varepsilon}_{it}$ therefore became;

$FP_1 = -0.019 + 0.012CG + \acute{\epsilon}_{it}$

$FP_2 = 1.675 + -0.037CG + \acute{\epsilon}_{it}$

$FP_1 = ROA$

$FP_2 = $ Tobin's Q

$CG = $ CG Composite

5.2.7 Relationship between Corporate Governance and Performance of Firms in Commercial Services Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01b(d)}$ *Corporate governance does not significantly affect performance of commercial services firms listed at the Nairobi Securities Exchange.*

Table 5.9: CG Variables and Performance of Firms in Commercial Services Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	0.046	0.062	-0.053	0.495
Women Director	-0.010	0.656	0.028	0.693
Occupational Expertise	-0.030	0.289	-0.046	0.607
Board Age	-0.022	0.012	-0.130	0.000
Board Size	0.012	0.642	0.053	0.499
Board Tenure	-0.061	0.464	-0.768	0.003
Board Ownership	-0.227	0.607	-4.712	0.001
Board Tools	0.168	0.002	0.393	0.020
Board Meetings	-0.085	0.008	-0.050	0.620
Number of Board Committees	0.038	0.472	0.138	0.409
Committees Meetings	0.010	0.303	0.033	0.274
Board Remuneration	0.007	0.804	0.085	0.305
Cons	1.284	0.091	10.821	0.000
	Wald chi2(12)= 81.44		Wald chi2(12)= 79.88	
	Prob > chi2 = 0.0000		Prob > chi2 = 0.0000	
	R-sq:= 0.4806		R-sq:= 0.4758	

Source: Author, 2018

Table 5.9 presents the findings on effect on corporate governance variables on performance of listed firms in commercial services sector in Kenya. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.000) and Tobin's Q (Prob>Chi2 =0.0000) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed firms in commercial services sector in Kenya.

The results showed that board age (β=-0.022, p=0.012), board tools age (β=0.168, p=0.002) and board meetings (β=-0.085, p=0.008) had significant relationship with ROA. Foreign directors, board size, board tools, number of board committees, committees meetings and board remuneration were found to be positively related to ROA of listed firms in commercial services sector in Kenya. However women directors, occupational expertise, board age, board size, board tenure, and board ownership and board meetings were found to be negatively related to ROA of listed firms in commercial services sector in Kenya

On the other hand, board age (β=--0.130, p=0.000), board tenure (β=-0.768, p=0.003), board ownership (β=-4.712, p=0.001), board tools (β=0.393, p=0.020) had significant relationship with Tobin's Q of listed firms in commercial and services sector in Kenya. Foreign directors, occupational expertise, board age, board tenure, board ownership and board meetings were found to be negatively related to Tobin's Q of listed firms in commercial services sector in Kenya. However, women directors, board size, board tools, of board committees, committees meetings and board remuneration were found to be positively related to Tobin's Q of listed firms in commercial services sector in Kenya

Table 5.10: Model CG Composite and Performance of Firms in Commercial Services Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0581	0.216	-0.14682	0.282
_cons	0.5810	0.145	2.973266	0.010
	Wald chi2(1) = 1.79		Wald chi2(1) = 0.29	
	Prob > chi2=0.1808		Prob > chi2 =0.5917	
	R-sq:= 0.0223		R-sq = 0.0035	

Source: Author, 2018

Table 5.10 shows the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed Commercial Services firms in Kenya. Similarly, results revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms (ROA and Tobin's Q) of listed Commercial Services firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = 0.5810 + -0.0581CG + \acute{\epsilon}_{it}$

$FP_2 = 2.973266 + -0.14682CG + \acute{\epsilon}_{it}$

FP_1= ROA

FP_2= Tobin's Q

CG = CG Composite

5.2.8   Relationship between Corporate Governance and Performance of Firms in Construction and Allied Sector

 The study fitted two models to address the following sub-hypothesis

$H_{01b(e)}$ *Corporate governance does not significantly affect performance of construction and allied firms listed at the Nairobi Securities Exchange.*

Table 5.11: CG Variables and Performance of Firms in Construction and Allied Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	0.0060	0.824	0.069	0.594
Women Director	0.0732	0.067	0.416	0.031
Occupational Expertise	0.0923	0.236	0.176	0.641
Board Age	0.0023	0.742	0.051	0.126
Board Size	-0.0650	0.188	-0.061	0.797
Board Tenure	-0.5529	0.144	-0.152	0.934
Board Ownership	-2.3488	0.111	-2.678	0.707
Board Tools	-0.0585	0.161	-0.900	0.000
Board Meetings	-0.0062	0.64	-0.075	0.240
Number of Board Committees	-0.1625	0.006	-0.323	0.256
Committees Meetings	0.0429	0.002	0.178	0.008
Board Remuneration	0.0730	0.158	0.157	0.531
cons	1.9287	0.083	1.260	0.815
	Wald chi2(12) = 64.38		Wald chi2(12)= 59.26	
	Prob > chi2= 0.0000		Prob > chi2 = 0.0000	
	R-sq:= 0.3860		R-sq:= 0.3299	

Source: Author, 2018

Table 5.11 presents the findings on effect on corporate governance variables on performance of listed firms in construction and allied sector in Kenya. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.000) and Tobin's Q (Prob>Chi2 =0.000) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed firms in construction and allied sector in Kenya.

The results revealed that number of board committees (β=-0.1625, p=0.006) and committees meetings (β=-0.0429, p=0.002) had significant relationship with ROA. Foreign directors, women directors, occupational expertise, board age, committees meetings and board remuneration positively affect ROA of listed construction and allied firms in Kenya. The relationship between board size, board ownership, board tools, board

meetings, board meetings and number of board committees were found to be negatively related to ROA of listed firms in construction and allied sector in Kenya.

The findings further indicated that women directors (β=0.416, p=0.031), board tools (β=-0.009, p=0.000) and (β=-0.1625, p=0.006) had significant relationship with Tobin's Q. foreign directors, women directors, occupational expertise, board age, committees meetings and board remuneration were found to be positively related to Tobin's Q of listed firms in construction and allied sector in Kenya. Women directors had a significant positive effect on Tobin's Q. Board size, board tenure, board ownership, board tools, number of board committees and board meetings were found to be negatively affecting Tobin's Q of listed firms in construction and allied sector in Kenya.

Table 5.12: Model CG Composite and Performance of Firms in Construction and Allied Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0667835	0.013	-0.1919	0.154
_cons	0.7193339	0.001	3.1401	0.004
	Wald chi2(1) = 0.70		Wald chi2(1)=2.01	
	Prob > chi2 = 0. 031		Prob > chi2 =0.1566	
	R-sq:= 0.0126		R-sq:= 0.0356	

Source: Author, 2018

Table 5.12 presents the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed construction and allied firms in Kenya. The results also revealed that the model fitted for CG and Tobin's Q was statistically insignificant which implied that CG composite was insignificant predictors of Tobin's Q of listed construction and allied firms in Kenya. The model for ROA was significant while implied that CG had a significant effect on ROA of listed construction and allied firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = 0.7193339 + -0.0667835CG + \acute{\epsilon}_{it}$

$FP_2 = 3.1401 + -0.1919CG + \acute{\epsilon}_{it}$

$FP_1 = ROA$

$FP_2 = Tobin's Q$

$CG = CG$ Composite

5.2.9 Relationship between Corporate Governance and Performance of Firms in Energy and Petroleum Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01b(f)}$ *Corporate governance does not significantly affect performance of energy and petroleum firms listed at the Nairobi Securities Exchange.*

Table 5.13: CG Variables and Performance of Firms in Energy and Petroleum Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	-0.024	0.443	-0.1502	0.114
Women Director	0.009	0.657	-0.0757	0.24
Occupational Expertise	0.003	0.902	0.0794	0.254
Board Age	-0.003	0.508	-0.0185	0.227
Board Size	-0.012	0.512	-0.1081	0.048
Board Tenure	-0.108	0.042	0.3048	0.059
Board Ownership	-0.105	0.597	-0.2139	0.721
Board Tools	-0.027	0.473	-0.1370	0.223
Board Meetings	-0.003	0.544	-0.0079	0.546
Number of Board Committees	-0.034	0.150	-0.0492	0.486
Committees Meetings	0.003	0.062	0.0050	0.368
Board Remuneration	0.069	0.090	-0.0542	0.658
cons	0.892	0.020	2.6157	0.025
	Wald chi2(12) = 22.24		Wald chi2(12) = 55.06	
	Prob > chi2= 0.0350		Prob > chi2 = 0.0000	
	R-sq:= 0.1608		R-sq: = 0.1917	

Source: Author, 2018

Table 5.13 shows the findings on effect on corporate governance variables on performance of listed firms in energy and petroleum sector in Kenya. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.035) and Tobin's Q (Prob>Chi2 =0.000) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed firms in energy and petroleum sector in Kenya. The results established that women directors, occupational expertise, committees meetings and board remuneration had positive effect on ROA of listed firms in energy and petroleum sector in Kenya while board age, board size, board tenure, board meetings, board tools and number of board committees had a negative effect on ROA of listed firms in energy and petroleum sector in Kenya. Only board tenure (β=-0.108, p=0.042) had significant negative relationship to ROA.

The study findings also revealed that only board size (β=-0.1081, p=0.048) had a negative significant effect to Tobin's Q. Foreign directors, women directors, board age, board ownership, board tools, board meetings and board remuneration had negative effect on Tobin's Q of listed firms in energy and petroleum sector in Kenya. Occupational expertise, board tenure and committees meetings had a negative effect on Tobin's Q of listed firms in energy and petroleum sector in Kenya.

Table 5.14: Model CG Composite and Performance of Firms in Energy and Petroleum Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.007851	0.303	-0.039	0.229
_cons	0.1798753	0.017	1.199	0.002
	Wald chi2(1)= 0.50		Wald chi2(1) = 0.51	
	Prob > chi2=0.4802		Prob > chi2 = 0.4740	
	R-sq:= 0.0309		R-sq:= 0.0206	

Source: Author, 2018

Table 5.14 presents the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed energy and petroleum firms in Kenya. The results also revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms (ROA and Tobin's Q) of listed energy and petroleum firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = 0.1798753 + -0.007851CG + \acute{\epsilon}_{it}$

$FP_2 = 1.199 + -0.039CG + \acute{\epsilon}_{it}$

$FP_1 = ROA$

$FP_2 = Tobin's\ Q$

$CG = CG\ Composite$

5.2.10 Relationship between Corporate Governance and Performance of Firms in Insurance Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01b\ (g)}$ *Corporate governance does not significantly affect performance of insurance firms listed at the Nairobi Securities Exchange.*

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Table 5.15: CG Variables and Performance of Firms in Insurance Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	0.0119	0.244	-0.042	0.281
Women Director	0.0185	0.195	0.031	0.569
Occupational Expertise	-0.0203	0.314	0.120	0.114
Board Age	-0.0072	0.034	-0.001	0.934
Board Size	0.0297	0.025	-0.158	0.002
Board Tenure	-0.0456	0.004	0.193	0.001
Board Ownership	0.2181	0.002	-1.180	0.000
Board Tools	0.0254	0.210	-0.011	0.889
Board Meetings	0.0047	0.093	0.013	0.237
Number of Board Committees	-0.0024	0.865	0.103	0.056
Committees Meetings	-0.0017	0.634	-0.008	0.577
Board Remuneration	-0.0075	0.710	0.051	0.499
cons	0.2772	0.146	1.358	0.059
	Wald chi2(12)= 59.49		Wald chi2(12) = 42.86	
	Prob > chi2=0.0000		Prob > chi2 = 0.0000	
	R-sq:= 0.5749		R-sq:= 0.2453	

Source: Author, 2018

Table 5.15 presents the results on effect on corporate governance variables on performance of listed firms in insurance sector in Kenya. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.000) and Tobin's Q (Prob>Chi2 =0.000) were statistically significant which also implied that corporate governance variables were significant predictor of performance of listed firms in insurance sector in Kenya.

The findings revealed that foreign directors, women directors, board size, board ownership, board tools and board meetings had positive relationship with ROA of listed insurance firms in Kenya. The findings further showed that board size (β=0.0297, p= 0.025) and board ownership (β=-0.2181, p = 0.002) had a significant positive effect on ROA of listed insurance firms in Kenya. Occupational expertise, board age, board tenure, number of board committees, committees meetings and board remuneration had negative

relationship with ROA of listed insurance firms in Kenya. The findings further revealed that board age (β=-0.0072, p=0.034) and board tenure (β=-0.0456, p=0.004) had significant negative effect on ROA.

The study findings further revealed that women directors, occupational expertise, board tenure, board meetings, number of board committees and board remuneration had a positive effect on Tobin's Q. Only board tenure (β=0.193, p=0.001) was found to have positive significant effect on Tobin's Q for listed insurance firms. Foreign directors, board size, board ownership, board tools and committees meetings were found to be negatively related with Tobin's Q. Board size (β=-0.158, p=0.002) and board ownership (β=-1.180, p=0.000) were found to have negative significant effect on Tobin's Q of listed insurance firms.

Table 5.16: Model CG Composite and Performance of Firms in Insurance sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0087215	0.375	0.0086	0.821
_cons	0.0287046	0.754	1.0473	0.002
	Wald chi2(1)= 0.12		Wald chi2(1)= 0.13	
	Prob > chi2 = 0.7288		Prob > chi2=0.7169	
	R-sq:= 0.0133		R-sq:= 0.0178	

Source: Author, 2018

Table 5.16 shows the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed insurance firms in Kenya. The results also revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms (ROA and Tobin's Q) of listed insurance firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = 0.0287046 + 0.0087215CG + \acute{\epsilon}_{it}$

$FP_2 = 1.0473 + 0.0086CG + \acute{\epsilon}_{it}$

$FP_1 = ROA$

$FP_2 = Tobin's\ Q$

$CG = CG\ Composite$

5.2.11 Relationship between Corporate Governance and Performance of Firms in Investment Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01b\ (h)}$ -*Corporate governance does not significantly affect performance of investment firms the Nairobi Securities Exchange.*

Table 5.17: CG Variables and Performance of Firms in Investment Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	0		0	
Women Director	0.0565	0.020	-0.16801	0.036
Occupational Expertise	0.0082	0.780	0.00403	0.967
Board Age	-0.0187	0.000	-0.0246	0.062
Board Size	0.0230	0.315	0.062627	0.406
Board Tenure	0.3204	0.000	-0.67029	0.005
Board Ownership	-0.3712	0.000	0.598637	0.02
Board Tools	0.0568	0.190	-0.08293	0.561
Board Meetings	-0.0144	0.023	0.016047	0.443
Number of board committees	0.0451	0.273	0.03196	0.814
Committees Meetings	0.0021	0.733	-0.00193	0.923
Board Remuneration	-0.0175	0.725	-0.03452	0.833
cons	-0.3168	0.326	3.976696	0.000
	Wald chi2(12) =159.96		Wald chi2(12) =35.42	
	Prob > chi2= 0.0000		Prob > chi2 = 0.0004	
	R-sq: within = 0.4669		R-sq:= 0.3521	

Source: Author, 2018

Table 5.17 shows results of effect on corporate governance variables on performance of listed firms in investment sector in Kenya. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.000) and Tobin's Q (Prob>Chi2 =0.0004) were statistically significant which also implied that corporate governance variables were significant predictor of performance of listed firms in investment sector in Kenya.

Women directors, occupational expertise, board size, board tenure, board tools, number of board committees and committees meetings positively affected ROA of investment firms listed in Kenya. Women directors (β=0.0565, p=0.020) and board tenure (β=0.3204, p=0.000) has positive and significant effect to ROA. Board age (β=-0.0187, p=0.000), board ownership (β=-0.3712, p=0.000) and board meetings (β=-0.0144, p=0.023) had a negative significant effect on ROA of investment firms listed in Kenya. Occupational expertise, board size, board ownership, board meetings and number of board committees were found to have a positive effect on Tobin's Q. only board ownership (β=0.5986, p=0.02) had positive significant relationship with Tobin's Q. women directors, board age, board tenure, board tools, committees meetings and board remuneration had a negative effect on Tobin's Q of listed investment firms in Kenya.

Table 5.18: Model CG Composite and Performance of firms in Investment Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0014	0.953	-0.12297	0.054
_cons	-0.0238	0.906	2.105525	0.000
	Wald chi2(1)= 0.16		Wald chi2(1)= 2.28	
	Prob > chi2 = 0.6928		Prob > chi2 =0.1313	
	R-sq:= 0.2556		R-sq:= 0.0564	

Source: Author, 2018

Table 5.18 presents the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed Investment firms in Kenya. The results also revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms (ROA and Tobin's Q) of listed Investment firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\epsilon}_{it}$ therefore became;

$FP_1 = -0.0238 + 0.0014CG + \acute{\epsilon}_{it}$

$FP_2 = 2.105525 + -0.12297CG + \acute{\epsilon}_{it}$

$FP_1 = ROA$

$FP_2 = Tobin's\ Q$

$CG = CG\ Composite$

5.2.12 Relationship between Corporate Governance and Performance of Firms in Manufacturing Sector

The study fitted two models to address the following sub-hypothesis;

$H_{01\ (h)}$ -*Corporate governance does not significantly affect performance of manufacturing firms listed at the Nairobi Securities Exchange*

Table 5.19: CG Variables and Performance of Firms in Manufacturing Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	0.0280	0.129	0.404	0.000
Women Director	-0.1232	0.00	-0.120	0.307
Occupational Expertise	0.0873	0.004	0.271	0.107
Board Age	-0.0007	0.894	0.038	0.168
Board Size	-0.0348	0.068	-0.048	0.651
Board Tenure	-0.0057	0.829	-0.163	0.266
Board Ownership	0.3848	0.042	2.728	0.010
Board Tools	0.0371	0.429	-0.153	0.559
Board Meetings	0.0177	0.343	0.042	0.690
Number of Board Committees	0.1243	0.006	0.128	0.610
Committees Meetings	-0.0081	0.292	0.015	0.725
Board Remuneration	0.0107	0.721	-0.004	0.982
Cons	-0.3246	0.322	-2.442	0.184
	Wald chi2(12)=162.13		Wald chi2(12)= 80.36	
	Prob > chi2= 0.0000		Prob>chi2=0.0000	
	R-sq: = 0.1488		R-sq:= 0.4662	

Source: Author, 2018

Table 5.19 shows findings on effect on corporate governance variables on performance of listed firms in manufacturing sector in Kenya. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.0000) and Tobin's Q (Prob>Chi2 =0.0000) were statistically significant which also implied that corporate governance variables were significant predictor of performance of listed firms in manufacturing sector in Kenya.

The study findings revealed that foreign directors, occupational expertise, board ownership, board tools, board meetings, board remuneration and number of board committees were positively related to ROA of listed manufacturing firms in Kenya. Occupational expertise (β=0.0873, p=0.004), board ownership (β= 0.3848, p=0.042) and number of board committees (β=0.1243, p=0.006) were found to have positive and significant relationship with ROA of listed manufacturing firms in Kenya. Women

director, board age, board size, board tenure and committees meetings had a negative effect on ROA of listed manufacturing firms in Kenya. Only women director (β =-0.1232, p=0.000) had negative significant relationship with ROA.

The findings also showed that foreign directors, occupational expertise, board age, board ownership, board meetings, number of board committees and committees meetings were positively related to Tobin's Q of listed manufacturing firms, however foreign directors (β = 0.404, p= 0.000) and board ownership (β =2.728, p=0.010) positive and significant relationship with Tobin's Q. Women directors, board size, board tenure, board tools and committees meetings had a negative effect on Tobin's Q of listed manufacturing firms in Kenya..

Table 5.20: Model CG Composite and Performance of Firms in Manufacturing Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0185212	0.593	0.2662	0.128
_cons	0.4075335	0.147	-0.3425	0.807
	Wald chi2(1) = 0.96		Wald chi2(1) = 0.10	
	Prob > chi2 = 0.3284		Prob > chi2 = 0.7480	
	R-sq:= 0.1792		R-sq: = 0.0011	

Source: Author, 2018

Table 5.20 presents the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed manufacturing firms in Kenya. The results also revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms (ROA and Tobin's Q) of listed manufacturing firms in Kenya.

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\varepsilon}_{it}$ therefore became;

$FP_1 = 0.147 +-0.0185212CG + \acute{\varepsilon}_{it}$

$FP_2 = -0.3425 +0.2662 + \acute{\varepsilon}_{it}$

$FP_1 = ROA$

$FP_2 = Tobin's\ Q$

$CG = CG\ Composite$

5.3   Intervening Effect of Financial Characteristics

The second objective of the study was to establish the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The hypothesis that was tested in order to fulfill the objectives was framed in null form as follows: ***H_{02a}*** *- Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.*

The study adopted the steps for testing the intervening effect as suggested by (Baron & Kenny, 1986). In the first step, panel regression was carried out between independent variable and dependent variables ignoring the intervening variables. In step two, panel regression is carried out between independent variables corporate governance and intervening variables financial characteristics (investment, leverage and liquidity) as the dependent variables. Step three involved panel regression analysis with the intervening variables as independent variables against the dependent variables (performance of firms). The final step in testing for intervening effect involved a regression model with independent variables (corporate governance), intervening variables (financial characteristics: investments, leverage and liquidity) as independent variables and dependent variables performance of firms (ROA and Tobin's Q). Intervention is deemed when corporate governance predicts performance of firms, corporate governance predicts financial characteristics and financial characteristics predicts performance of firms,

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additional corporate governance should predicts performance of firms in presence of financial characteristics.

5.3.1 Step One: Relationship between Independent Variable and Dependent Variables

The first step of testing the intervening involves fitting a model for independent variables and dependent variables while ignoring the intervening variables. The study fitted a RE effect model to test the relationship between CG composite and performance of firms measure using ROA and Tobin's Q.

Table 5.21: Step One RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00455	0.568	-0.0702	0.017
_cons	0.179561	0.01	1.9618	0.000
	Wald chi2(1) =0.23		Wald chi2(1) = 0.13	
	Prob >chi2 =0.6348		Prob >chi2 =0.7208	
	R-sq: = 0.0105		R-sq: = 0.0183	

Source: Author, 2018

Table 5.21 presents the RE regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q). The regression coefficient further revealed an insignificant relationship between CG Composite and performance of firms (ROA) (β=0.000, p=0.635) and Tobin's Q (β=0.000, p=0.721).

5.3.2 Step Two: Relationship between Independent Variable and Intervening Variables

Step two involved testing the relationship between independent variable (corporate governance) and intervening variables (financial characteristics) as dependent variables. The results are presented in Table 5.22.

Table 5.22: Step Two RE Regression Results: CG and FC Variables

	Investments		Leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.010	0.06	-0.003	0.954	0.004034	0.529
_cons	0.551	0.00	1.014	0.038	0.171453	0.004
	Wald chi2(1) = 0.07		Wald chi2(1) = 6.77		Wald chi2(1)= 0.54	
	Prob > chi2 = 0.7887		Prob > chi2 = 0.0093		Prob > chi2 = 0.4643	
	R-sq= 0.0480		R-Sq = 0.0797		R-sq: = 0.0008	

Source: Author, 2018

The results revealed that first model that tested the relationship between CG and investments was statistically insignificant (Prob >chi2= 0.7887). The second model fitted to test the relationship between CG and leverage was statistically significant (Prob > chi2 = 0.0093). The third model fitted to test the relationship between CG and liquidity was also statistically insignificant (Prob > chi2 = 0.4643).

5.3.3 Step Three: Relationship between Intervening Variables and Dependent Variables

Step three in testing for the intervening involved regressing the intervening variables with dependent variables without the independent variables. The study also conducted diagnostics tests before fitting the models.

Table 5.23: Step Three RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	-0.12536	0.025	-0.89195	0.000
Leverage	-0.0135	0.003	-0.04612	0.006
Liquidity	0.385251	0.000	-0.41655	0.025
_cons	0.156274	0.000	2.071693	0.000
	Wald chi2(3) = 112.20		Wald chi2(3)= 23.31	
	Prob > chi2 = 0.0000		Prob > chi2 = 0.0000	
	R-sq: = 0.1318		R-sq: = 0.0301	

Source: Author, 2018

The results presented in table 5.23 revealed that financial characteristics variables (investment, leverage and liquidity) had a significant effect on ROA and Tobin's Q. The two models fitted to link Financial Characteristics Variables to both ROA and Tobin's Q was statistically significant.

5.3.4 Step Four: Relationship between Independent Variable, Intervening Variable and Dependent Variables

Step four in testing for intervening effects of financial characteristics involved fitting model to link independent variables and dependent variables in presence of intervening variables.

Table 5.24: Step Four RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.006	0.446	-0.061	0.038
Investments	-0.119	0.034	-0.832	0.000
Leverage	-0.014	0.002	-0.048	0.004
Liquidity	0.386	0.000	-0.387	0.038
_cons	0.200	0.005	2.537	0.000
	Wald chi2(4)=104.80		Wald chi2(4) = 22.94	
	Prob > chi2 = 0.0000		Prob > chi2 = 0.0001	
	R-sq: = 0.1243		R-sq:= 0.0299	

Source: Author, 2018

Table 5.25: Overall Summary of the Intervening Effect of Financial Characteristics

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	significant	Achieved
		Leverage	significant	Achieved
		Liquidity	significant	Achieved
3	Investment	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	significant	Achieved

Source: Author, 2018

Since the step two and step three were achieved the study concluded that intervention was fully achieved. According to Kenny, Kashy and Bolger (1998) the essential steps in the tests for mediation are step 2 and 3. The authors argue that step four does not have to be met unless for full mediation. Hence the study rejected the null hypothesis H_{02}- *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.* The study also rejected the subsequent sub hypotheses and concluded that financial characteristics intervene in the relationship between corporate governance and performance of firms listed in Kenya.

5.3.5 Sectoral Analysis of Intervening Effect of Financial Characteristics

This section presents summary sectoral results of intervening effect of financial characteristics on the relationship between corporate governance and performance of listed firms. The main findings are attached in Appendix VIII. The summary contains the findings of the four steps of the methodology adopted.

5.3.6 Intervening Effect of Financial Characteristics in Agricultural Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix XVIII (a): $H_{02b\ (a)}$ **-** *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of agricultural firms listed at the Nairobi Securities Exchange.*

Table 5.26: Summary of the Intervening Effect of Financial Characteristics in Agricultural Sector

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	insignificant	Not Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved

Source: Author, 2018

The summary of the results presented in table 5.26 revealed that all the four steps for testing the intervening effects of financial characteristics on the relationship between corporate governance and performance of firms of listed agricultural sector in Kenya were not achieved the study concluded that intervention of financial characteristics was not fully achieved. The study further concluded that financial characteristics did not significantly intervene the relationship between corporate governance and performance of firms of listed Agricultural firms in Kenya since steps two and three were not achieved.

5.3.7 Intervening Effect of Financial Characteristics in Automobile and Accessories Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (b):

$H_{02\ b\ (b)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of automobile firms listed at the Nairobi Securities Exchange.*

Table 5.27: Summary of the Intervening Effect of Financial Characteristics in Automobile and Accessories Sector

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	significant	Not Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Leverage	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Not Achieved
	Leverage	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved

Source: Author, 2018

Based on the summary of the findings presented in table 5.27 study also concluded that financial characteristics did not significantly intervene the relationship between corporate governance and performance of firms of listed automobile sector in Kenya. The four steps suggested by Baron and Kenny (1986) were not achieved context listed automobile sector in Kenya. The findings show that financial characteristics did not significantly intervene the relationship between corporate governance and performance of firms of listed Automobile and Accessories firms in Kenya since steps two and three were not achieved.

5.3.8 Intervening Effect of Financial Characteristics in Banking Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (c):

$H_{02b\ (c)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of banking firms listed at the Nairobi Securities Exchange.*

Table 5.27: Summary of the Intervening Effect of Financial Characteristics in Banking Sector

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	significant	Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	insignificant	Not Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	insignificant	Achieved

Source: Author, 2018

Based on the summary of the findings presented in table 5.27 the study concluded that firm leverage partially intervened the relationship between corporate governance and performance of firms of listed banking sector in Kenya, however, the four steps suggested by Baron and Kenny (1986) were not fully achieved to have a significant intervening effect. The findings show that financial characteristics did not significantly intervene the relationship between corporate governance and performance of firms of listed banking firms in Kenya since steps two and three were not achieved.

5.3.9 Intervening Effect of Financial Characteristics in Commercial Services Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (d);

$H_{02b\ (d)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of commercial services firms listed at the Nairobi Securities Exchange.*

Table 5.28: Summary of the Intervening Effect of Financial Characteristics in Commercial Services Sector

Steps	IV	DV	Result	Intervention
1 CG		ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2 CG		Investment	Insignificant	Not Achieved
		Leverage	Insignificant	Not Achieved
		Liquidity	Insignificant	Not Achieved
3	Investment	ROA	Insignificant	Not Achieved
		Tobin's Q	Significant	Achieved
	Leverage	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Liquidity	ROA	Significant	Achieved
		Tobin's Q	Significant	Achieved
4 CG		ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	Insignificant	Not Achieved
		Tobin's Q	Significant	Achieved
	Leverage	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Liquidity	ROA	Significant	Achieved
		Tobin's Q	Significant	Achieved

Source: Author, 2018

Table 5.28 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms of listed commercial services sector. The findings showed that none of the financial characteristics variables achieved the four steps of intervention as suggested by baron and Kenny (1986)

hence the study concluded that investment, leverage and liquidity insignificantly intervened the relationship between corporate governance and performance of firms of listed commercial service sector in Kenya.

5.3.10 Intervening Effect of Financial Characteristics in Construction and Allied Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (e);

$H_{02\ b(e)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of construction and allied firms listed at the Nairobi Securities Exchange.*

Table 5.29: Summary of the Intervening Effect of Financial Characteristics in Construction and Allied Sector

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	insignificant	Not Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved

Source: Author, 2018

Table 5.29 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms of listed construction and allied sector. The findings also showed that none of the financial characteristics variables achieved the four steps of intervention as suggested by baron and Kenny (1986) hence the study concluded that investment; leverage and liquidity insignificantly intervened the relationship between corporate governance and performance of firms of listed construction and allied firms in Kenya.

5.3.11 Intervening Effect of Financial Characteristics in Energy and Petroleum Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (f):

$H_{02b \, (f)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of energy and petroleum firms listed at the Nairobi Securities Exchange.*

Table 5.30: Summary of the Intervening Effect of Financial Characteristics in Energy and Petroleum Sector

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	insignificant	Not Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	insignificant	Not Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	insignificant	Not Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved

Source: Author, 2018

Table 5.30 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms of listed energy and petroleum firms. The results also revealed investment; leverage and liquidity did not have a significant and full intervention on the relationship between corporate governance and performance of firms of listed energy and petroleum firms in Kenya.

5.3.12 Intervening Effect of Financial Characteristics in Insurance Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (g):

$H_{02b\ (g)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of insurance firms listed at the Nairobi Securities Exchange.*

Table 5.31: Summary of the Intervening Effect of Financial Characteristics in Insurance Sector

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	insignificant	Not Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Leverage	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved

Source: Author, 2018

Table 5.31 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms of listed insurance firms. The results also revealed investment; leverage and liquidity did not significantly and fully intervene the relationship between corporate governance and performance of firms of listed insurance firms in Kenya.

5.3.13 Intervening Effect of Financial Characteristics in Investment Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (h):

$H_{02b\ (h)}$ **-** *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of investment firms listed at the Nairobi Securities Exchange.*

Table 5.32: Summary of the Intervening Effect of Financial Characteristics in Investment Services Sector

Steps		IV	DV	Result	Intervention
	1	CG	ROA	Insignificant	Not Achieved
			Tobin's Q	Insignificant	Not Achieved
	2	CG	Investment	insignificant	Not Achieved
			Leverage	insignificant	Not Achieved
			Liquidity	insignificant	Not Achieved
	3	Investment	ROA	insignificant	Not Achieved
			Tobin's Q	significant	Achieved
		Leverage	ROA	significant	Achieved
			Tobin's Q	significant	Achieved
		Liquidity	ROA	insignificant	Not Achieved
			Tobin's Q	insignificant	Not Achieved
	4	CG	ROA	significant	Achieved
			Tobin's Q	Insignificant	Not Achieved
		Investment	ROA	Insignificant	Not Achieved
			Tobin's Q	Insignificant	Not Achieved
		Leverage	ROA	insignificant	Not Achieved
			Tobin's Q	insignificant	Not Achieved
		Liquidity	ROA	insignificant	Not Achieved
			Tobin's Q	insignificant	Not Achieved

Source: Author, 2018

Table 5.32 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms of listed investments services firms. The results also revealed investment; leverage and liquidity

did not significantly and fully intervene the relationship between corporate governance and performance of firms of listed investments services firms in Kenya.

5.3.14 Intervening Effect of Financial Characteristics in Manufacturing Sector

The study executed four steps for intervening effect to address the following sub-hypothesis findings attached in Appendix VIII (i);

$H_{02b\ (i)}$ - *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of manufacturing firms listed at the Nairobi Securities Exchange.*

Table 5.33: Summary of the Intervening Effect of Financial Characteristics in Manufacturing Sector

Steps	IV	DV	Result	Intervention
1 CG		ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2 CG		Investment	insignificant	Not Achieved
		Leverage	insignificant	Not Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
4 CG		ROA	significant	Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	Insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	significant	Achieved

Source: Author, 2018

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Table 5.33 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms of listed manufacturing firms. The results also revealed leverage and liquidity partially intervene the relationship between corporate governance and performance of firms of listed manufacturing firms in Kenya. The results also revealed firm investments did not significantly and fully intervene the relationship between corporate governance and performance of firms of listed investments services firms in Kenya.

5.4   Moderating Effects of Macroeconomic Factors

The third objective of the study was to determine the effect of macroeconomic factors on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The hypothesis that was tested in order to fulfill the objectives was framed in null form as follows: H_{03a}-*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.*

The study also adopted the steps for testing the moderating effects as suggested by Baron and Kenny (1986). The first step was to fit a regression model for joint effect of independent variable, moderating variables on dependent variables. The explanatory power of independent variable and moderating variables is checked. Step two involved computation of interaction variables using the product of independent variable and moderating variables. Here the following product was computed as shown in Table 5.34 which resulted in three interaction variables, IT1, IT2 and IT3.

Table 5.34: Interaction Variables Computation

	Moderating Variables		
	GDP Growth Rate	Interest rate	Inflation rate
CG	IT1	IT2	IT3

Source: Author, 2018

Step one: Joint Effect of Independent Variable, Moderating Variables on Dependent Variable

This section presents the overall results for model fitting of moderating effect of macroeconomic factors on relationship between corporate governance and firm performance.

Table 5.35: Step one: Joint Effect of CG, Moderating Variables on Dependent Variable

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.01097	0.188	-0.067	0.027
GDP Growth Rate	0.00902	0.007	0.025	0.036
Interest Rate	-0.00373	0.211	-0.050	0.000
Inflation Rate	0.006348	0.002	0.002	0.791
_cons		0.19724	0.014	2.568	0.000
	Wald chi2(4) = 16.02		Wald chi2(4) = 34.33	
	Prob > chi2 = 0.0030		Prob > chi2 = 0.0000	
	R-sq: within = 0.0226		R-sq: within = 0.0481	

Source: Author, 2018

The result revealed that both model 1 (Prob > chi2 = 0.0030) and model 2 (Prob >chi2 = 0.0000) were statistically significant. The results further revealed that CG, GDP growth rates, inflation rates and interest rates accounted for 2.26% and 4.81% in the variation in ROA and Tobin's Q respectively. This represented the explanatory power of CG, GDP growth rates, inflation rates and interest rates without the interaction variables.

Step Two: Joint Effect of Independent Variable, Moderating Variables, Interaction Variable on Dependent Variables

This step involves conducting panel regression analysis to test the joint effect of independent variable, moderating variables, interaction variable on dependent variable. The results are presented in table 5.36.

Table 5.36: Step Two: Joint Effect of CG, Moderating Variables, Interaction Variables on Dependent Variable

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.02067	0.597	-0.36802	0.007
GDP growth rate	-0.00169	0.928	-0.08166	0.207
Interest Rate	-0.00622	0.722	-0.17082	0.005
Inflation Rate	0.007671	0.502	-0.03219	0.418
IT1	0.00132	0.567	0.012982	0.106
IT2	0.000291	0.887	0.014234	0.046
IT3	-0.00014	0.921	0.004196	0.391
_cons	0.275918	0.402	5.083709	0.000
	Wald chi2(7) = 16.26		Wald chi2(7) =34.39	
	Prob > chi2 = 0.0228		Prob > chi2 = 0.0000	
	R-sq: within = 0.0230		R-sq: within =0.0483	

Source: Author, 2018

The results revealed that the explanatory power of independent variables and moderating variables on ROA increased from 2.26% to 2.3% with the inclusion of interaction variables IT1, IT2 and IT3. Similarly, the explanatory power of independent variables and moderating variables on Tobin's Q increased from 4.81% to 4.83% with the inclusion of interaction variables IT1, IT2 and IT3 in the model. These results implied that macroeconomic variables positively enhanced the relationship between corporate governance and firm performance. The findings further implied that friendly

macroeconomic factors enhance the effect of corporate governance on performance of firms. Therefore the study rejected the null hypothesis that:

H_{03a}-*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.*

5.4.1 Sectoral Model Fitting for Moderating Effect

Sectoral model fitting for moderating effect of macroeconomic factors on the relationship between corporate governance variables and performance of sectoral firms listed at the Nairobi Securities Exchange. The summary contains the findings of the two steps of the methodology adopted.

5.4.2 Moderating Effect of Macroeconomic Factors in Agricultural Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic factors on the relationship between corporate governance variables and performance of firms of agricultural firms listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (a)}$ -*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of agricultural firms listed at the Nairobi Securities Exchange.*

Table 5.37: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Agricultural Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000736	0.184	0.00000139	0.993
GDP growth rate	0.026699	0.044	-0.0156382	0.615
Interest rate	0.0091354	0.462	-0.0434667	0.136
Inflation rate	0.0201881	0.014	0.012657	0.51
Cons	0.243523	0.303	1.844694	0.015
	Wald chi2(4)= 9.93		Wald chi2(4) = 3.30	
	Prob > chi2 = 0.0416		Prob > chi2 = 0.5085	
	R-sq: = 0.1165		R-sq: = 0.0264	

Source: Author, 2018

Table 5.38: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Agricultural Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00079	0.134	0.0003276	0.88
GDP Growth Rate	0.0260577	0.079	-0.0191769	0.754
Interest Rate	0.0009856	0.943	-0.0296874	0.598
Inflation Rate	0.0164138	0.074	0.0147889	0.696
IT1	0.0000139	0.624	0.000028	0.810
IT2	0.0000467	0.072	-0.0000418	0.696
IT3	0.0000185	0.275	-0.00000948	0.892
Cons	0.1001064	0.697	1.705919	0.107
	Wald chi2(7)=18.26		Wald chi2(7)= 2.52	
	Prob > chi2 = 0.0109		Prob > chi2 = 0.9254	
	R-sq:= 0.1641		R-sq:= 0.0345	

Source: Author, 2018

The findings presented in Table 5.37 and Table 5.38 revealed that macroeconomic variables increased the explanatory power of corporate governance on performance of firms of listed agricultural firms in Kenya since the R-squared increased from 11.65% and 16.41% in the first model while increased from 2.64% to 3.45% in the second model. These results implied that macroeconomic variables positively enhanced the relationship between corporate governance and performance of listed agricultural firms in Kenya. The

findings further implied that friendly macroeconomic variables enhance the effect of corporate governance on performance of listed agricultural firms in Kenya. Therefore the study rejected the null sub-hypothesis that $H_{03b\ (a)}$ Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of agricultural firms listed at the Nairobi Securities Exchange.

5.4.3   Moderating Effect of Macroeconomic Factors in Automobile Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of firms of automobile firms listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (b)}$ -Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of automobile and accessories firms listed at the Nairobi Securities Exchange.

Table 5.39: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Automobile and Accessories Sector

	ROA		Tobin's Q	
	Coef.	**P>|z|**	**Coef.**	**P>|z|**
CG	0.00000503	0.861	0.0000462	0.441
GDP growth rate	-0.0117765	0.455	-0.0236152	0.495
Interest Rate	-0.0192343	0.185	-0.0829029	0.009
Inflation Rate	-0.0041676	0.673	-0.0314393	0.147
Cons	0.4088189	0.159	2.609915	0.000
Wald chi2(4)=	2.29		Wald chi2(4) =	10.11
Prob > chi2 =	0.6832		Prob > chi2 =	0.0386
R-sq:=	0.0538		R-sq:=	0.1991

Source: Author, 2018

Table 5.40: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Automobile and Accessories Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0004087	0.658	-0.0018124	0.264
GDP growth rate	-0.0143689	0.442	-0.0164407	0.612
interest rate	-0.0160672	0.334	-0.0867834	0.003
inflation rate	-0.0033617	0.770	-0.0424289	0.033
IT1	0.0000341	0.294	0.0002127	0.000
IT2	0.0000222	0.645	0.0000894	0.285
IT3	0.000000335	0.995	0.0002552	0.004
_cons	0.351002	0.273	2.722233	0.000
	Wald chi2(7)=4.52		Wald chi2(7)=30.44	
	Prob > chi2 = 0.7189		Prob > chi2=0.0001	
	R-sq: = 0.1088		R-sq:= 0.4514	

Source: Author, 2018

The results revealed that R-squared increased from 5.38% and 10.88% in the first model while increased from 19.91% to 45.14% in the second model with the inclusion of the interaction variables. The finding therefore implied that macroeconomic variables positively and insignificantly moderated the relationship between corporate governance and ROA of listed automobile firms in Kenya. The study findings revealed that GDP growth rate and interest rates significantly moderated the relationship between corporate governance and Tobin's Q since the interaction variables IT1 and IT3 were significant in the results presented in Table 5.40. The moderating effect of inflation on the relationship between corporate governance and Tobin's Q of listed automobile firms was statistically insignificant since IT2 was insignificant.

The overall interaction results however implied that macroeconomic variables positively improved the relationship between corporate governance and performance of listed automobile and accessories firms in Kenya. The findings further implied that favourable

macroeconomic variables enhance the effect of corporate governance on performance of listed automobile and accessories firms in Kenya. Therefore the study rejected the null sub-hypothesis that $H_{03b\ (b)}$ *Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of automobile and accessories firms listed at the Nairobi Securities Exchange.*

5.4.4 Moderating Effect of Macroeconomic Factors in Banking Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of firms of banking firms listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (c)}$ -*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of banking firms listed at the Nairobi Securities Exchange.*

Table 5.41: Step One: Model Fitting for Moderating Effect of Macroeconomic Factors in Banking Sector

	ROA		Tobin's Q	
	Coef.	**P>|z|**	**Coef.**	**P>|z|**
CG	-1.21E-08	0.045	-3.65E-08	0.580
GDP growth rate	0.0054563	0.002	-0.0112199	0.522
interest rate	0.003555	0.033	-0.0237191	0.145
inflation rate	0.0036934	0.001	-0.0173256	0.111
_cons	0.011917	0.724	1.802547	0.000
	Wald chi2(4)=20.33		Wald chi2(4)= 4.18	
	Prob > chi2 =0.0004		Prob > chi2 = 0.3817	
	R-sq: = 0.1192		R-sq:= 0.025	

Source: Author, 2018

Table 5.42: Step Two: Model Fitting for Moderating Effect of Macroeconomic Factors in Banking Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000921	0.068	0.00000229	0.632
GDP growth rate	0.0065579	0.001	0.0128476	0.477
interest rate	0.0038196	0.026	0.0252775	0.121
inflation rate	0.0040228	0.001	0.0174138	0.116
IT1	0.000000102	0.071	0.000000281	0.597
IT2	7.17E-09	0.705	1.51E-08	0.933
IT3	3.87E-08	0.221	0.000000132	0.661
_cons	0.0242715	0.483	1.857269	0.000
	Wald chi2(7) =24.16		Wald chi2(7)= 4.75	
	Prob > chi2 =0.0011		Prob > chi2 =0.6905	
	R-sq: = 0.1870		R-sq: = 0.0292	

Source: Author, 2018

The findings presented in Table 5.41 and Table 5.42 revealed that macroeconomic variables increased the explanatory power of corporate governance on performance of firms of listed banking firms. The results revealed that R-squared increased from 11.92% and 18.70% in the first model while increased from 2.5% to 2.92% in the second model with the inclusion of the interaction variables. The finding therefore implied that macroeconomic variables positively and significantly moderated the relationship between corporate governance and performance of listed banking firms in Kenya. The study therefore rejected the null sub-hypothesis that $H_{03b\ (c)}$*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of banking firms listed at the Nairobi Securities Exchange.*

5.4.5 Moderating Effect of Macroeconomic Factors in Commercial Services Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and

performance of firms of commercial service listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis;

$H_{03b\ (d)}$ -*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of commercial services firms listed at the Nairobi Securities Exchange.*

Table 5.43: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Commercial Services Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000053	0.182	-0.00000871	0.482
GDP Growth Rate	0.0085053	0.527	0.0202893	0.581
Interest Rate	-0.0069949	0.554	-0.0555139	0.087
Inflation Rate	0.0068003	0.409	-0.0297795	0.187
_cons	0.0964341	0.683	2.773831	0.000
	Wald chi2(4)= 3.40		Wald chi2(4)= 5.97	
	Prob > chi2 = 0.4938		Prob > chi2 =0.2014	
	R-sq:= 0.0406		R-sq:= 0.0213	

Source: Author, 2018

Table 5.44: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Commercial Services Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000484	0.406	-0.0000797	0.628
GDP Growth Rate	0.0142956	0.307	0.0188491	0.632
Interest Rate	-0.0143149	0.238	-0.0687618	0.044
Inflation Rate	0.0108396	0.207	-0.0343803	0.155
IT1	-0.0000126	0.115	-0.00000253	0.912
IT2	0.00000651	0.017	0.0000057	0.466
IT3	-0.00000953	0.028	0.000000424	0.973
Cons	0.1266062	0.597	2.98536	0.000
	Wald chi2(7)= 10.62		Wald chi2(7)= 7.79	
	Prob>chi2= 0.1562		Prob>chi2= 0.3518	
	R-sq:= 0.0537		R-sq:= 0.0348	

Source: Author, 2018

The results presented in Table 5.43 and Table 5.44 revealed that macroeconomic variables increased the explanatory power of corporate governance on performance of firms of listed commercial services firms. The results revealed that R-squared increased from 4.06% to 5.37% in the first model while increased from 2.13% to 3.48% in the second model with the inclusion of the interaction variables. Inflation rates and interest rates significantly moderated the relationship between corporate governance and ROA of listed commercial services firms while the moderating effects of GDP growth rate were insignificant. None of the macroeconomic variables had significant moderating effect on the relationship between corporate governance and Tobin's Q of listed commercial services firms in Kenya.

The overall interaction results however implied that macroeconomic variables positively improved the relationship between corporate governance and performance of listed commercial services firms in Kenya. The study rejected the null sub-hypothesis that H_{03b} $_{(d)}$*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of commercial services firms listed at the Nairobi Securities Exchange.*

5.4.6 Moderating Effect of Macroeconomic Factors in Construction and Allied Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of firms of construction and allied listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

H_{03b (e)} *-Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of construction and allied firms listed at the Nairobi Securities Exchange.*

Table 5.45: Step One: Model Fitting for Moderating Effect of Macroeconomic Factors in Construction and Allied Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000254	0.926	0.0001202	0.323
GDP growth rate	0.0019618	0.846	0.0587874	0.164
Interest Rate	-0.0172278	0.07	-0.1274894	0.001
Inflation Rate	0.0070311	0.263	0.0186904	0.477
_cons	0.3987004	0.028	3.112874	0.000
	Wald chi2(4) = 5.66		Wald chi2(4) = 17.59	
	Prob > chi2 =0.2257		Prob > chi2=0.0015	
	R-sq: = 0.0952		R-sq:= 0.2230	

Source: Author, 2018

Table 5.46: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Construction and Allied Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0004047	0.839	0.0026239	0.752
GDP growth rate	0.001581	0.882	0.064072	0.151
Interest Rate	-0.0175074	0.076	-0.125865	0.002
Inflation Rate	0.0072325	0.268	0.0170169	0.532
IT1	0.0000133	0.861	-0.0000985	0.756
IT2	0.0000177	0.819	-0.0001002	0.758
IT3	0.0000105	0.87	-0.0000697	0.794
_cons	0.4028772	0.031	3.077599	0.00
	Wald chi2(7)= 5.45		Wald chi2(7)= 17.10	
	Prob > chi2=0.6053		Prob > chi2 = 0.0168	
	R-sq:= 0.0975		R-sq: = 0.2258	

Source: Author, 2018

The results presented in Table 5.45 and Table 5.46 revealed that macroeconomic variables slightly increased the explanatory power of corporate governance on performance of firms of listed construction and allied firms in Kenya. The results revealed that R-squared increased from 9.52% to 9.75% in the first model while increased from 22.30% to 23.58% in the second model with the inclusion of the interaction variables. The findings showed that none of the macroeconomic variables had insignificant moderating effects on the relationship between corporate governance and Tobin's Q of listed construction and allied firms in Kenya since all the interaction variables IT1, IT2 and IT3 were insignificant.

The overall interaction results however implied that macroeconomic variables positively enhanced the association between corporate governance and performance of construction and allied listed firms in Kenya. The study rejected the null sub-hypothesis that $H_{03b\ (e)}$- *Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of construction and allied firms listed at the Nairobi Securities Exchange.*

5.4.7 Moderating Effect of Macroeconomic Factors in Energy and Petroleum Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of firms of energy and petroleum listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (f)}$ -*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of energy and petroleum firms listed at the Nairobi Securities Exchange.*

Table 5.47: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Energy and Petroleum Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-7.21E-08	0.224	-0.000000125	0.613
GDP growth rate	0.0030019	0.747	-0.0373117	0.213
Interest Rate	-0.012089	0.127	-0.0433121	0.094
Inflation Rate	-0.0038402	0.500	-0.0328739	0.073
_cons	0.3128512	0.042	2.004027	0.000
	Wald chi2(4) = 5.07		Wald chi2(4)=5.90	
	Prob > chi2 = 0.2798		Prob > chi2 = 0.2070	
	R-sq:= 0.0742		R-sq: = 0.0747	

Source: Author, 2018

Table 5.48: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Energy and Petroleum Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.000000491	0.557	-0.00000212	0.492
GDP growth rate	0.0021814	0.834	-0.049954	0.194
Interest Rate	-0.0154981	0.084	-0.0701094	0.034
Inflation Rate	-0.0036964	0.567	-0.0383343	0.108
IT1	-1.72E-10	0.998	7.32E-08	0.782
IT2	2.72E-08	0.371	0.000000076	0.494
IT3	-2.9E-09	0.940	4.27E-08	0.769
_cons	0.3702599	0.031	2.59416	0.000
	Wald chi2(7) = 5.74		Wald chi2(7)=8.20	
	Prob > chi2 = 0.5708		Prob > chi2=0.3149	
	R-sq:= 0.0809		R-sq: = 0.0801	

Source: Author, 2018

The findings presented in Table 5.47 and Table 5.48 also revealed that macroeconomic variables slightly increased the explanatory power of corporate governance on performance of firms of listed energy and petroleum firms in Kenya. The results revealed that R-squared increased from 7.42% to 8.09% in the first model while increased from 7.47% to 8.01% in the second model with the inclusion of the interaction variables. The findings also showed that none of the macroeconomic variables had significant moderating effects on the relationship between corporate governance and Tobin's Q of listed energy and petroleum firms in Kenya since all the interaction variables IT1, IT2 and IT3 were insignificant.

The overall interaction results however implied that macroeconomic variables positively enhanced the association between corporate governance and performance of construction and allied listed firms in Kenya. The study rejected the null sub-hypothesis that *H$_{03b\ (e)}$- Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of construction and allied firms listed at the Nairobi Securities Exchange*

5.4.8 Moderating Effect of Macroeconomic Factors in Insurance Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of firms of insurance listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (g)}$ -*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of insurance firms listed at the Nairobi Securities Exchange.*

Table 5.49: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Insurance Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000129	0.594	-0.00000105	0.323
GDP growth rate	0.0068677	0.134	0.0206172	0.332
Interest Rate	0.006898	0.049	-0.0112449	0.478
Inflation Rate	0.001	0.704	0.0009508	0.939
_cons	0.0458715	0.538	1.207144	0.000
	Wald chi2(4) = 5.37		Wald chi2(4)= 2.66	
	Prob > chi2 = 0.2516		Prob > chi2 = 0.6155	
	R-sq:= 0.1330		R-sq:= 0.0231	

Source: Author, 2018

Table 5.50: Step Two: Model Fitting for Moderating Effect of Macroeconomic Factors in Insurance Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000536	0.248	0.00000195	0.901
GDP Growth Rate	0.0047205	0.504	0.03956	0.099
Interest Rate	0.0097723	0.046	-0.0206992	0.213
Inflation Rate	0.0040924	0.322	-0.0073855	0.599
IT1	0.000000177	0.774	-0.00000349	0.095
IT2	-0.000000284	0.138	0.00000116	0.074
IT3	-0.000000147	0.612	-0.000000395	0.688
_cons	0.1131681	0.240	1.327172	0.000
	Wald chi2(7)=	9.58	Wald chi2(7) =	9.85
	Prob > chi2=	0.2134	Prob > chi2 =	0.1971
	R-sq: =	0.0578	R-sq:=	0.0655

Source: Author, 2018

The findings presented in Table 5.49 and Table 5.50 revealed that R-squared decreased from 13.30% to 5.78% in the first model while increased from 2.31% to 6.55% in the

second model with the inclusion of the interaction variables. The finding also showed that none of the macroeconomic variables had insignificant moderating effects on the relationship between corporate governance and performance of listed insurances firms as measured by Tobin's Q of listed insurance firms in Kenya since all the interaction variables IT1, IT2 and IT3 were insignificant.

The overall interaction results implied that macroeconomic variables enhanced the association between corporate governance and performance of insurance firms in Kenya as measured by Tobin's Q. However interaction results implied that macroeconomic variables do not enhanced the association between corporate governance and performance of listed insurance firms in Kenya as measured by ROA. The study rejected the null sub-hypothesis that $H_{03b\ (e)}$ *Macroeconomic factors do not significantly moderate the relationship between corporate governance and Tobin's Q of insurance firms listed at the Nairobi Securities Exchange; but failed to reject the null sub-hypothesis that Macroeconomic factors do not significantly moderate the relationship between corporate governance and ROA of insurance firms listed at the Nairobi Securities Exchange.*

5.4.9   Moderating Effect of Macroeconomic Factors in Investment Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of firms of investment listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (h)}$ -Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of investment firms listed at the Nairobi Securities Exchange.

Table 5.51: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Investment Services Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000507	0.000	-0.00000345	0.206
GDP growth rate	-0.0195559	0.154	0.0336269	0.230
interest rate	-0.0107815	0.309	-0.031475	0.146
inflation rate	-0.011212	0.177	0.0265104	0.119
_cons	0.3615572	0.075	1.254298	0.003
	Wald chi2(4) = 17.23		Wald chi2(4)= 6.57	
	Prob > chi2= 0.0017		Prob > chi2= 0.1606	
	R-sq:= 0.3299		R-sq:= 0.2390	

Source: Author, 2018

Table 5.52: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Investment Services Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0000205	0.149	-0.00000401	0.903
GDP growth rate	-0.0397428	0.006	0.0332702	0.328
Interest rate	-0.0207916	0.083	-0.0261514	0.349
Inflation rate	-0.0100327	0.265	0.0231419	0.269
IT1	0.00000266	0.055	0.000000709	0.826
IT2	0.000000795	0.198	-0.000000587	0.683
IT3	0.000000179	0.803	0.000000644	0.700
_cons	0.5901541	0.011	1.206624	0.025
	Wald chi2(7) = 30.66		Wald chi2(7)= 6.38	
	Prob > chi2 =0.0001		Prob > chi2 =0.4961	
	R-sq:= 0.4893		R-sq:= 0.2445	

Source: Author, 2018

The findings presented in Table 5.51 and Table 5.52 revealed that R-squared increased from 32.99% to 48.93% in the first model while increased from 23.90% to 24.45% in the

second model with the inclusion of the interaction variables. The findings also showed that none of the macroeconomic variables had significant moderating effects on the relationship between corporate governance and Tobin's Q of listed insurance firms in Kenya since all the interaction variables IT1, IT2 and IT3 were insignificant.

The overall interaction results however implied that macroeconomic variables positively enhanced the relationship between corporate governance and performance of *investment firms* allied listed firms in Kenya. The study rejected the null sub-hypothesis that $H_{03b(h)}$-*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of investment firms listed at the Nairobi Securities Exchange*

5.4.10 Moderating Effect of Macroeconomic Factors in Manufacturing Sector

This section presents the findings of sectoral model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of manufacturing firms of listed on NSE in Kenya. The study used two steps for moderating effect to address the following sub-hypothesis.:

$H_{03b\ (i)}$ -*Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of manufacturing firms listed at the Nairobi Securities Exchange.*

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Table 5.53: Step One: Models Fitting for Moderating Effect of Macroeconomic Factors in Manufacturing Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000494	0.239	0.00000162	0.479
GDP growth rate	0.0150841	0.049	0.1110762	0.008
Interest rate	-0.0091923	0.188	-0.0708646	0.063
Inflation rate	0.0074342	0.119	0.041618	0.11
_cons	0.2752696	0.07	1.962707	0.017
	Wald chi2(4)=	9.26	Wald chi2(4)=	14.07
	Prob > chi2 =	0.0549	Prob > chi2 =	0.0071
	R-sq:=	0.0924	R-sq:=	0.1295

Source: Author, 2018

Table 5.54: Step Two: Models Fitting for Moderating Effect of Macroeconomic Factors in Manufacturing Sector

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00000861	0.458	0.00000883	0.896
GDP growth rate	0.015022	0.055	0.1092932	0.017
Interest rate	-0.0122666	0.088	-0.065424	0.119
Inflation rate	0.0078969	0.101	0.0384522	0.170
IT1	-3.15E-08	0.976	0.00000144	0.240
IT2	0.000000614	0.084	-0.00000143	0.485
IT3	0.000000109	0.862	0.0000008	0.827
_cons	0.3113936	0.045	1.947707	0.020
	Wald chi2(7)= 13.99		Wald chi2(7)=13.08	
	Prob > chi2 = 0.0513		Prob > chi2= 0.0701	
	R-sq: = 0.1451		R-sq: = 0.1347	

Source: Author, 2018

The findings presented in Table 5.53 and Table 5.54 revealed that R-squared increased from 9.24% to 14.51% in the first model while increased from 12.95% to 13.47% in the second model with the inclusion of the interaction variables. The findings also showed that none of the macroeconomic variables had significant moderating effects on the relationship between corporate governance and Tobin's Q of listed manufacturing firms in Kenya since all the interaction variables IT1, IT2 and IT3 were insignificant.

The overall interaction results however implied that macroeconomic variables positively enhanced the association between corporate governance and performance of manufacturing firms listed in Kenya. The study rejected the null sub-hypothesis that H_{03b} $_{(e)}$Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of manufacturing firms listed at the Nairobi Securities Exchange.

5.5   Joint Effect of CG, FC, Macroeconomic Factors on Performance of Firms

5.5.1   Overall Joint Effect Model

The last objective of the study was to determine the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange. This section sought to test the hypothesis;

H_{04a}- *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange*

Since the diagnostics test had been performed earlier, there was no need to redo the diagnostics test again hence the study went to model fitting to test the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange.

Table 5.55: Joint Effect of CG, FC, Macroeconomic Factors on Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.01166	0.131	-0.0624	0.040
Investments	-0.12927	0.021	-0.81856	0.000
Leverage	-0.01279	0.004	-0.03913	0.019
Liquidity	0.381975	0.000	-0.3688	0.045
GDP growth rate	0.009154	0.004	0.028921	0.014
Interest Rate	-0.00296	0.296	-0.04436	0.000
Inflation Rate	0.006179	0.001	0.003605	0.614
_cons	0.209117	0.008	3.039322	0.000
	Wald chi2(7)=122.45		Wald chi2(7)= 54.09	
	Prob > chi2= 0.0000		Prob > chi2 = 0.0000	
	R-sq:within = 0.1447		R-sq: within = 0.0720	

Source: Author, 2018

The result in table 5.55 revealed that both model 1 (Prob > chi2= 0.0000) and model 2 (Prob > chi2 = 0.0000) were statistically significant. These findings further implied that the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange was significant hence the study rejected the null hypothesis that; *H_{04a}- Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange.* The study therefore concluded that corporate governance, financial characteristics and macroeconomic factors had a significant jointly effect on performance of firms listed on NSE.

Empirical model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 IN_{it-1} + \beta_3 LE_{it-1} + \beta_4 LI_{it-1} + \beta_5 GDP_{it-1} + \beta_6 INR_{it-1} + \beta_7 IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$ therefore became

Model 1

$$FP_{it} (ROA) = 0.209117 + -0.01166CG_{it} + -0.12927IN_{it-1} + -0.01279\ LE_{it-1} + 0.381975LI_{it-1} + 0.009154GDP_{it-1} + -0.00296INR_{it-1} + 0.006179IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$$

Model 2

$$FP_{it} (Tobin's\ Q) = 3.039322 + -0.0624CG_{it} + -0.81856\ IN_{it-1} + -0.03913LE_{it-1} + -0.3688LI_{it-1} + 0.028921GDP_{it-1} + -0.04436INR_{it-1} + 0.003605\ IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$$

Where;

CG = Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ε = Error Term

5.5.2 Sectoral Models for Joint Effect

This section presented the findings on the sectoral analysis on the joint effect of corporate governance, financial characteristics, and macroeconomic factors on performance of listed firms in Kenya. This analysis provides more insight on the effect of corporate governance on performance of firms since performance and corporate governance attributes vary across sectors. The sectoral analysis for investments services, telecommunication and real estate sectors firms were not computed since the sector had 1 firm each listed on NSE which was inadequate for regression analysis.

5.5.3 Agricultural Sector Joint Effect Model

The study analysed the effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms of listed agricultural firms in Kenya. At the point of the study NSE had a total of 7 agricultural firms listed therefore data for these 7 firms was used in this analysis. This section sought to test the sub-hypothesis; $H_{04b\ (a)}$ - *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of agricultural firms listed at Nairobi Securities Exchange.*

Table 5.56: Joint Effect of CG, FC, Macroeconomic Factors on Agricultural Firms Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00003923	0.965	1.08E-08	0.881
Investments	-1.155	0	-1.386	0.225
Leverage	-0.214	0.115	-0.836	0.085
Liquidity	-0.305	0.389	3.177	0.013
GDP Growth rate	0.00802	0.014	-0.03	0.491
Interest Rate	0.005	0.663	-0.082	0.045
Inflation Rate	0.022	0.005	0.008	0.776
_Cons	0.339	0.032	3.157	0.01
	Wald chi2(7)= 7.096		Wald chi2(7)= 10.263	
	Prob > chi2= 0.0000		Prob > chi2 = 0.0000	
	R-sq: within = 0.343		R-sq: within = 0.431	

Source: Author, 2018

The results presented in Table 5.56 revealed that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob>chi2=0.0000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob>chi2=0.0000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed agricultural firms performance.

The results further revealed that corporate governance had insignificant effect on both ROA and Tobin's Q of agricultural firms listed on NSE. The results further revealed that the relationship between corporate governance and ROA for listed agricultural firms was negative which implies that corporate governance increased when ROA was reducing. Firm investments (β=-1.155, p=0.000), GDP growth rate (β=0.03, p=0.014) and inflation (β=0.022, p=0.005) were found to have a significant effects on ROA while interest rate and firm liquidity significantly affected Tobin's Q of listed Agricultural firms in Kenya.

Model 1

FP_{it} (ROA) = 0.339 + -0.00003923 CG_{it} + -1.155 IN_{it-1}+ -0.214LE_{it-1} + -0.305 LI_{it-1}+ 0.0080215GDP_{it-1}+ 0.005 INR_{it-1}+ 0.022IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 3.157 + 0.0000000108 CG_{it} + -1.386 IN_{it-1}+ -0.836LE_{it-1} + 3.177LI_{it-1} + -0.030GDP_{it-1}+ -0.082INR_{it-1}+ 0.008 IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rates

IFR= Inflation Rate

ε =Error Term

5.5.4 Automobiles and Accessories Sector Joint Effect Model

This section presented the findings on the effect of corporate governance, financial characteristics, and macroeconomic factors on performance of listed automobiles and accessories firms in Kenya. During the period of the study NSE had a total of 3 automobiles and accessories firms listed therefore data for these 3 firms was adequate for regression analysis. This section sought to test the sub-hypothesis; $H_{04b(b)}$- *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of automobile and accessories firms listed at Nairobi Securities Exchange.*

Table 5.57: Joint Effect of CG, FC, Macroeconomic Factors on Automobiles and Accessories Firms Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	1.123	0.002	0.942	0.205
Investments	-0.642	0.092	-0.019	0.981
Leverage	-0.093	0.152	-0.328	0.025
Liquidity	-0.221	0.424	-0.255	0.675
GDP Growth rate	-0.01	0.489	-0.027	0.389
Interest Rate	-0.022	0.109	-0.105	0.001
Inflation Rate	-0.005	0.562	-0.033	0.113
_Cons	0.328	0.013	3.157	0.010
	Wald chi2(7) = 2.788		Wald chi2(7) = 2.843	
	Prob > chi2 = 0.020		Prob > chi2 = 0.018	
	R-sq:within = 0.221		R-sq: within = 0.227	

Source: Author, 2018

The results presented in Table 5.57 revealed that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob >chi2=0.020), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob >chi2=0.018) were statistically significant. These finding implied that CG, FC, macroeconomic variables were good predictors of listed automobiles and accessories firms performance.

The results presented in Table 5.57 showed that corporate governance had a significant and positive (β=1.123, p=0.002) effect on ROA of listed automobiles and accessories firms in Kenya. Financial characteristics and macroeconomic factors had insignificant effect on ROA of listed automobiles and accessories firms in Kenya. On the other hand, the relationship between CG and Tobin's Q was insignificant (β=0.942, p=0.205). Leverage (β=-0.328, p=0.025) and Interest Rate (β=-0.105, p=0.001) were found to have a significant effect on Tobin's Q of listed automobiles and accessories firms in Kenya. Investments, Liquidity, GDP Growth rate and Inflation Rates were also found to have insignificant effect on Tobin's Q of listed automobiles and accessories firms in Kenya

Model 1

FP_{it} (ROA) = 0.328 + 1.123 CG_{it} + -0.642 IN_{it-1} + -0.093LE_{it-1} + -0.221LI_{it-1} + -0.01GDP_{it-1} + -0.022INR_{it-1} + -0.005IFR_{it-1} + c_i + $\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 3.157 + 0.942 CG_{it} + -0.019 IN_{it-1} + -0.328LE_{it-1} + -0.255LI_{it-1} + -0.027GDP_{it-1} + --0.105INR_{it-1} + -0.033 IFR_{it-1} + c_i + $\acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ε =Error Term

5.5.5 Banking Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms of listed banking sectors firms in Kenya. During the period of the study NSE had listed 11 firms banking sector firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis; $H_{04b(c)}$-*Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of banking firms listed at Nairobi Securities Exchange.*

Table 5.58: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Banking Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000002	0.804	0.00000012	0.101
Investments	-0.016	0.677	0.158	0.617
Leverage	-0.023	0.000	-0.195	0.000
Liquidity	0.066	0.091	-0.11	0.725
GDP Growth rate	0.003	0.240	-0.037	0.042
Interest Rate	0.007	0.002	-0.001	0.954
Inflation Rate	0.003	0.042	-0.032	0.004
_Cons	0.00008	0.999	3.157	0.010
	Wald chi2(7)=8.925		Wald chi2(7)=6.928	
	Prob > chi2= 0.000		Prob > chi2 = 0.000	
	R-sq:within = 0.284		R-sq: within = 0.229	

Source: Author, 2018

The results presented in Table 5.58 revealed that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob >chi2=0.000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob >chi2=0.000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed banking firms performance.

The research findings presented in Table 5.58 revealed that Leverage (β=-0.023, p=0.000), Interest Rate (β=0.007, p=0.002) and Inflation Rate (β=-0.003, p=0.042) had a significant effect on ROA while CG (β=0.00000020, p=0.804), Investments (β=-0.016, p=0.677), Liquidity (β=0.066, p=0.091) and GDP Growth rate (β=0.003, p=0.240) were found to have insignificant effect on ROA. The findings also revealed that Leverage (β=-0.195, p=0.000), Inflation Rate (β=-0.032, p=0.004) and GDP Growth rate (β=-0.037, p=0.042) had a significant effect on Tobin's Q of listed Banking firms in Kenya. The relationship between CG (β=0.00000012, p=0.101), Investments (β=0.158, p=0.617), Liquidity (β=-0.110, p=0.725) and Interest Rate (β=-0.001, p=0.954) and Tobin's Q for banking firms was found to be insignificant.

Model 1

FP_{it} (ROA) = 0.00008 + 0.00000020 CG_{it} + -0.016IN_{it-1}+ -0.023LE_{it-1} + 0.066LI_{it-1}+ 0.003GDP_{it-1}+ 0.007INR_{it-1}+ -0.003IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 3.157 + 0.00000012 CG_{it} + 0.158 IN_{it-1}+ -0.195LE_{it-1} + -0.110LI_{it-1} + --0.037GDP_{it-1}+ -0.001INR_{it-1}+ -0.032IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ε =Error Term

5.5.6 Commercial Services Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms of listed commercial services firms in Kenya. During the period of the study NSE had listed 10 commercial services firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis; $H_{04b(d)}$-*Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of commercial service firms listed at Nairobi Securities Exchange.*

Table 5.59: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Commercial Services Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000023	0.431	-0.00000019	0.080
Investments	0.159	0.246	-2.629	0.000
Leverage	-0.004	0.571	-0.02	0.494
Liquidity	0.886	0.000	-0.135	0.729
GDP Growth rate	-0.006	0.634	0.056	0.218
Interest Rate	-0.024	0.026	-0.048	0.230
Inflation Rate	-0.001	0.853	-0.022	0.434
_Cons	0.388	0.064	3.947	0.000
	Wald chi2(7)=16.700		Wald chi2(7)=6.898	
	Prob > chi2= 0.000		Prob > chi2 = 0.000	
	R-sq:within = 0.524		R-sq: within = 0.292	

Source: Author, 2018

The results presented in Table 5.59 revealed that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob >chi2=0.000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q   (Prob >chi2=0.000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed commercial services firms performance.

The research findings revealed that Liquidity (β=0.886, p=0.000) and Interest Rate (β=-0.024, p=0.026) significantly affect ROA while CG (β=0.00000023, p=0.431), Investments (β=0.159, p=0.246), Leverage (β=-0.004, p=0.571), GDP Growth rate (β=-0.006, p=0.634) and Inflation Rate (β=-0.001, p=0.853) had an insignificant effect on ROA of listed commercial services firms. The results further revealed that only firm Investments (β=-2.629, p=0.000) was significantly related to Tobin's Q of listed commercial services firms in Kenya. CG (β=-0.00000019, p=0.080), Leverage (β=-0.020, p=0.494), Liquidity (β=-0.135, p=0.729), GDP Growth rate (β=0.056, p=0.218), Interest Rate (β=-0.048, p=0.230) and Inflation Rate (β=-0.022, p=0.434) were found to have insignificant effects on Tobin's Q of listed commercial services firms.

Model 1

FP_{it} (ROA) = 0.388 + 0.00000023 CG_{it} + 0.159IN_{it-1}+ -0.004LE_{it-1} + 0.886LI_{it-1}+ -0.006GDP_{it-1}+ -0.024INR_{it-1}+ -0.001IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 3.947 + -0.00000019 CG_{it} + -2.629 IN_{it-1}+ -0.020LE_{it-1} + -0.135LI_{it-1} + --0.056GDP_{it-1}+ -0.048INR_{it-1}+ -0.022IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ε =Error Term

5.5.7 Construction and Allied Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms of listed construction and allied firms in Kenya. During the period of the study NSE had listed 5 construction and allied firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis; $H_{04b(e)}$-*Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of construction and allied firms listed at Nairobi Securities Exchange.*

Table 5.60: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Construction and Allied Firms

	ROA		Tobins Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00000075	0.744	-0.00000361	0.765
Investments	0.159	0.090	0.382	0.610
Leverage	-0.279	0.000	-1.247	0.000
Liquidity	0.196	0.357	-0.165	0.882
GDP Growth rate	0.007	0.414	0.05	0.287
Interest Rate	-0.003	0.677	-0.099	0.027
Inflation Rate	0.01	0.094	0.017	0.559
_Cons	0.242	0.271	3.947	0.000
	Wald chi2(7)	=6.922	Wald chi2(7)	=5.593
	Prob > chi2	= 0.000	Prob > chi2	= 0.000
	R-sq: within	= 0.359	R-sq: within	= 0.303

Source: Author, 2018

The results presented in Table 5.60 revealed that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob>chi2=0.000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob>chi2=0.000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed firms in construction and allied sector performance.

The results also showed that only Leverage significantly and negatively (β=-0.279, p=0.000) affect ROA for listed firms in construction and allied sector performance. CG, Investments, Liquidity, GDP Growth rate, Interest Rate and Inflation Rate were found to have insignificant effect on ROA of for listed construction and allied sector firms. On the other hand, Leverage (β=-1.247, p=0.000) and Interest Rate (β=-0.099, p=0.027) negatively and significantly affected Tobin's Q. CG, Investments, Liquidity, GDP Growth rate and Inflation Rate were found to have insignificant effect on Tobin's Q of for listed construction and allied sector firms.

Model 1

FP_{it} (ROA) = 0.242 + -0.00000075CG_{it} + 0.159IN_{it-1}+ -0.279LE_{it-1} + 0.196LI_{it-1}+ 0.007GDP_{it-1}+ --0.003INR_{it-1}+ 0.010IFR_{it-1}+c_i +$\acute{\epsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 3.947 + -0.00000361 CG_{it} + 0.382 IN_{it-1}+ -1.247LE_{it-1} + -0.165LI_{it-1} + -0.050 GDP_{it-1}+ -0.099INR_{it-1}+ -0.017IFR_{it-1}+c_i +$\acute{\epsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ϵ =Error Term

5.5.8 Energy and Petroleum Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms of listed firms in energy and petroleum sector in Kenya. During the period of the study NSE had listed 5 energy and petroleum sector firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis;

$H_{04b\ (f)}$ - *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of energy and petroleum firms listed at Nairobi Securities Exchange.*

Table 5.61: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Energy and Petroleum Sector Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00000089	0.170	0.00000119	0.647
Investments	0.04	0.665	-0.688	0.068
Leverage	-0.044	0.001	-0.04	0.450
Liquidity	0.224	0.217	-0.159	0.828
GDP Growth rate	-0.002	0.793	-0.052	0.139
Interest Rate	-0.006	0.460	-0.052	0.090
Inflation Rate	-0.007	0.198	-0.04	0.070
_Cons	0.273	0.104	2.705	0.000
	Wald chi2(7)	=3.547	Wald chi2(7)	=2.046
	Prob > chi2	= 0.003	Prob > chi2	= 0.066
	R-sq:within	= 0.229	R-sq: within	= 0.109

Source: Author, 2018

The results presented in Table 5.61 revealed that model 1 linking CG, FC, macroeconomic variables and ROA (Prob>chi2=0.003) was statistically significant while Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob>chi2=0.066 was statistically insignificant. These findings implied that CG, FC, macroeconomic

variables were good predictors of ROA of listed energy and petroleum sector firms while insignificant predictors of Tobin's Q.

The study findings also revealed that only leverage (β=-0.044, p=0.001) significantly affected ROA while CG, investments, liquidity, GDP growth rate, interest rate, and inflation rate had insignificant effects on ROA. None of CG, FC variables and macroeconomic variables had a significant effect on Tobin's Q of listed firms in energy and petroleum sector.

Model 1

FP_{it} (ROA) = 0.273 + -0.00000089CG_{it} + 0.040IN_{it-1}+ -0.044LE_{it-1} + 0.224LI_{it-1}+ 0.002GDP_{it-1}+ -0.006INR_{it-1}+ -0.007IFR_{it-1}+c_i +$\acute{\epsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 2.705 + 0.00000119CG_{it} + -0.688IN_{it-1}+ -0.040LE_{it-1} + -0.159LI_{it-1} + -0.052GDP_{it-1}+ -0.052INR_{it-1}+ -0.040IFR_{it-1}+c_i +$\acute{\epsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ϵ =Error Term

5.5.9 Insurance Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms listed in insurance Sector in Kenya. During the period of the study NSE had listed 6 Insurance Sector firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis; $H_{04b(g)}$- *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of insurance firms listed at Nairobi Securities Exchange.*

Table 5.62: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Insurance Sector Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000224	0.475	-0.0000042	0.71
Investments	-0.016	0.915	-1.197	0.029
Leverage	-0.045	0.003	-0.05	0.338
Liquidity	-0.048	0.417	0.102	0.636
GDP Growth rate	0.007	0.215	0.016	0.446
Interest Rate	0.006	0.143	-0.014	0.363
Inflation Rate	0.003	0.321	-0.002	0.895
_Cons	0.032	0.853	2.25	0.001
	Wald chi2(7)=2.303		Wald chi2(7)=1.249	
	Prob > chi2= 0.041		Prob > chi2 = 0.295	
	R-sq:within = 0.140		R-sq: within = 0.030	

Source: Author, 2018

The results presented in Table 5.62 revealed that model 1 linking CG, FC, macroeconomic variables and ROA (Prob>chi2=0.041) was statistically significant while Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob>chi2=0.295) was statistically insignificant. These findings implied that CG, FC, macroeconomic variables were good predictors of ROA of listed insurance sector firms while insignificant predictors of Tobin's Q.

The research findings showed that leverage significantly (β=-0.045, p=0.003) affected ROA of listed insurance firms in Kenya. The relationship between CG (β=0.000000224, p=0.475), Investments (β=-0.016, p=0.915), Liquidity (β=-0.048, p=0.417), GDP Growth rate (β=0.007, p=0.215), Interest Rate (β=0.006, p=0.143), Inflation Rate (β=0.003, p=0.321) and ROA was found to be insignificant. The study established that CG, FC and Macroeconomic variables had an insignificant effect on Tobin's Q of listed insurance firms in Kenya.

Model 1

FP_{it} (ROA) = 0.032 + 0.000000224CG_{it} + -0.016IN_{it-1}+ -0.045LE_{it-1} + -0.048LI_{it-1}+ 0.007GDP_{it-1}+ -0.006INR_{it-1}+ 0.003IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 2.250 + -0.00000420CG_{it} + -1.197IN_{it-1}+ -0.050LE_{it-1} + 0.102LI_{it-1} + -0.016GDP_{it-1}+ -0.014INR_{it-1}+ -0.002IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ε =Error Term

5.5.10 Investment Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms of listed investments sector firms in Kenya. During the period of the study NSE had listed 5 investments sector firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis;

$H_{04b\ (h)}$ - *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of investment firms listed at Nairobi Securities Exchange.*

Table 5.63: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Investment Sector Firms

	ROA		Tobin's Q	
	Coef.	**P>|z|**	**Coef.**	**P>|z|**
CG	0.000000449	0.004	0.000001617	0.611
Investments	0.086	0.543	0.304	0.321
Leverage	0.007	0.618	0.01	0.735
Liquidity	0.221	0.287	0.069	0.877
GDP Growth rate	0.016	0.233	0.027	0.347
Interest Rate	0.012	0.270	0.033	0.149
Inflation Rate	0.01	0.236	0.03	0.089
_Cons	0.284	0.237	1.474	0.007
	Wald chi2(7)=3.194		Wald chi2(7)=1.040	
	Prob > chi2= 0.011		Prob > chi2 = 0.423	
	R-sq:within = 0.277		R-sq: within = 0.181	

Source: Author, 2018

The results presented in Table 5.63 revealed that model 1 linking CG, FC, macroeconomic variables and ROA (Prob>chi2=0.011) was statistically significant while Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob>chi2=0.423) was statistically insignificant. These findings implied that CG, FC, macroeconomic variables were good predictors of ROA of listed investment sector firms while insignificant predictors of Tobin's Q.

The study findings showed that CG (β=0.000000449, p=0.004), significantly affected ROA of listed investment firm in Kenya. Investments (β=0.086, p=0.543), leverage (β=0.007, p=0.618), liquidity (β=0.221, p=0.287), GDP growth rate (β=0.016, p=0.233), interest rate (β=0.012, p=0.270) and inflation rate (β=0.010, p=0.236) had insignificant effect on ROA for listed investment firms in Kenya. The study established that CG, FC and macroeconomic variables had an insignificant effect on Tobin's Q of listed investments firms in Kenya.

Model 1

FP_{it} (ROA) = $0.284 + 0.000000449CG_{it} + 0.086IN_{it-1} + 0.007LE_{it-1} + 0.221LI_{it-1} + 0.016GDP_{it-1} + -0.012INR_{it-1} + 0.010IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = $1.474 + 0.000001617CG_{it} + 0.3040IN_{it-1} + 0.010LE_{it-1} + 0.069LI_{it-1} + 0.027GDP_{it-1} + 0.033INR_{it-1} + 0.030IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

GDP = GDP growth Rate

INR = Interest Rate

IFR= Inflation Rate

ε =Error Term

5.5.11 Manufacturing Sector Joint Effect Model

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms listed in manufacturing sector in Kenya. During the period of the study NSE had listed 10 manufacturing firms hence the data for these firms was adequate in conducting analysis. This section sought to test the sub-hypothesis;

$H_{04b(i)}$- *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of manufacturing firms listed at Nairobi Securities Exchange.*

Table 5.64: Joint Effect of CG, FC, Macroeconomic Factors on Performance of Manufacturing Sector Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	2.955E-07	0.644	0.00000364	0.886
Investments	0.217	0.289	2.982	0.000
Leverage	0.353	0.000	3.384	0.000
Liquidity	0.185	0.373	5.13	0.000
GDP Growth rate	0.007	0.513	0.068	0.139
Interest Rate	0.002	0.830	0.052	0.224
Inflation Rate	0.003	0.677	0.017	0.546
_Cons	0.236	0.376	5.801	0.000
	Wald chi2 (7)=4.598		Wald chi2 (7) =13.838	
	Prob > chi2= 0.000		Prob > chi2 = 0.000	
	R-sq: within = 0.194		R-sq: within = 0.464	

Source: Author, 2018

The results presented in Table 5.64 revealed that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob >chi2=0.000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob >chi2=0.000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed manufacturing sector firms' performance.

The study findings revealed that only leverage significantly (β=0.353, p=0.000) affected ROA of listed manufacturing firms in Kenya. The results showed that CG, investments, liquidity, GDP Growth rate, interest rate and inflation rate insignificantly affected ROA. On the other, investments (β=2.982, p=0.000), leverage (β=3.384, p=0.000) and liquidity (β=5.130, p=0.000) significantly affect Tobin's Q of listed manufacturing firms in Kenya. CG, GDP Growth rate, Interest Rate and Inflation Rate insignificantly affected Tobin's Q of listed manufacturing firms in Kenya.

Model 1

$FP_{it} (ROA) = 0.236 + 0.353LE_{it-1} + c_i + \acute{\varepsilon}_{it}$

Model 2

$FP_{it} (Tobin's\ Q) = 5.801 + 2.982IN_{it-1} + 3.384LE_{it-1} + 5.130LI_{it-1} + c_i + \acute{\varepsilon}_{it}$

Where;

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

ε =Error Term

5.6 Discussion of the Research Findings

The earlier sections in chapter four and five presented the findings obtained from data analysis. In this section the study discussed the findings, comparing with the previous scholars' work and making inferences about the study findings.

5.6.1 Corporate Governance of Firms Listed at the Nairobi Security Exchange

This study analysed corporate governance of listed firms in Kenya and revealed various similarities and comparison across firms and sectors. The findings presented under descriptive results section revealed that majority of the listed firms had averagely good board structure and board activities in place. The study also established that the number of non-executive directors on the board was averagely high as shown by mean of non-executive directors of 6 which implied that majority of listed firms had at least 6 non-executive directors. This study therefore concluded that majority of the board of listed firms in Kenya are independent. The findings support those of Brown and Maloney (2008) who argue that when competent outside directors believe that the managers are not acting in the best interest of the shareholders, they would remain on the board and challenge the manager. If they chose to resign (resulting in a higher outside director turnover) lower firm performance would result. Horváth and Spirollari (2012) also reported that presence of executive director in the banking industry in Nigeria, we expect better or outstanding financial performance in the deposits money banks in Nigeria. Similarly, Otchere, Bedi and Kwakye (2012) argue that if the board is independent and observe their responsibility of transparency and accountability to stakeholders, they will disclose in time all the relevant information.

The mean for women directors for listed firms in Kenya were about 1.13 which implied that majority of the listed firms are not gender diversified. Eulerich, Velte and van Uum (2014) also revealed that board diversity in increasing being adopted in corporate governance. The results of this study revealed an increasing trend in board structure such as board independence, board gender diversity, board occupational expertise, board age and board size of listed firms in Kenya. The results also revealed reducing trend in board

tenure and board remuneration among the board policies of listed firms. However, an increasing trend was observed in other board policies variables such board ownership, board meetings, board tools, board committees and number of committees meetings. This observation could further be attributed to efforts by majority of listed firms to strengthen their corporate governance to protect shareholder interests in the listed firms. According to agency theory the board acts as an agent of the shareholder to protect their interest. Therefore continuous improvement of the board through adoption of modern practices is a deliberate effort to ensure the board in effective in executing its mandate.

In terms of board independence, the study findings show that telecommunication, investment and services and insurance firms had more independent board compared to firms in other sectors. The findings further show that the gender diversified boards were in telecommunication sectors. The boards with members of high occupational expertise were from telecommunication, investment services, banking and insurance sectors. The findings further show that manufacturing and agricultural sectors had boards with members of advanced age. Investment services and banking had the largest boards while real estate and construction had the leanest boards. The results further show the longest board tenure was in commercial and services while the shortest was in manufacturing and insurance firms. The sectors with the highest board ownership were energy and petroleum and investment while those with the least board ownership were telecommunication and real estate sectors. These findings demonstrated that corporate governance varied depending on the sectors the firms operate. The findings implied that board independence, board diversity, board size, board age, board tools, board remuneration and other aspects of corporate governance varied depending on the sectors. These findings are inconsistent with the proponents of configurational approaches to organizations that argue that

organisation are based on the fundamental foundation that designs of attributes will show diverse features and lead to diverse results depending on how they are organized (Delery & Doty, 1996). This also applies to corporate governance, its organisation may have diverse results in various firms depending on the fundamental attributes in that firms.

According to the wealth maximizing theory, improving corporate governance attributes is done in according to shareholders interests. Therefore, the improvements in board structure and board policies reported by this study could as a result of the shareholders need to protect their interest in public traded companies. Ponsor, (1981) also posited that wealth maximization is a primary norm of corporate governance that encourages a firm's board of directors to implement all major financial and non-financial decisions with the only interest of shareholders. According to Carter *et al.* (2003) outside directors are better representatives of shareholder interest compared to inside directors. Wright et al. (1996) also asserted that inside directors for personal reasons may engage risks that are absent for genuine growth opportunities. They may take decisions which benefit self-interest.

The findings of this study concur with Lekaram (2014) who suggested that corporate governance is the method used to plan, organize and control activities of a firm towards increasing wealth and corporate accountability with sole objective of achieving long term shareholders' prosperity, whilst enhancing the interest of other stakeholders. Bonazzi and Sardar (2007) on the other hand studied the effectiveness of board in their monitoring of CEO in Australia and established that independent directors are added to boards following corporate poor performance.

5.6.2   Performance of Firms Listed at the Nairobi Securities Exchange

The study also analysed the performance of listed firms as measured by ROA and Tobin's Q for a period of between 2002 and 2016. The study findings revealed increasing trends in ROA of listed firms between 2002 and 2006. The findings showed that ROA experienced a small drop in 2008 before stabilizing in 2009, 2010 and 2011. From 2012, ROA of listed firms experienced a significant drop which persisted all the way to 2016. The findings implied that from the 2011 to 2016 listed firms on NSE experienced drop in performance as measured by ROA. Similar to ROA, Tobin's Q of the listed firms in Kenya increased between 2002 and 2006 before experiencing a significant drop between 2006 and 2016. The findings implied that besides the poor financial performance as shown by ROA, listed firms also recorded poor market performance as shown by the trend analysis of Tobin's Q.

The sectorial analysis revealed that the best performing firms in terms of ROA were firms in telecommunication, manufacturing and investment services sectors. Real estate and automobile and accessories were the worst performing firms as measured by ROA. The finding further showed that telecommunication and manufacturing firms performed well as measured by Tobin's Q while investment services sector was the worst performing as measured by Tobin's Q.

These findings are unexpected considering that the corporate governance of listed firms in Kenya has been improving as indicated by increase in board independence, board diversity, board size and other aspects of board structure and other board policies. These preliminary findings revealed that increasing corporate governance was accompanied by

reduction in performance as measured by ROA and Tobin's Q. Some of the other studies that have reported a positive relationship between corporate governance and performance of firms include Rambo (2013) who found that the relationship between board of listed and non-listed companies and financial performance is significant.

Okioga (2013) studied corporate governance practices on the flow of investors into NSE and found that the model was moderately significant. Gachoki and Rotich (2013) studied influence of corporate governance on performance of public organizations in Kenya using a descriptive design and multiple regression models and found that board composition has significant positive relationship with performance of firms. Ongore and K'Obonyo (2011) found that firms listed at the NSE have positive significant relationship between ownership concentration and firms' performance however, the study concentrated on a few characteristics of corporate governance. Similarly, Bonazzi and Sardar (2007) studied the effectiveness of board in their monitoring of CEO in Australia and established that independent directors are added to boards following corporate poor performance. The improvement in corporate governance of listed firms is usually a counter measure of poor performance. Increasing trend in corporate governance in listed firms in Kenya could have been as a result of poor performance as suggested by Bonazzi and Sardar (2007).

5.6.3   Corporate Governance and Performance of Firms

The first objective of the study was to establish the relationship between corporate governance and performance of firms of listed firms in Kenya. The study used RE regression analysis to establish the effect of corporate governance on performance of firms. The analysis was first done using specific variables before the computation of composite variables such as board structure, board activities and corporate governance.

The results of Prob > chi2= 0.0423 for model on ROA and Prob > chi2 = 0.0022 for Tobin's Q revealed all the two models were statistically significant which further implied that corporate governance were significant predictors of performance of listed companies in Kenya as measured by Tobin's Q and ROA. The coefficient results showed that only Board Meetings (β=0.0174, p=0.040) significantly predicted ROA of listed companies in Kenya. The results implied that increase in board meetings would results to increase ROA. Other corporate governance variables such Foreign Director (p=0.304), women director (p=0.061), occupational expertise (p=0.076), board age (p=0.396), board size (p=0.212), board tenure (p=0.774), board ownership (p=0.259), number of board committees (p=0.541), committees meetings (p=0.097) and board remuneration (p=0.244) did not significantly predict ROA and Tobin's Q of lists Firms. These findings show that corporate governance measures independently did not affect performance in listed companies in Kenya. These findings further justify that fact that corporate governance when broken down into various components has insignificant effect on performance. All the components must work together to have a positive effect on performance. The results show that dysfunctional components of corporate governance render the entire corporate governance insignificant.

The results for CG composite on ROA and Tobin's Q revealed of Prob>chi^2= 0.6348 for ROA and Prob>chi^2= 0.008 for Tobin's Q also implying that the model fitted for CG predicted ROA was statistically insignificant while model fitted for CG and Tobin's Q was significant. The findings show that CG significantly predicted Tobin's Q (β=-0.0702, p=0.017) of listed companies in Kenya. However, the effect of CG on Tobin's Q was negative. The findings show that corporate governance increased when listed firms values

decrease. Based on these findings the study rejected H_{01a}- Corporate governance does not significantly affect Tobin's Q of firms listed at the Nairobi Securities Exchange while fail to rejected H_{01a}- Corporate governance does not significantly affect ROA of firms listed at the Nairobi Securities Exchange at the level of significance of 0.05. The findings of this study are inconsistent with those of Debby *et al.* (2014) study also found that there is no significant relationship between good corporate governance and firm's value and there is positive and significant relationship between company's size and firm's value. The study findings agree with Ness and Seifert (2010) who investigated the relationship between number of external directors (board independence) and corporate performance in USA and the result found no significant relationship between big number of external directors and ROA.

The results showed that only board occupational expertise (β=0.0174, p=0.031) and board gender diversity (β=-0.1494, p=0.038) significantly affected ROA. Board gender diversity negatively affected ROA. Other board structure variable such as board independence (β=-0.1192, p=0.200), board size (β=-0.0120, p=0.100), and board age (β=-0.0016, p=0.384) had insignificant effect on ROA. Similarly, Ness and Seifert (2010) investigated the relationship between number of external directors (board independence) and corporate performance in USA and the result found no significant relationship between big number of external directors and company performance. The results also revealed that board independence (β=-0.836, p=0.014) had negative and significant relationship with Tobin's Q. According to Carter *et al.,* (2003) outside directors are better representatives of shareholder interest compared to inside directors.

Wright *et al.* (1996) also asserted that inside directors for personal reasons may engage risks that are absent for genuine growth opportunities. They may take decisions which benefit self-interest. The study findings disagree with Ness and Seifert (2010) investigated the relationship between number of external directors (board independence) and corporate performance in USA and the result found no significant relationship between big number of external directors and company performance.

The results also revealed that board age (β=-0.018, p=0.006) had negative and significant effect on Tobin's Q. Grimm and Smith (1991) also found that there is positive significant relationship between board age and performance of firms. Only board meetings had a significant effect on ROA, while all other board activities variables had an insignificant effect on ROA. According to Mace (1986) boards meeting infrequently are unlikely to sustain any meaningful influence over corporate performance.

The relationship between gender diversity, board size on Tobin's Q was negative and insignificant. According to Hermalin and Weisbach (2003) board size is negatively related to corporate performance while board size was found to be positively related performance of firms. Occupational expertise had a positive and insignificant effect on Tobin's Q among listed firms in Kenya. Board tenure, (β=0.035, p=0.434), Committees Meetings (β=0.004, p=0.473) and Board Remuneration (β=0.049, p=0.250) were found to have a positive but insignificant effect on Tobin's Q among listed firms in Kenya. Board ownership (β=-0.226, p=0.574), board tools (β=-0.168, p=0.002), board meetings (β=-0.020, p=0.113), and number board committees (β=-0.026, p=0.476) were found to have negatively affected the performance measured by Tobin's Q in listed firms in Kenya.

Only board tools significantly affected the performance measured by Tobin's Q. According to Vafeas (1999) board activity, measured is an important dimension of board operations.

However, some of the other studies have reported a positive relationship between corporate governance and performance of firms include Okiro *et al.,* (2015) study effect of corporate governance and capital structure on firms listed at the East Africa Community Securities Exchange and found significant relationship between corporate governance and firm performance. Rambo (2013) also found that the relationship between boards of listed and non-listed companies and financial performance is significant. Ghabayen (2012) studied board characteristics and performance of firms in Saudi Arabia and established positive significant relationship between board characteristics and performance of firms.

Gachoki and Rotich (2013) studied influence of corporate governance on performance of public organizations in Kenya using a descriptive design and multiple regression models and found that board composition has significant positive relationship with performance of firms. Okioga (2013) studied corporate governance practices on the flow of investors into NSE and found that the model was moderately significant. Ongore and K'Obonyo (2011) found that firms listed at the NSE have positive significant relationship between ownership concentration and firms' performance. Ibe *et al.* (2017) studied used board size, board independence, executive directors' remunerations, directors' ownership, institutional ownership, and foreign ownership and found board size and executive directors' remunerations to have negative and significant effect on firm performance

(ROA) and board independence and institutional ownership indicated positive and significant impact on the financial performance (Michelberger, 2017; Ahmed & Hamdan, 2015; Vo & Nguyen, 2014) found different corporate governance variables have different effects on firm performance.

In the sectorial analysis, the sub-hypotheses H_{01b}- Corporate governance does not significantly affect performance of sectorial firms listed at the Nairobi Securities Exchange. The findings showed that effect of corporate governance on performance was significant in the various sectors. The results revealed that the model fitted predicting the effect of CG on ROA in agricultural sector was statistically insignificant (Prob > chi2 = 0.1577) which implied that CG did not significantly predict ROA for listed agricultural firms in Kenya. The model for Tobin's Q was however found to be statistically significant (Prob > chi2 =0.001) which implied that CG significantly predicted Tobin's Q of listed Agricultural firms in Kenya. Mwangangi (2018) also revealed that corporate governance leadership practices had a positive contribution on performance of listed companies in Kenya. The findings show that the effect of CG on ROA was significant while on Tobin's Q was significant. The results revealed that the models fitted were statistically significant which implied that CG composite was significant predictors of performance of firms (ROA and Tobin's Q) of listed automobile firms in Kenya. Mwangangi (2018) also revealed that corporate governance leadership practices had a positive contribution on performance of listed companies in Kenya.

The results revealed that the models fitted were statistically insignificant which showed that CG composite was insignificant predictors of Tobin's' Q while significant predicted

ROA of listed banking firms in Kenya. The findings therefore show that CG significantly predicted ROA of listed banking firms in Kenya. The results also revealed that the model fitted for CG and Tobin's Q was statistically insignificant while the model for ROA was significant while implied that CG had a significant effect on ROA of listed construction and allied firms in Kenya.

The relationship between corporate governance and performance in Commercial Services firms, energy and petroleum firms, insurance firms, Investment firms and manufacturing firms in Kenya was found to be insignificant. A report by CMA (2018) on state of corporate governance among issuers of securities in Kenya revealed a fair status of 55.00% weighted overall score in the application of corporate governance practices by Kenyan issuers of securities to the public. The finding show that majority of listed firms scored slightly above average in terms of corporate governance which justified why corporate governance in many sector of listed firms had insignificant effect on performance. The findings of this study are consistent with those of Debby *et al.* (2014) study who also found that there is no significant relationship between good corporate governance and firm's value. Philip (2015) findings revealed that the corporate governance practices were positively related to the performance of sugar manufacturing firms in western Kenya.

5.6.4 Intervening Effect of Financial Characteristics

The second objective of the study was to establish the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The study adopted the steps for testing the intervening effect as suggested by Baron and Kenny, (1986). In the first step, panel

regression was carried out between independent variable and dependent variables ignoring the intervening variables.

In step two, panel regression was carried out between independent variables corporate governance and intervening variables (investment, leverage and liquidity) as the dependent variables. Step three involved panel regression analysis with the intervening variables as independent variables against the dependent variables (performance of firms). The final step in testing for intervening effect involved a regression model with independent variables (corporate governance), intervening variables (investments, leverage and liquidity) as independent variables and dependent variables performance of firms (ROA and Tobin's Q).

Since the step two and step three were achieved the study concluded that intervention was achieved. Hence the study rejected the null hypothesis H_{02a}- *Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.* The test for intervening effect for various sectors revealed that no intervention was achieved in sectorial analysis hence the null hypothesis was not rejected in sectorial analysis. Waweru and Riro (2013) studied corporate governance, financial characteristics and earnings management in an emerging economy, Kenya. The study established a positive and significant relationship between leveraged firms and earnings management. The findings further agree with (Buvanendra *et al*., 2017; Souha & Anis, 2016; Badriyah *et al*., 2015; Okiro et al., 2015; Debby *et al.,* 2014; Suntraruk, 2013) who investigated intervening effects of financial

characteristics on the relationships between corporate governance and performance of firms and found significant impacts.

5.6.5   Moderating Effect of Macroeconomic Factors

The third objective of the study was to determine the effect of macroeconomic factors on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The study also adopted the steps for testing the moderating effects as suggested by Baron and Kenny (1986). The first step was to fit a regression model for joint effect of independent variable, moderating variables on dependent variables. The explanatory power of independent variable and moderating variables is checked. Step two involved computation of interaction variables using the product of independent variable and moderating variables. The results further revealed that CG, GDP growth rates, inflation rates and interest rates accounted for 2.26% and 4.81% in the variation in ROA and Tobin's Q respectively. This represented the explanatory power of CG, GDP growth rates, inflation rates and interest rates without the interaction variables.

The results revealed that the explanatory power of independent variables and moderating variables on ROA increased from 2.26% to 2.3% with the inclusion of interaction variables IT1, IT2 and IT3. Similarly, the explanatory power of independent variables and moderating variables on Tobin's Q increased from 4.81% to 4.83% with the inclusion of interaction variables IT1, IT2 and IT3 in the model. These result implied that macroeconomic variables positively enhanced the relationship between corporate governance and performance of firms.

However, the interaction variables IT1, IT2 and IT3 were found to have insignificant effect on performance of firms measured by ROA and Tobin's Q of the listed firms in Kenya. These findings therefore implied that macroeconomic had positive but insignificant moderating effect on the relationship between corporate governance and performance of firms of listed firms in Kenya. Therefore the rejected the null hypothesis that H_{03}-Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The findings further implied that friendly macroeconomic environment enhances the effect of corporate governance on performance of firms. (Deraso, 2012; Wang, 2014; Jacob, 2015 & Marinko & Tea, 2016) also found that macroeconomic factors impact on performance of all firms in an economy.

The findings also showed that H_{03b}-Macroeconomic factors do not significantly moderate the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange was also rejected for all the sectors. The study findings therefore established that Macroeconomic factors significantly moderated the relationship between corporate governance and performance of sectorial firms listed at the Nairobi Securities Exchange. The study finding support those of Makori (2015) who established that the relationships between performance proxied by ROA and the predictor macroeconomic variables are not statistically significant implying that macro-economic variables were moderators as opposed to predictors of performance of listed firms.

5.6.6   Joint Effect of CG, FC, Macroeconomic Factors and Performance

The last objective of the study was to determine the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the

Nairobi Securities Exchange. The result in table 5.32 revealed that both model 1 (Prob > chi2= 0.0000) and model 2 (Prob > chi2 = 0.0000) were statistically significant. These findings further implied that the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange was significant hence the study rejected the null hypothesis that; H_{04}- Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange.

The study therefore concluded that corporate governance, financial characteristics and macroeconomic factors had a significant jointly effect on performance of firms listed on NSE. However, corporate governance was still found to have insignificant effect on performance of firms. The findings of this study disagreed with Rambo (2013) who found that the relationship between board of listed and non-listed companies and financial performance is significant. The study further disagreed with Okioga (2013) studied corporate governance practices on the flow of investors into NSE and found that the model was moderately significant.

Gachoki and Rotich (2013) also found that board composition has significant positive relationship with performance of firms. Ongore and K'Obonyo (2011) found that firms listed at the NSE have positive significant relationship between ownership concentration and firms' performance however, the study concentrated on a few characteristics of corporate governance. The findings of this study also concurs with other studies: Debby *et al.* (2014) found that there is no significant relationship between good corporate governance and firm's value and there is positive and significant relationship between

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company's size and firm's value; Ribeiro *et al.* (2015) found capital intensity, leverage and Research and Development expenses have a negative impact on performance and ownership structure, board composition, larger number of board members and non-executive directors have positive impact on performance; Aghouei and Moradi (2015) found positive and significant relationship between earnings before tax to total assets ratio, interest expense coverage, earnings before tax to firm performance and no significant relationship between corporate governance variables and firm characteristics on firm performance; and Ondigo (2016) also found that corporate governance, risk management and firm characteristics significantly jointly predict all bank financial performance and no intervening effect of risk management on the relationship between corporate governance and bank financial performance.

In the sectorial analysis, the findings established that CG, FC, macroeconomic variables were good predictors of listed agricultural firms performance. The results further revealed that corporate governance had insignificant effect on both ROA and Tobin's Q of agricultural firms listed on NSE. The results further revealed that the relationship between corporate governance and ROA for listed agricultural firms was negative which implies that corporate governance increased when ROA was reducing. Firm investments (β=-1.155, p=0.000), GDP growth rate (β=0.03, p=0.014) and inflation (β=0.022, p=0.005) were found to have a significant effects on ROA while interest rate and firm liquidity significantly affected Tobin's Q of listed Agricultural firms in Kenya. The findings are inconsistent Ngwenze and Kariuki (2017) study who established that corporate governance practices have no significant influence on ROE and ROA of listed agricultural firms in Kenya.

In automobiles and accessories firms, the results further showed that corporate governance had a significant and positive effect on ROA of listed automobiles and accessories firms in Kenya. Financial characteristics and macroeconomic factors had insignificant effect on ROA of listed automobiles and accessories firms in Kenya. On the other hand, the relationship between CG and Tobin's Q was insignificant. Leverage and Interest Rate were found to have a significant effect on Tobin's Q of listed automobiles and accessories firms in Kenya. Investments, Liquidity, GDP Growth rate and Inflation Rates were also found to have insignificant effect on Tobin's Q of listed automobiles and accessories firms in Kenya.

In the banking sector, the results revealed that the model linking CG, FC, macroeconomic variables and ROA and that linking CG, FC, macroeconomic variables and Tobin's Q were statistically significant. Ondigo (2016) also found that corporate governance significantly jointly predict all bank financial performance. These findings showed that CG, FC, macroeconomic variables were good predictors of listed banking firms performance. This study findings also showed that CG, FC, macroeconomic variables were good predictors of listed commercial services firms performance.

In construction and allied sector, the results revealed that both model 1 linking CG, FC, macroeconomic variables and ROA, and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed firms in construction and allied sector performance. In energy and petroleum sector firms The results revealed that model 1 linking CG, FC, macroeconomic variables and ROA was statistically significant

while Model 2 linking CG, FC, macroeconomic variables and Tobin's Q was statistically insignificant. These findings implied that CG, FC, macroeconomic variables were good predictors of ROA of listed energy and petroleum sector firms while insignificant predictors of Tobin's Q. The findings also established that CG, FC, macroeconomic variables were good predictors of ROA of listed insurance sector firms while insignificant predictors of Tobin's Q.

The results for investment sector firms showed that CG, FC, macroeconomic variables were good predictors of ROA of listed while insignificant predictors of Tobin's Q. Finally, findings implied that CG, FC, macroeconomic variables were good predictors of listed manufacturing sector firms' performance. Karanja and Wagana (2015) also argue stagnation of manufacturing sector in Kenya has come about largely as a result of corporate governance challenges in the industry which leads to poor corporate performance.

5.7   Chapter Summary

This chapter presented the discussion of the findings in details while comparing with the findings of existing studies. Since the data was in panel form, panel regression analysis was conducted which was preceded by thorough analysis of the diagnostics test to avoid getting spurious results. The study performed tests on statistical assumptions, that is, test of regression assumptions and statistics used. This included linearity, normality, test of serial autocorrelation test, panel unit root test, multicollinearity, heteroscedasticity test and Hausman test for model specification to make sure the data used was adequate to conduct inferential analysis. The tests were conducted to make sure that the statistical analysis conducted adhered to regression assumptions hence avoid spurious and bias

findings. The study also conducted hypotheses testing in this chapter and table 5.65 contains the summary of the hypotheses testing.

Table 5.65: Summary of the Hypotheses Testing

Hypothesis	Analysis	Reject H0/Fail to reject H0
H_{01} - *Corporate governance does not significantly affect performance of firms listed at the Nairobi Securities Exchange.*	• RE regression analysis	Reject H_{01} (Tobin's Q) Failed to reject H_{01} (ROA)
H_{02} - *Firm characteristics does not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange*	• RE regression analysis	Reject H_{02}
H_{03a} - *Gross Domestic Product does not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.*	• RE regression analysis	Reject H_{03}
H_{03b} - *Interest rate does not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.*	• RE regression analysis	Reject H_{03}
H_{03c} - *Inflation rate does not significantly moderate the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange.*	• RE regression analysis	Reject H_{03}
H_{04} - *Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange.*	• RE regression analysis	Reject H_{04}

Source: Author, 2018

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1   Introduction

This chapter presents summary, conclusion, contribution of the study findings to knowledge, policy and practices and finally recommendations made from the study findings. The summary is presented in line with findings on each study variables and the research hypothesis. The conclusions were made on the basis of these study findings in comparison with the theoretical arguments. The chapter also presents some of the key limitations encountered in the process and how the study overcame those limitations.

6.2   Summary of the Study

This study aimed to examine the relationships among corporate governance, financial characteristics, macroeconomic factors and performance of firms listed at the Nairobi Securities Exchange. In this study, wealth maximization theory, agency theory, stewardship theory, stakeholders' theory and resource dependency theory were used to aid in formulation of the research hypotheses that guided the study. In regard to research design, the study employed longitudinal descriptive research design to determine relationships amongst independent, intervening, moderating and dependent variables. A longitudinal research design involves repeated observations of the same variables over long periods of time without external influence being applied.

This study used census approach as the main sampling technique. The study therefore surveyed a total of sixty five (65) companies listed at the NSE as at 31st December 2016. This study relied on the use of secondary panel data, the multi-dimensional data involving

measurements of corporate governance, financial characteristics and macroeconomic factors on performance of firms for companies listed at the NSE from the year 2002 when the corporate governance guidelines were introduced to companies listed at the NSE to the year 2016.

This study adopted the use of descriptive analyses and panel data regression in analyzing the relationship between corporate governance and performance of firms of listed companies at the NSE. Descriptive analyses were carried out to measure dispersion of variables such as standard deviations and coefficient of variation which was used to disclose the volatility in relationships of the variables under study. A panel data regression analysis was conducted using random effects model which allowed the companies to have a common mean value of the intercept to determine whether corporate governance influences performance of firms.

Prior to testing the research hypotheses, the study analysed critically the corporate governance practices among the listed firms in Kenya. Under corporate governance, the study had two broad categories; board structure and board activities. Board structure included board independence, board gender diversity, board occupational expertise, board age and board size whereas board activities included board tenure, board ownership, board meetings, board tools, board committees and number of committees meetings.

The results of this study revealed an increasing trend in board structure such as board independence, board gender diversity, board occupational expertise, board age and board size of listed firms in Kenya. An increasing trend was observed in other board activities

variables such board ownership, board meetings, board tools, board committees and number of committees meetings. The study findings on the other hand revealed reducing trend in board tenure and board remuneration of listed firms in Kenya. This was inferred to indicate that listed firms in Kenya have been strengthening their corporate governance over the study period.

The study also analysed the performance of listed firms as measured by ROA and Tobin's Q. the study findings revealed that performance of firms as measured by ROA and Tobin's Q of the listed firms in Kenya increased between 2002 and 2006 before experiencing a significant drop between 2006 and 2016. The findings implied that besides the poor financial performance as shown by ROA, listed firms also recorded poor market performance as shown by the trend analysis of Tobin's Q over the study period. These preliminary findings revealed that strengthening corporate governance was accompanied by reduction in performance of firms as measured by ROA and Tobin's Q of listed firms in Kenya.

On the relationship between corporate governance and performance of firms, the study findings revealed that board occupational expertise (β=0.0174, p=0.031), board gender diversity (β=-0.1494, p=0.038) board meetings (β=-0.00725, p=0.039) had a significant effect on ROA. Gender diversity and board meetings had a negative relationship with ROA while occupational expertise had a positive relationship with ROA. The relationship between other corporate governance variables and ROA was insignificant.

On the other hand, board age (β=-0.018, p=0.006) and board tools (β=-0.168, p=0.002) significantly affected Tobin's Q. board age and board tools negatively affected Tobin's Q.

These finding had two implications; the first implication was that listed firms in Kenya strengthened their corporate governance due to poor performance and second implication of the above findings is that corporate governance used by listed firms Kenya failed to impact on performance or had negative impact on performance.

The study further established that when composites of board structure, board activities and corporate governance were used in the regression analysis, none had a significant effect on performance of firms both on ROA and Tobin's Q. These findings implied that each corporate governance variables was unique in its way and how it affects performance of firms. Based on these findings the study failed to reject H_{01}- Corporate governance does not significantly affect ROA of firms listed at the Nairobi Securities Exchange but rejected corporate governance does not significantly affect Tobin's Q of firms listed at the Nairobi Securities Exchange Hence, the study concluded that corporate governance among listed firms in Kenya had significant effect on Tobin's Q of listed firms while effect of CG on ROA was insignificant.

In the sectorial analysis, the findings showed that effect of corporate governance on performance was significant in the following sectors automobile firms, banking firms and construction and allied firms in Kenya. The relationship between corporate governance and financial performance in Commercial Services firms, energy and petroleum firms, insurance firms, Investment firms and manufacturing firms in Kenya was found to be insignificant.

The second objective of the study was to establish the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The study adopted the steps for testing the intervening effect as suggested by Baron and Kenny, (1986). Since not all the criteria for intervention as suggested by Baron and Kenny (1986) were achieved, the study concluded that intervention was not fully achieved. Hence the study failed to reject the null hypothesis H_{02}- Financial characteristics do not significantly intervene in the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The study also failed to reject the subsequent sub hypothesis and concluded that financial characteristics do not intervene in the relationship between corporate governance and performance of listed firms in Kenya.

The study also sought to determine the effect of macroeconomic factors on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. The results revealed that the explanatory power of independent variables and moderating variables on ROA increased from 2.26% to 2.3% with the inclusion of interaction variables IT1, IT2 and IT3 in the model. Similarly, the explanatory power of independent variables and moderating variables on Tobin's Q increased from 4.81% to 4.83% with the inclusion of interaction variables IT1, IT2 and IT3 in the model. These results implied that macroeconomic variables positively enhanced the relationship between corporate governance and performance of firms. However, the interaction variables IT1, IT2 and IT3 were found to have insignificant effect on performance of firms measured by ROA and Tobin's Q of the listed firms in Kenya. These findings therefore implied that macroeconomic factors had a positive moderating effect on the relationship between corporate governance and performance of

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listed firms in Kenya. The study further failed to reject the hypothesis in sectoral analysis, which implied that macro-economic variables moderated the relationship between corporate governance and performance of listed firms in their various sectors.

The last objective of the study was to determine the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange. The result in table 5.32 revealed that both model 1 (Prob > chi2= 0.0000) and model 2 (Prob > chi2 = 0.0000) were statistically significant. These findings further implied that the joint effect of corporate governance, financial characteristics and macroeconomic factors on performance of firms listed at the Nairobi Securities Exchange was significant hence the study rejected the null hypothesis that; H_{04}- Corporate governance, financial characteristics and macroeconomic factors do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange. Sectoral analysis further revealed that corporate governance, financial characteristics, macro-economic variables affected the performance of listed companies across all the sectors.

6.3   Conclusion of the Study

Based on the findings, the study made various conclusions; first, the study concluded that listed firms in Kenya adopted corporate governance practices as part of the requirements of the regulating authority which had no impact on the specific firm's performance. The study established that most of the corporate governance measures adopted by listed firms in Kenya had significant effect on the performance of listed firms. These findings show that corporate governance measures independently did not affect performance in listed companies in Kenya. These findings further justify that fact that corporate governance

when broken down into various components has significant effect on performance. All the components must work together to have a positive effect on performance. The results show that dysfunctional components of corporate governance render the entire corporate governance insignificant.

The study concluded that listed firms in Kenya strengthened their corporate governance due to poor performance, further the study concluded that corporate governance practices used by listed firms failed to impact on performance or had negative impact on performance. The study also concluded that listed firms in Kenya continued to record poor performance despite corporate governance investments. The study further established that financial characteristics of the firms are important ingredients for better performance and overall firms' growth. However, such characteristics do not provide the necessary environment for corporate governance to affect performance of firms. Firm characteristics such as level of firms' investments, firms' leverage and firms' liquidity provide the necessary vehicle to be used by management in combining factors of production to fuel high performance of firms but do not impact on the activities of the board or corporate governance at large.

The study also concluded that the effect of corporate governance, financial characteristics, and macro-economic variables on performance of listed companies varied slightly depending on the sectors. The relationship is more significant in some sector compared to others and these relate to the varying corporate governance practices, structures and polices adopted in these particular sectors.

On the moderating effect of macroeconomic factors, the study concluded that unfriendly macroeconomic conditions act as a catalyst that enhances board activities such as frequency of board meetings to approve some of the immediate actions the management may wish to undertake to mitigate the effect of volatility in the macroeconomic environment. The findings of this study revealed that macroeconomic factors enhanced the strength of the relationship between corporate governance and performance of firms through enhancing the explanatory power of corporate governance variables on performance of firms. The study therefore concluded that the macroeconomic factors play a critical role in moderating the relationship between corporate governance and performance of firms. The study finally resolved that listed firms that focused on enhancing their corporate governance, financial characteristics and operated in favourable macroeconomic environment are likely to increase their performance since jointly corporate governance, financial characteristics and favourable macroeconomic conditions were found to account for the highest variations in both ROA and Tobin's Q of the listed firms in Kenya.

6.4 Contributions of the Study Findings

This section presents the contribution of the research findings on existing knowledge, policy and practice. The study findings contributed to knowledge, policy and practice in the following ways.

6.4.1 Contribution to Knowledge

This study contributed to the existing knowledge in various ways, first and foremost the study expounded on the utility of theories such as wealth maximization theory, agency theory, stewardship theory, stakeholders' theory and resource dependency theory to

explain the relationship between corporate governance and performance of firms. The study further expounded on the utility of finance theory and may be adopted by further studies in linking corporate governance, financial characteristics, macroeconomic factors and performance of firms. The study further explicated on the theoretical knowledge on the relationship between corporate governance practices and performance of listed firms' hence further studies may use the findings of this study as a basis or point of reference. Therefore, further studies may adopt these theories when researching on corporate governance and performance of firms.

Secondly, most available existing literature in this area revealed a positive and significant relationship between corporate governance practices and performance of firms. However, this study established that most of board structure and board activities had an insignificant relationship with performance of listed firms in Kenya. Besides having an insignificant relationship some of the corporate governance practices had a negative relationship. This study therefore contributed to the existing literature in two ways; first it established that relationship between corporate governance heavily relied on the context under study, this is why studies conducted in different context have conflicting results. The second contribution is that listed firms responded to poor performance by strengthening their corporate governance which implies that corporate governance was used by listed firms in Kenya as a counter reactive measure of poor performance.

This study further provided insight on the insignificant intervention of financial characteristics on the relationship between corporate governance and performance of firms. Financial characteristics were found to be medium in increasing firms' efficiency

hence impacting directly on performance of firms. Therefore further studies may use other variables as intervening variables to determine the relationship of corporate governance and firm performance. The study finally contributed to existing knowledge by providing insight on the joint effect of corporate governance, financial characteristics and economic factors on performance of firms that was mainly lacking in the existing literature. The study established that jointly corporate governance, financial characteristics and economic factors are likely to increase performance of firms as measured by ROA and Tobin's Q of the listed firms in Kenya.

6.4.2   Contribution to Managerial Policy and Practices

Based on the findings of this study, stakeholders of listed firms and regulating authorities such as Capital Market Authority may relook at the corporate governance policies of listed firms with the view revising the existing policies or formulating new and more progressive policies to ensure shareholders' interests are protected. These policies may go a long way to ensure listed firms not only strengthen their corporate governance during poor performing seasons but rather create board structure and board activities that provide a clear roadmap for better performance of firms.

This study also provided insight to directors of listed firms on the effects of various corporate governance practices, hence it may be possible for directors to formulate and implement of corporate governance practices which enhance the performance of their respective firms. The study findings may further be adopted by management of listed firms in explaining the role played by financial characteristics and macroeconomic factors on performance of their firms.

6.5   Limitations of the Study

The study faced a number of limitations in the process of data collection and employed various mitigation measures to ensure that the study findings were not affected by these limitations. First, the study use of secondary data which may have been collected for financial reporting and other purposes posed inherent problems to the study however these data was adapted for the study by using a suitable base (fraction) to mitigate this limitation.

Secondly, during the data collection process some of the listed firms were found to have inconsistent data, both in their financial statements and the records captured by NSE hand books. However, the missing data was a small fraction of the total data hence the study mitigated this limitation by use of mean for the missing values. The study also faced limitation in conducting sectoral analysis since some sectors had only one firm such as investment services sector and telecommunication sectors which was inadequate to run regression and make conclusion. The study however computed sectoral analysis for sector that had adequate information and conclusions were made based on complete and accurate data.

6.6   Recommendations for Further Research

The first objective of the study was to determine the effect of corporate governance on performance of firms listed at the Nairobi Securities Exchange and the study established some board structure and board activities have a significant effect on performance of listed firms in Kenya. Based on the findings, the study recommended that listed firms should revisit their corporate governance practices to ensure that they leverage on board structure and board activities that improve performance while obsolete corporate

governance practices should be eradicated. The shareholders of listed firms may adopt the findings of this study to restructure their corporate governance by implementing board structure and board activities that will improve performance of listed firms or realign the corporate governance practices to make more effective. The stakeholders may also use the findings of this study to open inquiry on effectiveness of corporate governance in their respective firms for future improvement.

The second objective of the study was to establish the intervening effect of financial characteristics on the relationship between corporate governance and performance of firms listed at the Nairobi Securities Exchange. Based on these findings, it was recommended that management of listed firms should restructure and optimize their financial characteristics to achieve higher level performance of their firms. The third objective of the study was to test for the moderating effect of macroeconomic variables on the relationship between corporate governance and performance of listed firms in Kenya. Based on the findings, the study recommended that management of listed firms must leverage on period of high economic growth to improve their performance since the macroeconomic environment moderated the relationship between corporate governance and performance of listed firms.

The final objective of the study was sought to test the joint effect of corporate governance, macroeconomic factors, and firm characteristics on performance of listed firms in Kenya. Established from the findings, the study recommended that management and stakeholders of listed firms should not only focus on streamlining corporate governance practices, but also further enhance their level of investments, liquidity and use

of leverage to significantly improve their firms' performance. The study further recommended that state authorities and policymakers should formulate policies to keep the economy afloat which will provide the necessary environment for operations of firms to enhance profitability.

This study established that corporate governance, financial characteristics and macroeconomic variables accounted for 14.47% of the variation in ROA and 7.20% in the variation in Tobin's Q. This study therefore recommends that further research focusing on determinants of performance of listed firms in Kenya should focus on other factors that account for the remaining percentages. Further studies may further focus on a case of one firm listed on NSE, so that a time series analysis is done to validate the findings of this study. The study further recommends that further studies should focus on establishing the relationship between corporate governance, financial characteristics, macroeconomic variables and performance of none listed firms in Kenya to bridge the contextual gaps since existing studies have focused on listed firms. The study finally suggested that further research should focus on other measures of corporate governance and performance of firms to also validate these findings.

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APPENDICES

Appendix I: Companies Listed at the Nairobi Securities Exchange (Period 2002-2016)

SNO.	SECTORS	SNO.	LISTED COMPANIES
1	AGRICULTURAL	1	Eaagads Limited
		2	Kapchorua Tea Co. Limited
		3	Kakuzi
		4	Limuru Tea Co. Limited
		5	Rea Vipingo Plantations Limited
		6	Sasini Limited
		7	Williamson Tea Kenya Limited
2	AUTOMOBILES AND ACCESSORIES	1	Car And General (K) Limited
		2	Sameer Africa Limited
		3	Marshalls (E.A.) Limited
3	BANKING	1	Barclays Bank Limited
		2	CFC Stanbic Holdings Limited
		3	I&M Holdings Limited
		4	Diamond Trust Bank Kenya
		5	Housing Finance Co. Limited
		6	Kenya Commercial Bank Limited
		7	National Bank of Kenya Limited
		8	NIC Bank Limited
		9	Standard Chartered Bank Limited
		10	Equity Bank Limited
		11	The Co-operative Bank of Kenya Limited
4	COMMERCIAL SERVICES	1	Express Limited
		2	Kenya Airways Limited
		3	Nation Media Group
		4	Standard Group Limited
		5	TPS Eastern Africa (Serena) Limited
		6	Scangroup Limted
		7	Uchumi Supermarket
		8	Hutchings Biemer
		9	Longhorn Kenya Limited
		10	Atlas Development And Support Services
5	CONSTRUCTION AND ALLIED	1	Athi River Mining
		2	Bamburi Cement Limited
		3	Crown Berger Limited
		4	East Africa Cables Limited
		5	East Africa Portland Cement Limited
6	ENERGY AND PETROLEUM	1	Kenol Kobil Mining
		2	Total Kenya Limited
		3	Kengen Limited
		4	Kenya Power & Lighting Co. Limited
		5	Umeme Limited

7	INSURANCE	1	Jubilee Holdings Limited
		2	Pan Africa Insurance Holdings Limited
		3	Kenya Re-Insurance Corporation Limited
		4	Liberty Kenya Holdings Limited
		5	British-American Investments Company (Kenya) Limited
		6	CIC Insurance Group Limited
8	INVESTMENT	1	Olympia Capital Holdings Limited
		2	Centum Investment Co. Limited
		3	Trans-Century Limited
		4	Home Afrika Limited
		5	Kurwitu Ventures
9	INVESTMENT SERICES	1	Nairobi Securities Exchange Limited
10	MANUFACTURING AND ALLIED	1	B.O.C Kenya Limited
		2	British American Tobacco Kenya Limited
		3	Carbacid Investments Limited
		4	East African Breweries Limited
		5	Mumias Sugar Co. Limited
		6	Unga Group Limited
		7	Eveready East Africa Limited
		8	Kanya Orchards Limited
		9	Baumann Co. Limited
		10	Flame Tree Group Holdings Limited
11	TELECOMMUNICATION AND TECHNOLOGY	1	Safaricom Limited
12	REAL ESTATE INVESTMENT TRUST	1	Stanlib Fahari I-Reit

Source: Nairobi Securities Exchange Hand Book (2016)

Appendix II: Schedule for Corporate Governance Data Collection Tool

Company Name and Year	Board composition in terms of number of directors		Board skills and expertise in terms of numbers		Board age in terms average age of board		Board size in terms of Number of directors	
Company Name:	Executive Directors		Education Degree level		Total years of Directors		Number of Directors	
	Non - Executive Directors		Professional Qualifications					
	Female Directors		Experience					
Year:	Male Directors							
	Foreign Directors							
	Any other specify							
	Total Number of Directors		**Total Number of Directors**		**Total Number of Directors**		**Total Number of Directors**	

Company Name and Year	Board Tenure in Average Number of years		Board Stock Ownership		Board Tools and Aids in terms of availability		Board Meetings	
Company	Average tenure for Executive Directors		Total number of shares held by Executive Directors		Code of Ethics and conduct		Number of scheduled board meetings	
Name:	Average tenure for Non - Executive Directors		Total number of shares held by Non- Executive Directors		Board Charter		Number of non-scheduled board meetings	
Year:					Annual board work plan			
					Board Evaluation tool kit			
			Total number of shares issued		**Total number of board tools and aids**		**Total number of meetings**	

Company Name and Year	Board Committees in terms of availability		Number of committee meetings	
Company	Audit Committee		Number of Meetings	
Name:	Finance Committee		Number of Meetings	
	Human Resource Committee		Number of Meetings	
	Risk Committee		Number of Meetings	
	Remuneration Committee		Number of Meetings	
Year:	Investment Committee		Number of Meetings	
	Nomination Committee		Number of Meetings	
	Any other Committee specify		Number of Meetings	
	Any other Committee specify		Number of Meetings	
	Total number of committees		**Total number of Committee Meetings**	

Appendix III: Schedule for Financial Characteristics Data Collection Tool

Name of the Company	Years	Investments (Long term assets/Total assets)	Leverage (Total debt/Total assets)	Liquidity (Net working capital/Total assets)
	2002			
	2003			
	2004			
	2005			
	2006			
	2007			
	2008			
	2009			
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			

Appendix IV: Schedule for Macroeconomic Factors Data Collection Tool

Years	GDP Growth Rate	Interest Rate	Inflation Rate
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2016			

Appendix V: Schedule for Companies' Performance of firms Data Collection Tool

Name of the Company	Years	Return on Assets (ROA) (Net Earnings/ Total Assets)	Tobin's Q (TQ) (Market Value of Equity+ Liquidation of outstanding Preference shares + Debt/ Total Assets)
	2002		
	2003		
	2004		
	2005		
	2006		
	2007		
	2008		
	2009		
	2010		
	2011		
	2012		
	2013		
	2014		
	2015		
	2016		

Appendix VI: University Authorization Letter and NACOSTI Permit

UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF BUSINESS

Telephone: 4184160-5 Ext 215
Telegrams: "Varsity"' Nairobi
Telex: 22095 Varsity

P.O. Box 30
Nairobi, KE

18th January, 2018

TO WHOM IT MAY CONCERN

Dear Sir/Madam,
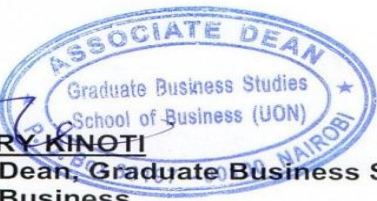
INTRODUCTORY LETTER FOR RESEARCH
MOSES ODHIAMBO ALUOCH– REGISTRATION NO. D80/60092/2011

The above named is a registered PhD candidate at the University of Nairobi, Schoo
Business. He is conducting research on *"Corporate Governance, Financ
Characteristics, Macroeconomic Factors and Performance of Firms Listed at
Nairobi Securities Exchange."*

The purpose of this letter is to kindly request you to assist and facilitate the student w
necessary data which forms an integral part of the research project. The informat
and data required is needed for academic purposes only and will be treated in Stri
Confidence.

Your co-operation will be highly appreciated.

Thank you.

PROF. MARY KINOTI
Associate Dean, Graduate Business Studies
School Of Business

MK/nwk

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020 400 7000,
0713 788787,0735404245
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/87687/21128**

Date: **2nd February, 2018**

Moses Odhiambo Aluoch
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Corporate governance, financial characteristics, macroeconomic factors and performance of firms listed at the Nairobi Securities Exchange"* I am pleased to inform you that you have been authorized to undertake research in **All Counties** for the period ending **1st February, 2019.**

You are advised to report to **the Chief Executive Officer of Nairobi Securities Exchange, the County Commissioners and the County Directors of Education, All Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GP Kalerwa

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Chief Executive Officer
Nairobi Securities Exchange.

The County Commissioners
All Counties.

National Commission for Science, Technology and Innovation isISO9001:2008 Certified

THIS IS TO CERTIFY THAT:
MR. MOSES ODHIAMBO ALUOCH
of UNIVERSITY OF NAIROBI, 0-100
NAIROBI,has been permitted to conduct
research in *All Counties*

on the topic: *CORPORATE*
GOVERNANCE, FINANCIAL
CHARACTERISTICS, MACROECONOMIC
FACTORS AND PERFORMANCE OF FIRMS
LISTED AT THE NAIROBI SECURITIES
EXCHANGE

for the period ending:
1st February,2019

....
Applicant's
Signature

Permit No : NACOSTI/P/18/87687/21128
Date Of Issue : 2nd February,2018
Fee Recieved :Ksh 2000

....
GP Kalerwa
Director General
National Commission for Science,
Technology & Innovation

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 17359

CONDITIONS: see back page

Appendix VII: Descriptive Statistics for Sectorial Firms

Descriptive Statistics of Study Variables in Agriculture Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board Independence	104	0.25	1	0.66909	0.213475
Gender diversity	104	0	0.125	0.011218	0.034625
Occupation Expertise	104	1	6	3.903846	1.438171
Board Age	104	46.5	69.7	56.69423	4.966346
Board Size	104	2	9	5.586538	1.978577
Board Tenure	104	3	3	3	0
Board Ownership	104	0	0.0391	0.005624	0.010501
Board Tools	104	0	4	2.605769	1.185825
Board Meeting	104	0	6	3.346154	1.459946
Number of Board Committees	104	0	3	1.692308	1.231283
Committees Meeting	104	0	12	4.317308	3.388342
Board Remuneration	102	1.272344	2.025853	0.031887	-0.25781
Investments	104	0.22458	0.992514	0.706689	0.163429
Leverage	103	0.036099	1.041919	0.28088	0.199937
Liquidity	103	-0.1441	0.573307	0.187993	0.152948
GDP Growth Rate	105	0.2	8.4	4.846667	2.190015
Interest Rate	105	12.25	19.85333	15.06825	2.258282
Inflation Rate	105	0.9	15.2	7.428	3.503312
ROA	103	0.304929	1.797788	0.192208	-0.2984
Tobin's Q	103	0.05566	6.709788	1.21217	-1.14111

a. sector = Agricultural

Source: Author, 2018

Descriptive Statistics for Automobiles and Accessories Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	45	.500	.875	.78169	.089030
Gender Diversity	45	.00	.14	.0032	.02130
Occupational Expertise	45	3	6	4.62	.650
Board Age	45	47	61	53.13	3.920
Board Size	45	5	8	6.78	.823
Board Tenure	45	1	10	3.11	2.630
Board Ownership	45	.00000	.01130	.0016249	.00383934
Board Tools	45	3	4	3.33	.477
Board Meetings	45	4	6	4.22	.471
Number Board Committees	45	1	3	2.36	.570
Committees Meetings	45	4	12	8.36	2.069
Board Remuneration	45	-2.19139	5.46248	.1704176	.89088932
Profit Before Tax million	45	-821.0080	458.9690	113.264689	233.2496364
Investments	45	.2160	.8710	.430287	.1669951
Leverage	45	.0030	2.6538	.780848	.6510070
Liquidity	45	-.4554	.5414	.167352	.2634061
GDP Growth Rate	45	.2000	8.4000	4.873333	2.2157904
Interest Rate	45	12.2500	19.8533	15.068252	2.2728991
Inflation Rate	45	.9000	15.2000	7.421333	3.5228434
ROA	45	-.612	.488	.03317	.222112
Tobin's Q	45	.6138	3.0672	1.033095	.4909640
Valid N (listwise)	45				

a. sector = Automobiles and Accessories

Source: Author, 2018

Descriptive Statistics of Study Variables in Banking Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board Independence	143	0.11	0.94	0.78	0.12
Gender Diversity	143	0	0.5	0.17	0.11
Occupation Expertise	143	2	12	7.14	1.75
Board Age	143	45.3	65.5	54.75	4.31
Board Size	143	7	54.25	10.19	4.07
Board Tenure	143	1	3	2.79	0.61
Board Ownership	143	0	0.71	0.09	0.21
Board Tools	143	3	4	3.21	0.41
Board Meeting	143	4	22	7.2	3.93
No. Board Committees	143	1	8	4.78	1.61
Committees Meeting	143	1	61	21.19	11.83
Board Remuneration	143	-0.19	0.78	0.05	0.09
Investments	141	0.39	1	0.79	0.12
Leverage	143	0.22	8.81	2.36	1.35
Liquidity	143	0.11	0.88	0.35	0.12
GDP growth Rate	165	0.2	8.4	4.85	2.19
Interest Rate	165	12.25	19.85	15.07	2.25
Inflation Rate	165	0.9	15.2	7.43	3.5
ROA	143	-0.14	0.27	0.09	0.06
Tobin's q	143	0.91	4.8	1.21	0.47

a. sector = Banking

Source: Author, 2018

Descriptive Statistics of Study Variables for Commercial Services Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board Independence	101	0.38	0.94	0.75	0.15
Gender Diversity	101	0	1	0.2	0.26
Occupational Expertise	101	2	15	6.45	2.89
Board Age	101	47.75	63.5	55.72	4.05
Board Size	101	4	16	9	3.06
Board Tenure	101	3	5	3.74	0.89
Board Ownership	101	0	0.66	0.11	0.14
Board Tools	101	1	4	2.54	0.59
Board Meeting	101	3	8	4.62	1.08
No. Board Committees	101	1	6	3.04	1.09
Committees Meeting	101	2	24	10.7	5.69
Board Remuneration	101	10.6	0.7	-0.03	-1.11
Investments	101	0	0.9	0.57	0.24
Leverage	101	-7.08	0.03	0.82	3.11
Liquidity	101	1.28	0.72	0.04	-0.31
GDP Growth Rate	120	0.2	8.4	4.85	2.19
Interest Rate	120	12.25	9.85	15.07	2.26
Inflation Rate	120	0.9	15.2	7.43	3.5
ROA	101	-1.38	0.67	0.11	0.34
Tobin's q	101	0.74	0.59	1.77	1.05

a. sector = Commercial and Services Sector

Source: Author, 2018

Descriptive Statistics of Study Variables for Construction and Allied Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board Independence	75	0.4	0.89	0.71	0.14
Gender Diversity	75	0	0.2	0.05	0.07
Occupation Expertise	75	4	9	5.87	1.4
Board Age	75	44.25	66.4	53.33	4.58
Board Size	75	5	11	7.69	1.59
Board Tenure	75	1	3	2.6	0.81
Board Ownership	75	0	0.52	0.11	0.21
Board Tools	75	2	4	3.31	0.64
Board Meeting	75	3	17	5.29	2.48
Number Board Committees	75	1	5	2.65	0.85
Committees Meetings	75	2	20	9.6	4.41
Board Remuneration	74	-2.82	0.74	0.06	0.38
Investments	75	0.17	0.92	0.57	0.2
Leverage	75	0.05	2.03	0.48	0.37
Liquidity	75	-0.25	0.54	0.15	0.15
GDP Growth Rate	75	0.2	8.4	4.85	2.19
Interest Rate	75	12.25	19.85	15.07	2.26
Inflation Rate	75	0.9	15.2	7.43	3.51
ROA	75	-0.26	0.73	0.2	0.19
Tobin's Q	75	0.43	5.73	1.65	0.94

a. sector = Construction and Allied Sector

Source: Author, 2018

Descriptive Statistics of Study Variables for Energy and Petroleum Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	61	.333	.929	.80775	.134950
Gender Diversity	61	.00	.75	.2005	.15232
Occupational Expertise	61	3	11	5.75	1.660
Board Age	61	37	63	52.87	5.351
Board Size	61	3	14	8.25	2.461
Board Tenure	61	1	3	2.84	.553
Board Ownership	75	.00000	.74550	.1913439	.27522676
Board Tools	61	2	4	3.48	.698
Board Meetings	61	4	39	9.11	7.931
No. Board Committees	61	0	7	3.69	2.126
Committees Meetings	61	0	86	20.85	19.891
Board Remuneration	61	-1.56550	1.88935	.0686603	.42918613
Profit Before Tax million	61	-4112.1930	160982.0000	13131.427820	35996.0426157
Investments	61	.1268	.9403	.525818	.2599554
Leverage	61	.0070	8.6156	1.077152	1.3770028
Liquidity	61	-.5937	.2755	.078849	.1227822
GDP Growth Rate	75	.2000	8.4000	4.873333	2.2057868
Interest Rate	75	12.2500	19.8533	15.068252	2.2626376
Inflation Rate	75	.9000	15.2000	7.421333	3.5069388
ROA	61	-.549	.387	.10349	.139493
Tobin's Q	61	-1.7528	2.4014	.954707	.5250935
Valid N (listwise)	61				

a. sector = Energy and Petroleum

Source: Author, 2018

Descriptive Statistics of Study Variables for Insurance Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	57	.778	1.000	.90479	.061791
Gender Diversity	57	.00	.33	.1571	.11863
Occupational Expertise	57	4	10	6.88	1.103
Board Age	57	49	64	54.94	3.139
Board Size	57	5	14	9.09	1.845
Board Tenure	57	1	3	2.05	1.007
Board Ownership	90	.00000	.60003	.1063880	.18572452
Board Tools	57	3	5	3.63	.522
Board Meetings	57	2	26	6.21	4.487
No. Board Committees	57	0	8	3.67	1.562
Committees Meetings	57	0	33	14.60	6.758
Board Remuneration	57	-2.91770	.98607	.0242863	.42590259
Profit Before Tax million	57	-1721.0660	4562.7050	1461.057351	1447.4942933
Investments	57	.6403	.9521	.794401	.0768580
Leverage	57	.3202	3.1707	1.287142	.7455994
Liquidity	57	.0961	.8090	.522386	.1723658
GDP Growth Rate	90	.2000	8.4000	4.873333	2.2033070
Interest Rate	90	12.2500	19.8533	15.068252	2.2600939
Inflation Rate	90	.9000	15.2000	7.421333	3.5029962
ROA	57	-.134	.257	.10266	.078980
Tobin's Q	57	.6258	1.8062	1.128378	.2685156
Valid N (listwise)	57				

a. sector = Insurance

Source: Author, 2018

Descriptive Statistics of Study Variables for Investment Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	43	.600	.923	.80981	.096688
Gender Diversity	43	.00	.33	.1332	.11231
Occupational Expertise	43	3	10	5.72	1.563
Board Age	43	46	61	53.14	4.010
Board Size	43	5	13	7.70	1.597
Board Tenure	43	2	3	2.91	.294
Board Ownership	75	.00000	.78000	.1604033	.21458152
Board Tools	43	3	4	3.51	.506
Board Meetings	43	4	14	5.56	2.472
No. Board Committees	43	2	5	2.95	.844
Committees Meetings	43	2	21	8.21	4.799
Board Remuneration	41	-.11162	1.85734	.1020032	.30249472
Profit Before Tax million	43	-2956.0720	10872.6930	857.936395	2299.2622529
Investments	42	.1901	.9816	.668884	.2516859
Leverage	42	.0031	15.3579	.980703	2.3987590
Liquidity	42	-.2982	.6003	.082978	.1555701
GDP Growth Rate	75	.2000	8.4000	4.873333	2.2057868
Interest Rate	75	12.2500	19.8533	15.068252	2.2626376
Inflation Rate	75	.9000	15.2000	7.421333	3.5069388
ROA	42	-.322	.373	.07244	.172495
Tobin's Q	42	.4789	1.7555	1.066798	.3291384
Valid N (listwise)	43				

a. sector = Investment

Source: Author, 2018

Descriptive Statistics of Study Variables for Investment Services Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	3	.875	.909	.89767	.019630
Gender Diversity	3	.18	.25	.2045	.03938
Occupational Expertise	3	6	8	7.33	1.155
Board Age	3	50	52	51.00	1.000
Board Size	3	8	11	10.00	1.732
Board Tenure	3	3	3	3.00	.000
Board Ownership	15	.00000	.00049	.0000774	.00016759
Board Tools	3	4	4	4.00	.000
Board Meetings	3	7	10	8.67	1.528
No. Board Committees	3	7	9	7.67	1.155
Committees Meetings	3	23	38	31.00	7.550
Board Remuneration	3	.08332	.93210	.3877552	.47251704
Profit Before Tax million	3	233.1150	441.8110	352.140000	107.3999446
Investments	3	.4988	.5323	.515903	.0167521
Leverage	3	.0808	.0921	.084576	.0064748
Liquidity	3	.3914	.4328	.412971	.0207404
GDP Growth Rate	15	.2000	8.4000	4.873333	2.2679338
Interest Rate	15	12.2500	19.8533	15.068252	2.3263864
Inflation Rate	15	.9000	15.2000	7.421333	3.6057452
ROA	3	.232	.524	.38465	.146884
Tobins Q	3	.0748	.0843	.077959	.0054856
Valid N (listwise)	3				

a. sector = Investment Services

Source: Author, 2018

Descriptive Statistics of Study Variables Manufacturing Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board Independence	107	0.6	1.25	0.82	0.09
Gender Diversity	107	0	0.63	0.15	0.14
Occupational Expertise	107	2	9	6.12	1.79
Board Age	107	47.6	74	57.64	5.83
Board Size	107	3	12	8.55	2.44
Board Tenure	107	1	3	2.02	0.93
Board Ownership	107	0	0.48	0.1	0.13
Board Tools	107	2	4	3.4	0.55
Board Meeting	107	3	8	4.55	1.01
No. Board Committees	107	0	6	2.9	1
Committees Meeting	105	0	24	8.36	4.74
Board Remuneration	107	-5.73	0.99	0	0.58
Investments	107	0.15	0.93	0.52	0.16
Leverage	107	0.03	0.19	0.36	0.42
Liquidity	107	-0.37	0.51	0.19	0.17
GDP growth Rate	135	0.2	8.4	4.85	2.19
Interest Rate	135	12.25	9.85	15.07	2.26
Inflation Rate	135	0.9	15.2	7.43	3.5
ROA	107	-0.53	0.76	0.29	0.27
Tobin's q	107	0.11	0.19	1.83	1.25

a. sector = Manufacturing

Source: Author, 2018

Descriptive Statistics of Study Variables Telecommunication Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	9	.818	.909	.88333	.025377
Gender Diversity	9	.33	.44	.4018	.05169
Occupational Expertise	9	7	9	7.89	.782
Board Age	9	53	57	55.17	1.020
Board Size	9	9	11	9.44	.882
Board Tenure	9	3	3	3.00	.000
Board Ownership	15	.00000	.00016	.0000739	.00006512
Board Tools	9	3	4	3.78	.441
Board Meetings	9	4	4	4.00	.000
No. Board Committees	9	2	2	2.00	.000
Committees Meetings	9	8	9	8.33	.500
Board Remuneration	9	.00006	.02006	.0092560	.00597429
Profit Before Tax million	9	15304.0200	55762.5050	28254.850889	14301.7003976
Investments	9	.7832	.8267	.805738	.0152935
Leverage	9	.0535	.2481	.144514	.0758429
Liquidity	9	-.1991	-.0739	-.120175	.0415651
GDP Growth Rate	15	.2000	8.4000	4.873333	2.2679338
Interest Rate	15	12.2500	19.8533	15.068252	2.3263864
Inflation Rate	15	.9000	15.2000	7.421333	3.6057452
ROA	9	.285	.701	.45378	.139777
Tobin's Q	9	1.4563	4.6879	2.978635	1.2678395
Valid N (listwise)	9				

a. sector = Telecommunication

Source: Author, 2018

Descriptive Statistics of Study Variables Real Estate Sector

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Board independence	1	.750	.750	.75000	.
Gender Diversity	1	.13	.13	.1250	.
Occupational Expertise	1	6	6	6.00	.
Board Age	1	56	56	55.55	.
Board Size	1	8	8	8.00	.
Board Tenure	1	3	3	3.00	.
Board Ownership	15	.00000	.00340	.0002267	.00087788
Board Tools	1	3	3	3.00	.
Board Meetings	1	4	4	4.00	.
No. Board Committees	1	1	1	1.00	.
Committees Meetings	1	4	4	4.00	.
Board Remuneration	1	.07663	.07663	.0766323	.
Profit Before Tax million	1	106.6000	106.6000	106.600000	.
Investments	1	.6622	.6622	.662246	.
Leverage	1	.0215	.0215	.021506	.
Liquidity	1	.3008	.3008	.300796	.
GDP Growth Rate	15	.2000	8.4000	4.873333	2.2679338
Interest Rate	15	12.2500	19.8533	15.068252	2.3263864
Inflation Rate	15	.9000	15.2000	7.421333	3.6057452
ROA	1	.032	.032	.03207	.
Tobin's Q	1	1.0728	1.0728	1.072755	.
Valid N (listwise)	1				

a. sector = Real Estate

Source: Author, 2018

Appendix VIII: Intervening Effect of Financial Characteristics on Relationship between CG and FP for Sectoral Firms

Appendix VIII (a) Agricultural Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000787	0.158	-0.0000202	0.002
_cons	0.1724257	0.000	1.2159	0.003
	Wald chi2(1)= 2.00		Wald chi2(1) = 0.02	
	Prob > chi2 = 0.1577		Prob > chi2 =0.9001	
	R-sq: = 0.0545		R-sq: = 0.0126	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		Leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000118	0.646	-0.0000122	0.745	-0.0000166	0.527
Cons	0.7041394	0.00	0.2753321	0.00	0.1897765	0.00
	Wald chi2(1)= 0.21		Wald chi2(1) = 0.11		Wald chi2(1)= 0.40	
	Prob > chi2 = 0.6456		Prob > chi2=0.7449		Prob > chi2 =0.5267	
	R-sq: = 0.0295		R-sq:= 0.0002		R-sq:= 0.0046	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	-0.939179	0.004	-3.326821	0.002
Leverage	-0.1568998	0.258	-0.6173152	0.096
Liquidity	-0.0452337	0.899	-1.378709	0.0215
_cons	0.9070948	0.003	3.989556	0.00
	Wald chi2(3) = 35.51		Wald chi2(3) = 19.77	
	Prob > chi2 = 0.0000		Prob > chi2 = 0.0002	
	R-sq:= 0.264		R-sq:= 0.2844	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA			Tobin's Q	
	Coef.	P>|z|		Coef.	P>|z|
CG	0.0000781	0.097		0.0000898	0.558
investments	0.6815775	0.065		3.428609	0.002
leverage	0.1553226	0.326		0.7722257	0.072
liquidity	0.2227522	0.584		1.464623	0.211
_cons	0.6550839	0.064		4.139829	0.00
	Wald chi2(4) = 35.47			Wald chi2(4)= 21.06	
	Prob > chi2 = 0.0000			Prob > chi2= 0.0003	
	R-sq: = 0.2901			R-sq: = 0.3213	

Source: Author, 2018

Appendix VIII (b) Automobiles and Accessories Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA			Tobin's Q	
	Coef.	P>|z|		Coef.	P>|z|
CG	0.0000156	0.55		0.0000871	0.136
_cons	0.026282	0.622		0.9947321	0.00
	Wald chi2(1) = 0.36			Wald chi2(1)= 2.23	
	Prob > chi2 = 0.5502			Prob > chi2= 0.1355	
	R-sq:= 0.0472			R-sq: = 0.0464	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		Leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000298	0.068	-0.0001858	0.002	0.0000315	0.105
cons	0.4171506	0.00	0.8626917	0.04	0.1812093)	0.397
	Wald chi2(1) = 3.33		Wald chi2(1) = 9.38		Wald chi2(1)= 2.63	
	Prob > chi2 = 0.0680		Prob > chi2 = 0.0022		Prob > chi2 = 0.1050	
	R-sq:= 0.0194		R-sq:= 0.0619		R-sq: 0.007	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	
Investments	-0.5131191	0.200	-0.286712	0.746
Leverage	-0.0639552	0.350	-0.2945063	0.052
Liquidity	-0.1366002	0.641	-0.3964824	0.541
_cons	0.3267599	0.194	1.45278	0.009
	Wald chi2(3)= 4.72		Wald chi2(3) = 4.58	
	Prob > chi2 =0.1936		Prob > chi2 = 0.2053	
	R-sq: = 0.1032		R-sq:= 0.1005	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000418	0.120	0.0000499	0.411
Investments	-0.4773526	0.226	-0.2439442	0.784
leverage	-0.0275472	0.699	-0.2509714	0.119
liquidity	-0.0535651	0.855	-0.2971931	0.653
_cons	0.2506461	0.320	1.361767	0.017
	Wald chi2(4) = 7.29		Wald chi2(4)= 5.22	
	Prob > chi2= 0.1212		Prob > chi2 =0.2657	
	R-sq:= 0.1542		R-sq:= 0.1154	

Source: Author, 2018

Appendix VIII (c) Banking Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000000125	0.077	0.0000000165	0.776
Cons	0.0964871	0.00	1.327775	0.00
	Wald chi2(1)= 3.13		Wald chi2(1)=0.08	
	Prob > chi2 = 0.0768		Prob > chi2 = 0.7757	
	R-sq:= 0.0346		R-sq:=0.0422	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		Leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000000643	0.680	0.000000574	0.00	0.0000000179	0.306
cons	0.7968143	0.00	2.202304	0.00	0.3509451	0.00
	Wald chi2(1)= 0.17		Wald chi2(1) = 12.87		Wald chi2(1)=1.05	
	Prob > chi2 = 0.6797		Prob > chi2 =0.0003		Prob > chi2=0.3062	
	R-sq: = 0.0037		R-sq: = 0.1297		R-sq: =0.1604	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
investments	0.0095298	0797	-0.2403411	0.441
leverage	-0.015276	0.00	-0.1180813	0.00
liquidity	0.0747032	0.039	-0.4084898	0.179
_cons	0.096289	0.005	1.910741	0.00
	Wald chi2(3)=23.28		Wald chi2(3) =19.27	
	Prob > chi2= 0.0000		Prob > chi2=0.0002	
	R-sq: = 0.2514		R-sq:= 0.188	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00000000351	0.619	0.0000000511	0.394
investments	0.0105034	0.778	-0.2262029)	0.474
leverage	-0.014635	0.00	-0.1300023	0.00
Liquidity	0.0732549	0.044	-0.3783539	0.221
_cons	0.0948103	0.007	1.905025	0.00
	Wald chi2(4) = 23.13		Wald chi2(4) = 20.65	
	Prob > chi2 = 0.0001		Prob > chi2= 0.0004	
	R-sq:= 0.2506		R-sq:= 0.2019	

Source: Author, 2018

Appendix VIII (d) Commercial Services Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000571	0.181	-0.00000669	0.592
Cons	0.0795399	0.404	1.788119	0.00
	Wald chi2(1) = 1.79		Wald chi2(1) = 0.29	
	Prob > chi2=0.1808		Prob > chi2 =0.5917	
	R-sq:= 0.0223		R-sq = 0.0035	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00000241	0.199	-0.0000202	0.606	0.00000425	0.16
_cons	0.5448731	0.00	0.8496471	0.026	0.0288431	0.792
	Wald chi2(1)= 1.65		Wald chi2(1)= 0.27		Wald chi2(1) = 1.97	
	Prob > chi2 =0.1992		Prob > chi2=0.6057		Prob > chi2 =0.1603	
	R-sq:= 0.0649		R-sq: = 0.0290		R-sq:= 0.0280	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	0.0586867	0.718	-2.387888	0.00
Leverage	-0.0045685	0.540	-0.0053664	0.818
Liquidity	0.7890206	0.00	-1.025456	0.011
_cons	0.0400794	0.688	3.097883	0.000
	Wald chi2(3) = 60.53		Wald chi2(3)=16.90	
	Prob > chi2 = 0.0000		Prob > chi2=0.0007	
	R-sq: =0.2556		R-sq:= 0.2148	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000189	0.577	-0.0000104	0.381
Investments	0.0628082	0.716	-2.450113	0.00
Leverage	-0.0042175	0.572	-0.0057906	0.804
Liquidity	0.7755681	0.00	-1.007062	0.013
_cons	0.0312553	0.290	3.170334	0.00
	Wald chi2(4) = 54.72		Wald chi2(4) =17.55	
	Prob > chi2 = 0.0000		Prob > chi2 =0.0015	
	R-sq:= 0.5304		R-sq: = 0.2338	

Source: Author, 2018

Appendix VIII (e) Construction and Allied Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000225	0.403	0.0001825	0.157
_cons	0.1982881	0.00	1.603964	0.00
	Wald chi2(1) = 0.70		Wald chi2(1)=2.01	
	Prob > chi2 = 0.4031		Prob > chi2 =0.1566	
	R-sq:= 0.0126		R-sq:= 0.0356	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0000244	0.155	-0.000089	0.079	0.0000217	0.315
Cons	0.5704946	0.000	0.4977846	0.000	0.1485131	0.000
	Wald chi2(1) = 2.02		Wald chi2(1)= 3.08		Wald chi2(1) = 1.01	
	Prob > chi2=0.1548		Prob > chi2 =0.0793		Prob > chi2 = 0.3151	
	R-sq: = 0.0322		R-sq:= 0.0548		R-sq:= 0.0185	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	-0.0504912	0.703	-0.3913973	0.687
Leverage	-0.303095	0.000	-1.196429	0.000
Liquidity	0.0677923	0.719	-0.7469801	0.498
Cons	0.3645788	0.001	2.559632	0.001
	Wald chi2(3)= 45.05		Wald chi2(3)=16.94	
	Prob > chi2 =0.0000		Prob > chi2= 0.0007	
	R-sq:= 0.2726		R-sq:= 0.1297	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000409	0.986	0.0000143	0.907
Investments	-0.0417025	0.762	0.0097595	0.989
Leverage	-0.3062248	0.000	-1.393273	0.000
Liquidity	0.0733548	0.704	-0.5520489	0.595
_cons	0.3614243	0.002	2.380464	0.000
	Wald chi2(4)= 44.36		Wald chi2(4)=26.69	
	Prob > chi2=0.0000		Prob > chi2 = 0.0000	
	R-sq:= 0.2756		R-sq:= 0.1225	

Source: Author, 2018

Appendix VIII (f) Energy and Petroleum Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000000498	0.480	-0.000000186	0.474
_cons	0.1150469	0.000	0.86147	0.001
	Wald chi2(1)= 0.50		Wald chi2(1) = 0.51	
	Prob > chi2=0.4802		Prob > chi2 = 0.4740	
	R-sq:= 0.0309		R-sq:= 0.0206	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0000000527	0.33	0.000000403	0.539	0.0000000485	0.434
_cons	0.5692381	0.000	1.147702	0.000	0.0606072	0.082
	Wald chi2(1)=0.95		Wald chi2(1)= 0.38		Wald chi2(1) = 0.61	
	Prob > chi2 = 0.3296		Prob > chi2 = 0.5387		Prob > chi2 =0.4336	
	R-sq:= 0.0291		R-sq: = 0.0554		R-sq:= 0.0403	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	0.0476577	0.626	0.3284866	0.595
Leverage	-0.0363516	0.002	0.0154481	0.716
Liquidity	0.3026211	0.062	0.4772276	0.406
_cons	0.0986666	0.140	0.5999884	0.191
	Wald chi2(3) = 17.91		Wald chi2(3)= 0.78	
	Prob > chi2 = 0.0005		Prob > chi2=0.8533	
	R-sq:= 0.2509		R-sq: = 0.0204	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0000000959	0.129	0.0000000531	0.841
Investments	0.0529899	0.555	-0.5875223	0.118
Leverage	-0.0407923	0.001	-0.0123649	0.807
Liquidity	0.2953808	0.078	0.4177652	0.552
_cons	0.1099023	0.052	1.236473	0.000
	Wald chi2(4)= 23.04		Wald chi2(4) = 7.92	
	Prob > chi2 = 0.0001		Prob > chi2 = 0.0947	
	R-sq:= 0.2540		R-sq:= 0.1239	

Source: Author, 2018

Appendix VIII (g) Insurance Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0000000807	0.729	-0.000000358	0.717
Cons	0.1069993	0.000	1.127974	0.000
	Wald chi2(1)= 0.12		Wald chi2(1)= 0.13	
	Prob > chi2 = 0.7288		Prob > chi2=0.7169	
	R-sq:= 0.0133		R-sq:= 0.0178	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		Leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000034	0.218	0.0000033	0.161	0.00000024	0.572
Cons	0.7947996	0.000	1.157378	0.000	0.4865115	0.000
	Wald chi2(1)= 1.52		Wald chi2(1)= 1.96		Wald chi2(1)= 0.32	
	Prob > chi2 = 0.2175		Prob > chi2 =0.1611		Prob > chi2 = 0.5715	
	R-sq: = 0.0707		R-sq: = 0.0491		R-sq:= 0.0384	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	-0.149384	0.201	-0.843324	0.063
Leverage	-0.0017817	0.894	-0.1606694	0.001
Liquidity	0.1036282	0.138	-0.1850366	0.456
_cons	0.1767763	0.106	2.083617	0.000
	Wald chi2(3) = 4.07		Wald chi2(3)= 11.45	
	Prob > chi2=0.2542		Prob > chi2=0.0095	
	R-sq:= 0.1178		R-sq:= 0.2754	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.0000000195	0.938	0.000000869	0.339
Investments	-0.1330531	0.285	-0.8512742	0.060
Leverage	-0.0065431	0.643	-0.1914445	0.000
Liquidity	0.0812527	0.248	-0.2633693	0.305
Cons	0.1804763	0.117	2.153714	0.000
	Wald chi2(4) = 2.86		Wald chi2(4) = 14.93	
	Prob > chi2 =0.5815		Prob > chi2= 0.0048	
	R-sq: = 0.0999		R-sq:= 0.3223	

Source: Author, 2018

Appendix VIII (h) Investment Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000448	0.693	-0.00000454	0.131
Cons	0.0109338	0.846	1.194872	0.000
	Wald chi2(1)= 0.16		Wald chi2(1)=2.28	
	Prob > chi2 = 0.6928		Prob > chi2 =0.1313	
	R-sq:= 0.2556		R-sq:= 0.0564	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		Leverage		liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000926	0.579	0.00000445	0.848	0.000000798	0.61
_cons	0.6179388	0.000	1.52615	0.129	0.0785037	0.07
	Wald chi2(1) = 0.31		Wald chi2(1) = 0.04		Wald chi2(1) = 0.26	
	Prob > chi2 = 0.5789		Prob > chi2 = 0.8481		Prob > chi2 = 0.6100	
	R-sq: = 0.0046		R-sq:= 0.0417		R-sq:= 0.0139	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	0.0692658	0.631	-0.6073097	0.048
Leverage	-0.0041572	0.603	-0.0244534	0.353
Liquidity	0.2307985	0.117	-0.1336485	0.741
_cons	-0.0675157	0.701	1.556889	0.000
	Wald chi2(3) = 5.48		Wald chi2(3)= 5.05	
	Prob>chi2=0.1398		Prob>chi2 =0.1682	
	R-sq:= 0.1303		R-sq: = 0.2428	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000042	0.004	-0.00000106	0.743
Investments	0.1175015	0.403	-0.2947274	0.345
leverage	-0.0049113	0.725	-0.0116249	0.705
Liquidity	0.274392	0.178	-0.2249517	0.615
_cons	-0.0733022	0.516	1.328476	0.000
	Wald chi2(4)=18.26		Wald chi2(4)= 1.69	
	Prob > chi2 =0.0011		Prob > chi2=0.7928	
	R-sq= 0.0324		R-sq: = 0.2810	

Source: Author, 2018

Appendix VIII (i) Manufacturing Sector Intervening Effect Test Results

Step One: RE Regression Results: CG and Firm Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.00000041	0.328	0.000000763	0.748
_cons	0.2671508	0.000	1.759086	0.000
	Wald chi2(1) = 0.96		Wald chi2(1) =0.10	
	Prob > chi2 = 0.3284		Prob > chi2 =0.7480	
	R-sq:= 0.1792		R-sq: = 0.0011	

Source: Author, 2018

Step Two: RE Regression Results: CG and FC Variables

	Investments		leverage		Liquidity	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000115	0.669	-0.000000581	0.310	0.0000000996	0.787
Cons	0.4857441	0.000	0.317861	0.000	0.2023424	0.000
	Wald chi2(1)= 0.18		Wald chi2(1) = 1.03		Wald chi2(1) = 0.07	
	Prob > chi2=0.6687		Prob > chi2=0.3098		Prob > chi2 =0.7865	
	R-sq: = 0.0016		R-sq:= 0.0099		R-sq:= 0.0100	

Source: Author, 2018

Step Three: RE Regression Results: FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
Investments	0.1429539	0.543	-1.20154	0.327
Leverage	-0.1015386	0.019	-1.373143	0.000
Liquidity	0.585227	0.001	-2.499633	0.014
_cons	0.1087855	0.517	3.325503	0.000
	Wald chi2(3)= 53.88		Wald chi2(3)= 28.70	
	Prob > chi2 = 0.0000		Prob > chi2 = 0.0000	
	R-sq:= 0.3597		R-sq:= 0.2099	

Source: Author, 2018

Step Four: RE Regression Results: CG, FC Variables and Performance

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.000000255	0.472	-0.00000031	0.864
Investments	0.0684607	0.778	-2.64502	0.024
Leverage	-0.1596379	0.019	-2.991583	0.000
Liquidity	0.5398929	0.004	-3.385062	0.000
_cons	0.17137	0.336	4.681603	0.000
	Wald chi2(4)= 42.14		Wald chi2(4)=75.45	
	Prob > chi2=0.0000		Prob>chi2 = 0.0000	
	R-sq:= 0.3099		R-sq:= 0.4376	

Source: Author, 2018

Appendix IX: Sectoral Correlation Analysis Results

		Executive Director	Non-Executive Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Ownership	Board Tools
Executive Director	r	1								
Non-Executive Director	r	-.514**	1							
Foreign Director	r	-0.048	.335**	1						
Women Director	r	-.262**	.515**	-.400**	1					
Occupational Expertise	r	-.266**	.909**	.341**	.478**	1				
Board Age	r	.249*	0.028	0.144	0.027	0.137	1			
Board Size	r	-.305**	.967**	.377**	.499**	.938**	0.086	1		
Board Ownership	r	-.413**	0.047	0.007	-0.13	0.005	.209*	-0.061	1	
Board Tools	r	-.370**	.702**	.408**	.275**	.740**	.358**	.695**	.197*	1
Board Meetings	r	-.225*	.564**	.316**	.214*	.612**	.215*	.571**	0.059	.865**
Number of Board Committees	r	-.480**	.618**	.490**	0.135	.548**	.359**	.585**	.524**	.714**
Committees Meetings	r	-.600**	.812**	.290**	.453**	.648**	.202*	.766**	.228*	.727**
Board Remuneration	r	-0.015	0.04	0.072	-0.022	0.005	-0.001	0.041	0.133	0.014
Investments	r	0.046	.254**	0.019	.250*	.331**	-0.073	.315**	-.261**	.482**
Leverage	r	0.047	.232*	.429**	0.039	.250*	0.178	.273**	-0.001	.214*
Liquidity	r	0.103	-.357**	-.255**	-0.154	-.425**	0.067	-.388**	0.013	-.589**
GDP Growth Rate	r	0.076	-0.007	-0.05	0.056	0.053	.341**	0.023	0.014	0.063
Interest Rate	r	0.133	0.035	0.062	0.061	0.061	.331**	0.068	0.036	0.095
Inflation Rate	r	0.032	0.007	-0.031	0.099	0.022	.227*	-0.008	0.023	0.002
ROA	r	-0.049	-0.085	-0.077	-0.075	-0.067	0.143	-0.121	.310**	-0.186
Tobin's Q	r	.249*	-.581**	-.362**	-0.16	-.598**	-.215*	-.595**	-0.188	-.795**
	Sig.	0.011	0	0	0.107	0	0.029	0	0.057	0
	N	103	103	103	103	103	103	103	103	103

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

* Correlation is significant at the 0.05 level (2-tailed).

a sector = Agriculture

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	.443**	1										
Committees Meetings	r	.488**	.833**	1									
Board Remuneration	r	-0.022	0.071	-0.008	1								
Investments	r	.643**	0.014	0.19	-0.12	1							
Leverage	r	0.082	.342**	.268**	-0.103	0.086	1						
Liquidity	r	-.661**	-.292**	-.309**	-0.013	-.861**	-.259**	1					
GDP Growth Rate	r	0.013	0.043	0.064	-0.067	0.027	0.026	0.045	1				
Interest Rate	r	0.032	0.071	0.04	0.077	-0.077	-0.083	0.111	-0.151	1			
Inflation Rate	r	0.005	0.015	0.018	-0.108	0.015	0.045	0.027	-.262**	-0.126	1		
ROA	r	-.237*	0.062	-0.074	0.037	-.504**	-0.143	.447**	0.136	0.012	0.167	1	
Tobin's Q	r	-.778**	-.579**	-.587**	-0.022	-.567**	-.260**	.615**	-0.027	-0.086	0.059	0.141	1
	Sig.	0	0	0	0.824	0	0.008	0	0.788	0.388	0.554	0.156	
	N	103	103	103	101	103	103	103	103	103	103	103	103

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

* Correlation is significant at the 0.05 level (2-tailed).

a sector = Agriculture

		Executive director	Non Exe director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive director	r	1									
Non Exe director	r	-.344*	1								
Foreign Director	r	0.195	0.047	1							
Women Director	r	-0.152	0.114	-0.043	1						
Occupational Expertise	r	.431**	.465**	.445**	-0.146	1					
Board Age	r	-.631**	.370*	0.02	0.286	0.057	1				
Board Size	r	0.105	.780**	0.269	0.041	.605**	0.033	1			
Board Tenure	r	0.238	-0.015	.456**	-0.122	.424**	-.324*	0.18	1		
Board Ownership	r	0.223	-0.14	0.291	-0.057	0.225	-.370*	0.111	.860**	1	
Board Tools	r	-0.049	-0.034	.643**	0.213	-0.024	.310*	0.077	-0.211	-0.119	1
Board Meetings	r	-0.033	-0.162	.338*	-0.072	-0.016	-0.096	-0.104	.548**	.659**	0.169
No. Board Committees	r	-0.205	0.13	0.251	0.172	-0.181	.372*	0.124	-.330*	-0.227	.641**
Committees Meetings	r	-0.056	-0.012	0.286	0.047	-0.05	.385**	-0.019	-.408**	-.437**	.568**
Board Remuneration	r	0.092	0.104	0.041	-0.036	0.036	-0.254	0.01	0.061	-0.021	-0.079
Investments	r	-0.167	0.238	0.029	-0.115	.401**	0.284	0.126	.337*	0.117	-.441**
Leverage	r	0.097	0.226	.360*	-0.053	.370*	0	0.065	-0.008	-0.277	0.089
Liquidity	r	0.088	-0.236	-0.135	0.051	-.458**	-0.171	-0.052	-.319*	-0.063	.364*
GDP Growth Rate	r	-0.256	0.139	0.094	0.064	0.042	.374*	0.115	-0.1	-0.046	0.144
Interest Rate	r	-0.256	0.043	0.174	-0.094	-0.011	.349*	-0.045	-0.117	-0.176	.302*
Inflation Rate	r	0.004	0.198	0.016	-0.048	0.174	0.23	0.125	-0.184	-0.187	0.146
ROA	r	.306*	-.451**	0.235	-.383**	-0.105	-.487**	-0.172	0.272	.366*	0.132
Tobin's Q	r	.368*	-0.203	-0.227	-0.109	0.061	-.436**	0.097	0.167	0.265	-.336*
	Sig.	0.013	0.182	0.134	0.478	0.689	0.003	0.525	0.273	0.079	0.024
	N	45	45	45	45	45	45	45	45	45	45

* Correlation is significant at the 0.05 level (2-tailed).

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

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	0.038	1										
Committees Meetings	r	-0.06	.757**	1									
Board Remuneration	r	-0.008	-0.053	-0.015	1								
Investments	r	-0.021	-.437**	-0.218	0.008	1							
Leverage	r	-0.137	-0.166	0.111	0.21	0.193	1						
Liquidity	r	-0.014	.501**	0.186	-0.196	-.824**	-.526**	1					
GDP Growth Rate	r	0.025	0.134	0.139	-.309*	0.015	0.036	-0.052	1				
Interest Rate	r	-0.02	0.268	.444**	0.2	0.124	-0.153	-0.028	-0.151	1			
Inflation Rate	r	-0.12	0.178	0.139	-0.267	-0.094	0.049	0.153	-0.262	-0.126	1		
ROA	r	0.246	-0.003	-0.097	0.047	-0.288	-0.177	0.254	-0.074	-0.172	-0.016	1	
Tobin's Q	r	0.065	-.311*	-.299*	-0.192	0.002	-.298*	0.073	-0.008	-.350*	-0.174	0.113	1
		0.673	0.037	0.046	0.206	0.988	0.047	0.634	0.958	0.018	0.253	0.462	
		45	45	45	45	45	45	45	45	45	45	45	45

* Correlation is significant at the 0.05 level (2-tailed).

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

a sector = Automobiles and Accessories

		Executive Director	Non Exe Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non Exe Director	r	-.511**	1								
Foreign Director	r	0.111	-0.13	1							
Women Director	r	.203*	-0.022	-.208*	1						
Occupational Expertise	r	-0.148	.389**	.265**	0.061	1					
Board Age	r	-.293**	0.134	.276**	-.303**	.335**	1				
Board Size	r	-0.039	.875**	-0.097	0.098	.367**	-0.011	1			
Board Tenure	r	0.017	0.089	-.247**	0.1	0.067	0.037	0.111	1		
Board Ownership	r	0.089	-0.137	-.358**	-0.149	-.276**	0.12	-0.105	0.139	1	
Board Tools	r	.239**	-0.134	0.139	.176*	-0.12	-0.008	-0.013	-0.104	-0.019	1
Board Meetings	r	.181*	-0.005	-.507**	.196*	-0.051	-.175*	0.106	.256**	.646**	-0.096
No Board Committees	r	-.195*	0.081	0.047	-0.103	.208*	0.163	-0.015	.537**	0.065	-0.005
Committees Meetings	r	-0.077	0.161	-.264**	.164*	.245**	-0.081	0.147	.511**	.164*	-0.08
Board Remuneration	r	-.248**	-0.139	-0.003	-0.06	-0.159	0.01	-.305**	0.023	0.135	-0.026
Investments	r	0.103	-0.054	-0.061	-0.041	-0.026	.184*	-0.008	0.037	0.117	.444**
Leverage	r	-.219**	-0.049	-.189*	0.027	-0.14	-0.04	-.179*	0.025	.535**	-0.02
Liquidity	r	.335**	-.189*	0.046	0.152	0.157	0.06	-0.023	-0.031	.190*	.192*
GDP Growth Rate	r	0.006	-0.015	-0.07	0.106	0.062	0.103	-0.015	0.005	0.002	0.154
Interest Rate	r	-0.014	0.004	-0.059	0.051	0.023	0.046	0.007	0.015	0.003	.312**
Inflation Rate	r	-0.048	0.158	-0.064	0.003	0.114	0.146	0.157	0.01	0.006	-0.04
ROA	r	.214*	.175*	0.123	-0.059	.187*	0.144	.330**	.212*	-.281**	0.098
Tobin's Q	r	.169*	-0.032	0.001	-0.057	-0.07	-.191*	0.057	0.116	-0.157	0.08
	N	143	143	143	143	143	143	143	143	143	143

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

* Correlation is significant at the 0.05 level (2-tailed).

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	.196*	1										
Committees Meetings	r	.543**	.711**	1									
Board Remuneration	r	-0.081	0.083	0.024	1								
Investments	r	-0.012	0.137	-0.044	-0.002	1							
Leverage	r	.266**	0.062	0.111	.255**	-0.091	1						
Liquidity	r	0.151	0.102	0.057	-.232**	0.137	0.067	1					
GDP Growth Rate	r	0.022	0.04	0.102	-0.081	0.138	-.165*	0.111	1				
Interest Rate	r	-0.022	-0.022	-0.068	-.209*	0.164	.189*	-0.024	-0.151	1			
Inflation Rate	r	0.051	-0.007	0	0.031	0.144	-0.138	0.007	-.262**	-0.126	1		
ROA	r	-.194*	0.006	-0.119	-.246**	0.11	-.489**	0.099	0.112	0.112	.171*	1	
Tobin's Q	r	-0.109	0.043	-0.042	-0.107	0.036	-.445**	-0.062	-0.004	-0.067	-0.109	0.151	1
	N	143	143	143	143	141	143	143	143	143	143	143	143

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

* Correlation is significant at the 0.05 level (2-tailed).

a sector = Banking

		Executive Director	Non-Executive Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non-Executive Director	r	-.474**	1								
Foreign Director	r	-.223*	.750**	1							
Women Director	r	-.333**	-0.021	-.247*	1						
Occupational Expertise	r	-.240*	.886**	.815**	-0.028	1					
Board Age	r	-.490**	.493**	.314**	0.075	.321**	1				
Board Size	r	-.267**	.973**	.774**	-0.119	.913**	.407**	1			
Board Tenure	r	.540**	-.629**	-.388**	0.159	-.499**	-.270**	-.565**	1		
Board Ownership	r	-.260**	0.087	-.270**	0.046	-0.026	-0.14	0.036	-.625**	1	
Board Tools	r	.217*	0.123	0.053	-.224*	.202*	-0.129	.199*	-0.111	.202*	1
Board Meetings	r	-0.105	0.166	-0.182	0.062	0	.255*	0.15	-.288**	.409**	-0.098
No. of Board Committees	r	-.453**	.473**	.373**	0.169	.492**	0.066	.400**	-.289**	-0.073	-0.034
Committees Meetings	r	-.287**	.265**	0.128	.322**	.299**	0.006	.205*	0.081	-0.114	-0.121
Board Remuneration	r	.229*	0.07	0.082	-0.188	0.117	-0.184	0.137	-0.111	0.052	0.153
Investments	r	0.098	-0.005	-0.159	0.174	-0.066	.473**	-0.001	.378**	-.298**	-.349**
Leverage	r	0.055	0.009	-0.067	0.127	0.106	0.04	0.022	-0.035	0.122	0.03
Liquidity	r	-0.098	0.19	.417**	-.366**	.271**	-0.178	.199*	-.211*	0.01	.445**
GDP Growth Rate	r	-0.149	0.06	-0.085	0.09	-0.01	0.134	0.013	-0.029	0.066	.200*
Interest Rate	r	-0.1	0.044	-0.038	.220*	0.012	0.083	0.024	-0.072	0.175	0.08
Inflation Rate	r	-0.057	-0.009	-0.011	-0.052	-0.001	0.112	-0.007	-0.009	0.011	.295**
ROA	r	-0.076	.227*	.379**	-.203*	.301**	-.242*	.235*	-0.081	-0.13	.330**
Tobin's Q	r	0.055	0.19	.265**	-0.117	.279**	-.295**	.228*	-0.127	-0.133	.215*
	N	101	101	101	101	101	101	101	101	101	101

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

* Correlation is significant at the 0.05 level (2-tailed).

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	-.216*	1										
Committees Meetings	r	-0.151	.748**	1									
Board Remuneration	r	0.04	-0.123	-.284**	1								
Investments	r	.199*	-.317**	-0.012	-0.131	1							
Leverage	r	0.005	-0.05	-0.003	-0.019	0.153	1						
Liquidity	r	-.400**	.305**	0.091	0.084	-.649**	-0.097	1					
GDP Growth Rate	r	0.016	0.059	0.063	-0.083	0.071	0.019	0.065	1				
Interest Rate	r	-0.024	0.039	0.039	-0.119	-0.031	0.139	0.106	-0.151	1			
Inflation Rate	r	-0.066	-0.006	-0.079	0.049	-0.027	0.053	0.107	-.262**	-0.126	1		
ROA	r	-.465**	.369**	.229*	0.078	-.428**	-0.128	.723**	0.053	-0.078	0.09	1	
Tobin's Q	r	-.287**	.431**	.248*	0.178	-.529**	-0.155	.317**	0.085	-0.121	-0.079	.443**	1
	N	101	101	101	101	101	101	101	101	101	101	101	101

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

* Correlation is significant at the 0.05 level (2-tailed).

a sector = Commercial and Services

		Executive Director	Non Exe Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non Exe Director	r	-.290*	1								
Foreign Director	r	.468**	.548**	1							
Women Director	r	.339**	.409**	.603**	1						
Occupational Expertise	r	.422**	.708**	.897**	.638**	1					
Board Age	r	-0.201	0.185	0.194	0.005	0.004	1				
Board Size	r	.331**	.808**	.829**	.612**	.958**	0.059	1			
Board Tenure	r	.608**	-.350**	.265*	0.106	0.12	-0.019	0.029	1		
Board Ownership	r	-.626**	.359**	-.273*	-0.114	-0.128	0.048	-0.031	-.997**	1	
Board Tools	r	-0.093	0.059	0.052	0.167	-0.014	.525**	0.001	0.084	-0.071	1
Board Meetings	r	-.606**	.305**	-.246*	-0.149	-0.164	.247*	-0.073	-.767**	.781**	0.088
No Board Committees	r	-.799**	.429**	-0.21	-.280*	-0.154	.365**	-0.07	-.603**	.625**	0.175
Committees Meetings	r	-.841**	.258*	-.435**	-.270*	-.380**	.250*	-.264*	-.724**	.735**	.252*
Board Remuneration	r	.241*	-0.199	-0.055	0.009	-0.048	0.009	-0.048	0.105	-0.109	0.061
Investments	r	-0.069	.595**	.520**	0.203	.503**	0.163	.544**	-.438**	.448**	-0.212
Leverage	r	-0.219	-0.138	-.357**	-.415**	-.354**	.259*	-.272*	-.279*	.304**	0.193
Liquidity	r	-0.035	-0.165	-.236*	0.078	-0.116	-.382**	-0.184	0.156	-0.177	0.023
GDP Growth Rate	r	-0.006	0.075	0.069	-0.006	0.048	.369**	0.07	0	0.006	.238*
Interest Rate	r	0.009	-0.034	0.096	0.148	-0.034	.343**	-0.028	0	0.005	.319**
Inflation Rate	r	0.004	-0.02	0.073	-0.008	-0.013	.260*	-0.017	0	0.001	0.11
ROA	r	0.103	0.053	0.194	.352**	0.172	-0.163	0.115	0.126	-0.156	-0.013
Tobin's Q	r	0.092	.271*	.395**	.367**	.346**	-0.038	.324**	.236*	-.246*	-.255*
	N	75	75	75	75	75	75	75	75	75	75

* Correlation is significant at the 0.05 level (2-tailed).

a sector = Construction and Allied

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	.598**	1										
Committees Meetings	r	.648**	.850**	1									
Board Remuneration	r	-0.162	-0.195	-0.148	1								
Investments	r	.378**	0.208	0.11	-0.12	1							
Leverage	r	.319**	.425**	.366**	0.083	0.017	1						
Liquidity	r	-0.187	-0.114	-0.081	-0.108	-.719**	-.333**	1					
GDP Growth Rate	r	0.011	0.112	0.059	0.187	0.048	-0.005	-0.167	1				
Interest Rate	r	0.101	0.097	0.125	-0.167	0.099	.228*	-0.186	-0.151	1			
Inflation Rate	r	-0.027	0.003	0.036	0.181	0.014	-0.034	-0.144	-.262*	-0.126	1		
ROA	r	-.250*	-.329**	-0.149	0.17	-0.103	-.615**	.292*	0.024	-0.227	0.155	1	
Tobin's Q	r	-.318**	-0.177	-0.213	0.03	0.071	-.532**	0.092	0.147	-.358**	0.081	.550**	1
	N	75	75	75	74	75	75	75	75	75	75	75	75

a sector = Construction and Allied

		Executive Director	Non Exe Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non Exe Director	r	-.436**	1								
Foreign Director	r	.438**	-.587**	1							
Women Director	r	-0.139	.474**	-.510**	1						
Occupational Expertise	r	0.035	.690**	-0.091	.324*	1					
Board Age	r	-0.035	.366**	-.586**	.439**	.311*	1				
Board Size	r	-0.217	.973**	-.525**	.478**	.758**	.388**	1			
Board Tenure	r	-.505**	0.034	-.450**	0.11	-.408**	-0.021	-0.092	1		
Board Ownership	r	-.445**	.775**	-.878**	.656**	.383**	.571**	.726**	0.235	1	
Board Tools	r	-0.189	.446**	-.286*	.391**	.491**	.470**	.436**	-0.227	.325*	1
Board Meetings	r	-.339**	.513**	-.678**	0.232	0.098	.287*	.470**	0.164	.562**	.378**
No. of Board Committees	r	-0.143	.703**	-.604**	.466**	.502**	.584**	.725**	-0.243	.683**	.630**
Committees Meetings	r	-.262*	.635**	-.661**	.460**	.337**	.478**	.622**	-0.005	.697**	.487**
Board Remuneration	r	0.126	-0.121	0.068	-0.106	-0.034	-0.016	-0.099	0.005	-0.095	-0.096
Investments	r	-0.214	.736**	-.707**	.610**	.537**	.531**	.744**	-0.151	.882**	.407**
Leverage	r	-0.1	0.122	-0.109	-0.083	0.051	0.126	0.107	-0.105	0.095	0.006
Liquidity	r	0.012	-.418**	.362**	-.295*	-.388**	-.360**	-.450**	0.183	-.463**	-.361**
GDP Growth Rate	r	0.021	0.045	-0.063	0.198	0.116	0.188	0.054	-0.068	0.088	.304*
Interest Rate	r	0.052	0.018	0.101	0.183	0.242	0.142	0.033	-0.234	0.069	.399**
Inflation Rate	r	-0.011	0.142	-0.087	0.111	0.106	.254*	0.152	0.014	0.103	0.049
ROA	r	.268*	-.388**	.326*	-0.207	-0.196	-0.249	-.352**	-0.185	-.337**	-.273*
Tobin's Q	r	-0.222	-.363**	-0.035	-.268*	-.508**	-.266*	-.451**	.541**	-0.169	-.459**
	N	61	61	61	61	61	61	61	61	61	61

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

a sector = Energy and Petroleum

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	.673**	1										
Committees Meetings	r	.764**	.831**	1									
Board Remuneration	r	-0.082	-0.03	-0.078	1								
Investments	r	.514**	.735**	.670**	-0.175	1							
Leverage	r	-0.016	0.035	-0.078	0.033	0.143	1						
Liquidity	r	-.260*	-.457**	-.366**	0.107	-.595**	-.307*	1					
GDP Growth Rate	r	-0.053	0.175	0.106	0.201	0.032	-0.178	-0.011	1				
Interest Rate	r	-0.206	0.115	-0.013	-0.224	0.13	0.162	-.300*	-0.151	1			
Inflation Rate	r	0.109	0.193	0.155	-0.047	0.019	-0.157	-0.079	-.262*	-0.126	1		
ROA	r	-.263*	-.306*	-0.198	0.223	-0.228	-.453**	.364**	0.099	-0.211	-0.101	1	
Tobin's Q	r	-0.116	-.485**	-.264*	0.013	-.337**	-0.106	.275*	-0.081	-0.23	-0.15	0.095	1
	N	61	61	61	61	61	61	61	61	61	61	61	61

a sector = Energy and Petroleum

		Executive Director	Non Exe Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non Exe Director	r	-0.17	1								
Foreign Director	r	-.334*	-.385**	1							
Women Director	r	.268*	.514**	-.730**	1						
Occupational Expertise	r	-0.188	.743**	0.078	0.081	1					
Board Age	r	0	0.043	-0.079	-0.073	0.206	1				
Board Size	r	0.107	.959**	-.485**	.585**	.699**	0.043	1			
Board Tenure	r	.290*	.281*	-.384**	.615**	-0.074	-.405**	.372**	1		
Board Ownership	r	0.253	0.138	-.563**	.358**	-0.089	-0.043	0.216	.529**	1	
Board Tools	r	-0.196	0.096	-0.066	0.195	0.23	.327*	0.016	-0.064	0.102	1
Board Meetings	r	0.221	.276*	-.709**	.487**	-0.031	0.105	.339**	.345**	.657**	0.049
No. of Board Committees	r	0.096	.326*	0.033	-0.211	.577**	.488**	.364**	-.295*	0.107	0
Committees Meetings	r	0.199	.524**	-.400**	0.241	.559**	.374**	.589**	0.132	.493**	0.124
Board Remuneration	r	-0.016	0.076	-0.023	0.176	0.141	-0.036	0.069	-0.07	-0.023	0.196
Investments	r	.460**	-0.091	-.386**	0.173	-0.159	-0.097	0.028	0.198	.530**	-0.043
Leverage	r	-.309*	-.335*	.634**	-.380**	0.009	0.083	-.431**	-.354**	-.487**	0.223
Liquidity	r	0.163	0.087	0.233	-0.079	0.21	-0.139	0.156	.397**	0.183	-0.247
GDP Growth Rate	r	-0.173	0.203	-0.078	0.203	0.151	0.197	0.152	-0.033	0.067	.301*
Interest Rate	r	0.02	0.109	-0.182	.289*	0.088	0.173	0.108	-0.043	0.163	0.232
Inflation Rate	r	-0.157	-0.091	-0.167	0.127	-0.175	-0.098	-0.127	0.031	0.136	-0.086
ROA	r	-0.021	.422**	-.516**	.482**	0.097	-0.145	.420**	.282*	.526**	0.143
Tobin's Q	r	-0.222	-0.195	.344**	-0.17	-0.011	0.027	-0.255	-0.128	-.491**	-0.018
	N	57	57	57	57	57	57	57	57	57	57

* Correlation is significant at the 0.05 level (2-tailed).

a sector = Insurance

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	0.056	1										
Committees Meetings	r	.448**	.780**	1									
Board Remuneration	r	0.002	0.029	0.009	1								
Investments	r	.361**	0.059	0.248	-0.023	1							
Leverage	r	-.538**	-0.215	-.474**	0.129	-.377**	1						
Liquidity	r	-0.181	.318*	.267*	-0.002	-0.057	0.002	1					
GDP Growth Rate	r	-0.095	-0.042	0.028	.323*	-0.1	0.056	-0.066	1				
Interest Rate	r	-0.024	0.07	0.102	-0.139	-0.044	-0.001	-0.029	-0.151	1			
Inflation Rate	r	0.164	-0.162	-0.074	.272*	-0.084	0.119	-0.037	-.262*	-0.126	1		
ROA	r	.547**	-0.022	.269*	0.079	0.141	-.397**	-0.108	0.106	0.185	0.033	1	
Tobin's Q	r	-.297*	-0.003	-0.202	0.092	-.313*	-0.005	0.071	0.144	-0.119	-0.05	-.363**	1
	N	57	57	57	57	57	57	57	57	57	57	57	57

a sector = Insurance

		Executive director	Non Exe director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive Director	r	1									
Non Exe Director	r	-.728**	1								
Foreign Director	r	.c	.c	.c							
Women Director	r	-.540**	.784**	.c	1						
Occupational Expertise	r	-.563**	.893**	.c	.746**	1					
Board Age	r	0.035	-0.087	.c	-0.041	-0.023	1				
Board Size	r	-.571**	.978**	.c	.777**	.900**	-0.094	1			
Board Tenure	r	0.234	-.322*	.c	-.355*	-0.265	-0.285	-.315*	1		
Board Ownership	r	-.557**	0.271	.c	0.175	0.164	-.422**	0.156	.418**	1	
Board Tools	r	0.032	0.254	.c	.415**	.396**	-0.057	.314*	.328*	0.234	1
Board Meetings	r	-.467**	.305*	.c	0.054	0.288	0.245	0.225	-0.025	0.007	-0.062
No. of Board Committees	r	-.486**	.644**	.c	.592**	.820**	0.169	.625**	-0.21	0.113	.448**
Committees Meetings	r	-.650**	.767**	.c	.606**	.782**	0.047	.723**	-.475**	0.058	0.073
Board Remuneration	r	.445**	-0.268	.c	-0.071	-0.126	0.204	-0.19	0.102	-0.289	0.185
Investments	r	-.335*	0.233	.c	0.235	0.163	-0.197	0.179	.609**	.739**	.558**
Leverage	r	-0.129	-0.075	.c	0.048	-0.128	.359*	-0.127	-.575**	-.353*	-.321*
Liquidity	r	.386*	-0.174	.c	-0.192	-0.007	-.331*	-0.093	0.188	-0.016	0.015
GDP Growth Rate	r	-0.091	0.02	.c	-0.099	0.024	.315*	-0.004	-0.101	0.085	0.135
Interest Rate	r	-0.138	0.06	.c	0.098	0.167	0.26	0.03	-0.125	0.131	-0.102
Inflation Rate	r	-0.012	0.023	.c	-0.062	0.096	0.064	0.023	0.054	0.012	0.118
ROA	r	-0.038	.453**	.c	.526**	.541**	-.465**	.530**	0.255	0.117	.608**
Tobin's Q	r	-.517**	.328*	.c	0.031	0.185	-0.285	0.238	-.334*	0.242	-.346*
	N	42	42	42	42	42	42	42	42	42	42

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

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	.367*	1										
Committees Meetings	r	.391**	.761**	1									
Board Remuneration	r	-0.19	-0.043	-0.221	1								
Investments	r	0.091	0.141	-0.085	-0.06	1							
Leverage	r	0.113	0.007	0.142	-0.087	-.445**	1						
Liquidity	r	-.470**	-0.139	-0.143	0.13	-.319*	-.377*	1					
GDP Growth Rate	r	0.146	0.269	0.251	0.018	-0.002	0.107	-0.154	1				
Interest Rate	r	-0.013	0.232	0.149	0.187	-0.14	-0.038	0.14	-0.151	1			
Inflation Rate	r	0.053	0.103	0.009	-0.033	0.097	-0.049	-0.137	-.262*	-0.126	1		
ROA	r	-0.149	.414**	0.271	0.039	.326*	-.329*	0.162	-0.144	-0.154	-0.049	1	
Tobin's Q	r	0.168	0.081	.329*	-.358*	-0.156	0.081	-0.005	0.065	-0.199	0.174	-0.142	1
	N	42	42	42	40	42	42	42	42	42	42	42	42

		Executive director	Non Exe director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Tenure	Board Ownership	Board Tools
Executive director	r	1									
Non Exe director	r	0.101	1								
Foreign Director	r	.514**	0.04	1							
Women Director	r	-0.041	.410**	.211*	1						
Occupational Expertise	r	.614**	.641**	.584**	.209*	1					
Board Age	r	-.207*	-.270**	-.405**	-.473**	-.277**	1				
Board Size	r	.453**	.920**	.227*	.375**	.799**	-.313**	1			
Board Tenure	r	-0.179	0.159	-0.107	.320**	-.222*	-.473**	0.07	1		
Board Ownership	r	-.421**	0.13	-.550**	0.109	-.409**	0.131	-0.058	.378**	1	
Board Tools	r	.286**	-0.048	.303**	0.178	.326**	0.144	0.066	-.311**	-.415**	1
Board Meetings	r	.215*	-0.115	.226*	0.114	0.062	0.028	-0.025	-0.111	-0.106	.363**
No. of Board Committees	r	0.154	.563**	.264**	.487**	.492**	-0.013	.581**	-0.069	-0.076	.283**
Committees Meetings	r	-0.044	.615**	.207*	.489**	.424**	-0.166	.548**	0.009	0.119	0.005
Board Remuneration	r	0.051	-0.015	0.004	-0.054	0.097	-0.004	0.004	-0.059	-0.018	0.043
Investments	r	0.127	.216*	-0.15	-0.055	0.105	.375**	.235*	-0.122	.195*	0.127
Leverage	r	-0.139	.247*	-0.182	.384**	-0.124	-.204*	0.173	0.176	0.07	-0.126
Liquidity	r	-.268**	-.348**	-0.091	-.432**	-0.175	.197*	-.412**	-0.146	-0.119	-0.018
GDP Growth Rate	r	-0.038	-0.036	-0.032	0.148	-0.036	0.042	-0.032	0.047	0.051	0.132
Interest Rate	r	-0.078	-0.11	0.07	.296**	-0.103	-0.113	-0.119	0.041	0.058	0.173
Inflation Rate	r	-0.031	0.092	-0.043	0.065	0.061	0.056	0.082	0.034	0.028	0.174
ROA	r	.434**	-0.062	.380**	-.399**	.453**	.192*	0.113	-.406**	-.318**	.302**
Tobin's Q	r	.444**	0.124	.524**	0.003	.514**	0.014	.286**	-.281**	-0.175	0.184
	N	107	107	107	107	107	107	107	107	107	107

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

		Board Meetings	No. Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. Board Committees	r	0.113	1										
Committees Meetings	r	0.025	.805**	1									
Board Remuneration	r	0.054	-0.06	-0.019	1								
Investments	r	.278**	.256**	0.102	0.148	1							
Leverage	r	-0.14	.307**	0.059	-0.137	0.059	1						
Liquidity	r	-0.153	-.360**	-.228*	0.023	-.592**	-.496**	1					
GDP Growth Rate	r	0.044	0.074	0.034	-0.168	0.005	0.008	-0.02	1				
Interest Rate	r	0.093	0.104	0.038	0.071	-0.008	0.13	-0.133	-0.151	1			
Inflation Rate	r	0.069	0.052	0.022	0.15	-0.074	-0.045	0.036	-.262**	-0.126	1		
ROA	r	0.163	0.125	0.052	0.093	0.07	-.510**	.267**	0.043	-0.125	0.044	1	
Tobin's Q	r	0.147	.304**	.303**	0.038	0.117	-.429**	-0.111	0.141	-0.172	0.066	.617**	1
	N	107	107	105	107	107	107	107	107	107	107	107	107

Appendix X: Data for Thesis Analysis

Firms	Sectors	Year	Executive_Diretor	NonExe_Diretor	Foreign_Director	Board_Independence	Women_Director	GenderDiversity	Occupational_Expertise	Board_Age	Board_Size	Board_Tenure	Board_Ownership	Board_Tools	Board_Meetings	No_Board_Committees	Committees_Meetings	Board_Renumeration_Kshs000'00	Board_Renumeration	ProfitBeforeTaxKshs000	ProfitBeforeTax_million	Investments	Leverage	Liquidity	GDP_GrowthRate	InterestRate
EAAGARDS LTD	1	2002	2	1	1	0.3	0	0.0	2	50.1	3	3	0	2	4	0	0	144	0.02	6391	6.391	0.65	0.14	0.31	0.5	18.34
EAAGARDS LTD	1	2003	2	1	1	0.3	0	0.0	2	51.1	3	3	0	2	4	0	0	144	-0.01	-19783	-19.78	0.75	0.10	0.24	2.9	13.47
EAAGARDS LTD	1	2004	2	1	1	0.3	0	0.0	2	52.1	3	3	0	2	4	0	0	144	0.05	2760	2.76	0.85	0.12	0.14	5.1	12.25
EAAGARDS LTD	1	2005	2	1	1	0.3	0	0.0	2	53.1	3	3	0	2	4	0	0	144	-0.03	-4708	-4.708	0.81	0.14	0.19	5.9	13.16
EAAGARDS LTD	1	2006	2	1	1	0.3	0	0.0	2	54.1	3	3	0	2	4	0	0	240	0.03	9107	9.107	0.87	0.08	0.08	6.3	13.74
EAAGARDS LTD	1	2007	2	1	1	0.3	0	0.0	2	55.1	3	3	0	2	4	0	0	240	-0.08	-2892	-2.892	0.93	0.10	0.10	7	13.32
EAAGARDS LTD	1	2008	2	1	1	0.3	0	0.0	2	56.1	3	3	0	2	4	0	0	240	0.01	42960	42.96	0.86	0.17	0.17	0.2	13.55
EAAGARDS LTD	1	2009	2	1	1	0.3	0	0.0	2	57.1	3	3	0	2	4	0	0	240	0.01	42960	42.96	0.86	0.14	0.14	3.3	13.94
EAAGARDS LTD	1	2010	2	1	1	0.3	0	0.0	2	58.1	3	3	0	2	4	0	0	240	0.01	42960	42.96	0.86	.	.	8.4	14.01
EAAGARDS LTD	1	2011	2	1	1	0.3	0	0.0	2	59.1	3	3	0	2	4	0	0	240	0	101480	101.5	0.79	0.11	0.20	6.1	14.89
EAAGARDS LTD	1	2012	2	1	1	0.3	0	0.0	2	60.1	3	3	0	2	4	0	0	360	0.01	36178	36.18	0.86	0.09	0.14	4.6	19.85
EAAGARDS LTD	1	2013	2	1	1	0.3	0	0.0	3	61.1	3	3	0	3	4	0	0	360	-0	-83223	-83.22	0.98	0.08	0.02	5.7	17.14
EAAGARDS LTD	1	2014	2	1	1	0.3	0	0.0	3	62.1	3	3	0	3	4	0	0	240	-0	-58676	-58.68	0.93	0.07	-0.01	5.3	16.39
EAAGARDS LTD	1	2015	2	1	1	0.3	0	0.0	3	63.1	3	3	0	3	4	0	0	240	-0.01	-25120	-25.12	0.99	0.05	0.00	5.6	18.3
EAAGARDS LTD	1	2016	2	1	1	0.3	0	0.0	3	64.1	3	3	0	3	4	0	0	240	0.02	9691	9.691	0.85	0.05	0.13	5.8	13.66
KAKUZI LTD	1	2002	2	6	5	0.8	0	0.0	5	50.5	8	3	8E-04	3	4	2	3	17161	2.03	8471	8.471	0.65	0.28	0.00	0.5	18.34
KAKUZI LTD	1	2003	2	4	4	0.7	0	0.0	5	51.5	6	3	6E-04	3	4	2	3	25027	-1.27	-19670	-19.67	0.88	0.89	-0.10	2.9	13.47
KAKUZI LTD	1	2004	2	5	5	0.7	0	0.0	5	52.5	7	3	6E-04	3	4	2	3	26591	0.29	92996	93	0.89	0.56	-0.06	5.1	12.25
KAKUZI LTD	1	2005	2	5	5	0.7	0	0.0	5	53.5	7	3	9E-05	3	4	2	3	20439	-0.18	-1E+05	-112.1	0.85	0.62	-0.14	5.9	13.16
KAKUZI LTD	1	2006	2	4	3	0.7	0	0.0	5	54.5	6	3	9E-05	3	4	2	3	15064	0.08	189752	189.8	0.83	0.67	-0.09	6.3	13.74
KAKUZI LTD	1	2007	2	4	3	0.7	0	0.0	5	55.5	6	3	1E-04	3	4	2	3	13978	0.05	270330	270.3	0.86	0.57	-0.04	7	13.32
KAKUZI LTD	1	2008	2	4	3	0.7	0	0.0	5	56.5	6	3	1E-04	3	4	2	3	2215	0.01	390189	390.2	0.83	0.54	0.01	0.2	13.55
KAKUZI LTD	1	2009	2	4	3	0.7	0	0.0	5	57.5	6	3	1E-04	3	4	2	3	890	0	558890	558.9	0.78	0.39	0.07	3.3	13.94
KAKUZI LTD	1	2010	2	4	3	0.7	0	0.0	5	58.5	6	3	1E-04	3	4	2	3	871	0	552934	552.9	0.75	0.26	0.13	8.4	14.01
KAKUZI LTD	1	2011	2	4	3	0.7	0	0.0	5	59.5	6	3	7E-05	3	4	2	3	1379	0	650486	650.5	0.69	0.26	0.22	6.1	14.89
KAKUZI LTD	1	2012	2	5	4	0.7	0	0.0	5	60.5	7	3	7E-05	3	4	2	3	1537	0	479299	479.3	0.65	0.18	0.31	4.6	19.85
KAKUZI LTD	1	2013	3	5	4	0.6	0	0.0	6	61.5	8	3	7E-05	3	4	2	3	1648	0.01	239306	239.3	0.69	0.17	0.28	5.7	17.14
KAKUZI LTD	1	2014	2	6	4	0.8	0	0.0	6	62.5	8	3	7E-05	3	4	2	3	1695	0.01	232799	232.8	0.69	0.15	0.26	5.3	16.39

KAKUZI LTD	1	2015	2	5	3	0.7	0	0.0	5	63.5	7	3	7E-05	3	4	2	3	3258	0	667340	667.3	0.66	0.12	0.25	5.6	18.3
KAKUZI LTD	1	2016	2	6	3	0.8	0	0.0	6	64.5	8	3	7E-05	3	4	2	3	3328	0	757779	757.8	0.60	0.12	0.32	5.8	13.66
KAPCHORUA TEA LTD	1	2002	1	3	3	0.6	0	0.0	3	50.1	5	3	0.01	3	4	3	6	424	-0.02	-18019	-18.02	0.75	0.10	0.03	0.5	18.34
KAPCHORUA TEA LTD	1	2003	1	3	3	0.6	0	0.0	3	51.5	5	3	0.01	3	4	3	7	356	0.01	28204	28.2	0.82	0.25	0.12	2.9	13.47
KAPCHORUA TEA LTD	1	2004	1	3	3	0.6	0	0.0	3	52.9	5	3	0.01	3	3	3	8	356	0.01	56292	56.29	0.79	0.30	0.14	5.1	12.25
KAPCHORUA TEA LTD	1	2005	1	3	3	0.6	0	0.0	3	54.3	5	3	0.01	3	3	3	8	256	0.01	37277	37.28	0.78	0.33	0.12	5.9	13.16
KAPCHORUA TEA LTD	1	2006	1	3	3	0.6	0	0.0	3	55.7	5	3	0.01	3	3	3	8	356	-0.03	-13372	-13.37	0.83	0.26	0.09	6.3	13.74
KAPCHORUA TEA LTD	1	2007	1	3	3	0.6	0	0.0	3	57.1	5	3	0.01	3	3	3	8	356	0.17	2054	2.054	0.77	0.35	0.12	7	13.32
KAPCHORUA TEA LTD	1	2008	1	5	4	1.0	0	0.0	3	58.5	5	3	0.01	3	4	3	8	356	-0	-1E+05	-103.1	0.79	0.39	0.09	0.2	13.55
KAPCHORUA TEA LTD	1	2009	1	5	4	0.8	0	0.0	3	59.9	6	3	0.01	3	4	3	8	356	0	99735	99.74	0.70	0.50	0.12	3.3	13.94
KAPCHORUA TEA LTD	1	2010	1	5	4	0.8	0	0.0	3	61.3	6	3	0.01	3	4	3	8	356	0	199538	199.5	0.55	0.49	0.18	8.4	14.01
KAPCHORUA TEA LTD	1	2011	1	5	4	0.8	0	0.0	3	62.7	6	3	0.01	3	4	3	8	356	0	268393	268.4	0.63	0.42	0.19	6.1	14.89
KAPCHORUA TEA LTD	1	2012	1	5	4	0.8	0	0.0	4	64.1	6	3	0.001	3	4	3	8	356	0	112576	112.6	0.62	0.52	0.15	4.6	19.85
KAPCHORUA TEA LTD	1	2013	1	5	4	0.8	0	0.0	4	65.5	6	3	0.001	3	4	3	8	356	0	255753	255.8	0.60	0.81	0.21	5.7	17.14
KAPCHORUA TEA LTD	1	2014	2	5	3	0.7	0	0.0	4	66.9	7	3	0.001	3	4	3	8	356	0	182079	182.1	0.68	0.28	0.26	5.3	16.39
KAPCHORUA TEA LTD	1	2015	2	5	3	0.7	0	0.0	4	68.3	7	3	0.001	4	4	3	8	1791	-0.06	-29536	-29.54	0.68	0.28	0.27	5.6	18.3
KAPCHORUA TEA LTD	1	2016	2	5	3	0.7	0	0.0	4	69.7	7	3	0.001	4	4	3	8	10342	0.03	336007	336	0.62	0.29	0.29	5.8	13.66
LIMURU TEA LTD	1	2002	1	2	2	0.7	0	0.0	2	46.5	3	3	0	0	0	0	0	30	0.01	4082	4.082	0.31	0.04	0.55	0.5	18.34
LIMURU TEA LTD	1	2003	1	2	1	0.7	0	0.0	2	47.5	3	3	0	0	0	0	0	30	0	11666	11.67	0.39	0.17	0.49	2.9	13.47
LIMURU TEA LTD	1	2004	1	2	1	0.7	0	0.0	2	48.5	3	3	0	0	0	0	0	30	0	13898	13.9	0.41	0.09	0.49	5.1	12.25
LIMURU TEA LTD	1	2005	1	2	1	0.7	0	0.0	2	49.5	3	3	0	0	0	0	0	30	-0.01	-4490	-4.49	0.46	0.08	0.46	5.9	13.16
LIMURU TEA LTD	1	2006	1	1	1	0.5	0	0.0	1	50.5	2	3	0	0	0	0	0	18	0	6955	6.955	0.45	0.08	0.46	6.3	13.74
LIMURU TEA LTD	1	2007	1	1	1	0.5	0	0.0	1	51.5	2	3	0	0	0	0	0	390	0.03	12445	12.45	0.46	0.08	0.44	7	13.32
LIMURU TEA LTD	1	2008	2	1	1	0.3	0	0.0	2	52.5	3	3	0	0	0	0	0	390	0.03	15234	15.23	0.30	0.05	0.52	0.2	13.55
LIMURU TEA LTD	1	2009	2	1	1	0.3	0	0.0	2	53.5	3	3	0	0	0	0	0	390	0.01	38731	38.73	0.22	0.07	0.57	3.3	13.94
LIMURU TEA LTD	1	2010	2	1	1	0.3	0	0.0	2	54.5	3	3	0	0	0	0	0	390	0	104328	104.3	0.44	0.08	0.49	8.4	14.01
LIMURU TEA LTD	1	2011	2	1	1	0.3	0	0.0	2	55.5	3	3	0	0	0	0	0	639	0.01	59849	59.85	0.48	0.08	0.50	6.1	14.89
LIMURU TEA LTD	1	2012	2	1	1	0.3	0	0.0	2	56.5	3	3	0	0	0	0	0	408	0	146621	146.6	0.59	0.10	0.38	4.6	19.85
LIMURU TEA LTD	1	2013	3	1	1	0.3	0	0.0	2	57.5	4	3	0	0	0	0	0	408	0.01	41556	41.56	0.85	0.85	0.14	5.7	17.14
LIMURU TEA LTD	1	2014	3	1	2	0.3	0	0.0	2	58.5	4	3	0	0	0	0	0	408	0.2	2078	2.078	0.61	0.61	0.34	5.3	16.39
LIMURU TEA LTD	1	2015	3	1	2	0.3	0	0.0	2	59.5	4	3	0	0	0	0	0	410	0.05	7681	7.681	0.52	0.52	0.40	5.6	18.3
LIMURU TEA LTD	1	2016	3	1	1	0.3	0	0.0	3	60.5	4	3	0	0	0	0	0	576	-0.02	-26731	-26.73	0.49	0.49	0.41	5.8	13.66
REA VIPINGO LTD	1	2002	1	4	2	0.8	0	0.0	3	55.2	5	3	0.024	3	3	3	5	8260	0.18	47108	47.11	0.68	0.28	0.12	0.5	18.34
REA VIPINGO LTD	1	2003	1	3	2	0.8	0	0.0	3	57	4	3	0.024	3	3	3	5	10810	0.17	64373	64.37	0.64	0.53	0.11	2.9	13.47
REA VIPINGO LTD	1	2004	1	4	2	0.8	0	0.0	4	56.8	5	3	0.024	3	3	3	5	12358	0.07	177941	177.9	0.61	0.40	0.14	5.1	12.25
REA VIPINGO LTD	1	2005	1	4	2	0.8	0	0.0	4	57.8	5	3	0.024	3	3	3	5	16587	0.09	185139	185.1	0.60	0.23	0.17	5.9	13.16
REA VIPINGO LTD	1	2006	1	4	2	0.8	0	0.0	4	58.8	5	3	0.024	3	3	3	5	14918	0.09	157358	157.4	0.64	0.19	0.13	6.3	13.74
REA VIPINGO LTD	1	2007	1	4	2	0.8	0	0.0	4	59.8	5	3	0.024	3	3	3	5	28278	0.17	167785	167.8	0.59	0.24	0.15	7	13.32

Company	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
REA VIPINGO LTD	1	2008	1	4	2	0.8	0	0.0	4	60.8	5	3	0.024	3	3	3	5	30754	0.18	168153	168.2	0.52	0.40	0.15	0.2	13.55
REA VIPINGO LTD	1	2009	1	4	2	0.8	0	0.0	4	57.6	5	3	0.024	3	3	3	5	43267	0.2	214066	214.1	0.64	0.27	0.20	3.3	13.94
REA VIPINGO LTD	1	2010	1	4	2	0.8	0	0.0	4	58.6	5	3	0.024	3	3	3	5	44727	0.43	103910	103.9	0.66	0.32	0.09	8.4	14.01
REA VIPINGO LTD	1	2011	1	4	2	0.8	0	0.0	4	59.6	5	3	0.039	3	3	3	5	39829	0.06	678846	678.8	0.61	0.35	0.20	6.1	14.89
REA VIPINGO LTD	1	2012	1	4	2	0.8	0	0.0	4	60.6	5	3	0.039	3	4	3	5	44126	0.08	555293	555.3	0.63	0.24	0.26	4.6	19.85
REA VIPINGO LTD	1	2013	1	4	2	0.8	0	0.0	4	61.6	5	3	0.039	3	4	3	5	46595	0.07	647992	648	0.63	0.19	0.29	5.7	17.14
REA VIPINGO LTD	1	2014	1	4	2	0.8	0	0.0	4	62.6	5	3	0.039	3	4	3	5	52801	0.1	530803	530.8	0.41	0.13	0.41	5.3	16.39
REA VIPINGO LTD	1	2015	1	4	2	0.8	0	0.0	4	63.6	5	3	0.039	3	4	3	5	52107	0.02	2E+06	2117	0.33	0.13	0.38	5.6	18.3
REA VIPINGO LTD	1	2016	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5.8	13.66
SASINI LTD	1	2002	1	7	1	0.9	0	0.0	5	47.6	8	3	7E-04	3	4	2	8	8376	0.12	-68415	-68.42	0.78	0.05	0.10	0.5	18.34
SASINI LTD	1	2003	1	7	1	0.9	0	0.0	5	48.6	8	3	7E-04	3	4	2	8	1398	-0.01	-95877	-95.88	0.83	0.16	0.12	2.9	13.47
SASINI LTD	1	2004	1	7	1	0.9	0	0.0	5	49.6	8	3	7E-04	3	4	2	8	4001	0	1E+06	1104	0.86	0.21	0.09	5.1	12.25
SASINI LTD	1	2005	1	7	2	0.9	0	0.0	5	50.6	8	3	7E-04	3	4	2	8	7007	-0.01	-5E+05	-523.6	0.87	0.17	0.07	5.9	13.16
SASINI LTD	1	2006	1	8	2	0.9	0	0.0	6	51.6	9	3	0.024	3	4	2	8	6827	0.02	349493	349.5	0.85	0.16	0.07	6.3	13.74
SASINI LTD	1	2007	1	8	1	0.9	1	0.1	6	52.6	9	3	6E-04	3	6	2	8	10035	-0.14	-70723	-70.72	0.88	0.14	0.05	7	13.32
SASINI LTD	1	2008	1	8	1	0.9	1	0.1	6	53.6	9	3	6E-04	3	4	2	8	10223	0.01	1E+06	1266	0.86	0.33	0.09	0.2	13.55
SASINI LTD	1	2009	1	8	1	0.9	1	0.1	6	54.6	9	3	1E-03	3	4	2	8	10286	0.01	759722	759.7	0.87	0.34	0.08	3.3	13.94
SASINI LTD	1	2010	1	8	1	0.9	1	0.1	6	55.6	9	3	7E-04	3	4	3	12	9972	0.01	1E+06	1382	0.86	0.27	0.08	8.4	14.01
SASINI LTD	1	2011	1	8	1	0.9	1	0.1	6	56.6	9	3	7E-04	4	4	3	12	14201	0.01	1E+06	1014	0.87	0.29	0.07	6.1	14.89
SASINI LTD	1	2012	1	8	1	0.9	1	0.1	6	57.6	9	3	5E-04	4	4	2	8	14807	-0.17	-85225	-85.23	0.88	0.28	0.06	4.6	19.85
SASINI LTD	1	2013	1	7	1	0.9	1	0.1	6	58.6	8	3	5E-04	4	4	2	7	16152	0.1	158407	158.4	0.86	0.28	0.06	5.7	17.14
SASINI LTD	1	2014	1	7	0	0.9	1	0.1	6	59.6	8	3	0.003	4	4	2	10	17252	0.28	61793	61.79	0.92	0.19	0.05	5.3	16.39
SASINI LTD	1	2015	1	7	0	0.9	1	0.1	6	60.6	8	3	0.003	4	5	2	9	17933	0.02	1E+06	1039	0.87	0.15	0.10	5.6	18.3
SASINI LTD	1	2016	1	7	0	0.9	1	0.1	6	61.6	8	3	0.003	4	4	2	8	18734	0.02	1E+06	1021	0.45	0.78	0.53	5.8	13.66
WILLIAMSON TEA LTD	1	2002	1	6	4	0.9	0	0.0	5	48.1	7	3	0.001	3	4	1	4	16453	-0.43	-38425	-38.43	0.80	0.23	0.12	0.5	18.34
WILLIAMSON TEA LTD	1	2003	1	6	3	0.9	0	0.0	5	49.1	7	3	0.001	3	4	1	4	17428	0.25	70763	70.76	0.84	0.31	0.10	2.9	13.47
WILLIAMSON TEA LTD	1	2004	1	6	3	0.9	0	0.0	5	50.1	7	3	0.001	3	6	1	4	16542	0.13	123870	123.9	0.83	0.29	0.12	5.1	12.25
WILLIAMSON TEA LTD	1	2005	1	6	3	0.9	0	0.0	5	51.1	7	3	0.001	3	5	1	4	13817	0.1	139751	139.8	0.80	0.27	0.13	5.9	13.16
WILLIAMSON TEA LTD	1	2006	1	6	3	0.9	0	0.0	5	52.1	7	3	0.001	3	4	1	4	10844	-0.13	-86666	-86.67	0.83	0.27	0.10	6.3	13.74
WILLIAMSON TEA LTD	1	2007	1	6	3	0.9	0	0.0	5	53.1	7	3	0.001	3	4	1	3	10991	0.05	214067	214.1	0.79	0.29	0.12	7	13.32
WILLIAMSON TEA LTD	1	2008	1	6	4	0.9	0	0.0	5	54.1	7	3	0.001	3	4	1	4	10845	-0.08	-1E+05	-144	0.83	0.36	0.09	0.2	13.55
WILLIAMSON TEA LTD	1	2009	1	6	4	0.9	0	0.0	5	55.1	7	3	0.001	3	4	1	6	12092	0.08	145341	145.3	0.76	0.27	0.15	3.3	13.94
WILLIAMSON TEA LTD	1	2010	1	6	4	0.9	0	0.0	5	56.1	7	3	0.001	4	4	1	6	21568	0.02	1E+06	1223	0.64	0.35	0.18	8.4	14.01
WILLIAMSON TEA LTD	1	2011	1	6	4	0.9	0	0.0	5	57.1	7	3	0.001	4	4	3	8	17340	0.01	1E+06	1294	0.61	0.27	0.27	6.1	14.89
WILLIAMSON TEA LTD	1	2012	1	6	4	0.9	0	0.0	5	58.1	7	3	0.001	4	4	3	8	18083	0.02	1E+06	1163	0.66	0.37	0.20	4.6	19.85
WILLIAMSON TEA LTD	1	2013	1	6	4	0.9	0	0.0	5	59.1	7	3	0.001	4	4	3	8	.	.	1E+07	11634	0.67	0.27	0.24	5.7	17.14
WILLIAMSON TEA LTD	1	2014	1	6	4	0.9	0	0.0	5	60.1	7	3	0.001	4	4	3	8	.	.	1E+06	1156	0.68	1.04	0.28	5.3	16.39
WILLIAMSON TEA LTD	1	2015	2	5	4	0.7	0	0.0	5	61.1	7	3	0.001	4	4	3	8	27710	-	-4E+05	-352	0.68	0.22	0.28	5.6	18.3

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WILLIAMSON TEA LTD	1	2016	2	5	3	0.7	0	0.0	5	62.1	7	3	1E-04	4	4	3	8	39320	-0.13	-3E+05	-295.9	0.64	0.24	0.29	5.8	13.66
CAR & GENERAL LTD	2	2002	2	5	2	0.7	0	0.0	5	48.3	7	10	0.011	3	5	2	6	3939	0.2	20074	20.07	0.60	0.04	-0.02	0.5	18.34
CAR & GENERAL LTD	2	2003	2	5	2	0.7	0	0.0	5	48.8	7	10	0.011	3	5	2	6	9665	0.16	61487	61.49	0.54	0.11	0.13	2.9	13.47
CAR & GENERAL LTD	2	2004	2	5	2	0.7	0	0.0	5	49.3	7	10	0.011	3	5	2	6	10349	0.24	44006	44.01	0.41	0.47	0.16	5.1	12.25
CAR & GENERAL LTD	2	2005	2	5	2	0.7	0	0.0	5	49.8	7	10	0.011	3	5	2	6	15288	0.05	283010	283	0.50	0.45	0.12	5.9	13.16
CAR & GENERAL LTD	2	2006	2	5	2	0.7	0	0.0	5	50.3	7	10	0.011	3	5	2	6	16904	0.1	176815	176.8	0.49	0.40	0.14	6.3	13.74
CAR & GENERAL LTD	2	2007	2	5	2	0.7	0	0.0	5	50.8	7	3	0.011	4	5	2	6	17536	0.07	257446	257.4	0.38	0.55	0.15	7	13.32
CAR & GENERAL LTD	2	2008	2	6	2	0.8	0	0.0	5	51.3	8	3	3E-04	4	4	2	7	19667	0.06	321565	321.6	0.33	0.91	0.38	0.2	13.55
CAR & GENERAL LTD	2	2009	2	6	3	0.8	0	0.0	5	51.8	8	3	3E-04	4	4	3	7	22483	0.08	279390	279.4	0.32	0.96	0.47	3.3	13.94
CAR & GENERAL LTD	2	2010	2	6	3	0.8	0	0.0	5	52.3	8	3	3E-04	4	4	3	9	23218	0.07	329175	329.2	0.31	0.95	0.45	8.4	14.01
CAR & GENERAL LTD	2	2011	2	5	3	0.7	0	0.0	5	52.8	7	3	3E-04	4	4	3	12	26328	0.06	427926	427.9	0.37	1.28	0.37	6.1	14.89
CAR & GENERAL LTD	2	2012	2	5	3	0.7	0	0.0	5	53.3	7	3	3E-04	4	4	3	12	28000	0.08	354518	354.5	0.40	1.24	0.34	4.6	19.85
CAR & GENERAL LTD	2	2013	2	5	3	0.7	0	0.0	5	53.8	7	3	3E-04	4	4	3	12	28768	0.06	458969	459	0.31	1.28	0.07	5.7	17.14
CAR & GENERAL LTD	2	2014	2	5	3	0.7	0	0.0	5	54.3	7	3	3E-04	4	4	3	12	31774	0.08	420267	420.3	0.38	1.17	0.10	5.3	16.39
CAR & GENERAL LTD	2	2015	2	5	3	0.7	0	0.0	5	54.8	7	3	3E-04	4	4	3	12	32713	0.4	81069	81.07	0.41	1.18	0.03	5.6	18.3
CAR & GENERAL LTD	2	2016	1	5	3	0.8	0	0.0	4	55.3	6	3	3E-04	4	6	3	12	30282	0.2	150278	150.3	0.42	1.63	0.00	5.8	13.66
SAMMEER AFRICA LTD	2	2002	2	3	0	0.6	0	0.0	3	46.5	5	1	2E-04	3	4	2	8	34586	0.11	310834	310.8	0.43	0.04	0.42	0.5	18.34
SAMMEER AFRICA LTD	2	2003	2	3	0	0.6	0	0.0	3	47.5	5	1	2E-04	3	4	2	8	36795	0.14	255709	255.7	0.40	0.11	0.41	2.9	13.47
SAMMEER AFRICA LTD	2	2004	3	3	0	0.5	0	0.0	4	48.5	6	1	2E-04	3	4	2	8	35852	0.09	400437	400.4	0.34	0.18	0.37	5.1	12.25
SAMMEER AFRICA LTD	2	2005	3	5	0	0.6	0	0.0	5	49.5	8	1	2E-04	3	4	2	8	24639	0.08	294253	294.3	0.30	0.15	0.38	5.9	13.16
SAMMEER AFRICA LTD	2	2006	2	5	0	0.7	0	0.0	5	50.5	7	1	2E-04	3	4	2	8	32575	-2.19	-14865	-14.87	0.30	0.17	0.32	6.3	13.74
SAMMEER AFRICA LTD	2	2007	1	6	0	0.9	0	0.0	4	51.5	7	1	2E-04	3	4	3	8	30154	0.18	166520	166.5	0.30	0.23	0.37	7	13.32
SAMMEER AFRICA LTD	2	2008	1	6	0	0.9	0	0.0	4	52.5	7	1	2E-04	3	4	3	8	28009	0.17	165522	165.5	0.33	0.25	0.41	0.2	13.55
SAMMEER AFRICA LTD	2	2009	1	6	0	0.9	0	0.0	4	53.5	7	1	2E-04	3	4	3	8	19213	0.09	221464	221.5	0.31	0.20	0.49	3.3	13.94
SAMMEER AFRICA LTD	2	2010	1	6	0	0.9	0	0.0	4	54.5	7	1	2E-04	3	4	3	8	18579	0.3	62199	62.2	0.33	0.16	0.48	8.4	14.01
SAMMEER AFRICA LTD	2	2011	1	6	0	0.9	0	0.0	4	55.5	7	1	2E-04	3	4	3	12	19425	0.13	148446	148.4	0.27	0.25	0.49	6.1	14.89
SAMMEER AFRICA LTD	2	2012	1	5	1	0.8	0	0.0	4	56.5	6	1	2E-04	4	5	3	12	25433	0.09	296761	296.8	0.22	0.31	0.51	4.6	19.85
SAMMEER AFRICA LTD	2	2013	1	5	1	0.8	0	0.0	4	57.5	6	1	2E-04	4	4	3	10	33241	0.07	456521	456.5	0.23	0.24	0.54	5.7	17.14
SAMMEER AFRICA LTD	2	2014	1	5	1	0.8	0	0.0	4	58.5	6	1	2E-04	4	4	3	9	30866	-0.46	-67453	-67.45	0.26	0.31	0.45	5.3	16.39
SAMMEER AFRICA LTD	2	2015	1	5	1	0.8	0	0.0	4	59.5	6	1	2E-04	4	5	3	9	30769	0.26	118069	118.1	0.26	0.36	0.40	5.6	18.3
SAMMEER AFRICA LTD	2	2016	1	6	1	0.9	1	0.1	4	60.5	7	1	2E-04	4	4	3	9	31049	-0.04	-8E+05	-821	0.30	0.55	0.26	5.8	13.66
MARSHALLS E.A. LTD	2	2002	2	6	1	0.9	0	0.0	5	47.2	7	3	0	3	4	2	8	9827	5.46	1799	1.799	0.44	1.39	-0.15	0.5	18.34
MARSHALLS E.A. LTD	2	2003	2	6	1	0.9	0	0.0	5	48.2	7	3	0	3	4	2	8	10438	0.47	22045	22.05	0.37	2.65	-0.16	2.9	13.47
MARSHALLS E.A. LTD	2	2004	2	4	1	0.8	0	0.0	4	49.2	5	3	0	3	4	2	8	10763	0.48	22256	22.26	0.37	1.54	-0.14	5.1	12.25
MARSHALLS E.A. LTD	2	2005	1	5	1	0.8	0	0.0	4	50.2	6	3	0	3	4	1	4	8279	0.13	61850	61.85	0.36	1.39	0.11	5.9	13.16
MARSHALLS E.A. LTD	2	2006	1	5	1	0.8	0	0.0	4	51.2	6	3	0	3	4	1	4	7583	0.14	53485	53.49	0.31	1.37	0.13	6.3	13.74
MARSHALLS E.A. LTD	2	2007	3	6	1	0.9	0	0.0	6	52.2	7	3	0	3	4	2	8	16973	0.4	42321	42.32	0.41	0.98	0.11	7	13.32

Company																										
MARSHALLS E.A. LTD	2	2008	3	6	1	0.9	0	0.0	6	53.2	7	3	0	3	4	2	8	4295	-0.03	-2E+05	-169.7	0.44	1.89	0.13	0.2	13.55
MARSHALLS E.A. LTD	2	2009	2	5	1	0.8	0	0.0	5	54.2	6	3	0	3	4	2	8	3036	-0.03	-1E+05	-117.5	0.61	1.16	-0.05	3.3	13.94
MARSHALLS E.A. LTD	2	2010	1	7	1	0.9	0	0.0	5	55.2	8	3	0	3	4	2	8	7416	-0.02	-3E+05	-344.7	0.75	2.45	-0.25	8.4	14.01
MARSHALLS E.A. LTD	2	2011	1	7	1	0.9	0	0.0	5	56.2	8	3	0	3	4	2	8	3932	0.02	181501	181.5	0.83	1.11	-0.46	6.1	14.89
MARSHALLS E.A. LTD	2	2012	1	7	1	0.9	0	0.0	5	57.2	8	3	0	3	4	2	8	402	-0	-2E+05	-165.5	0.65	0.31	0.04	4.6	19.85
MARSHALLS E.A. LTD	2	2013	1	7	1	0.9	0	0.0	5	58.2	8	3	0	3	4	2	8	402	-0	-1E+05	-110	0.71	0.00	-0.14	5.7	17.14
MARSHALLS E.A. LTD	2	2014	1	5	1	0.8	0	0.0	5	59.2	6	3	0	3	4	2	8	402	-0.16	-2481	-2.481	0.70	0.77	-0.21	5.3	16.39
MARSHALLS E.A. LTD	2	2015	1	5	1	0.8	0	0.0	5	60.2	6	3	0	3	4	2	8	402	-0.02	-20393	-20.39	0.77	0.61	-0.25	5.6	18.3
MARSHALLS E.A. LTD	2	2016	1	5	1	0.8	0	0.0	5	61.2	6	3	0	3	4	2	8	2062	-0.12	-17431	-17.43	0.87	1.40	-0.37	5.8	13.66
BARCLAYS BANK LTD	3	2002	3	9	1	0.8	1	0.1	8	46	12	3	0	3	8	3	14	45000	0.02	3E+06	2550	0.68	2.75	0.24	0.5	18.34
BARCLAYS BANK LTD	3	2003	3	10	1	0.8	3	0.2	7	49.8	13	3	0	3	8	3	14	46000	0.01	5E+06	4790	0.66	1.29	0.21	2.9	13.47
BARCLAYS BANK LTD	3	2004	3	10	1	0.8	3	0.2	7	46.9	13	3	0	3	8	3	14	47000	0.01	5E+06	5391	0.66	1.84	0.28	5.1	12.25
BARCLAYS BANK LTD	3	2005	3	9	1	0.8	3	0.3	5	46	12	3	0	3	8	3	14	56000	0.01	5E+06	5427	0.70	0.22	0.21	5.9	13.16
BARCLAYS BANK LTD	3	2006	3	5	1	0.6	3	0.4	5	48	8	3	0	3	8	3	14	52000	0.01	6E+06	6475	0.67	0.87	0.30	6.3	13.74
BARCLAYS BANK LTD	3	2007	3	6	1	0.7	2	0.2	5	50.5	9	3	0	3	7	3	14	42000	0.01	7E+06	7079	0.71	1.14	0.36	7	13.32
BARCLAYS BANK LTD	3	2008	3	6	0	0.7	2	0.2	6	51	9	3	0	3	8	3	14	96000	0.01	8E+06	8016	0.70	1.70	0.33	0.2	13.55
BARCLAYS BANK LTD	3	2009	3	5	1	0.6	2	0.3	5	50	8	3	0	3	7	3	13	1E+05	0.01	9E+06	9002	0.62	1.70	0.34	3.3	13.94
BARCLAYS BANK LTD	3	2010	3	5	0	0.6	2	0.3	5	51.7	8	3	0	3	9	3	16	84000	0.01	1E+07	13553	0.56	1.29	0.43	8.4	14.01
BARCLAYS BANK LTD	3	2011	3	7	0	0.7	3	0.3	7	52.3	10	3	0	3	8	3	15	90000	0.01	1E+07	12013	0.66	1.53	0.43	6.1	14.89
BARCLAYS BANK LTD	3	2012	3	7	0	0.7	3	0.3	7	52.3	10	3	0	3	7	3	14	1E+05	0.01	1E+07	13020	0.88	1.39	0.42	4.6	19.85
BARCLAYS BANK LTD	3	2013	3	5	0	0.6	3	0.4	5	54	8	3	0	3	4	3	12	1E+05	0.01	1E+07	11134	0.39	1.36	0.47	5.7	17.14
BARCLAYS BANK LTD	3	2014	2	8	0	0.8	5	0.5	7	52	10	3	0	3	8	3	13	1E+05	0.01	1E+07	12293	0.90	2.14	0.45	5.3	16.39
BARCLAYS BANK LTD	3	2015	2	6	0	0.8	3	0.4	6	52.3	8	3	0	4	8	3	14	1E+05	0.01	1E+07	12074	0.93	1.77	0.28	5.6	18.3
BARCLAYS BANK LTD	3	2016	2	6	0	0.8	4	0.5	6	51	8	3	0	4	10	3	16	1E+05	0.01	1E+07	10439	0.85	2.04	0.34	5.8	13.66
CFC STANBIC LTD	3	2002	2	6	5	0.8	0	0.0	5	50	8	1	0	3	4	3	6	18306	0.06	323000	323	0.65	3.05	0.12	0.5	18.34
CFC STANBIC LTD	3	2003	2	6	5	0.8	0	0.0	5	51.3	8	1	0	3	4	3	6	26837	0.05	530000	530	0.63	2.15	0.25	2.9	13.47
CFC STANBIC LTD	3	2004	2	6	5	0.8	0	0.0	5	52.3	8	1	0	3	4	3	6	31667	0.04	881000	881	0.71	2.21	0.14	5.1	12.25
CFC STANBIC LTD	3	2005	3	8	5	0.7	0	0.0	8	50.3	11	1	0	3	4	3	6	89481	0.1	866000	866	0.47	1.93	0.45	5.9	13.16
CFC STANBIC LTD	3	2006	3	7	2	0.7	0	0.0	5	51.3	10	1	0	3	4	2	6	1E+05	0.08	1E+06	1367	0.51	1.87	0.43	6.3	13.74
CFC STANBIC LTD	3	2007	2	7	3	0.8	0	0.0	6	52.3	9	1	0	3	5	2	7	1E+05	0.09	1E+06	1353	0.80	1.47	0.41	7	13.32
CFC STANBIC LTD	3	2008	1	6	2	0.9	1	0.1	5	55.8	7	1	0	3	5	2	1	70601	0.05	1E+06	1322	0.94	2.05	0.41	0.2	13.55
CFC STANBIC LTD	3	2009	1	6	2	0.9	1	0.1	5	55.9	7	1	0	3	6	2	1	39004	0.06	709000	709	0.89	2.53	0.27	3.3	13.94
CFC STANBIC LTD	3	2010	1	9	2	0.9	3	0.3	8	55.8	10	1	0	3	4	2	2	71590	0.04	2E+06	2006	0.78	1.89	0.23	8.4	14.01
CFC STANBIC LTD	3	2011	2	8	3	0.8	3	0.3	8	56.8	10	1	0	3	4	3	3	66400	0.02	3E+06	2799	0.86	3.56	0.30	6.1	14.89
CFC STANBIC LTD	3	2012	3	7	3	0.7	3	0.3	9	56.2	10	1	0	4	4	1	2	82577	0.02	5E+06	4558	0.78	2.29	0.22	4.6	19.85
CFC STANBIC LTD	3	2013	3	8	3	0.7	3	0.3	9	56.7	11	1	0	4	4	1	2	90599	0.01	7E+06	7224	0.89	2.22	0.54	5.7	17.14
CFC STANBIC LTD	3	2014	3	9	3	0.8	3	0.3	9	55.7	12	1	0	4	4	1	2	95838	0.01	8E+06	7700	0.90	1.67	0.48	5.3	16.39
CFC STANBIC LTD	3	2015	1	9	2	0.9	2	0.2	8	56.7	10	1	0	4	4	1	2	1E+05	0.02	7E+06	7359	0.90	2.40	0.54	5.6	18.3

CFC STANBIC LTD	3	2016	1	8	2	0.9	2	0.2	7	57.6	9	1	0	4	4	5	2	1E+05	0.02	6E+06	6049	0.91	2.57	0.68	5.8	13.66
DIAMOND TRUST LTD	3	2002	1	8	6	0.9	1	0.1	7	56.6	9	3	9E-04	3	6	4	16	13969	0.12	112799	112.8	0.48	2.94	0.15	0.5	18.34
DIAMOND TRUST LTD	3	2003	1	11	7	0.9	1	0.1	8	57.6	12	3	9E-04	3	4	4	16	15618	0.08	204106	204.1	0.60	1.78	0.11	2.9	13.47
DIAMOND TRUST LTD	3	2004	1	11	7	0.9	1	0.1	8	58.6	12	3	9E-04	3	4	4	16	20756	0.09	240235	240.2	0.69	2.31	0.27	5.1	12.25
DIAMOND TRUST LTD	3	2005	1	8	4	0.9	1	0.1	9	59.6	9	3	9E-04	3	4	6	24	16548	0.04	426614	426.6	0.66	2.60	0.36	5.9	13.16
DIAMOND TRUST LTD	3	2006	1	8	4	0.9	1	0.1	9	60.6	9	3	9E-04	3	5	6	24	23380	0.03	705954	706	0.66	1.45	0.39	6.3	13.74
DIAMOND TRUST LTD	3	2007	1	8	4	0.9	1	0.1	9	61.6	9	3	9E-04	3	5	7	28	29690	0.03	1E+06	1055	0.66	1.49	0.35	7	13.32
DIAMOND TRUST LTD	3	2008	1	8	4	0.9	1	0.1	9	62.8	9	3	9E-04	3	4	7	20	43592	0.03	2E+06	1604	0.63	2.70	0.41	0.2	13.55
DIAMOND TRUST LTD	3	2009	1	11	5	0.9	1	0.1	12	63.6	12	3	9E-04	3	4	6	24	52484	0.03	2E+06	1930	0.68	3.00	0.40	3.3	13.94
DIAMOND TRUST LTD	3	2010	1	9	5	0.9	1	0.1	10	62	10	3	9E-04	3	4	6	25	59769	0.02	3E+06	3463	0.69	2.27	0.37	8.4	14.01
DIAMOND TRUST LTD	3	2011	1	9	5	0.9	1	0.1	10	62.2	10	3	9E-04	3	4	6	20	62147	0.01	4E+06	4307	0.68	3.05	0.36	6.1	14.89
DIAMOND TRUST LTD	3	2012	1	9	5	0.9	1	0.1	10	63.2	10	3	9E-04	3	4	6	20	65924	0.01	6E+06	6208	0.67	2.66	0.28	4.6	19.85
DIAMOND TRUST LTD	3	2013	1	9	4	0.9	2	0.2	10	58.7	10	3	9E-04	3	6	6	20	83747	0.01	7E+06	7235	0.75	2.26	0.33	5.7	17.14
DIAMOND TRUST LTD	3	2014	1	10	3	0.9	2	0.2	11	58.6	11	3	9E-04	3	6	6	24	89126	0.01	9E+06	8521	0.70	2.95	0.36	5.3	16.39
DIAMOND TRUST LTD	3	2015	1	10	3	0.9	2	0.2	11	59.3	11	3	0.001	3	6	6	25	1E+05	0.01	1E+07	9565	0.69	2.96	0.39	5.6	18.3
DIAMOND TRUST LTD	3	2016	1	10	3	0.9	2	0.2	11	57.6	11	3	9E-04	3	5	6	24	1E+05	0.01	1E+07	12059	0.88	3.93	0.50	5.8	13.66
I&M HOLDINGS LTD	3	2002	2	7	1	0.8	0	0.0	7	51.7	9	3	0	4	4	7	21	50680	0.01	7E+06	7480	0.92	0.22	0.31	0.5	18.34
I&M HOLDINGS LTD	3	2015	2	7	1	0.8	1	0.1	7	52.7	9	3	0	4	4	6	18	68644	0.01	9E+06	8748	0.94	0.43	0.34	5.6	18.3
I&M HOLDINGS LTD	3	2016	2	7	1	0.8	1	0.1	7	53.7	9	3	0	4	5	6	16	2E+05	0.02	9E+06	9025	0.94	0.61	0.37	5.8	13.66
HOUSING FINANCE LTD	3	2002	1	6	3	0.9	3	0.4	5	53.9	7	3	0.047	3	4	7	28	21216	0.22	95318	95.32	0.77	6.08	0.12	0.5	18.34
HOUSING FINANCE LTD	3	2003	1	6	3	0.9	3	0.4	5	54.3	7	3	0.047	3	4	7	28	27395	0.28	98011	98.01	0.68	3.97	0.22	2.9	13.47
HOUSING FINANCE LTD	3	2004	1	6	2	0.9	2	0.3	5	54.7	7	3	0.047	3	4	6	24	30443	0.35	87856	87.86	0.74	3.98	0.13	5.1	12.25
HOUSING FINANCE LTD	3	2005	1	6	2	0.9	2	0.3	5	55.1	7	3	0.047	3	4	6	24	29239	0.32	90488	90.49	0.70	2.99	0.23	5.9	13.16
HOUSING FINANCE LTD	3	2006	1	6	1	0.9	2	0.3	5	55.5	7	3	0.047	3	4	6	24	13785	0.1	141236	141.2	0.75	1.13	0.27	6.3	13.74
HOUSING FINANCE LTD	3	2007	1	8	1	0.9	2	0.2	7	55.9	9	3	0.047	3	5	6	24	25285	0.22	113397	113.4	0.79	1.33	0.22	7	13.32
HOUSING FINANCE LTD	3	2008	1	8	1	0.9	2	0.2	7	56.3	9	3	0.047	3	7	5	20	30669	0.15	202670	202.7	0.76	1.31	0.32	0.2	13.55
HOUSING FINANCE LTD	3	2009	1	8	1	0.9	1	0.1	7	56.7	9	3	0.047	3	5	5	20	31525	0.09	351118	351.1	0.83	1.72	0.24	3.3	13.94
HOUSING FINANCE LTD	3	2010	1	8	1	0.9	1	0.1	7	57.1	9	3	0.047	3	7	5	20	42861	0.08	561028	561	0.69	2.42	0.36	8.4	14.01
HOUSING FINANCE LTD	3	2011	1	6	1	0.9	0	0.0	6	57.5	7	3	0.047	3	5	5	20	66936	0.07	975795	975.8	0.83	3.59	0.29	6.1	14.89
HOUSING FINANCE LTD	3	2012	1	6	1	0.9	0	0.0	6	57.9	7	3	0.047	3	4	5	20	60884	0.07	907631	907.6	0.78	4.12	0.30	4.6	19.85
HOUSING FINANCE LTD	3	2013	1	7	1	0.9	1	0.1	7	58.3	8	3	0.047	3	5	5	20	70484	0.05	1E+06	1480	0.78	2.48	0.34	5.7	17.14
HOUSING FINANCE LTD	3	2014	1	7	1	0.9	1	0.1	7	58.7	8	3	0.047	3	5	5	20	95277	0.07	1E+06	1401	0.78	3.17	0.29	5.3	16.39
HOUSING FINANCE LTD	3	2015	1	9	1	0.9	2	0.2	7	59.1	10	3	0.047	3	4	3	12	1E+05	0.08	2E+06	1754	0.99	3.32	0.25	5.6	18.3
HOUSING FINANCE LTD	3	2016	1	8	1	0.9	3	0.3	7	59.5	9	3	0.047	3	4	4	16	1E+05	0.1	1E+06	1366	1.00	3.18	0.20	5.8	13.66
KENYA COMMERCIAL BANK LTD	3	2002	2	9	0	0.8	3	0.3	7	45.3	11	3	0.036	3	12	4	22	78675	-0.19	-4E+05	-410.6	0.55	7.01	0.34	0.5	18.34
KENYA COMMERCIAL BANK LTD	3	2003	2	9	0	0.8	4	0.4	7	45.3	11	3	0.036	3	12	5	30	58574	0.08	750151	750.2	0.49	4.00	0.37	2.9	13.47
KENYA COMMERCIAL BANK LTD	3	2004	2	9	0	0.8	3	0.3	8	46.3	11	3	0.029	3	12	5	54	57529	0.05	1E+06	1073	0.56	2.86	0.39	5.1	12.25
KENYA COMMERCIAL BANK LTD	3	2005	2	9	0	0.8	3	0.3	8	47.3	11	3	0.029	3	12	5	54	75082	0.04	2E+06	1948	0.49	2.09	0.44	5.9	13.16
KENYA COMMERCIAL BANK LTD	3	2006	2	9	0	0.8	3	0.3	9	48.3	11	3	0.026	3	12	6	54	92920	0.03	3E+06	3167	0.77	1.35	0.42	6.3	13.74

KENYA COMMERCIAL BANK LTD	3	2007	2	9	0	0.8	3	0.3	9	49.3	11	3	0.026	3	12	6	52	1E+05	0.03	4E+06	4226	0.68	1.53	0.33	7	13.32
KENYA COMMERCIAL BANK LTD	3	2008	2	9	0	0.8	3	0.3	9	50.3	11	3	0.024	3	10	5	38	1E+05	0.02	6E+06	6013	0.64	2.32	0.32	0.2	13.55
KENYA COMMERCIAL BANK LTD	3	2009	2	9	0	0.8	3	0.3	9	51.3	11	3	0.024	3	14	6	53	1E+05	0.02	6E+06	6300	0.78	2.53	0.31	3.3	13.94
KENYA COMMERCIAL BANK LTD	3	2010	2	9	0	0.8	2	0.2	9	52.3	11	3	0.02	3	16	8	61	1E+05	0.01	1E+07	9798	0.82	2.05	0.30	8.4	14.01
KENYA COMMERCIAL BANK LTD	3	2011	2	9	0	0.8	2	0.2	9	53.3	11	3	0.02	3	20	8	53	75592	0	2E+07	15130	0.78	3.03	0.31	6.1	14.89
KENYA COMMERCIAL BANK LTD	3	2012	2	9	0	0.8	2	0.2	9	54.3	11	3	0.018	3	17	7	45	2E+05	0.01	2E+07	17208	0.84	2.22	0.36	4.6	19.85
KENYA COMMERCIAL BANK LTD	3	2013	2	9	0	0.8	2	0.2	9	55.3	11	3	0.018	3	11	7	24	1E+05	0.01	2E+07	17146	0.85	1.60	0.35	5.7	17.14
KENYA COMMERCIAL BANK LTD	3	2014	2	9	0	0.8	3	0.3	9	56.3	11	3	0.017	3	9	7	61	3E+05	0.01	2E+07	22362	0.77	1.67	0.44	5.3	16.39
KENYA COMMERCIAL BANK LTD	3	2015	2	9	0	0.8	3	0.3	9	57.3	11	3	0.017	3	10	7	34	5E+05	0.02	2E+07	23445	0.81	2.23	0.48	5.6	18.3
KENYA COMMERCIAL BANK LTD	3	2016	2	9	0	0.8	3	0.3	9	58.3	11	3	0.018	3	10	6	34	6E+05	0.02	3E+07	29091	0.82	2.72	0.38	5.8	13.66
NATIONAL BANK OF KENYA	3	2002	2	7	0	0.8	1	0.1	6	55.2	9	3	0.709	3	12	6	28	7332	0.02	390142	390.1	0.81	8.81	0.69	0.5	18.34
NATIONAL BANK OF KENYA	3	2003	2	7	0	0.8	1	0.1	6	56.2	9	3	0.709	3	12	5	20	18294	0.04	491902	491.9	###	4.93	0.88	2.9	13.47
NATIONAL BANK OF KENYA	3	2004	2	6	0	0.8	1	0.1	6	57.2	8	3	0.709	3	12	6	24	22934	0.03	743478	743.5	###	4.37	0.64	5.1	12.25
NATIONAL BANK OF KENYA	3	2005	3	7	0	0.7	1	0.1	5	59	10	3	0.709	3	12	5	24	29633	0.03	859161	859.2	0.86	3.27	0.64	5.9	13.16
NATIONAL BANK OF KENYA	3	2006	3	7	0	0.7	1	0.1	6	60	10	3	0.709	3	13	5	28	36166	0.04	934177	934.2	0.88	2.18	0.24	6.3	13.74
NATIONAL BANK OF KENYA	3	2007	3	7	0	0.7	1	0.1	6	60.3	10	3	0.709	3	13	5	28	44540	0.03	2E+06	1610	0.75	2.56	0.29	7	13.32
NATIONAL BANK OF KENYA	3	2008	3	7	0	0.7	1	0.1	6	59.3	10	3	0.709	3	22	5	28	44540	0.02	2E+06	1797	0.80	2.46	0.31	0.2	13.55
NATIONAL BANK OF KENYA	3	2009	3	7	0	0.7	1	0.1	6	56	10	3	0.709	3	22	5	28	49797	0.02	2E+06	2159	0.82	2.77	0.35	3.3	13.94
NATIONAL BANK OF KENYA	3	2010	3	7	0	0.7	1	0.1	6	57.4	10	3	0.709	3	18	5	28	49708	0.02	3E+06	2698	0.88	2.40	0.41	8.4	14.01
NATIONAL BANK OF KENYA	3	2011	3	7	0	0.7	1	0.1	6	57.1	10	3	0.709	3	18	5	28	58769	0.02	2E+06	2444	0.84	3.61	0.34	6.1	14.89
NATIONAL BANK OF KENYA	3	2012	2	7	0	0.8	2	0.2	5	54	9	3	0.709	3	15	7	28	75438	0.07	1E+06	1157	0.88	3.71	0.30	4.6	19.85
NATIONAL BANK OF KENYA	3	2013	2	7	0	0.8	2	0.2	5	51.8	9	3	0.709	3	16	3	24	1E+05	0.06	2E+06	1812	0.78	4.05	0.42	5.7	17.14
NATIONAL BANK OF KENYA	3	2014	2	7	0	0.8	2	0.2	5	52.8	9	3	0.709	4	8	4	24	1E+05	0.11	1E+06	1303	0.82	5.79	0.32	5.3	16.39
NATIONAL BANK OF KENYA	3	2015	2	7	0	0.8	1	0.1	6	50.6	9	3	0.709	4	11	4	24	84160	-0.05	-2E+06	-1638	0.80	7.71	0.30	5.6	18.3
NATIONAL BANK OF KENYA	3	2016	1	7	0	0.9	2	0.3	6	52.8	8	3	0.709	4	14	5	26	1E+05	0.78	182654	182.7	0.86	7.79	0.31	5.8	13.66
NIC BANK LTD	3	2002	2	7	1	0.8	1	0.1	8	52.6	9	3	0	3	5	5	20	22854	0.07	340224	340.2	0.77	1.66	0.31	0.5	18.34
NIC BANK LTD	3	2003	2	8	1	0.8	1	0.1	8	53.6	10	3	0	3	5	5	20	22023	0.06	359301	359.3	0.89	1.33	0.26	2.9	13.47
NIC BANK LTD	3	2004	2	7	1	0.8	1	0.1	8	54.6	9	3	0	3	5	5	20	35359	0.09	372556	372.6	0.83	2.07	0.15	5.1	12.25
NIC BANK LTD	3	2005	2	7	1	0.8	1	0.1	8	50.6	9	3	0	3	5	5	20	42496	0.11	403010	403	0.84	2.61	0.46	5.9	13.16
NIC BANK LTD	3	2006	2	7	1	0.8	1	0.1	8	51.6	9	3	0	3	5	5	20	56444	0.08	677072	677.1	0.83	2.01	0.31	6.3	13.74
NIC BANK LTD	3	2007	2	7	1	0.8	1	0.1	8	52.6	9	3	0	3	7	4	19	52042	0.05	1E+06	1050	0.81	2.43	0.32	7	13.32
NIC BANK LTD	3	2008	2	7	1	0.8	1	0.1	8	53.6	9	3	0	3	5	4	19	7E+05	0.48	1E+06	1484	0.82	1.59	0.26	0.2	13.55
NIC BANK LTD	3	2009	2	8	1	0.8	1	0.1	8	54.6	10	3	0	3	4	5	17	2E+05	0.14	2E+06	1527	0.80	2.54	0.34	3.3	13.94
NIC BANK LTD	3	2010	2	8	1	0.8	1	0.1	8	51.4	10	3	0	3	4	6	25	1E+05	0.04	3E+06	2608	0.82	2.04	0.30	8.4	14.01
NIC BANK LTD	3	2011	2	8	1	0.8	1	0.1	8	47.5	10	3	0	3	5	6	24	1E+05	0.03	4E+06	3605	0.84	3.42	0.34	6.1	14.89
NIC BANK LTD	3	2012	2	8	1	0.8	1	0.1	8	47.5	10	3	0	3	6	6	26	2E+05	0.04	5E+06	4518	0.84	2.56	0.32	4.6	19.85
NIC BANK LTD	3	2013	2	9	1	0.8	2	0.2	2	48.5	11	3	0	4	6	6	23	2E+05	0.04	5E+06	5010	0.86	2.06	0.32	5.7	17.14
NIC BANK LTD	3	2014	2	9	1	0.8	2	0.2	2	49.5	11	3	0	4	6	5	26	2E+05	0.04	6E+06	6231	0.89	1.99	0.29	5.3	16.39
NIC BANK LTD	3	2015	2	10	1	0.8	2	0.2	2	50.5	12	3	0	4	4	6	24	2E+05	0.04	6E+06	6397	0.88	3.37	0.31	5.6	18.3

NIC BANK LTD	3	2016	2	9	1	0.8	2	0.2	2	51.5	11	3	0	4	5	8	30	2E+05	0.03	6E+06	6167	0.87	2.98	0.36	5.8	13.66
STANDARD CHARTERED BANK	3	2002	4	3	4	0.4	0	0.0	5	55	7	3	0	3	4	4	16	89439	0.03	3E+06	3212	0.86	2.67	0.31	0.5	18.34
STANDARD CHARTERED BANK	3	2003	4	6	4	0.6	1	0.1	7	53.3	10	3	0	3	4	4	16	1E+05	0.03	4E+06	4010	0.89	1.07	0.30	2.9	13.47
STANDARD CHARTERED BANK	3	2004	5	6	4	0.1	1	0.0	7	53.3	54	3	0	3	4	4	16	1E+05	0.05	3E+06	2691	0.87	1.56	0.31	5.1	12.25
STANDARD CHARTERED BANK	3	2005	4	4	4	0.5	2	0.3	6	54.3	8	3	0	3	5	4	16	1E+05	0.04	4E+06	3513	0.88	1.33	0.41	5.9	13.16
STANDARD CHARTERED BANK	3	2006	4	4	4	0.5	2	0.3	6	55.3	8	3	0	3	5	4	5	1E+05	0.03	4E+06	3810	0.89	1.08	0.58	6.3	13.74
STANDARD CHARTERED BANK	3	2007	4	6	4	0.6	2	0.2	8	55.4	10	3	0	3	4	5	20	1E+05	0.03	5E+06	4910	0.83	1.20	0.58	7	13.32
STANDARD CHARTERED BANK	3	2008	4	7	5	0.6	3	0.3	8	56.7	11	3	0	3	4	5	7	87365	0.02	5E+06	4720	0.70	1.59	0.58	0.2	13.55
STANDARD CHARTERED BANK	3	2009	4	6	4	0.6	2	0.2	8	53	10	3	0	3	6	6	24	1E+05	0.01	7E+06	6728	0.86	1.90	0.60	3.3	13.94
STANDARD CHARTERED BANK	3	2010	4	6	4	0.6	2	0.2	8	54.2	10	3	0	4	8	5	18	88020	0.01	8E+06	7682	0.93	1.30	0.59	8.4	14.01
STANDARD CHARTERED BANK	3	2011	4	6	4	0.6	2	0.2	8	54	10	3	0	4	5	5	20	1E+05	0.01	8E+06	8255	0.91	2.15	0.43	6.1	14.89
STANDARD CHARTERED BANK	3	2012	4	5	4	0.6	2	0.2	7	53.5	9	3	0	4	7	5	20	1E+05	0.01	1E+07	11556	0.92	1.59	0.39	4.6	19.85
STANDARD CHARTERED BANK	3	2013	3	5	4	0.6	2	0.3	7	53.5	8	3	0	4	8	6	19	1E+05	0.01	1E+07	13355	0.91	1.41	0.39	5.7	17.14
STANDARD CHARTERED BANK	3	2014	3	5	4	0.6	2	0.3	7	53.6	8	3	0	4	10	6	24	1E+05	0.01	1E+07	14346	0.92	1.30	0.44	5.3	16.39
STANDARD CHARTERED BANK	3	2015	3	5	4	0.6	3	0.4	7	46.1	8	3	0	4	8	6	24	2E+05	0.02	9E+06	9160	0.92	1.97	0.52	5.6	18.3
STANDARD CHARTERED BANK	3	2016	4	7	7	0.6	4	0.4	9	47.1	11	3	0	4	9	6	27	2E+05	0.01	1E+07	13288	0.92	1.88	0.62	5.8	13.66
EQUITY BANK LTD	3	2006	1	8	2	0.9	0	0.0	7	55.5	9	3	0.039	3	6	7	28	57000	0.05	1E+06	1102	0.78	1.21	0.39	6.3	13.74
EQUITY BANK LTD	3	2007	1	10	3	0.9	0	0.0	7	56.5	11	3	0.035	3	5	7	28	73000	0.03	2E+06	2378	0.95	0.55	0.14	7	13.32
EQUITY BANK LTD	3	2008	1	12	4	0.9	0	0.0	8	57.5	13	3	0.035	3	5	8	28	2E+05	0.04	5E+06	5022	0.84	0.70	0.50	0.2	13.55
EQUITY BANK LTD	3	2009	1	9	2	0.9	1	0.1	8	58.5	10	3	0.044	3	7	7	28	3E+05	0.06	5E+06	5278	0.86	1.02	0.30	3.3	13.94
EQUITY BANK LTD	3	2010	1	9	3	0.9	1	0.1	8	59.5	10	3	0.044	3	7	7	28	4E+05	0.05	9E+06	9045	0.87	0.92	0.41	8.4	14.01
EQUITY BANK LTD	3	2011	1	12	3	0.9	1	0.1	10	60.5	13	3	0.044	4	7	6	49	5E+05	0.04	1E+07	12834	0.97	1.71	0.41	6.1	14.89
EQUITY BANK LTD	3	2012	3	10	3	0.8	1	0.1	10	61.5	13	3	0.044	4	5	6	23	6E+05	0.04	2E+07	17419	0.99	1.75	0.46	4.6	19.85
EQUITY BANK LTD	3	2013	3	9	3	0.8	1	0.1	8	62.5	12	3	0.041	4	7	6	25	3E+05	0.02	2E+07	19004	0.87	1.37	0.34	5.7	17.14
EQUITY BANK LTD	3	2014	3	6	3	0.7	2	0.2	7	63.5	9	3	0.041	4	7	6	24	4E+05	0.02	2E+07	22364	0.85	1.16	0.30	5.3	16.39
EQUITY BANK LTD	3	2015	3	6	3	0.7	2	0.2	7	64.5	9	3	0.038	4	5	3	18	6E+05	0.03	2E+07	23958	0.78	1.63	0.30	5.6	18.3
EQUITY BANK LTD	3	2016	3	6	3	0.7	2	0.2	7	65.5	9	3	0.038	4	5	4	18	7E+05	0.03	2E+07	24927	0.86	1.97	0.48	5.8	13.66
CO-OPERATIVE BANK LTD	3	2008	1	15	0	0.9	1	0.1	7	53.5	16	3	0.04	3	5	3	13	64868	0.02	3E+06	3359	1.00	1.35	0.15	0.2	13.55
CO-OPERATIVE BANK LTD	3	2009	1	15	0	0.9	1	0.1	7	53.9	16	3	0.04	3	7	3	9	75512	0.02	4E+06	3736	0.65	2.00	0.18	3.3	13.94
CO-OPERATIVE BANK LTD	3	2010	1	10	0	0.9	1	0.1	7	54.9	11	3	0.04	3	5	3	9	89887	0.02	6E+06	5773	0.83	1.56	0.15	8.4	14.01
CO-OPERATIVE BANK LTD	3	2011	1	11	0	0.9	1	0.1	7	55.9	12	3	0.03	3	7	3	8	1E+05	0.02	6E+06	6363	0.84	2.31	0.16	6.1	14.89
CO-OPERATIVE BANK LTD	3	2012	1	11	0	0.9	1	0.1	7	56.9	12	3	0.03	3	5	3	9	84797	0.01	1E+07	9984	0.81	2.08	0.29	4.6	19.85
CO-OPERATIVE BANK LTD	3	2013	1	11	0	0.9	1	0.1	7	57.4	12	3	0.031	3	6	3	12	1E+05	0.01	1E+07	10872	0.66	1.75	0.36	5.7	17.14
CO-OPERATIVE BANK LTD	3	2014	1	11	0	0.9	2	0.2	7	57	12	3	0.028	3	7	3	11	2E+05	0.01	1E+07	10916	0.77	1.76	0.35	5.3	16.39
CO-OPERATIVE BANK LTD	3	2015	1	12	0	0.9	2	0.2	7	57.8	13	3	0.026	3	8	4	16	1E+05	0.01	2E+07	15383	0.80	2.19	0.33	5.6	18.3
CO-OPERATIVE BANK LTD	3	2016	2	10	0	0.8	2	0.2	8	58.8	12	3	0.026	3	5	4	16	2E+05	0.01	2E+07	18020	0.87	2.31	0.34	5.8	13.66
EXPRESS KENYA LTD	4	2002	2	5	6	0.7	6	0.9	6	48.7	7	5	0	1	4	2	8	14034	-0.29	-47608	-47.61	0.41	0.58	-0.24	0.5	18.34
EXPRESS KENYA LTD	4	2003	2	3	2	0.6	4	0.8	4	49.7	5	5	0	1	4	6	20	16751	-0.15	-1E+05	-108.8	0.43	2.34	-0.26	2.9	13.47
EXPRESS KENYA LTD	4	2004	2	3	1	0.6	4	0.8	4	50.7	5	5	0	2	4	3	12	6000	0.59	10237	10.24	0.64	0.91	-0.28	5.1	12.25

Company	C1	Year	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26
EXPRESS KENYA LTD	4	2005	2	3	1	0.6	4	0.8	4	51.7	5	5	0	2	4	3	12	9030	0.12	76580	76.58	0.69	0.52	-0.21	5.9	13.16
EXPRESS KENYA LTD	4	2006	2	2	1	0.5	4	1.0	4	52.7	4	5	0	2	4	2	8	18000	0.18	102508	102.5	0.72	0.45	-0.15	6.3	13.74
EXPRESS KENYA LTD	4	2007	2	3	1	0.6	2	0.4	2	53.7	5	5	0	2	4	2	8	18000	0.16	112380	112.4	0.75	0.31	-0.06	7	13.32
EXPRESS KENYA LTD	4	2008	2	2	1	0.5	3	0.8	3	54.7	4	5	0	2	4	2	8	18000	-0.34	-52864	-52.86	0.86	1.00	-0.25	0.2	13.55
EXPRESS KENYA LTD	4	2009	2	2	1	0.5	4	1.0	4	55.7	4	5	0	2	4	2	8	18000	0.69	25916	25.92	0.88	1.28	-0.27	3.3	13.94
EXPRESS KENYA LTD	4	2010	2	2	1	0.5	3	0.8	3	56.7	4	5	0	2	4	2	8	18000	-1.21	-14869	-14.87	0.87	1.45	-0.28	8.4	14.01
EXPRESS KENYA LTD	4	2011	2	2	1	0.5	3	0.8	3	57.7	4	5	0	2	4	2	8	18470	0.08	-2E+05	-222.4	0.82	2.08	-0.35	6.1	14.89
EXPRESS KENYA LTD	4	2012	2	2	1	0.5	3	0.8	3	58.7	4	5	0	2	4	4	24	18550	-1.4	-13236	-13.24	0.87	0.92	-0.20	4.6	19.85
EXPRESS KENYA LTD	4	2013	1	4	1	0.8	3	0.6	3	59.7	5	5	0	2	4	4	24	18000	-10.6	-1696	-1.696	0.77	0.84	-0.13	5.7	17.14
EXPRESS KENYA LTD	4	2014	1	4	1	0.8	3	0.6	3	60.7	5	5	0	2	4	4	24	18200	-0.24	-76435	-76.44	0.84	0.73	-0.11	5.3	16.39
EXPRESS KENYA LTD	4	2015	1	4	1	0.8	3	0.6	3	61.7	5	5	0	2	4	4	24	18000	-0.24	-75734	-75.73	0.75	1.15	0.03	5.6	18.3
EXPRESS KENYA LTD	4	2016	1	4	1	0.8	3	0.6	3	62.7	5	5	0	2	4	1	5	18000	0.16	-1E+05	-112	0.90	2.39	-0.27	5.8	13.66
KENYA AIRWAYS LTD	4	2002	2	9	6	0.8	0	0.0	10	57.4	11	3	0.231	1	6	3	12	6000	0.01	1E+06	1059	0.62	0.68	0.07	0.5	18.34
KENYA AIRWAYS LTD	4	2003	2	9	7	0.8	0	0.0	10	57.6	11	3	0.231	2	6	3	12	1E+05	0.17	756000	756	0.72	1.60	0.02	2.9	13.47
KENYA AIRWAYS LTD	4	2004	2	10	6	0.8	0	0.0	10	57.4	12	3	0.231	2	6	3	12	91000	0.04	2E+06	2075	0.78	1.63	-0.03	5.1	12.25
KENYA AIRWAYS LTD	4	2005	2	10	6	0.8	0	0.0	8	56.5	12	3	0.231	2	6	3	12	79000	0.01	6E+06	5520	0.74	1.39	-0.05	5.9	13.16
KENYA AIRWAYS LTD	4	2006	2	9	4	0.8	1	0.1	9	55.5	11	3	0.23	2	5	3	12	82000	0.01	7E+06	6960	0.74	0.79	0.03	6.3	13.74
KENYA AIRWAYS LTD	4	2007	2	9	4	0.8	1	0.1	9	54.5	11	3	0.23	2	5	3	12	86000	0.02	6E+06	5513	0.74	0.85	0.07	7	13.32
KENYA AIRWAYS LTD	4	2008	2	9	4	0.8	1	0.1	8	58.1	11	3	0.23	3	5	3	12	95000	0.01	7E+06	6526	0.21	1.02	0.03	0.2	13.55
KENYA AIRWAYS LTD	4	2009	2	9	3	0.8	1	0.1	8	59.1	11	3	0.23	3	5	3	12	91000	-0.02	-6E+06	-5664	0.74	2.24	-0.03	3.3	13.94
KENYA AIRWAYS LTD	4	2010	2	9	3	0.8	2	0.2	8	58.2	11	3	0.23	3	5	3	12	78000	0.03	3E+06	2671	0.76	1.12	-0.04	8.4	14.01
KENYA AIRWAYS LTD	4	2011	2	9	3	0.8	2	0.2	8	57.6	11	3	0.23	3	5	3	12	78000	0.02	5E+06	5002	0.70	1.48	0.02	6.1	14.89
KENYA AIRWAYS LTD	4	2012	2	9	3	0.8	2	0.2	9	56.2	11	3	0.23	3	5	3	9	96000	0.04	2E+06	2146	0.72	1.85	-0.02	4.6	19.85
KENYA AIRWAYS LTD	4	2013	2	9	3	0.8	2	0.2	9	56.7	11	3	0.278	3	5	4	9	92000	0.01	-1E+07	-10826	0.77	1.80	-0.18	5.7	17.14
KENYA AIRWAYS LTD	4	2014	2	9	3	0.8	1	0.1	10	57.7	11	3	0.278	3	5	3	9	1E+05	-0.02	-5E+06	-4861	0.80	2.58	-0.23	5.3	16.39
KENYA AIRWAYS LTD	4	2015	2	9	2	0.8	3	0.3	10	58.7	11	3	0.278	3	5	3	9	1E+05	-0	-3E+07	-29712	0.77	30.03	-0.22	5.6	18.3
KENYA AIRWAYS LTD	4	2016	2	9	2	0.8	2	0.2	9	59.7	11	3	0.278	3	5	4	12	93000	-0	-3E+07	-26099	0.81	-2.18	-0.28	5.8	13.66
NATION MEDIA GROUP LTD	4	2002	1	11	7	0.9	0	0.0	8	55.2	12	3	0.03	1	4	5	18	58100	0.09	635200	635.2	0.42	0.19	0.24	0.5	18.34
NATION MEDIA GROUP LTD	4	2003	1	10	6	0.9	0	0.0	8	55.2	11	3	0.03	2	4	5	18	56400	0.06	872600	872.6	0.42	0.09	0.29	2.9	13.47
NATION MEDIA GROUP LTD	4	2004	1	11	6	0.9	0	0.0	8	55.2	12	3	0.03	2	4	5	18	40800	0.05	894700	894.7	0.50	0.10	0.21	5.1	12.25
NATION MEDIA GROUP LTD	4	2005	1	11	7	0.9	0	0.0	8	55.2	12	3	0.03	2	4	5	18	50400	0.05	1E+06	1018	0.46	0.07	0.27	5.9	13.16
NATION MEDIA GROUP LTD	4	2006	1	11	7	0.9	0	0.0	8	56.2	12	3	0.03	2	4	5	18	88500	0.08	1E+06	1151	0.39	0.07	0.33	6.3	13.74
NATION MEDIA GROUP LTD	4	2007	1	11	6	0.9	1	0.1	10	57.2	12	3	0.03	2	4	5	18	2E+05	0.11	2E+06	1602	0.39	0.08	0.29	7	13.32
NATION MEDIA GROUP LTD	4	2008	1	11	6	0.9	0	0.0	10	62.7	12	3	0.03	3	4	5	18	70200	0.04	2E+06	1910	0.39	0.16	0.28	0.2	13.55
NATION MEDIA GROUP LTD	4	2009	1	12	8	0.9	1	0.1	12	58.7	13	3	0.03	3	4	5	18	59300	0.03	2E+06	1817	0.43	0.09	0.30	3.3	13.94
NATION MEDIA GROUP LTD	4	2010	1	13	8	0.9	3	0.2	12	55.7	14	3	0.03	3	4	5	18	82000	0.04	2E+06	2147	0.36	0.08	0.32	8.4	14.01
NATION MEDIA GROUP LTD	4	2011	1	14	9	0.9	3	0.2	13	56.8	15	3	0.03	3	4	5	18	89500	0.03	3E+06	2810	0.34	0.09	0.38	6.1	14.89

Company																											
NATION MEDIA GROUP LTD	4	2012	1	15	9	0.9	4	0.3	13	56.8	16	3	0.031	3	4	5	18	1E+05	0.03	4E+06	3505	0.32	0.08	0.38	4.6	19.85
NATION MEDIA GROUP LTD	4	2013	1	14	8	0.9	4	0.3	13	58.3	15	3	0.007	3	4	5	18	1E+05	0.03	4E+06	3587	0.31	0.06	0.41	5.7	17.14
NATION MEDIA GROUP LTD	4	2014	1	14	8	0.9	4	0.3	15	60.2	15	3	0.007	3	4	5	18	1E+05	0.03	4E+06	3624	0.38	0.05	0.36	5.3	16.39
NATION MEDIA GROUP LTD	4	2015	1	15	8	0.9	3	0.2	15	60.2	16	3	0.007	3	4	5	18	1E+05	0.05	3E+06	2823	0.41	0.08	0.31	5.6	18.3
NATION MEDIA GROUP LTD	4	2016	1	14	7	0.9	2	0.1	12	60.7	15	3	0.009	3	4	5	18	1E+05	0.05	2E+06	2460	0.41	0.13	0.30	5.8	13.66
STANDARD MEDIA GROUP LTD	4	2002	5	3	2	0.4	0	0.0	5	48.4	8	5	0	3	4	2	6	24925	1.71	14550	14.55	0.44	0.22	-0.11	0.5	18.34
STANDARD MEDIA GROUP LTD	4	2003	5	3	2	0.4	0	0.0	5	48.4	8	5	0	3	4	2	6	65587	0.87	75173	75.17	0.43	0.19	-0.04	2.9	13.47
STANDARD MEDIA GROUP LTD	4	2004	3	4	1	0.6	0	0.0	5	49	7	5	0	3	4	3	12	49241	0.4	121908	121.9	0.45	0.23	-0.01	5.1	12.25
STANDARD MEDIA GROUP LTD	4	2005	2	3	1	0.6	0	0.0	4	50	5	5	0	3	4	4	16	55714	0.47	118051	118.1	0.43	0.22	0.03	5.9	13.16
STANDARD MEDIA GROUP LTD	4	2006	4	3	1	0.4	0	0.0	5	47.7	7	5	0	3	4	4	16	74498	0.24	304507	304.5	0.39	0.15	0.18	6.3	13.74
STANDARD MEDIA GROUP LTD	4	2007	2	5	1	0.7	1	0.1	5	49.7	7	5	0	3	4	4	16	67060	0.16	413120	413.1	0.58	0.30	0.10	7	13.32
STANDARD MEDIA GROUP LTD	4	2008	3	5	1	0.6	1	0.1	5	48.4	8	5	0	3	4	3	7	66581	0.16	428774	428.8	0.57	0.38	0.12	0.2	13.55
STANDARD MEDIA GROUP LTD	4	2009	3	5	1	0.6	1	0.1	5	48.8	8	5	0	3	4	3	8	88052	0.23	376493	376.5	0.64	0.46	0.08	3.3	13.94
STANDARD MEDIA GROUP LTD	4	2010	3	5	1	0.6	1	0.1	5	51.2	8	5	0	3	4	3	16	56749	0.13	453650	453.7	0.59	0.39	0.10	8.4	14.01
STANDARD MEDIA GROUP LTD	4	2011	3	4	1	0.6	1	0.1	5	50.9	7	5	0	3	4	3	16	48902	0.21	232097	232.1	0.63	0.57	0.03	6.1	14.89
STANDARD MEDIA GROUP LTD	4	2012	3	3	2	0.5	1	0.2	4	51.9	6	5	0	3	3	3	16	63237	0.24	265364	265.4	0.64	0.75	0.04	4.6	19.85
STANDARD MEDIA GROUP LTD	4	2013	3	4	2	0.6	1	0.1	5	52.9	7	5	0	3	3	2	16	75049	0.25	300680	300.7	0.60	0.82	0.72	5.7	17.14
STANDARD MEDIA GROUP LTD	4	2014	3	5	2	0.6	1	0.1	5	53.9	8	5	0	3	3	2	6	83834	0.26	326083	326.1	0.64	0.37	0.07	5.3	16.39
STANDARD MEDIA GROUP LTD	4	2015	3	5	2	0.6	1	0.1	5	54.9	8	5	0	3	7	2	11	72587	-0.18	-4E+05	-395.9	0.61	0.70	-0.02	5.6	18.3
STANDARD MEDIA GROUP LTD	4	2016	3	5	2	0.6	1	0.1	5	56	8	5	0	3	7	2	11	94984	0.35	269475	269.5	0.55	0.54	0.07	5.8	13.66
TPS EA SERENA LTD	4	2002	2	6	3	0.8	0	0.0	5	54.9	8	4	0.045	2	4	2	6	16662	0.1	168987	169	0.64	0.63	0.03	0.5	18.34
TPS EA SERENA LTD	4	2003	2	5	2	0.7	0	0.0	5	56.1	7	4	0.045	2	6	2	6	18381	0.43	42968	42.97	0.66	0.48	0.03	2.9	13.47
TPS EA SERENA LTD	4	2004	2	5	3	0.7	0	0.0	5	57	7	4	0.004	2	6	2	6	20122	0.1	197540	197.5	0.66	0.33	0.03	5.1	12.25
TPS EA SERENA LTD	4	2005	2	6	2	0.8	0	0.0	6	59	8	4	0.004	2	6	2	6	22234	0.16	140300	140.3	0.82	0.31	0.03	5.9	13.16
TPS EA SERENA LTD	4	2006	2	12	7	0.9	0	0.0	8	59.8	14	4	0.004	2	4	2	6	26045	0.05	498605	498.6	0.84	0.25	0.05	6.3	13.74
TPS EA SERENA LTD	4	2007	2	10	6	0.8	0	0.0	8	58	12	4	0.004	2	4	2	6	33285	0.05	617380	617.4	0.79	0.32	0.01	7	13.32
TPS EA SERENA LTD	4	2008	2	10	7	0.8	0	0.0	8	61.1	12	4	0.005	3	4	2	5	33335	0.1	330014	330	0.81	0.30	0.04	0.2	13.55
TPS EA SERENA LTD	4	2009	2	9	7	0.8	0	0.0	8	62.1	11	4	0.004	3	4	2	5	52450	0.1	519689	519.7	0.78	0.33	0.08	3.3	13.94
TPS EA SERENA LTD	4	2010	2	10	6	0.8	0	0.0	8	60.3	12	4	0.003	3	3	2	5	60062	0.09	692933	692.9	0.80	0.25	0.06	8.4	14.01
TPS EA SERENA LTD	4	2011	2	10	6	0.8	0	0.0	8	61.2	12	4	0.003	3	7	2	5	71242	0.08	853133	853.1	0.82	0.32	0.06	6.1	14.89
TPS EA SERENA LTD	4	2012	2	10	6	0.8	0	0.0	8	60	12	4	0.007	3	6	2	5	77913	0.11	721516	721.5	0.85	0.38	0.00	4.6	19.85
TPS EA SERENA LTD	4	2013	2	9	5	0.8	1	0.1	7	59.3	11	4	0.006	3	4	2	5	75847	0.1	755717	755.7	0.85	0.27	0.01	5.7	17.14
TPS EA SERENA LTD	4	2014	2	9	5	0.8	1	0.1	7	59.7	11	4	0.007	3	4	2	5	76060	0.35	220101	220.1	0.86	0.35	-0.03	5.3	16.39
TPS EA SERENA LTD	4	2015	2	9	5	0.8	1	0.1	7	58.9	11	4	0.007	3	5	2	5	75874	-0.36	-2E+05	-211	0.85	0.47	0.01	5.6	18.3
TPS EA SERENA LTD	4	2016	2	9	5	0.8	1	0.1	7	59.9	11	4	0.007	3	6	2	8	75048	0.23	325301	325.3	0.82	0.41	0.04	5.8	13.66
SCANGROUP LTD	4	2006	2	3	2	0.6	0	0.0	3	53.6	5	3	0.284	3	4	2	5	44598	0.16	278684	278.7	0.04	0.17	0.34	6.3	13.74
SCANGROUP LTD	4	2007	2	3	2	0.6	0	0.0	3	51.7	5	3	0.284	3	4	2	5	46744	0.13	352814	352.8	0.08	0.22	0.27	7	13.32
SCANGROUP LTD	4	2008	2	3	4	0.4	0	0.0	5	50	7	3	0.206	3	4	2	2	57980	0.13	436755	436.8	0.05	0.21	0.50	0.2	13.55
SCANGROUP LTD	4	2009	2	5	4	0.7	0	0.0	5	51	7	3	0.206	3	4	2	2	66215	0.12	544100	544.1	0.18	0.20	0.42	3.3	13.94

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Company																											
SCANGROUP LTD	4	2010	2	5	5	0.7	0	0.0	6	51.7	7	3	0.194	3	4	3	3	76962	0.09	838396	838.4	0.11	0.24	0.36	8.4	14.01
SCANGROUP LTD	4	2011	2	5	5	0.7	0	0.0	5	51.6	7	3	0.196	3	4	3	3	83827	0.07	1E+06	1280	0.08	0.26	0.47	6.1	14.89
SCANGROUP LTD	4	2012	2	4	4	0.6	0	0.0	5	52.6	7	3	0.182	3	4	3	3	80027	0.07	1E+06	1095	0.11	0.15	0.50	4.6	19.85
SCANGROUP LTD	4	2013	2	5	4	0.7	0	0.0	5	54.8	7	3	0.137	3	4	3	3	97823	0.1	963093	963.1	0.17	0.18	0.49	5.7	17.14
SCANGROUP LTD	4	2014	1	5	3	0.8	0	0.0	5	55.8	6	3	0.137	3	4	3	3	77692	0.09	912277	912.3	0.18	0.18	0.49	5.3	16.39
SCANGROUP LTD	4	2015	2	5	4	0.7	0	0.0	5	55	7	3	0.137	3	4	3	3	1E+05	0.12	875271	875.3	0.19	0.20	0.52	5.6	18.3
SCANGROUP LTD	4	2016	2	5	4	0.7	0	0.0	5	56	7	3	0.12	3	4	3	3	1E+05	0.01	7E+06	7126	0.18	0.30	0.48	5.8	13.66
UCHUMI SUPERMARKET LTD	4	2002	2	7	2	0.8	2	0.2	6	52.6	9	3	0.21	2	6	2	10	10585	0.03	307525	307.5	0.54	1.62	-0.18	0.5	18.34
UCHUMI SUPERMARKET LTD	4	2003	2	7	2	0.8	2	0.2	6	53.6	9	3	0.21	2	6	2	10	13325	0.07	202826	202.8	0.92	1.44	-1.28	2.9	13.47
UCHUMI SUPERMARKET LTD	4	2004	2	8	2	0.8	2	0.2	6	54.6	10	3	0.21	2	6	2	10	20445	-0.03	-7E+05	-654.4	0.57	2.72	-0.44	5.1	12.25
UCHUMI SUPERMARKET LTD	4	2005	2	8	2	0.8	2	0.2	6	55.6	10	3	0.21	2	6	2	10	14319	-0.01	-1E+06	-1227	0.71	0.63	-0.94	5.9	13.16
UCHUMI SUPERMARKET LTD	4	2011	1	6	0	0.9	1	0.1	3	58.5	7	3	0.21	2	4	3	6	20141	0.04	514833	514.8	0.65	0.33	-0.04	6.1	14.89
UCHUMI SUPERMARKET LTD	4	2012	1	6	0	0.9	2	0.3	3	59.5	7	3	0.21	2	4	3	6	24299	0.07	371905	371.9	0.68	0.33	-0.12	4.6	19.85
UCHUMI SUPERMARKET LTD	4	2013	1	6	0	0.9	3	0.4	3	60.5	7	3	0.21	2	6	3	6	29799	0.08	393589	393.6	0.69	0.33	-0.13	5.7	17.14
UCHUMI SUPERMARKET LTD	4	2014	1	8	0	0.9	3	0.3	3	61.5	9	3	0.173	2	6	3	6	29779	0.07	432777	432.8	0.67	0.52	-0.16	5.3	16.39
UCHUMI SUPERMARKET LTD	4	2015	1	8	0	0.9	3	0.3	4	62.5	9	3	0.173	2	8	3	5	29779	-0.01	-4E+06	-3513	0.72	1.39	-0.54	5.6	18.3
UCHUMI SUPERMARKET LTD	4	2016	1	8	0	0.9	3	0.3	4	63.5	9	3	0.173	2	8	3	5	31272	-0.01	-3E+06	-2671	0.67	-7.08	-0.95	5.8	13.66
LORNHORN	4	2012	1	6	0	0.9	2	0.3	4	48.5	7	3	0.459	3	4	3	14	3082	0.02	151327	151.3	0.33	0.29	0.07	4.6	19.85
LORNHORN	4	2013	1	7	0	0.9	2	0.3	6	49.5	8	3	0.459	3	4	3	13	2886	0.02	147226	147.2	0.29	0.25	0.27	5.7	17.14
LORNHORN	4	2014	1	8	0	0.9	3	0.3	5	50.5	9	3	0.422	3	7	3	14	3681	0.04	96916	96.92	0.27	0.36	0.32	5.3	16.39
LORNHORN	4	2015	1	8	0	0.9	3	0.3	5	51.5	9	3	0.661	3	6	3	13	4788	0.04	119285	119.3	0.33	0.21	0.22	5.6	18.3
LORNHORN	4	2016	1	8	0	0.9	3	0.3	5	52.5	9	3	0.661	4	7	3	16	6031	0.04	171407	171.4	0.19	0.44	0.32	5.8	13.66
ATHI RIVER MINING LTD	5	2002	3	3	1	0.5	0	0.0	5	46.7	6	3	0	2	4	1	2	18219	0.22	82136	82.14	0.65	0.42	0.08	0.5	18.34
ATHI RIVER MINING LTD	5	2003	3	5	2	0.6	0	0.0	6	47.7	8	3	0	2	4	1	3	19896	0.15	131197	131.2	0.68	0.21	0.12	2.9	13.47
ATHI RIVER MINING LTD	5	2004	3	5	2	0.6	0	0.0	6	48.7	8	3	0	2	4	2	3	26734	0.16	172368	172.4	0.66	0.41	0.01	5.1	12.25
ATHI RIVER MINING LTD	5	2005	3	5	2	0.6	0	0.0	6	49.7	8	3	0	2	4	2	4	31128	0.11	295920	295.9	0.67	0.42	0.17	5.9	13.16
ATHI RIVER MINING LTD	5	2006	3	5	3	0.6	0	0.0	7	50.7	8	3	0	2	4	2	3	52399	0.14	387868	387.9	0.75	0.32	-0.01	6.3	13.74
ATHI RIVER MINING LTD	5	2007	3	5	3	0.6	0	0.0	6	51.7	8	3	0	2	4	2	3	57236	0.09	626640	626.6	0.74	0.25	0.03	7	13.32
ATHI RIVER MINING LTD	5	2008	3	5	3	0.6	0	0.0	6	52.7	8	3	0	2	4	2	3	59287	0.08	705450	705.5	0.70	0.38	0.01	0.2	13.55
ATHI RIVER MINING LTD	5	2009	3	4	4	0.6	0	0.0	6	53.7	7	3	0	3	4	2	3	1E+05	0.11	948714	948.7	0.72	0.53	0.00	3.3	13.94
ATHI RIVER MINING LTD	5	2010	3	6	4	0.7	0	0.0	7	54.7	9	3	0	3	4	2	3	1E+05	0.1	1E+06	1113	0.74	0.50	0.06	8.4	14.01
ATHI RIVER MINING LTD	5	2011	3	4	4	0.6	0	0.0	6	55.7	7	3	0	3	4	3	10	1E+05	0.08	1E+06	1363	0.82	0.67	-0.03	6.1	14.89
ATHI RIVER MINING LTD	5	2012	3	6	5	0.7	1	0.1	7	56.7	9	3	0	3	4	3	10	1E+05	0.09	1E+06	1246	0.71	0.68	0.05	4.6	19.85
ATHI RIVER MINING LTD	5	2013	3	6	5	0.7	0	0.0	7	57.7	9	3	0	3	3	3	10	1E+05	0.11	1E+06	1349	0.77	0.41	-0.01	5.7	17.14
ATHI RIVER MINING LTD	5	2014	3	6	6	0.7	0	0.0	7	58.7	9	3	0	3	3	3	10	2E+05	0.08	2E+06	2018	0.78	0.55	-0.25	5.3	16.39
ATHI RIVER MINING LTD	5	2015	3	6	5	0.7	0	0.0	7	59.7	9	3	0	4	4	3	10	2E+05	-0.05	-4E+06	-3539	0.85	0.94	-0.24	5.6	18.3
ATHI RIVER MINING LTD	5	2016	2	9	5	0.8	0	0.0	9	60.7	11	3	0	4	6	5	9	2E+05	-0.05	-4E+06	-3979	0.35	0.89	0.46	5.8	13.66
BAMBURI CEMENT LTD	5	2002	3	7	5	0.7	2	0.2	8	44.4	10	3	0	3	4	2	6	55000	0.03	2E+06	2083	0.77	0.18	0.08	0.5	18.34

BAMBURI CEMENT LTD	5	2003	3	7	5	0.7	2	0.2	8	45.4	10	3	0	3	4	2	6	.	.	.	####	0.76	0.07	0.15	2.9	13.47
BAMBURI CEMENT LTD	5	2004	3	7	5	0.7	2	0.2	8	46.4	10	3	0	3	4	2	6	80000	0.03	3E+06	2786	0.76	0.10	0.11	5.1	12.25
BAMBURI CEMENT LTD	5	2005	3	7	5	0.7	2	0.2	8	53.1	10	3	0	3	4	2	6	94000	0.03	3E+06	3147	0.75	0.07	0.13	5.9	13.16
BAMBURI CEMENT LTD	5	2006	3	7	5	0.7	2	0.2	8	57.5	10	3	0	3	4	2	6	98000	0.03	4E+06	3838	0.70	0.05	0.17	6.3	13.74
BAMBURI CEMENT LTD	5	2007	3	7	5	0.7	1	0.1	8	54	10	3	0	3	4	2	6	1E+05	0.02	5E+06	5443	0.66	0.07	0.19	7	13.32
BAMBURI CEMENT LTD	5	2008	3	7	5	0.7	1	0.1	8	55	10	3	0	4	4	2	6	1E+05	0.02	5E+06	4889	0.64	0.15	0.16	0.2	13.55
BAMBURI CEMENT LTD	5	2009	3	7	5	0.7	1	0.1	8	53	10	3	0	4	4	2	7	1E+05	0.01	1E+07	9596	0.60	0.14	0.24	3.3	13.94
BAMBURI CEMENT LTD	5	2010	3	7	4	0.7	1	0.1	8	50.6	10	3	0	4	4	2	6	1E+05	0.02	8E+06	7564	0.61	0.13	0.16	8.4	14.01
BAMBURI CEMENT LTD	5	2011	3	6	6	0.7	1	0.1	8	52	9	3	0	4	4	2	5	2E+05	0.02	7E+06	7176	0.60	0.13	0.25	6.1	14.89
BAMBURI CEMENT LTD	5	2012	3	7	6	0.7	2	0.2	8	55.4	10	3	0	4	4	2	7	2E+05	0.03	6E+06	5516	0.62	0.12	0.22	4.6	19.85
BAMBURI CEMENT LTD	5	2013	3	7	6	0.7	2	0.2	8	54.8	10	3	0	4	4	2	6	1E+05	0.03	5E+06	4716	0.63	0.11	0.23	5.7	17.14
BAMBURI CEMENT LTD	5	2014	3	7	6	0.7	2	0.2	8	56.1	10	3	0	4	5	2	6	1E+05	0.03	4E+06	4387	0.62	0.15	0.21	5.3	16.39
BAMBURI CEMENT LTD	5	2015	3	7	6	0.7	2	0.2	8	63	10	3	0	4	5	2	6	2E+05	0.02	8E+06	8458	0.57	0.14	0.25	5.6	18.3
BAMBURI CEMENT LTD	5	2016	3	6	5	0.7	0	0.0	7	54.7	9	3	0	4	6	2	6	2E+05	0.02	8E+06	8271	0.53	0.12	0.29	5.8	13.66
CROWN BERGER LTD	5	2002	3	4	0	0.6	0	0.0	5	44.3	7	3	0	3	4	2	8	9870	0.12	79553	79.55	0.31	0.45	0.41	0.5	18.34
CROWN BERGER LTD	5	2003	3	4	0	0.6	0	0.0	5	45.3	7	3	0	3	4	2	8	10863	0.12	88361	88.36	0.40	0.25	0.30	2.9	13.47
CROWN BERGER LTD	5	2004	3	4	0	0.6	0	0.0	5	46.3	7	3	0	3	4	2	8	8533	0.12	73639	73.64	0.32	0.38	0.28	5.1	12.25
CROWN BERGER LTD	5	2005	3	6	0	0.7	0	0.0	7	47.3	9	3	0	3	4	2	8	8443	0.12	69726	69.73	0.31	0.41	0.26	5.9	13.16
CROWN BERGER LTD	5	2006	3	4	0	0.6	0	0.0	5	48.3	7	3	0	3	4	2	8	18853	0.17	108800	108.8	0.33	0.42	0.25	6.3	13.74
CROWN BERGER LTD	5	2007	3	4	0	0.6	0	0.0	5	49.3	7	3	0	3	4	2	8	18507	0.1	187289	187.3	0.36	0.35	0.24	7	13.32
CROWN BERGER LTD	5	2008	3	2	0	0.4	0	0.0	4	50.3	5	3	0	3	4	2	8	24564	0.22	110732	110.7	0.29	0.76	0.18	0.2	13.55
CROWN BERGER LTD	5	2009	3	2	0	0.4	0	0.0	4	51.3	5	3	0	4	4	2	8	35997	0.17	205735	205.7	0.29	0.71	0.22	3.3	13.94
CROWN BERGER LTD	5	2010	3	2	0	0.4	0	0.0	4	52.3	5	3	0	4	4	2	8	45629	0.33	139618	139.6	0.25	0.61	0.25	8.4	14.01
CROWN BERGER LTD	5	2011	3	2	0	0.4	0	0.0	4	53.3	5	3	0	4	4	2	8	81346	0.74	109480	109.5	0.29	0.76	0.22	6.1	14.89
CROWN BERGER LTD	5	2012	3	2	0	0.4	0	0.0	4	54.3	5	3	0	4	4	2	8	1E+05	0.38	264047	264	0.30	0.52	0.25	4.6	19.85
CROWN BERGER LTD	5	2013	3	3	0	0.5	1	0.2	5	55.3	6	3	0	4	4	2	8	1E+05	0.3	358536	358.5	0.26	0.50	0.20	5.7	17.14
CROWN BERGER LTD	5	2014	3	4	0	0.6	1	0.1	5	56.3	7	3	0	4	4	2	8	1E+05	0.66	151481	151.5	0.27	0.54	0.17	5.3	16.39
CROWN BERGER LTD	5	2015	3	4	0	0.6	1	0.1	4	57.3	7	3	0	4	4	2	8	1E+05	0.24	456588	456.6	0.27	0.87	0.17	5.6	18.3
CROWN BERGER LTD	5	2016	3	3	0	0.5	0	0.0	4	58.3	6	3	0	4	4	2	8	1E+05	0.29	407260	407.3	0.25	2.03	0.11	5.8	13.66
EAST AFRICA CABLES LTD	5	2002	1	4	0	0.8	0	0.0	4	50.2	5	3	1E-04	3	6	3	11	13972	-2.82	-4954	-4.954	0.28	0.20	0.54	0.5	18.34
EAST AFRICA CABLES LTD	5	2003	1	4	0	0.8	0	0.0	4	51.2	5	3	1E-04	3	6	3	10	9208	0.66	14022	14.02	0.23	0.20	0.53	2.9	13.47
EAST AFRICA CABLES LTD	5	2004	1	4	0	0.8	0	0.0	4	52.2	5	3	1E-04	3	4	3	12	9208	0.66	14044	14.04	0.17	0.13	0.52	5.1	12.25
EAST AFRICA CABLES LTD	5	2005	1	4	0	0.8	0	0.0	4	53.2	5	3	1E-04	3	4	3	12	5291	0.03	178815	178.8	0.29	0.14	0.31	5.9	13.16
EAST AFRICA CABLES LTD	5	2006	1	5	1	0.8	0	0.0	4	54.2	6	3	2E-04	3	4	3	12	12918	0.04	294035	294	0.35	0.11	0.25	6.3	13.74
EAST AFRICA CABLES LTD	5	2007	1	6	1	0.9	0	0.0	5	56	7	3	1E-04	3	4	3	14	22681	0.05	422812	422.8	0.31	0.22	0.25	7	13.32
EAST AFRICA CABLES LTD	5	2008	1	6	1	0.9	0	0.0	5	54.1	7	3	5E-04	3	4	3	12	11995	0.02	486927	486.9	0.35	0.26	0.26	0.2	13.55
EAST AFRICA CABLES LTD	5	2009	1	6	1	0.9	0	0.0	5	50.6	7	3	5E-04	4	4	3	14	18638	0.04	526444	526.4	0.52	0.34	0.13	3.3	13.94
EAST AFRICA CABLES LTD	5	2010	1	6	1	0.9	0	0.0	5	52.5	7	3	5E-04	4	4	3	12	20140	0.08	258645	258.6	0.60	0.44	0.09	8.4	14.01
EAST AFRICA CABLES LTD	5	2011	1	5	1	0.8	0	0.0	5	53.5	6	3	5E-04	4	4	3	10	17180	0.04	464756	464.8	0.52	0.60	0.07	6.1	14.89

Company		Year																								
EAST AFRICA CABLES LTD	5	2012	1	6	1	0.9	0	0.0	5	56.8	7	3	6E-04	4	4	3	12	19149	0.03	753243	753.2	0.51	0.63	0.08	4.6	19.85
EAST AFRICA CABLES LTD	5	2013	1	6	1	0.9	0	0.0	5	57	7	3	7E-04	4	7	3	12	17295	0.03	585400	585.4	0.47	0.51	0.12	5.7	17.14
EAST AFRICA CABLES LTD	5	2014	1	6	1	0.9	0	0.0	5	58	7	3	1E-04	4	7	4	16	16838	0.03	507483	507.5	0.51	0.74	0.07	5.3	16.39
EAST AFRICA CABLES LTD	5	2015	1	6	1	0.9	0	0.0	5	66.4	7	3	0.098	4	7	4	10	21263	-0.02	-1E+06	-1087	0.65	1.02	-0.03	5.6	18.3
EAST AFRICA CABLES LTD	5	2016	1	7	1	0.9	0	0.0	5	61.4	8	3	0.098	4	8	4	15	19977	-0.02	-8E+05	-810.3	0.75	1.33	-0.17	5.8	13.66
EAST AFRICA PORTLAND LTD	5	2002	1	7	1	0.9	0	0.0	6	46.5	8	1	0.523	3	8	4	16	2814	0.01	212934	212.9	0.74	1.83	0.15	0.5	18.34
EAST AFRICA PORTLAND LTD	5	2003	1	7	1	0.9	0	0.0	6	47.5	8	1	0.523	3	8	4	16	3948	0.01	382164	382.2	0.70	0.84	0.18	2.9	13.47
EAST AFRICA PORTLAND LTD	5	2004	1	7	1	0.9	0	0.0	6	48.5	8	1	0.523	3	8	4	16	20486	-0.05	-4E+05	-391.5	0.68	0.93	0.18	5.1	12.25
EAST AFRICA PORTLAND LTD	5	2005	1	7	1	0.9	0	0.0	6	49.5	8	1	0.523	3	8	4	16	20982	0.02	1E+06	1086	0.62	0.50	0.27	5.9	13.16
EAST AFRICA PORTLAND LTD	5	2006	1	7	1	0.9	1	0.1	6	50.5	8	1	0.523	3	8	4	16	18948	0.02	924364	924.4	0.62	0.40	0.23	6.3	13.74
EAST AFRICA PORTLAND LTD	5	2007	1	7	1	0.9	1	0.1	6	51.5	8	1	0.523	3	8	4	16	16775	0.02	1E+06	1113	0.65	0.39	0.19	7	13.32
EAST AFRICA PORTLAND LTD	5	2008	1	7	1	0.9	1	0.1	6	52.5	8	1	0.523	3	8	3	14	19995	0.03	715889	715.9	0.71	0.30	0.16	0.2	13.55
EAST AFRICA PORTLAND LTD	5	2009	1	8	1	0.9	0	0.0	6	53.5	9	1	0.523	3	8	3	14	21925	0.01	2E+06	1882	0.74	0.45	0.13	3.3	13.94
EAST AFRICA PORTLAND LTD	5	2010	1	6	1	0.9	0	0.0	5	54.5	7	1	0.523	3	7	3	12	22943	-0.06	-4E+05	-388.6	0.76	0.49	0.09	8.4	14.01
EAST AFRICA PORTLAND LTD	5	2011	1	6	1	0.9	0	0.0	5	55.5	7	1	0.523	3	7	3	15	32251	0.27	-1E+05	-119.1	0.77	0.73	0.08	6.1	14.89
EAST AFRICA PORTLAND LTD	5	2012	1	6	1	0.9	0	0.0	5	56.5	7	1	0.523	3	16	4	17	13316	-0.01	-1E+06	-1033	0.82	1.11	0.02	4.6	19.85
EAST AFRICA PORTLAND LTD	5	2013	1	6	1	0.9	1	0.1	5	57.5	7	1	0.523	3	9	4	16	10579	0.01	1E+06	1419	0.78	0.68	0.02	5.7	17.14
EAST AFRICA PORTLAND LTD	5	2014	1	6	1	0.9	0	0.0	5	58.5	7	1	0.523	4	8	4	20	9738	-0.03	-4E+05	-373.7	0.79	0.65	-0.01	5.3	16.39
EAST AFRICA PORTLAND LTD	5	2015	1	6	1	0.9	0	0.0	5	59.5	7	1	0.523	4	8	4	20	7220	0	7E+06	7342	0.86	0.49	-0.01	5.6	18.3
EAST AFRICA PORTLAND LTD	5	2016	1	6	1	0.9	0	0.0	5	60.5	7	1	0.523	4	17	3	15	7946	0	4E+06	3735	0.92	0.49	-0.10	5.8	13.66
KENOL KOBIL LTD	6	2002	2	2	3	0.5	1	0.3	3	45.3	4	3	0	2	4	0	0	5062	0.01	679174	679.2	0.47	0.21	0.10	0.5	18.34
KENOL KOBIL LTD	6	2003	2	2	3	0.5	1	0.3	3	46.3	4	3	0	2	4	0	0	5837	0.01	709688	709.7	0.45	0.43	0.13	2.9	13.47
KENOL KOBIL LTD	6	2004	2	2	3	0.5	1	0.3	3	47.3	4	3	0	2	4	0	0	9725	0.01	1E+06	1201	0.38	0.34	0.21	5.1	12.25
KENOL KOBIL LTD	6	2005	2	2	3	0.5	1	0.3	3	48.3	4	3	0	2	4	0	0	11860	0.01	1E+06	1361	0.29	0.26	0.22	5.9	13.16
KENOL KOBIL LTD	6	2006	2	1	3	0.3	1	0.3	3	49.3	3	3	0	2	4	3	8	12979	0.01	1E+06	1226	0.22	0.57	0.16	6.3	13.74
KENOL KOBIL LTD	6	2007	2	5	3	0.7	1	0.1	3	50.3	7	3	0	2	4	3	8	12396	0.01	2E+06	1880	0.25	0.56	0.17	7	13.32
KENOL KOBIL LTD	6	2008	2	5	3	0.7	1	0.1	3	51.3	7	3	0	2	4	3	9	26687	0.02	1E+06	1446	0.24	0.81	0.17	0.2	13.55
KENOL KOBIL LTD	6	2009	2	5	3	0.7	1	0.1	5	52.3	7	3	0	3	4	3	8	47727	0.02	2E+06	1933	0.15	1.14	0.20	3.3	13.94
KENOL KOBIL LTD	6	2010	2	4	3	0.7	1	0.2	5	53.3	6	3	0	3	4	3	7	67960	1.89	35970	35.97	0.14	0.74	0.23	8.4	14.01
KENOL KOBIL LTD	6	2011	2	4	3	0.7	1	0.2	5	54.3	6	3	0	4	4	3	7	88719	1.6	55498	55.5	0.13	1.31	0.16	6.1	14.89
KENOL KOBIL LTD	6	2012	2	4	3	0.7	1	0.2	5	55.3	6	3	0	4	4	3	7	67343	-0.63	-1E+05	-106.1	0.25	0.99	-0.02	4.6	19.85
KENOL KOBIL LTD	6	2013	2	4	3	0.7	1	0.2	5	56.3	6	3	0	4	4	2	8	73949	0.01	6E+06	5664	0.31	1.00	-0.05	5.7	17.14
KENOL KOBIL LTD	6	2014	2	4	3	0.7	1	0.2	5	57.3	6	3	0	4	4	2	8	72278	0.04	2E+06	1995	0.35	0.82	-0.03	5.3	16.39
KENOL KOBIL LTD	6	2015	2	4	2	0.7	1	0.2	5	58.3	6	3	0	4	4	2	8	84156	0.03	3E+06	2782	0.39	0.39	0.12	5.6	18.3
KENOL KOBIL LTD	6	2016	1	3	1	0.8	0	0.0	4	59.3	4	3	0	4	4	2	8	89110	0.03	4E+06	3538	0.36	0.46	0.13	5.8	13.66
TOTAL KENYA LTD	6	2002	1	7	6	0.9	0	0.0	6	36.7	8	3	0	3	4	1	4	9785	0.02	604776	604.8	0.39	0.39	0.14	0.5	18.34
TOTAL KENYA LTD	6	2003	1	7	4	0.9	0	0.0	6	37.7	8	3	0	3	4	1	4	10122	0.01	756645	756.6	0.29	0.35	0.24	2.9	13.47
TOTAL KENYA LTD	6	2004	1	7	4	0.9	0	0.0	6	38.7	8	3	0	3	4	1	4	10122	0.01	931638	931.6	0.22	0.29	0.21	5.1	12.25

Company																										
TOTAL KENYA LTD	6	2005	1	7	4	0.9	0	0.0	6	46.5	8	3	0	3	4	1	4	12377	0.02	798190	798.2	0.26	0.53	0.17	5.9	13.16
TOTAL KENYA LTD	6	2006	1	7	4	0.9	0	0.0	6	53.7	8	3	0	3	4	2	6	22207	0.05	486078	486.1	0.18	1.00	0.12	6.3	13.74
TOTAL KENYA LTD	6	2007	1	7	4	0.9	0	0.0	6	49.8	8	3	0	3	4	2	6	24605	0.03	781935	781.9	0.22	0.73	0.16	7	13.32
TOTAL KENYA LTD	6	2008	1	7	4	0.9	0	0.0	6	52.4	8	3	0	3	4	2	6	25179	0.02	1E+06	1031	0.19	0.90	0.16	0.2	13.55
TOTAL KENYA LTD	6	2009	1	7	4	0.9	0	0.0	6	55	8	3	0	3	4	2	6	28415	0.04	733699	733.7	0.34	1.60	0.07	3.3	13.94
TOTAL KENYA LTD	6	2010	1	7	4	0.9	1	0.1	6	49.1	8	3	0	3	4	2	6	44985	0.03	1E+06	1338	0.34	1.42	0.10	8.4	14.01
TOTAL KENYA LTD	6	2011	1	7	4	0.9	2	0.3	6	45.2	8	3	0	3	4	2	6	87805	1.52	57850	57.85	0.28	2.21	0.07	6.1	14.89
TOTAL KENYA LTD	6	2012	1	7	4	0.9	3	0.4	6	48.6	8	3	0	4	4	2	6	1E+05	-1.57	-64301	-64.3	0.29	1.13	0.16	4.6	19.85
TOTAL KENYA LTD	6	2013	1	3	4	0.8	3	0.8	5	51	4	3	0	4	4	2	6	1E+05	0.09	1E+06	1312	0.25	0.79	0.16	5.7	17.14
TOTAL KENYA LTD	6	2014	1	3	4	0.8	3	0.8	5	50.6	4	3	0	4	4	2	8	1E+05	0.05	2E+06	2276	0.32	0.49	0.22	5.3	16.39
TOTAL KENYA LTD	6	2015	1	7	3	0.9	3	0.4	5	50.8	8	3	0	4	4	2	8	99883	0.04	3E+06	2619	0.31	0.57	0.26	5.6	18.3
TOTAL KENYA LTD	6	2016	1	6	3	0.9	3	0.4	5	52	7	3	0	4	4	2	8	90143	0.02	4E+06	3935	0.30	0.57	0.28	5.8	13.66
KENGEN LTD	6	2006	1	9	0	0.9	3	0.3	7	56.8	10	3	0.7	3	10	3	37	77825	0.02	4E+06	3721	0.82	0.23	0.10	6.3	13.74
KENGEN LTD	6	2007	1	9	0	0.9	3	0.3	7	57.8	10	3	0.7	3	10	3	21	82839	0.02	5E+06	4719	0.90	0.32	0.03	7	13.32
KENGEN LTD	6	2008	1	10	0	0.9	3	0.3	7	58.8	11	3	0.7	3	8	5	33	91438	0.06	2E+06	1629	0.90	0.32	0.03	0.2	13.55
KENGEN LTD	6	2009	1	10	0	0.9	3	0.3	7	59.8	11	3	0.7	3	10	5	32	1E+05	0.03	5E+06	4556	0.88	0.48	0.06	3.3	13.94
KENGEN LTD	6	2010	1	10	0	0.9	3	0.3	7	61.1	11	3	0.7	4	12	6	39	1E+05	0.04	2E+06	2485	0.78	0.74	0.17	8.4	14.01
KENGEN LTD	6	2011	1	10	0	0.9	3	0.3	7	62.1	11	3	0.7	4	9	6	35	1E+05	0.03	4E+06	3651	0.88	0.92	0.05	6.1	14.89
KENGEN LTD	6	2012	1	10	0	0.9	3	0.3	7	63.1	11	3	0.7	4	9	6	57	1E+05	0.03	4E+06	4045	0.86	1.04	0.04	4.6	19.85
KENGEN LTD	6	2013	1	10	0	0.9	4	0.4	7	62	11	3	0.7	4	10	7	34	1E+05	0.03	4E+06	4093	0.87	1.10	0.04	5.7	17.14
KENGEN LTD	6	2014	1	10	0	0.9	4	0.4	7	53.7	11	3	0.705	4	14	6	41	1E+05	0.03	4E+06	4158	0.89	1.21	0.01	5.3	16.39
KENGEN LTD	6	2015	1	10	0	0.9	4	0.4	7	54.8	11	3	0.7	4	10	5	41	1E+05	0.02	9E+06	8690	0.94	1.99	-0.59	5.6	18.3
KENGEN LTD	6	2016	1	10	0	0.9	3	0.3	7	52.1	11	3	0.746	4	12	5	34	1E+05	0.01	1E+07	11264	0.94	0.62	0.01	5.8	13.66
KENYA POWER & LIGHTING LTD	6	2002	1	8	0	0.9	1	0.1	5	53.5	9	3	0.404	3	12	3	11	8845	-0	-3E+06	-2849	0.63	6.53	0.04	0.5	18.34
KENYA POWER & LIGHTING LTD	6	2003	1	8	0	0.9	1	0.1	5	54.5	9	3	0.404	3	12	3	11	11882	-0	-4E+06	-4112	0.68	8.62	-0.06	2.9	13.47
KENYA POWER & LIGHTING LTD	6	2004	1	8	0	0.9	1	0.1	5	55.5	9	3	0.404	4	32	5	11	23452	0.03	873684	873.7	0.70	0.60	0.04	5.1	12.25
KENYA POWER & LIGHTING LTD	6	2005	1	8	0	0.9	1	0.1	5	56.5	9	3	0.404	4	32	7	85	30348	0.02	2E+06	1979	0.62	0.61	0.08	5.9	13.16
KENYA POWER & LIGHTING LTD	6	2006	1	9	0	0.9	2	0.2	5	53.2	10	3	0.404	4	27	7	86	21402	0.01	2E+06	2498	0.59	0.54	0.10	6.3	13.74
KENYA POWER & LIGHTING LTD	6	2007	1	9	0	0.9	2	0.2	5	52.6	10	3	0.404	4	19	7	46	22572	0.01	3E+06	2649	0.60	0.01	0.03	7	13.32
KENYA POWER & LIGHTING LTD	6	2008	1	9	0	0.9	2	0.2	6	54.2	10	3	0.404	4	39	7	56	22549	0.01	3E+06	2738	0.65	0.01	0.05	0.2	13.55
KENYA POWER & LIGHTING LTD	6	2009	1	9	0	0.9	2	0.2	6	54.4	10	3	0.404	4	26	6	59	30995	0.01	5E+06	4782	0.71	0.01	0.03	3.3	13.94
KENYA POWER & LIGHTING LTD	6	2010	1	9	0	0.9	2	0.2	6	50	10	3	0.404	4	15	6	31	29038	0.01	6E+06	5633	0.76	0.02	0.02	8.4	14.01
KENYA POWER & LIGHTING LTD	6	2011	1	9	0	0.9	2	0.2	6	51	10	3	0.404	4	15	6	31	33022	0.01	6E+06	6255	0.71	0.07	0.04	6.1	14.89
KENYA POWER & LIGHTING LTD	6	2012	1	10	0	0.9	1	0.1	11	58.5	11	3	0.501	4	12	6	35	39604	0	9E+06	8507	0.79	1.68	-0.02	4.6	19.85
KENYA POWER & LIGHTING LTD	6	2013	1	13	0	0.9	2	0.1	8	54.2	14	3	0.501	4	14	6	24	90788	0.01	7E+06	6570	0.80	1.32	-0.01	5.7	17.14
KENYA POWER & LIGHTING LTD	6	2014	1	8	0	0.9	2	0.2	5	55.2	9	3	0.501	4	14	6	23	1E+05	0.01	1E+07	10198	0.77	1.49	0.01	5.3	16.39
KENYA POWER & LIGHTING LTD	6	2015	1	8	0	0.9	2	0.2	5	56.2	9	3	0.501	4	15	6	41	60967	0	1E+07	12254	0.76	1.61	0.09	5.6	18.3
KENYA POWER & LIGHTING LTD	6	2016	1	8	0	0.9	2	0.2	5	56.2	9	3	0.501	4	14	5	38	56874	0	1E+07	12082	0.83	2.84	0.00	5.8	13.66
UMEME LTD	6	2012	1	4	5	0.8	0	0.0	5	51.3	5	1	0.006	4	4	5	16	4E+06	0.06	6E+07	60921	0.57	2.02	0.03	4.6	19.85

Company																										
UMEME LTD	6	2013	1	6	5	0.9	0	0.0	6	52.3	7	1	0.011	4	5	5	18	7E+06	0.05	1E+08	1E+05	0.55	1.97	0.03	5.7	17.14
UMEME LTD	6	2014	4	7	5	0.6	2	0.2	9	53.3	11	1	0.027	4	4	5	19	9E+06	0.07	1E+08	1E+05	0.60	0.27	0.01	5.3	16.39
UMEME LTD	6	2015	3	8	5	0.7	2	0.2	10	54.3	11	1	0.01	4	4	6	24	1E+07	0.06	2E+08	2E+05	0.77	0.93	0.00	5.6	18.3
UMEME LTD	6	2016	3	8	5	0.7	2	0.2	10	55.3	11	1	1E-03	4	7	6	29	1E+07	0.06	2E+08	2E+05	0.80	2.60	-0.05	5.8	13.66
JUBILEE HOLDINGS LTD	7	2002	2	8	5	0.8	0	0.0	8	52	10	1	6E-04	3	4	6	18	35481	0.17	213413	213.4	0.88	0.84	0.66	0.5	18.34
JUBILEE HOLDINGS LTD	7	2003	2	8	4	0.8	0	0.0	8	53	10	1	6E-04	3	4	6	18	28051	0.09	305664	305.7	0.85	0.56	0.72	2.9	13.47
JUBILEE HOLDINGS LTD	7	2004	2	8	4	0.8	0	0.0	8	54	10	1	6E-04	3	4	5	15	31944	0.09	358882	358.9	0.79	1.77	0.39	5.1	12.25
JUBILEE HOLDINGS LTD	7	2005	0	11	5	1.0	0	0.0	8	53	11	1	6E-04	3	4	5	13	33845	0.07	470726	470.7	0.77	1.67	0.55	5.9	13.16
JUBILEE HOLDINGS LTD	7	2006	0	8	4	1.0	0	0.0	7	50.6	8	1	2E-04	3	3	3	9	34139	0.05	664687	664.7	0.71	0.78	0.53	6.3	13.74
JUBILEE HOLDINGS LTD	7	2007	0	8	4	1.0	0	0.0	7	52.6	8	1	2E-04	3	3	3	9	26002	0.03	809566	809.6	0.95	1.07	0.50	7	13.32
JUBILEE HOLDINGS LTD	7	2008	0	8	4	1.0	0	0.0	7	52.6	8	1	2E-04	4	3	3	9	12568	0.01	900692	900.7	0.84	2.02	0.39	0.2	13.55
JUBILEE HOLDINGS LTD	7	2009	0	8	4	1.0	0	0.0	7	53.6	8	1	2E-04	4	3	3	9	93069	0.08	1E+06	1116	0.68	2.33	0.42	3.3	13.94
JUBILEE HOLDINGS LTD	7	2010	0	8	4	1.0	0	0.0	7	54.6	8	1	2E-04	4	3	3	9	1E+05	0.05	2E+06	2053	0.64	1.77	0.42	8.4	14.01
JUBILEE HOLDINGS LTD	7	2011	0	8	4	1.0	0	0.0	7	55.8	8	1	2E-04	4	3	3	12	1E+05	0.07	2E+06	2144	0.68	2.15	0.45	6.1	14.89
JUBILEE HOLDINGS LTD	7	2012	0	8	4	1.0	0	0.0	7	55.9	8	1	2E-04	4	4	3	9	1E+05	0.05	3E+06	2693	0.67	2.11	0.44	4.6	19.85
JUBILEE HOLDINGS LTD	7	2013	0	8	5	1.0	0	0.0	7	56.9	8	1	2E-04	4	4	3	10	2E+05	0.05	3E+06	3151	0.67	1.75	0.47	5.7	17.14
JUBILEE HOLDINGS LTD	7	2014	0	11	5	1.0	1	0.1	10	57.9	11	1	2E-04	4	4	6	20	3E+05	0.07	4E+06	3949	0.64	2.15	0.48	5.3	16.39
JUBILEE HOLDINGS LTD	7	2015	0	11	6	1.0	1	0.1	10	58.9	11	1	2E-04	4	4	6	20	5E+05	0.11	4E+06	4145	0.70	1.94	0.47	5.6	18.3
JUBILEE HOLDINGS LTD	7	2016	0	9	6	1.0	1	0.1	8	59.9	9	1	1E-04	4	4	6	20	4E+05	0.1	5E+06	4563	0.72	2.14	0.46	5.8	13.66
SANLAM LTD	7	2002	1	7	4	0.9	0	0.0	6	54.9	8	3	0.113	3	4	3	12	18825	-2.92	-6452	-6.452	0.80	1.01	0.59	0.5	18.34
SANLAM LTD	7	2003	1	7	4	0.9	0	0.0	6	52.3	8	3	0.113	3	4	3	12	17132	-0.25	-68776	-68.78	0.84	1.23	0.54	2.9	13.47
SANLAM LTD	7	2004	1	7	4	0.9	0	0.0	6	53.6	8	3	0.149	3	4	3	11	24153	0.27	91007	91.01	0.82	1.41	0.52	5.1	12.25
SANLAM LTD	7	2005	1	8	6	0.9	1	0.1	6	54.9	9	3	0.182	3	4	4	13	25960	0.06	454345	454.3	0.75	0.97	0.66	5.9	13.16
SANLAM LTD	7	2006	1	7	4	0.9	1	0.1	6	53.9	8	3	0.182	3	4	3	10	27832	0.06	454067	454.1	0.82	0.60	0.68	6.3	13.74
SANLAM LTD	7	2007	1	7	4	0.9	1	0.1	6	50.5	8	3	0.2	3	4	3	12	37546	0.08	451307	451.3	0.76	0.72	0.74	7	13.32
SANLAM LTD	7	2008	1	6	4	0.9	1	0.1	6	50.9	7	3	0.2	3	4	4	19	36017	0.18	203608	203.6	0.76	1.18	0.73	0.2	13.55
SANLAM LTD	7	2009	1	8	4	0.9	2	0.2	7	54.7	9	3	0.2	4	4	3	12	28702	0.17	173647	173.6	0.78	1.82	0.72	3.3	13.94
SANLAM LTD	7	2010	1	8	4	0.9	2	0.2	7	52.8	9	3	0.202	4	4	3	12	33643	0.05	665899	665.9	0.81	1.78	0.75	8.4	14.01
SANLAM LTD	7	2011	1	8	4	0.9	2	0.2	7	52.4	9	3	0.202	4	4	3	12	36129	0.07	552435	552.4	0.68	2.28	0.79	6.1	14.89
SANLAM LTD	7	2012	1	8	4	0.9	2	0.2	7	55.6	9	3	0.202	4	4	3	12	38742	0.05	834646	834.6	0.69	2.13	0.80	4.6	19.85
SANLAM LTD	7	2013	1	8	4	0.9	2	0.2	7	59.4	9	3	0.2	4	4	3	12	42300	0.03	2E+06	1576	0.76	1.49	0.81	5.7	17.14
SANLAM LTD	7	2014	1	7	4	0.9	2	0.3	7	51.2	8	3	0.2	4	4	3	12	44521	0.04	1E+06	1153	0.82	1.55	0.81	5.3	16.39
SANLAM LTD	7	2015	1	7	4	0.9	2	0.3	7	52.6	8	3	0.205	4	4	3	12	53568	0.99	54325	54.33	0.85	2.45	0.76	5.6	18.3
SANLAM LTD	7	2016	1	7	4	0.9	1	0.1	7	52.3	8	3	0.205	4	4	3	12	60502	0.19	317052	317.1	0.87	3.17	0.75	5.8	13.66
KENYA RE. LTD	7	2008	1	7	0	0.9	2	0.3	5	53.8	8	3	0.6	3	26	2	12	14760	0.01	2E+06	1759	0.84	0.36	0.45	0.2	13.55
KENYA RE. LTD	7	2009	1	7	0	0.9	2	0.3	5	53.3	8	3	0.6	3	12	3	13	15690	0.01	1E+06	1464	0.83	0.37	0.47	3.3	13.94
KENYA RE. LTD	7	2010	1	10	0	0.9	2	0.2	7	54.7	11	3	0.6	4	12	3	18	13906	0.01	2E+06	1660	0.89	0.39	0.46	8.4	14.01
KENYA RE. LTD	7	2011	1	10	0	0.9	3	0.3	7	51.3	11	3	0.6	4	13	4	25	13283	0.01	2E+06	2037	0.90	0.48	0.44	6.1	14.89
KENYA RE. LTD	7	2012	1	10	0	0.9	3	0.3	7	52.3	11	3	0.6	4	10	4	17	17650	0.01	3E+06	2945	0.90	0.42	0.45	4.6	19.85

Company																										
KENYA RE. LTD	7	2013	1	10	0	0.9	3	0.3	7	53.3	11	3	0.6	4	8	4	17	16791	0.01	3E+06	3000	0.91	0.36	0.47	5.7	17.14
KENYA RE. LTD	7	2014	1	10	0	0.9	3	0.3	7	54.3	11	3	0.6	4	8	4	23	18811	0	4E+06	3920	0.91	0.38	0.43	5.3	16.39
KENYA RE. LTD	7	2015	1	10	0	0.9	3	0.3	8	55.3	11	3	0.6	4	11	4	28	18218	0	4E+06	4391	0.89	0.38	0.63	5.6	18.3
KENYA RE. LTD	7	2016	1	10	0	0.9	3	0.3	8	56.3	11	3	0.6	4	21	4	31	21410	0	4E+06	4309	0.84	0.36	0.41	5.8	13.66
LIBERTY KENYA LTD	7	2011	1	5	3	0.8	2	0.3	5	55	6	1	0	3	5	0	0	14931	0.01	1E+06	1012	0.84	2.66	0.20	6.1	14.89
LIBERTY KENYA LTD	7	2012	1	5	3	0.8	2	0.3	5	54	6	1	0	3	5	1	2	33761	0.03	1E+06	1203	0.87	2.48	0.24	4.6	19.85
LIBERTY KENYA LTD	7	2013	1	7	4	1.0	2	0.3	6	55	7	1	0	5	6	2	8	51511	0.12	436636	436.6	0.87	1.97	0.10	5.7	17.14
LIBERTY KENYA LTD	7	2014	1	4	3	0.8	1	0.2	4	56	5	1	0	4	3	2	4	18066	0.01	1E+06	1347	0.74	1.77	0.22	5.3	16.39
LIBERTY KENYA LTD	7	2015	1	5	3	0.8	1	0.2	5	54.4	6	1	0	4	4	2	5	98644	0.1	953702	953.7	0.72	1.23	0.22	5.6	18.3
LIBERTY KENYA LTD	7	2016	1	5	3	0.8	1	0.2	5	55.7	6	1	0	4	3	2	4	93267	0.1	941885	941.9	0.81	0.68	0.35	5.8	13.66
BRITAM LTD	7	2011	1	8	2	0.9	1	0.1	7	58.8	9	1	0.291	3	4	6	24	44874	-0.03	-2E+06	-1721	0.80	0.93	0.69	6.1	14.89
BRITAM LTD	7	2012	1	8	2	0.9	1	0.1	7	59.8	9	1	0.248	3	4	7	23	45328	0.02	3E+06	2849	0.81	0.98	0.71	4.6	19.85
BRITAM LTD	7	2013	1	8	2	0.9	1	0.1	7	60.8	9	1	0.232	4	7	8	33	97201	0.03	3E+06	3121	0.87	0.66	0.66	5.7	17.14
BRITAM LTD	7	2014	1	8	1	0.9	1	0.1	7	61.8	9	1	0.232	4	15	8	25	1E+05	0.04	3E+06	3212	0.84	0.64	0.50	5.3	16.39
BRITAM LTD	7	2015	1	8	1	0.9	1	0.1	7	62.8	9	1	0.194	4	9	5	21	66859	-0.06	-1E+06	-1195	0.82	1.40	0.51	5.6	18.3
BRITAM LTD	7	2016	2	7	1	0.8	1	0.1	7	63.8	9	1	0.191	4	7	5	20	61507	0.01	4E+06	4239	0.82	1.77	0.44	5.8	13.66
CIC INSURANCE LTD	7	2011	1	13	0	0.9	4	0.3	7	56	14	3	0.007	3	8	3	12	54647	0.07	787214	787.2	0.71	1.36	0.66	6.1	14.89
CIC INSURANCE LTD	7	2012	1	11	0	0.9	4	0.3	7	49.5	12	3	0.007	3	5	3	15	78925	0.05	2E+06	1650	0.71	0.65	0.60	4.6	19.85
CIC INSURANCE LTD	7	2013	1	11	0	0.9	4	0.3	7	52.3	12	3	0.007	3	11	3	18	63453	0.04	2E+06	1671	0.73	0.53	0.50	5.7	17.14
CIC INSURANCE LTD	7	2014	1	11	0	0.9	4	0.3	8	53.3	12	3	0.002	4	9	3	17	67721	0.05	1E+06	1390	0.78	0.32	0.39	5.3	16.39
CIC INSURANCE LTD	7	2015	1	11	0	0.9	4	0.3	8	57.2	12	3	0.002	4	9	3	17	44200	0.03	1E+06	1339	0.82	0.43	0.29	5.6	18.3
CIC INSURANCE LTD	7	2016	1	11	0	0.9	4	0.3	8	57.5	12	3	0.003	4	7	3	15	62621	0.55	114388	114.4	0.78	0.60	0.28	5.8	13.66
OLYMPIA CAPITAL LTD	8	2002	2	4	0	0.7	0	0.0	4	46.1	6	3	0.116	3	4	2	4	7435	0.38	19691	19.69	0.31	1.00	0.29	0.5	18.34
OLYMPIA CAPITAL LTD	8	2003	2	3	0	0.6	0	0.0	4	47.2	5	3	0.116	3	4	2	4	2700	0.08	35150	35.15	0.33	0.48	0.30	2.9	13.47
OLYMPIA CAPITAL LTD	8	2004	2	4	0	0.7	0	0.0	4	48.2	6	3	0.116	3	4	2	4	3457	0.07	48706	48.71	0.35	0.38	0.36	5.1	12.25
OLYMPIA CAPITAL LTD	8	2005	2	3	0	0.6	0	0.0	3	49.2	5	3	0.116	3	4	2	4	4374	0.19	23196	23.2	0.57	0.34	0.13	5.9	13.16
OLYMPIA CAPITAL LTD	8	2006	2	5	0	0.7	0	0.0	3	50.2	7	3	0.116	3	4	2	4	4374	0.21	21054	21.05	0.41	1.36	-0.02	6.3	13.74
OLYMPIA CAPITAL LTD	8	2007	2	5	0	0.7	0	0.0	5	51.3	7	3	0.116	3	4	2	4	5153	0.2	26009	26.01	.	.	.	7	13.32
OLYMPIA CAPITAL LTD	8	2008	2	5	0	0.7	0	0.0	5	52.3	7	3	0.116	3	4	2	4	797	0.02	34874	34.87	0.46	0.36	0.23	0.2	13.55
OLYMPIA CAPITAL LTD	8	2009	2	5	0	0.7	0	0.0	5	53.3	7	3	0.116	4	4	2	4	4980	0.08	61945	61.95	0.65	0.29	0.10	3.3	13.94
OLYMPIA CAPITAL LTD	8	2010	2	5	0	0.7	0	0.0	5	54.4	7	3	0.116	4	4	2	4	.	.	25481	25.48	0.54	0.53	0.19	8.4	14.01
OLYMPIA CAPITAL LTD	8	2011	2	5	0	0.7	1	0.1	5	55.4	7	3	0.116	4	4	3	4	.	.	31881	31.88	0.60	0.50	0.06	6.1	14.89
OLYMPIA CAPITAL LTD	8	2012	2	5	0	0.7	1	0.1	5	56.4	7	3	0.116	4	4	3	4	4173	0.1	41734	41.73	0.62	0.65	0.21	4.6	19.85
OLYMPIA CAPITAL LTD	8	2013	2	5	0	0.7	1	0.1	5	57.5	7	3	0.116	4	4	3	4	5194	0.48	10850	10.85	0.60	0.65	0.25	5.7	17.14
OLYMPIA CAPITAL LTD	8	2014	2	5	0	0.7	1	0.1	5	58.5	7	3	0.127	4	4	3	4	4140	0.15	28360	28.36	0.77	0.40	0.03	5.3	16.39
OLYMPIA CAPITAL LTD	8	2015	2	4	0	0.7	1	0.2	5	59.5	6	3	0.116	4	4	3	4	2708	1.86	1458	1.458	0.71	0.34	0.11	5.6	18.3
OLYMPIA CAPITAL LTD	8	2016	2	4	0	0.7	1	0.2	5	60.5	6	3	0.118	4	4	3	4	1585	0.06	27281	27.28	0.78	0.37	0.09	5.8	13.66
CENTUM INVESTMENT ICDC LTD	8	2002	1	8	0	0.9	3	0.3	6	50.2	9	3	0.463	3	4	2	5	10545	0.03	307525	307.5	0.91	0.03	0.06	0.5	18.34
CENTUM INVESTMENT ICDC LTD	8	2003	1	8	0	0.9	3	0.3	6	51.2	9	3	0.463	4	5	2	5	15146	0.07	202826	202.8	0.98	0.04	-0.04	2.9	13.47

CENTUM INVESTMENT ICDC LTD	8	2004	1	8	0	0.9	3	0.3	6	52.8	9	3	0.463	4	5	3	11	15200	0.04	348451	348.5	0.96	0.04	-0.03	5.1	12.25
CENTUM INVESTMENT ICDC LTD	8	2005	1	8	0	0.9	2	0.2	6	50.4	9	3	0.463	4	5	3	12	12256	0.03	373999	374	0.96	0.05	0.00	5.9	13.16
CENTUM INVESTMENT ICDC LTD	8	2006	1	8	0	0.9	1	0.1	6	50.2	9	3	0.468	4	6	3	9	14136	0.02	696489	696.5	0.94	0.02	0.03	6.3	13.74
CENTUM INVESTMENT ICDC LTD	8	2007	1	8	0	0.9	1	0.1	6	51.1	9	3	0.45	4	6	3	9	16288	0.01	1E+06	1186	0.96	0.00	0.03	7	13.32
CENTUM INVESTMENT ICDC LTD	8	2008	1	8	0	0.9	2	0.2	7	48.5	9	3	0.399	4	6	3	4	28405	0.03	985208	985.2	0.96	0.00	0.03	0.2	13.55
CENTUM INVESTMENT ICDC LTD	8	2009	1	8	0	0.9	2	0.2	7	47.6	9	3	0.402	4	8	4	13	33759	0.07	475653	475.7	0.97	0.05	-0.06	3.3	13.94
CENTUM INVESTMENT ICDC LTD	8	2010	1	8	0	0.9	2	0.2	7	48.6	9	3	0.408	4	8	4	13	23006	0.02	1E+06	1181	0.94	0.02	0.01	8.4	14.01
CENTUM INVESTMENT ICDC LTD	8	2011	1	8	0	0.9	2	0.2	8	48.2	9	3	0.411	4	9	4	17	45162	0.02	2E+06	2294	0.69	0.12	0.09	6.1	14.89
CENTUM INVESTMENT ICDC LTD	8	2012	1	8	0	0.9	2	0.2	8	49.2	9	3	0.41	4	6	4	13	51913	0.04	1E+06	1367	0.97	0.08	-0.01	4.6	19.85
CENTUM INVESTMENT ICDC LTD	8	2013	1	8	0	0.9	2	0.2	8	49.4	9	3	0.416	4	5	4	11	86259	0.03	3E+06	3248	0.38	0.15	0.60	5.7	17.14
CENTUM INVESTMENT ICDC LTD	8	2014	1	8	0	0.9	2	0.2	8	53.2	9	3	0.511	4	7	4	11	97882	0.02	4E+06	4011	0.96	0.28	0.00	5.3	16.39
CENTUM INVESTMENT ICDC LTD	8	2015	1	8	0	0.9	2	0.2	8	53.7	9	3	0.511	4	4	5	12	2E+05	0.02	9E+06	8817	0.83	0.49	0.05	5.6	18.3
CENTUM INVESTMENT ICDC LTD	8	2016	1	8	0	0.9	2	0.2	8	54.7	9	3	0.52	4	7	5	16	2E+05	0.02	1E+07	10873	0.83	0.53	0.12	5.8	13.66
TRANS-CENTURY LTD	8	2011	1	7	0	0.9	1	0.1	6	55.3	8	3	0.212	3	4	3	12	47532	0.05	869265	869.3	0.58	1.33	0.08	6.1	14.89
TRANS-CENTURY LTD	8	2012	1	7	0	0.9	1	0.1	6	56.3	8	3	0.212	3	4	3	10	45428	0.04	1E+06	1226	0.66	1.27	0.08	4.6	19.85
TRANS-CENTURY LTD	8	2013	1	7	0	0.9	1	0.1	6	57.3	8	3	0.212	3	7	3	12	44630	0.05	858570	858.6	0.63	0.81	0.12	5.7	17.14
TRANS-CENTURY LTD	8	2014	1	7	0	0.9	0	0.0	6	58.3	8	3	0.212	3	11	3	13	51045	0.02	2E+06	2114	0.58	1.50	0.16	5.3	16.39
TRANS-CENTURY LTD	8	2015	1	4	0	0.8	0	0.0	4	59.3	5	3	0.213	3	13	3	10	45232	-0.02	-3E+06	-2956	0.60	2.53	-0.23	5.6	18.3
TRANS-CENTURY LTD	8	2016	1	6	0	0.9	0	0.0	5	60.3	7	3	0.122	3	14	3	2	42583	-0.03	-2E+06	-1615	0.70	2.97	-0.30	5.8	13.66
HOME AFRIKA LTD	8	2013	1	9	0	0.9	2	0.2	8	55.2	10	2	0	3	4	4	16	20145	0.11	183465	183.5	0.21	1.00	0.07	5.7	17.14
HOME AFRIKA LTD	8	2014	1	12	0	0.9	3	0.2	10	56.2	13	2	0	3	9	4	21	2893	0.06	47775	47.78	0.20	1.13	0.12	5.3	16.39
HOME AFRIKA LTD	8	2015	1	6	0	0.9	2	0.3	5	57.2	7	2	0	3	5	3	12	45852	-0.11	-4E+05	-410.8	0.21	3.25	-0.02	5.6	18.3
HOME AFRIKA LTD	8	2016	1	6	0	0.9	2	0.3	5	58.2	7	2	0	3	5	3	12	4721	-0.02	-2E+05	-207	0.19	15.36	-0.20	5.8	13.66
KURWITU VENTURES	8	2014	1	5	0	0.8	0	0.0	4	50	6	3	0.78	3	4	2	4	900	0.11	-8123	-8.123	0.87	0.05	0.12	5.3	16.39
KURWITU VENTURES	8	2015	1	5	0	0.8	0	0.0	4	51	6	3	0.78	3	4	2	4	900	0.11	-8123	-8.123	0.74	0.20	0.24	5.6	18.3
KURWITU VENTURES	8	2016	1	5	0	0.8	0	0.0	4	52	6	3	0.78	3	4	2	4	900	-0.11	-8123	-8.123	0.96	0.21	0.02	5.8	13.66
NAIROBI SECURITIES EXC.	9	2014	1	7	0	0.9	2	0.3	6	50	8	3	2E-04	4	10	7	32	4E+05	0.93	441811	441.8	0.53	0.09	0.39	5.3	16.39
NAIROBI SECURITIES EXC.	9	2015	1	10	0	0.9	2	0.2	8	51	11	3	5E-04	4	9	9	38	31787	0.08	381494	381.5	0.52	0.08	0.41	5.6	18.3
NAIROBI SECURITIES EXC.	9	2016	1	10	0	0.9	2	0.2	8	52	11	3	4E-04	4	7	7	23	34465	0.15	233115	233.1	0.50	0.08	0.43	5.8	13.66
B.O.C KENYA LTD	10	2002	1	5	3	0.8	0	0.0	5	56.3	6	3	3E-04	3	4	2	4	13049	0.08	154990	155	0.44	0.18	0.07	0.5	18.34
B.O.C KENYA LTD	10	2003	1	6	3	0.9	0	0.0	6	56.6	7	3	3E-04	3	4	2	4	22412	0.11	210720	210.7	0.44	0.09	0.40	2.9	13.47
B.O.C KENYA LTD	10	2004	1	6	3	0.9	0	0.0	6	57	7	3	3E-04	3	4	2	4	14027	0.06	220980	221	0.46	0.08	0.36	5.1	12.25
B.O.C KENYA LTD	10	2005	1	6	3	0.9	0	0.0	6	58	7	3	3E-04	3	4	2	4	14139	0.05	291257	291.3	0.46	0.08	0.36	5.9	13.16
B.O.C KENYA LTD	10	2006	1	6	3	0.9	0	0.0	6	59	7	3	3E-04	3	4	2	5	14288	0.04	333705	333.7	0.47	0.10	0.32	6.3	13.74
B.O.C KENYA LTD	10	2007	1	6	3	0.9	0	0.0	6	60	7	3	3E-04	3	4	2	5	17327	0.06	295179	295.2	0.45	0.10	0.34	7	13.32
B.O.C KENYA LTD	10	2008	1	6	4	0.9	2	0.3	6	61	7	3	3E-04	4	4	2	5	16305	0.06	263924	263.9	0.45	0.13	0.29	0.2	13.55
B.O.C KENYA LTD	10	2009	1	6	4	0.9	2	0.3	6	55.3	7	3	3E-04	4	4	2	4	18867	0.08	231682	231.7	0.51	0.10	0.30	3.3	13.94
B.O.C KENYA LTD	10	2010	1	5	3	0.8	1	0.2	6	50.6	6	3	9E-05	4	5	2	5	20500	0.18	114685	114.7	0.51	0.12	0.29	8.4	14.01

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B.O.C KENYA LTD	10	2011	2	5	3	0.7	1	0.1	6	51.8	7	3	9E-05	4	5	2	4	29100	0.14	214948	214.9	0.51	0.15	0.24	6.1	14.89
B.O.C KENYA LTD	10	2012	2	6	4	0.8	2	0.3	7	51	8	3	6E-05	4	5	3	7	32433	0.11	286693	286.7	0.45	0.16	0.28	4.6	19.85
B.O.C KENYA LTD	10	2013	2	7	5	0.8	3	0.3	7	51.1	9	3	3E-04	4	5	3	7	37966	0.12	308392	308.4	0.54	0.12	0.25	5.7	17.14
B.O.C KENYA LTD	10	2014	2	7	4	0.8	3	0.3	7	52.1	9	3	3E-04	4	5	3	7	40999	0.15	277984	278	0.49	0.13	0.27	5.3	16.39
B.O.C KENYA LTD	10	2015	2	6	2	0.8	3	0.4	6	50.6	8	3	0.014	4	5	3	7	43204	0.19	221721	221.7	0.46	0.16	0.28	5.6	18.3
B.O.C KENYA LTD	10	2016	2	6	2	0.8	3	0.4	6	50.7	8	3	0.051	4	5	3	9	48198	0.25	190682	190.7	0.46	0.15	0.30	5.8	13.66
BAT TOBACCO LTD	10	2002	3	7	3	0.7	0	0.0	7	52	10	2	0	3	5	3	5	48017	0.04	1E+06	1310	0.54	0.52	0.21	0.5	18.34
BAT TOBACCO LTD	10	2003	3	7	3	0.7	0	0.0	8	59	10	2	0	3	5	3	5	53471	0.03	2E+06	1678	0.56	0.07	0.20	2.9	13.47
BAT TOBACCO LTD	10	2004	4	7	3	0.6	0	0.0	8	58.8	11	2	0	3	5	3	5	74038	0.04	2E+06	1751	0.58	0.10	0.14	5.1	12.25
BAT TOBACCO LTD	10	2005	4	8	3	0.7	1	0.1	9	57.4	12	2	0	3	5	3	5	83085	0.04	2E+06	2009	0.59	0.10	0.14	5.9	13.16
BAT TOBACCO LTD	10	2006	4	8	3	0.7	1	0.1	9	54.3	12	2	0	4	5	3	5	88122	0.05	2E+06	1747	0.54	0.15	0.10	6.3	13.74
BAT TOBACCO LTD	10	2007	4	8	3	0.7	1	0.1	9	59.5	12	2	0	4	5	3	5	1E+05	0.06	2E+06	2050	0.57	0.25	0.05	7	13.32
BAT TOBACCO LTD	10	2008	4	7	3	0.6	0	0.0	8	55.5	11	2	0	4	5	3	5	2E+05	0.07	2E+06	2417	0.55	0.30	0.02	0.2	13.55
BAT TOBACCO LTD	10	2009	4	6	3	0.6	1	0.1	7	56.6	10	2	0	4	5	3	5	1E+05	0.07	2E+06	2109	0.60	0.26	-0.01	3.3	13.94
BAT TOBACCO LTD	10	2010	4	6	3	0.6	1	0.1	7	59	10	2	0	4	5	3	5	1E+05	0.05	3E+06	2723	0.57	0.19	0.06	8.4	14.01
BAT TOBACCO LTD	10	2011	2	7	3	0.8	1	0.1	7	57.6	9	2	0	4	5	3	5	96504	0.02	4E+06	4484	0.49	0.24	0.12	6.1	14.89
BAT TOBACCO LTD	10	2012	2	8	3	0.8	1	0.1	8	58.4	10	2	0	4	5	3	5	96779	0.02	5E+06	4754	0.53	0.14	0.07	4.6	19.85
BAT TOBACCO LTD	10	2013	2	5	3	0.7	2	0.3	6	54.8	7	2	0	4	5	3	6	1E+05	0.02	6E+06	5771	0.50	0.14	0.10	5.7	17.14
BAT TOBACCO LTD	10	2014	2	7	3	0.8	2	0.2	7	54	9	2	6E-06	4	5	3	6	1E+05	0.02	6E+06	6372	0.51	1.23	0.10	5.3	16.39
BAT TOBACCO LTD	10	2015	2	7	3	0.8	2	0.2	7	49.3	9	2	6E-06	4	7	3	5	74855	0.01	8E+06	7672	0.49	1.10	0.16	5.6	18.3
BAT TOBACCO LTD	10	2016	2	7	3	0.8	2	0.2	7	52.2	9	2	6E-06	4	5	3	6	68906	0.01	6E+06	5911	0.52	1.09	0.14	5.8	13.66
CARBACID LTD	10	2002	1	5	1	0.8	0	0.0	4	61.2	6	1	0.11	3	5	2	5	19006	0.24	78859	78.86	0.50	0.09	0.48	0.5	18.34
CARBACID LTD	10	2003	1	5	1	0.8	0	0.0	4	62.2	6	1	0.102	3	6	3	6	12693	0.1	125860	125.9	0.65	0.07	0.27	2.9	13.47
CARBACID LTD	10	2004	1	5	1	0.8	0	0.0	4	63.2	6	1	0.103	3	7	2	4	3834	0.03	124168	124.2	0.72	0.09	0.24	5.1	12.25
CARBACID LTD	10	2005	1	5	1	0.8	0	0.0	4	64.2	6	1	0.11	3	5	2	6	4023	0.03	158650	158.7	0.62	0.08	0.35	5.9	13.16
CARBACID LTD	10	2006	1	4	1	0.8	0	0.0	4	67	5	1	0.11	3	5	2	4	3827	0.02	179213	179.2	0.92	0.07	0.02	6.3	13.74
CARBACID LTD	10	2007	1	4	1	0.8	0	0.0	4	68	5	1	0.113	4	8	3	11	4356	0.02	226796	226.8	0.53	0.07	0.44	7	13.32
CARBACID LTD	10	2008	1	4	1	0.8	0	0.0	4	69	5	1	0.113	4	8	3	11	4578	0.02	241942	241.9	0.55	0.07	0.42	0.2	13.55
CARBACID LTD	10	2009	1	4	1	0.8	0	0.0	4	70	5	1	0.113	4	4	3	5	4910	0.01	367027	367	0.49	0.04	0.47	3.3	13.94
CARBACID LTD	10	2010	1	4	1	0.8	0	0.0	4	71	5	1	0.113	4	4	3	12	8638	0.02	438041	438	0.75	0.03	0.21	8.4	14.01
CARBACID LTD	10	2011	1	4	1	0.8	0	0.0	4	72	5	1	0.13	4	5	3	5	9582	0.03	374210	374.2	0.77	0.06	0.21	6.1	14.89
CARBACID LTD	10	2012	1	4	1	0.8	0	0.0	4	73	5	1	0.147	4	5	3	4	12586	0.02	535444	535.4	0.68	0.06	0.24	4.6	19.85
CARBACID LTD	10	2013	1	4	1	0.8	0	0.0	4	74	5	1	0.147	4	5	3	4	12655	0.02	634686	634.7	0.60	0.08	0.36	5.7	17.14
CARBACID LTD	10	2014	1	5	1	0.8	0	0.0	5	72	6	1	0.127	4	5	3	4	14650	0.02	597262	597.3	0.61	0.05	0.33	5.3	16.39
CARBACID LTD	10	2015	1	5	1	0.8	0	0.0	5	73	6	1	0.307	4	3	3	4	17566	0.03	580467	580.5	0.62	0.07	0.29	5.6	18.3
CARBACID LTD	10	2016	1	5	1	0.8	0	0.0	5	74	6	1	0.327	4	4	3	5	16913	0.03	547748	547.7	0.72	0.06	0.24	5.8	13.66
EAST AFRICA BREWERIES LTD	10	2002	2	9	5	0.8	1	0.1	9	58.3	11	1	0.002	3	4	4	16	2E+05	0.07	2E+06	2301	0.46	0.34	0.22	0.5	18.34
EAST AFRICA BREWERIES LTD	10	2003	2	9	5	0.8	1	0.1	9	56.3	11	1	0.002	3	4	4	16	1E+05	0.03	4E+06	3641	0.51	0.13	0.29	2.9	13.47
EAST AFRICA BREWERIES LTD	10	2004	2	9	5	0.8	1	0.1	9	59.1	11	1	0.002	3	4	4	16	2E+05	0.03	7E+06	7042	0.47	0.09	0.34	5.1	12.25

EAST AFRICA BREWERIES LTD	10	2005	2	9	4	0.8	1	0.1	9	59.9	11	1	0.002	3	4	4	16	2E+05	0.03	8E+06	8223	0.44	0.05	0.38	5.9	13.16
EAST AFRICA BREWERIES LTD	10	2006	2	9	5	0.8	1	0.1	9	59.1	11	1	0.021	3	4	4	16	2E+05	0.02	9E+06	8577	0.44	0.06	0.39	6.3	13.74
EAST AFRICA BREWERIES LTD	10	2007	2	9	3	0.8	1	0.1	9	59.7	11	1	0.021	3	4	4	16	2E+05	0.02	1E+07	10636	0.42	0.09	0.32	7	13.32
EAST AFRICA BREWERIES LTD	10	2008	2	9	3	0.8	1	0.1	9	57.8	11	1	0.192	3	4	4	16	2E+05	0.02	1E+07	10834	0.52	0.06	0.20	0.2	13.55
EAST AFRICA BREWERIES LTD	10	2009	2	9	3	0.8	1	0.1	9	55	11	1	0.192	4	4	4	16	2E+05	0.02	1E+07	11039	0.54	0.09	0.19	3.3	13.94
EAST AFRICA BREWERIES LTD	10	2010	2	9	3	0.8	2	0.2	8	59	11	1	0.192	4	4	4	16	2E+05	0.01	1E+07	12568	0.55	0.09	0.15	8.4	14.01
EAST AFRICA BREWERIES LTD	10	2011	2	9	4	0.8	2	0.2	9	55.7	11	1	0.002	4	4	4	16	2E+05	0.01	1E+07	12250	0.67	0.13	0.02	6.1	14.89
EAST AFRICA BREWERIES LTD	10	2012	2	9	4	0.8	4	0.4	9	53.3	11	1	1E-05	4	4	4	16	2E+05	0.01	2E+07	15253	0.67	0.24	-0.08	4.6	19.85
EAST AFRICA BREWERIES LTD	10	2013	2	9	6	0.8	5	0.5	9	53.1	11	1	7E-05	4	7	4	14	2E+05	0.02	1E+07	11115	0.68	0.21	-0.14	5.7	17.14
EAST AFRICA BREWERIES LTD	10	2014	2	9	7	0.8	3	0.3	9	53.7	11	1	6E-05	4	6	4	12	3E+05	0.03	1E+07	10407	0.68	0.23	-0.12	5.3	16.39
EAST AFRICA BREWERIES LTD	10	2015	3	9	7	0.8	2	0.2	9	50.7	12	1	6E-05	4	7	4	13	1E+05	0.01	1E+07	14151	0.62	0.20	0.01	5.6	18.3
EAST AFRICA BREWERIES LTD	10	2016	3	8	7	0.7	2	0.2	9	52	11	1	6E-05	4	6	3	11	2E+05	0.01	1E+07	13619	0.65	0.22	-0.10	5.8	13.66
MUMIAS SUGAR LTD	10	2002	1	7	2	0.9	2	0.3	5	51.9	8	3	0.381	3	4	3	11	4349	0.04	104552	104.6	0.65	0.70	0.08	0.5	18.34
MUMIAS SUGAR LTD	10	2003	1	15	1	1.3	1	0.1	8	52.8	12	3	0.381	3	4	3	11	6222	0.03	-2E+05	-244.9	0.64	0.63	0.10	2.9	13.47
MUMIAS SUGAR LTD	10	2004	1	11	0	0.9	2	0.2	7	53.7	12	3	0.381	3	4	3	11	44488	0.04	1E+06	1139	0.61	0.37	0.19	5.1	12.25
MUMIAS SUGAR LTD	10	2005	1	11	0	0.9	1	0.1	7	54.6	12	3	0.381	3	4	3	12	44414	0.02	2E+06	1843	0.62	0.18	0.21	5.9	13.16
MUMIAS SUGAR LTD	10	2006	1	11	0	0.9	1	0.1	7	55.5	12	3	0.381	3	4	3	12	49616	0.02	2E+06	2220	0.63	0.11	0.21	6.3	13.74
MUMIAS SUGAR LTD	10	2007	1	11	0	0.9	1	0.1	7	56.5	12	3	0.212	3	4	3	12	53230	0.03	2E+06	1910	0.69	0.16	0.18	7	13.32
MUMIAS SUGAR LTD	10	2008	1	11	0	0.9	2	0.2	7	56.6	12	3	0.212	3	4	3	12	55570	0.03	2E+06	1589	0.68	0.18	0.08	0.2	13.55
MUMIAS SUGAR LTD	10	2009	1	11	0	0.9	1	0.1	7	60.8	12	3	0.212	3	4	3	12	59994	0.05	1E+06	1193	0.71	0.39	0.08	3.3	13.94
MUMIAS SUGAR LTD	10	2010	1	11	0	0.9	1	0.1	6	60.6	12	3	0.212	3	4	3	14	54902	0.03	2E+06	2180	0.64	0.24	0.18	8.4	14.01
MUMIAS SUGAR LTD	10	2011	1	11	0	0.9	2	0.2	6	61.5	12	3	0.201	4	4	3	11	61024	0.02	3E+06	2647	0.72	0.34	0.15	6.1	14.89
MUMIAS SUGAR LTD	10	2012	1	10	0	0.9	1	0.1	6	60	11	3	0.201	3	7	3	16	84025	0.05	2E+06	1764	0.74	0.47	0.05	4.6	19.85
MUMIAS SUGAR LTD	10	2013	1	10	0	0.9	4	0.4	5	59.8	11	3	0.2	3	4	4	16	54846	-0.02	-2E+06	-2236	0.74	0.76	-0.05	5.7	17.14
MUMIAS SUGAR LTD	10	2014	1	10	0	0.9	4	0.4	5	59.8	11	3	0.2	3	4	6	24	30250	-0.01	-3E+06	-3405	0.82	0.86	-0.27	5.3	16.39
MUMIAS SUGAR LTD	10	2015	1	11	1	0.9	3	0.3	6	58.7	12	3	0.2	3	4	6		78486	0.04	-2E+06	-2223	0.93	1.70	-0.33	5.6	18.3
MUMIAS SUGAR LTD	10	2016	1	10	1	0.9	3	0.3	5	58.5	11	3	0.2	3	4	6		33610	0.01	-6E+06	-6071	0.90	3.19	-0.37	5.8	13.66
UNGA GROUP LTD	10	2002	2	4	1	0.7	0	0.0	4	55.6	6	1	2E-04	3	3	1	3	2250	-0.02	-1E+05	-135.9	0.63	0.85	0.01	0.5	18.34
UNGA GROUP LTD	10	2003	2	6	1	0.8	0	0.0	5	55	8	1	2E-04	3	3	1	3	2250	0.14	-16448	-16.45	0.64	0.68	0.00	2.9	13.47
UNGA GROUP LTD	10	2004	2	6	1	0.8	0	0.0	5	62.2	8	1	2E-04	3	3	1	3	16690	0.17	-95505	-95.51	0.50	1.00	0.00	5.1	12.25
UNGA GROUP LTD	10	2005	1	6	1	0.9	0	0.0	5	54.7	7	1	2E-04	3	4	2	4	14653	0.09	155017	155	0.50	0.66	0.07	5.9	13.16
UNGA GROUP LTD	10	2006	1	7	1	0.9	1	0.1	5	55.9	8	1	2E-04	3	4	2	4	10751	0.08	142427	142.4	0.49	0.54	0.15	6.3	13.74
UNGA GROUP LTD	10	2007	1	7	1	0.9	1	0.1	6	56.9	8	1	2E-04	3	4	2	4	8870	0.06	156665	156.7	0.43	0.57	0.21	7	13.32
UNGA GROUP LTD	10	2008	1	7	1	0.9	1	0.1	6	57.9	8	1	2E-04	3	4	2	5	10891	0.02	564016	564	0.38	0.47	0.30	0.2	13.55
UNGA GROUP LTD	10	2009	1	7	1	0.9	1	0.1	6	58.9	8	1	2E-04	3	4	2	5	14369	0.06	260439	260.4	0.31	0.62	0.31	3.3	13.94
UNGA GROUP LTD	10	2010	1	7	1	0.9	1	0.1	6	59.9	8	1	2E-04	3	4	2	4	15194	0.05	335101	335.1	0.32	0.40	0.41	8.4	14.01
UNGA GROUP LTD	10	2011	1	7	1	0.9	1	0.1	6	60.9	8	1	2E-04	4	4	2	4	15634	0.02	631070	631.1	0.28	0.44	0.43	6.1	14.89
UNGA GROUP LTD	10	2012	1	7	1	0.9	1	0.1	5	55.8	8	1	2E-04	4	4	2	4	17474	0.03	512569	512.6	0.28	0.49	0.42	4.6	19.85

UNGA GROUP LTD	10	2013	1	7	1	0.9	2	0.3	7	56.9	8	1	2E-04	4	4	2	4	16408	0.04	389458	389.5	0.30	0.65	0.32	5.7	17.14
UNGA GROUP LTD	10	2014	1	7	1	0.9	2	0.3	7	58.1	8	1	2E-04	4	4	4	7	16617	0.03	567735	567.7	0.34	0.54	0.37	5.3	16.39
UNGA GROUP LTD	10	2015	1	7	1	0.9	2	0.3	7	58.1	8	1	2E-04	4	4	4	14	14867	0.02	635695	635.7	0.37	0.46	0.36	5.6	18.3
UNGA GROUP LTD	10	2016	1	7	1	0.9	2	0.3	7	59.9	8	1	2E-04	4	4	4	14	21440	0.03	734401	734.4	0.37	0.69	0.36	5.8	13.66
EVEREADY EAST AFRICA LTD	10	2006	1	6	2	0.9	2	0.3	5	49.2	7	3	0.174	3	4	3	10	26289	0.11	234036	234	0.19	0.18	0.11	6.3	13.74
EVEREADY EAST AFRICA LTD	10	2007	1	8	2	0.9	2	0.2	5	50.2	9	3	0.174	3	4	3	10	25553	0.14	179505	179.5	0.15	0.23	0.51	7	13.32
EVEREADY EAST AFRICA LTD	10	2008	1	11	2	0.9	2	0.2	6	50.3	12	3	0.173	3	4	3	10	27639	0.99	27855	27.86	0.24	0.43	0.30	0.2	13.55
EVEREADY EAST AFRICA LTD	10	2009	1	7	2	0.9	2	0.3	4	55.9	8	3	0.174	3	4	3	8	31985	1.13	-28271	-28.27	0.20	0.60	0.27	3.3	13.94
EVEREADY EAST AFRICA LTD	10	2010	1	7	2	0.9	2	0.3	4	55.1	8	3	0.174	3	4	3	8	34612	5.73	-6043	-6.043	0.21	0.77	0.23	8.4	14.01
EVEREADY EAST AFRICA LTD	10	2011	1	7	2	0.9	3	0.4	4	59.2	8	3	0.174	3	4	3	8	24065	-0.14	-2E+05	-173.2	0.28	1.14	0.07	6.1	14.89
EVEREADY EAST AFRICA LTD	10	2012	1	7	2	0.9	3	0.4	5	54	8	3	0.294	3	4	3	12	17028	0.25	68914	68.91	0.24	1.03	0.16	4.6	19.85
EVEREADY EAST AFRICA LTD	10	2013	1	7	2	0.9	4	0.5	5	51.5	8	3	0.301	3	4	3	12	18083	0.3	60113	60.11	0.27	0.57	0.26	5.7	17.14
EVEREADY EAST AFRICA LTD	10	2014	1	7	2	0.9	5	0.6	5	54.3	8	3	0.26	3	4	3	11	7747	0.03	-2E+05	-248	0.18	0.72	0.21	5.3	16.39
EVEREADY EAST AFRICA LTD	10	2015	1	7	2	0.9	5	0.6	5	52.7	8	3	0.295	3	6	3	11	3891	0.04	98912	98.91	0.58	0.49	-0.01	5.6	18.3
EVEREADY EAST AFRICA LTD	10	2016	1	7	2	0.9	4	0.5	5	54	8	3	0.295	4	8	3	11	5606	0.03	-2E+05	-219	0.75	0.61	-0.30	5.8	13.66
FLAME TREE GROUP LTD	10	2014	1	4	4	0.8	1	0.2	4	47.6	5	3	0	3	4	3	12	5107	0.04	144798	144.8	0.24	0.36	0.27	5.3	16.39
FLAME TREE GROUP LTD	10	2015	1	4	4	0.8	1	0.2	4	48.6	5	3	0	3	4	3	12	5107	0.03	198387	198.4	0.23	0.38	0.30	5.6	18.3
FLAME TREE GROUP LTD	10	2016	1	4	4	0.8	1	0.2	4	49.6	5	3	0	3	4	3	12	5107	0.03	175974	176	0.25	0.51	0.26	5.8	13.66
KENYA ORCHARDS LTD	10	2014	1	3	0	0.8	0	0.0	2	56.3	4	3	0.485	2	4	0	0	9E+05	0.6	1E+06	1471	0.42	0.06	0.25	5.3	16.39
KENYA ORCHARDS LTD	10	2015	1	2	0	0.7	0	0.0	2	57.3	3	3	0.485	2	4	0	0	9E+05	0.2	4E+06	4329	0.57	0.05	0.22	5.6	18.3
KENYA ORCHARDS LTD	10	2016	1	2	0	0.7	0	0.0	2	58.3	3	3	0.485	2	4	0	0	9E+05	0.17	5E+06	5295	0.47	0.06	0.27	5.8	13.66
SAFARICOM LTD	11	2008	1	8	6	0.9	3	0.3	8	53.4	9	3	2E-04	3	4	2	8	1174	0	2E+07	19945	0.83	0.17	-0.17	0.2	13.55
SAFARICOM LTD	11	2009	1	8	6	0.9	3	0.3	8	54.4	9	3	2E-04	3	4	2	8	1E+05	0.01	2E+07	15304	0.81	0.24	-0.20	3.3	13.94
SAFARICOM LTD	11	2010	1	8	6	0.9	4	0.4	8	55.4	9	3	1E-04	4	4	2	8	4E+05	0.02	2E+07	20967	0.78	0.15	-0.11	8.4	14.01
SAFARICOM LTD	11	2011	1	8	6	0.9	4	0.4	8	54.6	9	3	1E-04	4	4	2	9	2E+05	0.01	2E+07	18361	0.81	0.21	-0.11	6.1	14.89
SAFARICOM LTD	11	2012	1	10	6	0.9	4	0.4	9	55.4	11	3	1E-04	4	4	2	9	2E+05	0.01	2E+07	17369	0.83	0.25	-0.13	4.6	19.85
SAFARICOM LTD	11	2013	2	9	7	0.8	4	0.4	9	55.4	11	3	1E-04	4	4	2	8	4E+05	0.02	3E+07	25451	0.80	0.09	-0.09	5.7	17.14
SAFARICOM LTD	11	2014	1	8	6	0.9	4	0.4	7	55	9	3	2E-04	4	4	2	8	2E+05	0.01	3E+07	34984	0.79	0.07	-0.07	5.3	16.39
SAFARICOM LTD	11	2015	1	8	6	0.9	4	0.4	7	56	9	3	1E-04	4	4	2	8	3E+05	0.01	5E+07	46150	0.79	0.07	-0.12	5.6	18.3
SAFARICOM LTD	11	2016	1	8	6	0.9	4	0.4	7	57	9	3	1E-04	4	4	2	9	3E+05	0.01	6E+07	55763	0.81	0.05	-0.08	5.8	13.66
STANLIB FAHARI I-REIT	12	2016	2	6	6	0.8	1	0.1	6	55.6	8	3	0.003	3	4	1	4	8169	0.08	106600	106.6	0.66	0.02	0.30	5.8	13.66