

**MODERATING EFFECT OF BOARD COMPOSITION ON
THE DETERMINANTS OF FINANCIAL PERFORMANCE
OF COMPANIES LISTED ON THE NAIROBI SECURITIES
EXCHANGE IN KENYA**

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**Moderating Effect of Board Composition on the Determinants of
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Securities Exchange in Kenya**

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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This thesis has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

My dedication goes to my family, my husband Benson and sons Timothy and Toby for their unrelenting support and their encouragement throughout my study at the Jomo Kenyatta University of Agriculture and Technology.

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ABBREVIATIONS AND CRONYMS

CA	Capital Adequacy
CAR	Capital Adequacy Ratio
CIT	Corporate Income Tax
CBK	Central Bank of Kenya
CEO	Chief Executive Officer
CFOs	Chief Financial Officers
CMA	Capital Markets Authority
CS	Capital Structure
EPS	Earning Per Share
ESAP	Economic Structural Adjustment
FL	Financial Leverage
FO	Firm Ownership
IFC	International Finance Corporation
IPO	Initial Public Offers
JSX	Jakarta Stock Exchange
KA	Cost On Assets
KE	Cost On Equity
LBO:	Leveraged Buy-Out

LTA	Log of Total Assets
MC	Market Capitalization
M&M	Modigliani & Miller
NPR	Net Profit Ratio
NPV	Net Present Value
NSE	Nairobi Securities Exchange
OECD	Organization for Economic Co-operation and Development
P/E	Price Earnings
R&D	Research & Development
RBZ	Reserve Bank of Zimbabwe
ROA	Return on Asset
ROCE	Return on capital employed
RONW	Return on Net Worth
ROE	Return On Equity
ROA	Return On Asset
ROC	Return On Capital
ROI	Return On Investment
ROS	Return On Sales

SMEs	Small and Medium Enterprises
TFP	Total Factor Productivity
TMT	Top Management Teams
SOE	Small Open Economy
S0X	Sarbanes Oxley Act
UK	United Kingdom
USA	United State of America
US	United States
CDSC	Central Depository and Settlement Corporation
NPM	Net Profit Margin
TSR	Total Shareholder's Returns
PM	Profit Margin

DEFINITION OF KEY TERMS

- Board composition:** is related to board independence (including independence of board committees), diversity (firm and industry experience, functional backgrounds, etc.) of board members and CEO duality (Hermalin, 2011).
- Capital adequacy:** a measure of a bank's or other financial institution's ability to pay its debts if people or organizations are unable to pay back the money they have borrowed from the bank. Used as a measure of its financial strength and stability (Jarrow, 2013).
- Capital structure:** is the specific mix of debt and equity that a firm uses to finance its operations (Abor, 2005), or is a company's outstanding debt and equity. Is how a firm finances its overall operations and growth by using different sources of funds. It's commonly known as the debt to equity ratio (Shim & Siegel, 2008).
- Corporate income tax:** taxes against profits earned by businesses during a given taxable period; they are generally applied to companies' operating earnings, after expenses (Arulampalam, 2012).
- Financial leverage** the portion of a firm's assets financed with debt instead of equity (Obreja, 2013).
- Financial performance:** the degree to which financial objectives being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms (Metcalf, 2013). Financial performance refers to

general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Ngumi, 2016).

Firm ownership: structure of rights and responsibilities among the parties

Market capitalization: the total market value of all of company's outstanding shares of a stock by the price of a single share (Albu, 2014).

Profitability: used to assess a business's ability to generate earnings compared to its expenses and other relevant costs incurred during a specific period of time (Kiaritha, 2015).

ROI: measures the gain or loss generated on an investment relative to the amount of money invested. Is usually expressed as a percentage and is typically used for personal financial decisions, to compare a company's profitability or to compare the efficiency of different investments. To calculate ROI, the benefit (or return) of an investment is divided by the cost of the investment, and the result is expressed as a percentage or a ratio (Ongore, 2013)

ABSTRACT

The study aims to investigate moderating effect of board composition on determinants of financial performance of companies listed on the Nairobi Securities Exchange in Kenya and was guided by the following specific research objectives: to establish the effect of corporate income tax on financial performance of the companies listed on the NSE in Kenya, evaluate the effect of Capital adequacy on financial performance of the companies listed on the NSE in Kenya, examine the effect of firm ownership on financial performance of the companies listed on the NSE in Kenya, determine the effect of market capitalization on financial performance of the companies listed on the NSE in Kenya, assess the effect of financial leverage on financial performance of the companies listed on the NSE in Kenya and finally find out the moderating effect of board composition on financial performance of the companies listed on the NSE in Kenya. The research design used in this study was mixed research designs both qualitative and quantitative design. A sample of 59 firms was drawn using stratified random sampling and purposive sampling. The target populations of the study were the 69 companies listed on the Nairobi Securities' Exchange in Kenya. The study focused on listed firms only. A pre-test on a different sample gave a Cronbach's alpha greater than 0.7 for all the variables. Data analysis was by descriptive statistics and inferential statistics using Standard statistical techniques including Pearson correlation coefficient and regression analysis were employed in the analysis. All the analysis was done using the statistical package for social sciences (SPSS Version.24). Analysis of variance (ANOVA) was used to establish if there is a statistical significance between the observed and expected values with the Pearson Chi square giving the degree significance of the relations, hence establishing the hypotheses. In multivariate analysis, multiple regression analysis models were used to determine the type of the relationship that existed between independent and dependent variables. Hypotheses were tested by regressing independent variables against dependent variables, financial performance. The findings indicated that all independent variables had a significant positive influence on the company's financial performance. When all independent variables were analyzed together, corporate income tax and capital adequacy had the highest positive significant contribution on financial performance. This can be attributed to the fact that corporate income tax reduces investment through an increase in the user of cost of capital. For capital adequacy it's backed by the fact that it creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs hence enhance performance. Therefore it can be concluded that there was a strong relationship between corporate income tax, capital adequacy, firm ownership, market capitalization and financial leverage and financial performance. The study recommends that there is need to identify policy makers with useful input for formulating Government policies to avert poor performance and consequently bankruptcy of listed companies and enlighten the investors who will be interested in the study as they will be in a position to protect their investments and direct them to the best performing companies at the Nairobi Securities Exchange which will in turn spur economic growth in the long-term.

CHAPTER ONE

INTRODUCTION

1.1 Background

Board composition is a subject that has received increased attention during the last three decades. Listed companies especially in the last decades have realized the importance of composing effective boards of directors in order to maximize firm performance. Boards have long had the legal authority and shareholder encouragement to proactively oversee executive decision making (**Beekes, 2012**). Boards with relevant knowledge, skills, and abilities have the potential for proffering unique tactical and strategic advantages to corporations (**Finkelstein & Hambrick, 2014**). They can contribute to a firm's success through three primary roles: the resource role wherein they enhance access to critical external resources, the service role in which they provide important advice to executive management, and the control role in which they provide governance oversight and determine incentives for executive performance (**Chatterjee & Harrison, 2014**). To do this, boards require financial resources which are affected by the firm's capital structure.

1.1.1 Global perspective

Globally, one can observe a growing body of especially empirical research on board composition issues such as CEO-duality, size and composition of the board, and remuneration of board members. Although, businesses around the globe require development and growth in an attempt to garner investments. Before investing in a certain business, investors often make sure that the business is secure and stable financially in order to produce profits in the long-term (**Manaseer, 2012**). More recently, board composition has grown in importance, particularly with the collapse of major corporate like Commerce Bank, Enron, Arthur Anderson, WorldCom, HIH, and Harris Scarfe in the context of the United States, Europe and other countries (Khan,

2011). Therefore, board composition is one of mechanism to minimize conflicts of interests between managers and investors. Its objective is to safeguard the capital owners from opportunistic activities **Abdurrouf, (2011)** and to make sure that management exert effort to achieve the shareholders' and stakeholders' capital structure and interests.

In the age of globalization and open markets companies all over the world are now exposed to more intense competition for other nations around the world. **Gomez (2005)** pointed out that from the global perspective the past two decades have witnessed significant transformations in corporate governance structures leading to increased scholarly interest in the role of board composition in driving corporate performance. In Africa, the increased attention on board composition has been motivated by the collapse of great corporations like Sterling Bank Bauchi, Access Bank and Guaranty Trust Bank. Most countries have made significant effort to strengthen their board, transparency and disclosure levels (**Sanda, 2014**). The collapse of the Nigerian financial institutions was as a result of poor board composition standard, corruption and lack of transparency. According to **Jiang and Wong (2004)** for the last two decades the moderating effect of board composition on the relationship between capital structure and financial performance has become an area of interest among investors and has developed considerable attention in the broader field of corporate finance among other stakeholders. **Lioui and Shaema (2012)** argued that firms' ownership is organized in order to maximize firm value and suggested that firms' ownership and capital structure decisions reflect attempts to mitigate agency problems between various stakeholder to avoid potential conflicts of interest between a controlling shareholder and minority investors.

Shareholders lost confidence totally in both public and private companies in the country as a result of weak board practice in the country (**Puthenpurackal, 2013**). In order to gain back the confidence, Security and Exchange Commission came up with the Code of

Best Practice. It provides guidelines on the principles of board composition in Nigeria. Therefore, a good system of board composition is considered as an important element in running the affairs of the company for the best interest of the shareholders (**Kamardin, 2011**). It assists in controlling the performance of the board in business operations. The board of director has a part to play in board composition as their main duty is that of supervising the management to ensure proper accountability to shareholders and other stakeholders. Since the board of director is vested with the responsibility of monitoring the interest of shareholders, they ought to have greater interest in the appointment of directors to ensure that qualified, experienced and educated directors are appointed. Individual firms apart from the security exchange commission requirements have specified the profile requirements expected of their directors (**Pearce, 2012**)

Over the years, the Zimbabwean banking sector was apparently immune from board composition practices, as the Banking Act (**Chapter 24:01**) was the only operational law governing bank operations. With the advent of The Economic Structural Adjustment Program (ESAP) and the accompanying financial market liberalization of the early 1990s local banks were granted banking licenses as existing entry barriers in the sector were removed. In 2004 monetary authorities uncovered unethical underhand dealings by domestic banks which threatened to destabilize the whole banking sector. This prompted the Reserve Bank of Zimbabwe (RBZ), and also Ecobank Zimbabwe, and Steward Bank to act. Two guidelines on corporate governance, Board composition guidelines and Minimum Internal Audit Standards in Banking Institutions were issued. These represented minimum standards that banks were expected to abide by and included the selection and proportion of executive and non-executive directors subject to approval by monetary authorities.

According to **Gompers et al., (2003)** good corporate governance influences company's strategic decisions. **Kajola (2008)** observed that corporate governance is making sure

the business is well managed and stakeholder's interest is protected at all times. Organization for Economic Cooperation and Development (OECD) (2004) claimed corporate governance is broad in practice. It defines corporate governance as the system by which business corporations are directed and controlled. It further states that the corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as, the board, managers, shareholders and other stakeholders; and thus spells out the rules and procedures for making decisions on corporate affairs. It also provides the structure through which the company's objectives are set and the means of attaining those objectives and monitoring performance (Odugbemi, & Akinsulire , 2006). Good corporate governance practices may have significant influence on the strategic decisions of accompany, for example external financing, that are taken at board level. Therefore corporate governance variables like size of board, gender diversity, CEO duality may have direct impact on firm performance

Boards of directors are entrusted with the responsibility to make economic decisions affecting the well-being of investors' capital, employees' security, communities' economic health, and executive power and perquisites (Banks, 2004). The board of directors is charged with oversight of management. Agency theorists argue that in order to protect the interests of shareholders, the board of directors must assume an effective oversight function (**Uadiale, 2010**). It is assumed that board performance of its monitoring duties is influenced by the effectiveness of the board, which in turn is influenced by factors such as board composition and quality, size of board, duality of chief executive officer, gender diversity, information asymmetries and board culture (**Brennan, 2006**). Hence, boards of directors have the ultimate internal authority within a company (**Renton, 1994**).

Board of directors is concerned with determining the best financing mix or capital structure of a company. According to **Saad (2010)**, board of directors is considered as one of the major two components of the corporate governance which provides an efficient regulatory and controlling mechanism to decrease agency problems. A corporate board should be composed of members having proper collective skill set to guide corporate strategy successfully (**Johnson, 2010**). According to Johnson, achieving this end through the initial selection of board members or adjusting the membership of an existing board is nevertheless a high achievement. The board is responsible for ensuring that the corporation has well-defined and protected shareholder rights, a solid control environment, high levels of transparency and disclosure, and keeps the interests of the company and those of all shareholders aligned. The board is responsible for directing and controlling the business of its company and is accountable to shareholders for its performance (**Bowen, 2008**).

An effective board of directors is at the heart of the governance structure of a well-functioning and well-governed corporation, acting as the ultimate internal monitor. Ideally, the board guides long-term corporate strategy, puts the key agents in place to implement it, and monitors performance against the strategy set out. Consequently, poor firm company performance begins with a board not fulfilling its key responsibilities. However, almost by definition, boards of directors operate out of sight of the public and most investors. While the nature of confidential board deliberations makes it impossible to demand full transparency of board meetings, there needs to be trust and confidence in the proper functioning of the Board (**Abor 2007**). An organization's board of directors is responsible for ensuring that a corporation meets the objectives of stakeholders as well as developing business strategies to prosper in the future (**Arfken et al., 2004; Peterson and Philpot, 2007**). When the corporation fails to meet these objectives, many question the ability of the board members.

There is evidence on the relationship between firm performance and board composition (**Abor, 2007; Pfeffer and Salancick, 1978; Lipton and Lorsch, 1992**). For example, Firms with larger board membership have low leverage or debt ratio (**Berger et al., 1997**). They assume that larger board size translates into strong pressure from the corporate board to make managers pursue lower leverage to increase firm performance. However, other researchers argue that firms with high leverage or debt ratio rather have larger boards (**Jensen 1986**). The researchers also show a positive relationship between board size and financial leverage (capital structure) (**Abor, 2007**). Their findings suggest that large boards, which are more entrenched due to superior monitoring by regulatory bodies, pursue higher leverage to raise company value. Another reason is that larger board membership could result in difficulty in arriving at consensus in decision-making. These conflicts arising from bigger board size have the tendency of weakening corporate governance resulting in high leverage. Other researchers also show that the cost of debt is lower for larger boards, presumably because creditors view these firms as having more effective monitors of their financial accounting processes (**Anderson 2011**). The above studies have indicated contradictory and lack of a consensus about how board composition affects on determinants of firm performance in emerging economies such as Kenya.

1.1.2 Kenya perspective

The aforesaid studies were based on data from other countries and their findings may not be applicable to the Kenyan perspective. Moreover, literature provides contradictory conclusions for it is based on different models and methodologies and it is only applied in the banking sector. It is from the aforementioned contradictions that the current study attempt to investigate the factors that affect financial performance of listed companies. The motivation to undertake this study was provided following the many corporate failures in the Kenyan capital market and those have gone into receivership,

only a handful of companies have managed to come out of it in sound financial health. There is an increasing trend of failure of Kenyan firms such as KCC, Uchumi Supermarkets, A Baumann and Company, Bulk medical limited, Nyaga stock brokers are examples of these (**Maina & Sakwa, 2010**).

Capital Markets Authority was established in 1989 through the Capital Markets Authority Act, Cap 485 A (MA Act) to regulate and oversee the orderly development of Kenya's capital markets. The Authority ensures the development and maintenance of an appropriate legal and regulatory framework to boost investor confidence, enhance efficiency and to create and maintain a fair and orderly market. The Authority also reviews existing policies and makes recommendations to the Government on new policy issues that could promote and enhance market development. It also provides guidance to market operators. Therefore, Capital Market Authority (CMA) has a regulatory responsibility to keep surveillance of firms listed in NSE with regards to capital, liquidity and other aspects with overall aim of ensuring financial stability of these firms (**Maina & Sakwa, 2010**).

The Nairobi Securities Exchange (NSE) was established in 1954 and it is the only stock exchange in the Kenya (Nairobi Securities Exchange, 2012). Listed companies fall into two main segments, that is, the main market segment and the alternative investment market segment. The Nairobi Securities Exchange classified these companies into ten sectors. These are; agricultural, commercial and services, telecommunication and technology, automobiles and accessories, banking, insurance, investment, manufacturing and allied, construction and allied, energy and petroleum (Nairobi Securities Exchange, 2012). Currently the Market has just 60 listed firms which is less than what the country inherited at independence (**Ngugi, Amanja & Maana, 2009**). The Nairobi Security Exchange (NSE) has a double responsibility for development and regulation of the market operations to ensure efficient trading. For an efficient stock exchange, the

companies listed in NSE are expected to be financially health so as to ensure economic growth of a country (**Maina & Sakwa, 2010**).

The NSE has been performing poorly in recent years. The performance of the stock market indicates that the market has not managed to make significant contribution to financing economic growth (**Ngugi, Amanja & Maana, 2009 as cited in Maina & Sakwa, 2010**). While there are about 60 companies listed in NSE, not all of them are in a financially sound position. Although at the point of listing, these listed companies must meet the listing requirement of NSE, given time, the company's financial position and business direction can change for the better or for the worse. There are many reasons for these changes, such as governance, management, financial appetite, risk profile or over gearing.

According to **Iravo, Ongore & Munene (2013)** raised concerns as to why some organizations succeed while others fail and this has influenced a study on moderating effect of board composition on the determinants of financial performance of firms listed on the NSE. According to **Mukulu, Nteete & Namusonge, (2015)** noted that performance measurement is important for organizations as a means of continuous improvement and also as a means of determining whether or not organizations are achieving their objectives.

In Kenya, board composition is prescribed under Section 11(3) and 12 of the Capital Markets Authority Act, (CMA Act, 2000) that empowers the Capital Markets Authority to make rules and regulations to govern capital markets in Kenya (**Maina, 2011**). The CMA guideline on board composition practices (2013) has proposed that a balanced board constitutes an effective board. It therefore requires that the board of directors of every listed company should reflect a balance between the independent non-executive directors and executive directors. The independent and non-executive directors should

form at least one-third of the membership of the board to ensure that no individual or small group of individuals can dominate board decision making processes (**Ongore, 2011**).**Musila (2015)**, argued that the erosion of investor confidence in Kenya has been brought about by companies' board composition standards and a lack of transparency in the financial system. This is evidenced by the collapse of firms listed in the NSE such as Uchumi and many stock brokerage firms in a period of just less than ten years (**Mwangi, 2012**). Therefore, the restoration of confidence in the economy by investors will rely on improvements in board composition standards, including the adoption of transparency as an important strategy in corporate management. With the economic recovery of most East African countries, attention has understandably been drawn to addressing and researching the underlying issues and factors that can lead to a crisis like that witnessed in the US (Jensen, 2016).

Ongore et al., (2015) conducted a study on board composition and financial performance: Empirical analysis of companies listed at the Nairobi Securities Exchange. They noted that studies investigating effects of board composition on financial performance have yielded mixed results, due largely to contextual variables and varying roles of boards in different jurisdictions. Independent members, gender diversity and board size are some of the key attributes of boards that have been linked to financial performance of companies in industrialized countries, but which, unfortunately have not attracted much scholarly interest in developing countries. The study, which surveyed forty-six companies listed at the Nairobi Securities Exchange in 2011, was therefore, designed to inform practice of corporate governance mainly in developing countries. Using multivariate regression analysis on panel data, with Return on Assets, Return on Equity, and Dividend Yield as performance indicators, the study found out that independent board members had insignificant effect on financial performance, but gender diversity did, in fact, have significant positive effect on financial performance. Board size, on the other hand, had an inverse relationship with financial performance.

These results are largely consistent with conceptual and empirical literature on corporate governance with respect to small board size (5 to 7) that is sufficiently diverse in terms of gender, skill, experience, industry networks, among other important attributes. Regarding outside directors, however, the study findings appear to contradict the long-held traditional view that outsiders confer superior performance to the board.

Tarus et al., (2016) looked at the board composition and capital structure: evidence from Kenya. The purpose of this study was to examine the effect of board composition on capital structure of a firm. The paper used data from firms listed in Nairobi Securities Exchange covering the period 2004-2012. Fixed effect regression model was estimated to test the effect of board composition on capital structure and how chief executive officer (CEO) tenure moderates the relationship. The paper finds that board composition has important implications on capital structure decisions. Specifically, director independence is positively related to leverage, whereas CEO duality and tenure have negative and significant effect on leverage. In addition, the interaction effect of CEO tenure indicates that when CEOs have long tenure, the power of independent directors to influence capital structure decisions diminishes. Further, the study found that under long CEO tenure, long-tenure boards use less leverage in their capital structure. As expected, dual CEO with long tenure uses less leverage.

Ngulumbu and Aduda (2017) conducted a study on the relationship between board composition and financial performance of companies listed at the Nairobi Securities Exchange. The purpose of this study is to establish the relationship between board composition and financial performance of quoted companies at the Nairobi Securities exchange. This study employed correlational survey design. The population of this research consisted of all the listed companies in the Nairobi Security Exchange. The study used secondary data. Financial performance (ROA) was collected for a period of

three years (2010 to 2012). Data was analyzed using Statistical Package for Social Sciences (SPSS) and results were presented in frequency tables and figures. The data was then analyzed in terms of descriptive statistics like frequencies, means and percentages. The study findings indicated that the overall financial performance of listed companies was determined by the corporate governance practices. Results also revealed that there was an increasing trend in board Size, independent directors (non-executive directors), number of board committees, number of founder directors, gender mix, level of education of directors and age of the directors over the three years. Regression analysis was conducted to empirically determine whether independent variables were a significant determinant of profit before tax. Regression results indicate the goodness of fit for the regression between independent variables and dependent variable is satisfactory. ANOVAs results indicated that the overall model is significant. This implied that the independent variables did a good job at predicting profitability. The study recommends that the management should ensure that corporate governance practices are adhered to strictly as they are good determinants of financial performance. It is also recommended that the firm should have non-executive directors who act as “professional referees” to ensure that competition among insiders stimulates actions consistent with shareholder value maximization. On the same note, the study recommends that non-executive directors/ foreign ownership be handled with care for their participation is significant.

Non-executive directors/ foreign ownership should be designed to enhance the ability of the firm to protect itself against threats from the environment and align the firm's resources for greater advantage.

Iraya, Mwangi and Muchoki (2015) looked at the effect of corporate governance practices on earnings management of companies listed at the Nairobi securities exchange. The objective of the study was to establish the effect of corporate governance

practices on earnings management of companies listed at the Nairobi Security Exchange (NSE). The target population consisted of the 49 companies that had been continuously and actively trading at the NSE between January 2010 and December 2012. Secondary data was used covering the period 2010 to 2012 and analyzed using linear regression to test the effect of the independent variables on the dependent variable. The study found that earnings management is negatively related to ownership concentration, board size and board independence but positively related to board activity and CEO duality. The study recommended the need for effective corporate governance practices in listed companies in Kenya to contribute to reduced earnings management and avert possible collapse of listed companies in Kenya.

Mutende, Mwangi, Njihia and Ochieng (2017) focused on the moderating role of firm characteristics on the relationship between free cash flows and financial performance of firms listed at the Nairobi securities exchange. Their paper sought to find out the influence of firm characteristics on the relationship between free cash flows and firm financial performance.

1.1.2 Nairobi Securities Exchange

The Nairobi Securities Exchange was formed in 1954 through incorporation into company as a voluntary organization of stock brokers, now is one of the most active markets in Africa. Currently there are 61 quoted companies representing different sectors namely the Agricultural, Commercial and Services, Finance and Investment, and Industrial and Allied sectors. There have been rapid changes in the NSE to facilitate smooth functioning of the market. Among some of the key changes include the introduction of the Central Depository and Settlement Corporation (CDSC) which increased the market efficiency. Buying and selling shares became easier as investors open electronic accounts similar to their bank accounts to buy shares and bonds.

Demutualization, deregulation and automation of the market activities removed control of the market from the hands of few brokers who could send signals among themselves to influence the activities of the market and ensured that the market was demand/supply driven (**Kihumba, 1993**). NSE has grown to become the continent's fourth-largest exchange by trading volume and fifth largest by market capitalization as a percentage of GDP. This is evidenced by many firms raising new equity from the stock market for the first time and consequently many investors investing in their shares through primary initial offering and secondary markets. Further there has been a number of cross-listing with East African securities markets like the Uganda Securities Exchange and the Dares Salaam Securities Exchange in Tanzania (NSE Report, 2010). However the World Bank's (2010) Investing across Borders Report found that Kenya restricts foreign ownership in more sectors than most other economies in sub-Saharan Africa. According to the Economic Survey (2010) Kenya's equities market recorded marked improvement in activity in both primary and secondary markets where capitalization rose by 40% in the year 2010 compared to 2009. In 2010 NSE was among the best performing equity markets in Africa after the Uganda Securities Exchange, which

recorded an index return of 53 %. This impressive performance was due to improved business confidence in the market because of economic recovery, adoption of best practice within capital markets, as well as resumed participation by foreign and institutional investors (**Mule et al., 2013; Nafula et al., 2012**). NSE has grown to become the continent's fourth-largest exchange by trading volume and fifth largest by market capitalization as a percentage of GDP. This is evidenced by many firms raising new equity from the stock market for the first time and consequently many investors investing in their shares through primary initial offering and secondary markets. Further there has been a number of cross-listing with East African securities markets like the Uganda Securities Exchange and the Dares Salaam Securities Exchange in Tanzania (NSE Report, 2010). However the World Bank's (2010) Investing across Borders Report

found that Kenya restricts foreign ownership in more sectors than most other economies in sub-Saharan Africa. According to the Economic Survey (2010) Kenya's equities market recorded marked improvement in activity in both primary and secondary markets where capitalization rose by 40% in the year 2010 compared to 2009. In 2010 NSE was among the best performing equity markets in Africa after the Uganda Securities Exchange, which recorded an index return of 53 %. This impressive performance was due to improved business confidence in the market because of economic recovery, adoption of best practice within capital markets, as well as resumed participation by foreign and institutional investors

In supporting compensation contracts (**Mule et al., 2013; Nafula et al., 2012**) **Sang et al. (2013)** pointed out that share option is one of the components adopted by owners of the firm as agents remunerations package designed to encourage agents to take more risks and move away from selfish behavior.

Smith (2004) argues that stakeholder's theory not only represents a shift in the business and accounting profession but a paradigm shift in how the business is conducted at large. Stakeholder's theory underpins the alternative financial reporting trend that is set to revolutionize how the business operates and interacts with the external business environment. In order to effectively implement stake-holders – oriented approach organizations must be able to think, plan, and act strategically in an interconnected business environment. Stake holders emphasizes that shareholders and management must engage each other in making managerial decision as part of the strategic planning process which is imperative to successful long-term planning and imitativensess. Agency theory has been applied in firm performance to reduce agency problems between shareholders, management and claim holders hence improving corporate governance within a firm. However **Allayannis et al. (2012)** concentrated on monitoring pressure on managers from shareholders and its impact on firm financial performance and found that

increased pressure in a firm where managers have limited power to make autonomous decision financial performance is compromised. This is supported by **Ongore (2011)** study findings in Kenya which stipulates that managers work better in environment where they are afforded an opportunity to own shares of the firm then allowed freehand to exercise their professional judgments without undue influence from shareholders. However **Hill and McDonnell (2015)** asserts that controls must be put in place as managements can be bad agents using their position to get unwarranted leisure and unwarranted perquisites at the expense of their principal. However **Wanjugu et al. (2016)** recommends resource based theory approach that recognizes that private shareholders bring in resources and expertise required by a company to improve governance and financial performance of corporate entities rather than monitoring pressure and controls on managers advocated by the urgency theory.

1.1.3 Financial performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. It is the process of measuring the results of a firm's policies and operations in monetary terms (Mwangi, 2016). It identifies the financial strengths and weaknesses of a firm by establishing relationships between the items of the financial position and income statement. The term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure firms' performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales (**Njeru, 2012**). Quantitative measures of firm performance include profitability measures such as gross margin, net margin for example return on sales, return on equity, economic value added, return on equity less cost of equity and return on capital

employed. Other measures of performance include cash flow measures such as free cash flow over sales and growth measures for example historical revenue growth. Ideally, forward-looking measures such as expected profitability, cash flow and growth should be used to measure a firm's performance (**Kiaritha, 2015**). Management researchers prefer accounting variables as performance measures such as return on equity (ROE), return on investment (ROI), and return on assets (ROA). Other common measures of performance include Earnings per share (EPS); Price/Earning (P/E) ratio and net interest margin (NIM). The NIM variable is defined as the net interest income divided by total assets. Okiro (2014) use net interest margin and before tax profit/total assets as measures of financial performance. Earlier studies typically measure accounting rates of return. These include: Return on Investment (ROI), return on capital (ROC), return on assets (ROA) and return on sales (ROS). The idea behind these measures is perhaps to evaluate managerial performance-how well is a firm's management using the assets to generate accounting returns per unit of investment, assets or sales (**Memba, 2011**).

The problems with these measures are well known. Accounting returns include depreciation and inventory costs and affect the accurate reporting of earnings. Asset values are also recorded historically. Return of total assets (ROA) is the ratio of net income after taxes divided by total assets and reflects how well management uses the firms real investments resources to generate profit (**Ongore, 2013**). Return on assets indicates how profitable a business is relative to its assets. **Nyabwanga, Ojera, Otieno and Nyakundi (2013)** assert that return on assets must be positive and the standard figure for return on assets is 10% -12%. The higher the ROA the better because the business is earning more money on the capital invested. ROA takes into consideration the return on investment (ROI) and indicates the effectiveness in generating profits with its available assets. Return on equity (ROE) is a frequently used variable in judging top management performance, and for making executive compensation decisions. ROE is defined as net income (income available to common stockholders) divided by

stockholders equity. Return on equity (ROE) indicates the return on owners' equity, hence the higher the better. Earnings per share (EPS) indicate the dollar amount earned on behalf of each common share, thus the higher the better. Price/earnings (P/E) ratio is the amount investors are willing to pay for each dollar of earnings, that is indicates investors' confidence (**Herrmann, 2008**). Liquidity is also a measure of financial performance. Liquidity measures the ability to meet financial obligations as they fall due without disrupting the operations of the firm (**Mwirie et al., 2015**).

1.2 Statement of the Problem

Despite the impressive performance of the NSE, firms listed on the NSE still dogged with challenges of poor board composition has resulted to financial scandals as evidenced by collapse of some reputable firms such as Uchumi supermarket, Nakumatt supermarket, Imperial bank, Trust bank and Chase bank. The capital structure decisions are influenced by the board decision which might increase the company performance or ruin the company

There are several literature gaps that are filled by this study. First and foremost, there is lack of knowledge with respect to the level of board composition thresholds among Kenyan listed firms. **Namusonge, Kabare & Mutua (2012) and Iravo, Ongore & Munene (2013)** raised concerns as to why some organizations succeed while others fail and this has influenced a study on moderating effect of board composition on the determinants and financial performance of companies listed on the NSE in Kenya. From this perspective, studying moderating effect of board composition on the determinants and financial performance among Kenyan companies helps Government policies to avert poor performance and consequently bankruptcy of listed companies and enlighten the investors who will be interested in the study as they will be in a position to protect their

investments and direct them to the best performing companies at the Nairobi Securities Exchange which will in turn spur economic growth in the long-term

Most studies concentrated on the relationship between board composition and financial performance. There is therefore clear evidence that the relationship between the three variables, board composition, determinants of financial performance have not been studied simultaneously. Attempts to study these variables have led to study of either of the two of the variables. Consequently there is need to study the relationship that exists between these three variables.

Namusonge, Kabare & Mutua (2012) observed that Kenya has been experiencing turbulent times with regard to its organizational practices in the last two decades. This resulted in generally low profits across the economy. **Weir & Laing (2012)** argues that good ownership structure advocates for good governance mechanisms that boosts a firms' capacity to attract investors, ensure effective monitoring mechanisms of the board and the decisions-making process are in place to protect and promote shareholders' interests and improve the overall firms' performance.

George & Nyambonga (2014) pointed out that despite the impressive performance of the NSE, firms listed at NSE are still dogged with challenges of Ownership structure where some shareholder (controlling shareholders) took the opportunity to use their powers to undertake activities of personal gain at the expense of minority shareholders. This has resulted to financial scandals as evidenced by collapse of some reputable firms such as Daima bank, Trust Bank, Euro Bank, Imperial bank, Uchumi Supermarket, Nakumatt Supermarket and Chase Bank among others and routine suspension of listed companies from trading at NSE due to compromised financial results released by firms in Kenya (**George & Nyambonga 2014**). Further there is trend of firms operating in

the same market selling similar products or services but with diverse performance where some are excelling where others are collapsing and getting de-registered from securities exchange.

Recently, board composition has grown to be importantly particularly with the collapse of major corporates. Not only that, some listed company are performing well while other are not, others are under receivership **Namusonge, & Ng'ang'a (2017)**.

Further in this area there has been an overlook of qualitative factors that affect performance as most of the studies have been based on quantitative factors derived from secondary data of published financial statements. Therefore there is need for a study linking moderating effect of board composition on the determinants and financial performance of companies listed on the NSE in Kenya.

1.3 Research Objectives

1.3.1 General Objective

To investigate the moderating effect of board composition on the relationship between capital structure and financial performance of companies listed on the Nairobi Securities Exchange, Kenya.

1.3.2 Specific objectives

1. To establish the effect of corporate income tax on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.
2. To evaluate the effect of capital adequacy on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

3. To examine the effect of firm ownership on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.
4. To determine the effect of market capitalization on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.
5. To assess the effect of financial leverage on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.
6. To find out moderating effect of board composition on the determinants and financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

1.4 Research Questions

The study was anchored on the following research questions.

1. What is the effect of corporate income tax on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya?
2. What is the effect capital adequacy on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya?
3. What is the effect of firm ownership on financial performance of the companies listed at Nairobi Securities Exchange in Kenya?
4. What is the effect of market capitalization on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya?
5. What is the effect of financial leverage on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya?
6. What is the effect of moderating of board composition on the determinants of financial performance of the companies listed on the Nairobi Securities Exchange in Kenya?

1.5 Research Hypotheses

This study sought to test the following null hypotheses;

- H₀₁:** Corporate income tax has no significant effect on the financial performance of the companies listed in the NSE in Kenya
- H₀₂:** Capital adequacy has no significant effect on the financial performance of the companies listed on the NSE in Kenya.
- H₀₃:** Firm ownership has no significant effect on the financial performance of the companies listed on the NSE in Kenya.
- H₀₄:** Market capitalization has no significant effect on the financial performance of the companies listed on the NSE in Kenya.
- H₀₅:** Financial leverage has no significant effect on the financial performance of the companies listed on the NSE in Kenya.
- H₀₆:** Moderating effect of board composition has no significant effect on the determinants of financial performance of the companies listed on the NSE in Kenya.

1.6 Significance of the study

The fact that Kenyans economy is undergoing transition from emerging to developed market and majority of small individual investors are expressing interests in investing in the stock markets, the study is relevant to the following stakeholders;

1.6.1 Management

The study findings can provide important information to the management of the companies which are listed and the ones which are not to benefit from the results of the study. For instance, firms' management would be able to identifying indicators of success or failure and take the necessary action(s) to improve the performance of their companies.

1.6.2 Policy Makers

The study is of help to the Government of Kenya and policy makers with useful input for formulating Government policies to avert poor performance and consequently bankruptcy of listed companies as was the case with Uchumi Supermarket limited, Chase Bank, Daima Bank, Trust Bank, Imperial Bank, Nakumatt Supermarket, and A Baumann and Company among others.

1.6.3 Institutional regulatory bodies

The study is important to the Institutional regulatory bodies such as, Capital Markets Authority, Central Bank of Kenya, Insurance Regulatory Authority, Retirement Benefits Authority and the Kenya Revenue Authority can use the study findings to; improve on the framework for regulation to make a level platform for all categories of investors especially domestic small scale investors. The Nairobi Securities Exchange (NSE) and Capital Market Authority (CMA) can use the study findings to regulate the operations of listed companies in the stock exchange by developing and adopting policies to enhance confidence to small investor and public at large on their investments and boost equality and stability of the economy.

1.6.4 Investors

Financial advisors can use the findings to advice and direct their clients to invest in companies that will yield highest returns on their investments. The study is of significance to the following groups specifically Board of directors, stakeholders and investors and finally to a theoretical critique. It benefits the board of directors of companies in NSE in evaluating the way their organizations are governed and in identifying areas where changes to be made may be necessary.

1.6.5 Researchers and Academicians

This study is important in critiquing the various theories on financial performance by supporting or showing whether they do not hold. Finally, this study is to add to the body of existing knowledge on moderating effect of board composition on the determinants of financial performance. In addition, this study is to points to the gaps hence offering challenge to the researchers on area for future research. Moreover, this study can potentially serve as a stepping stone for further research in this area.

1.7 Scope of the Study

The study investigated the moderating effect of board composition on the determinants of financial performance of companies listed on the NSE for a period between 2005 and 2015. The study was limited to only companies' listed in the Nairobi Securities Exchange in Kenya because of reliable and consistent source of information needed for comparison purposes and also since the information is in real time therefore always updated. According to companies Act, it's a legal requirement for all registered companies to submit audited published final accounts on yearly basis and this made this study to have access to the required data. Further for the company to qualify in the

sample, it must have been listed at the NSE between 2005 and 2015 and had compiled their financial reports for the relevant period of the study to enable the researcher to establish trends, patterns and relationship of the conceptualized study variables. The scope of this study covered firms from different sectors of the economy listed on the Nairobi Securities Exchange in Kenya.

This included firms from sectors covering wide range of economic activities like Agriculture, Commercial and Services, Telecommunication and Technology, Automobiles and Accessories, Insurance, Investment, Manufacturing and Allied, Energy and Petroleum, Finance and Construction, Real Estate Investment Trust and Investment Services. These sectors were selected not only because of their immense contribution to the economic development of Kenya but also because of the realization of the amount of finances the public investors have put in them. The ten years' period is selected because it is considered a reasonable amount of time to have overcome the challenges a company faces initially after listing initially.

The financial institutions were included irrespective of the high volatility in their finances as compared to the rest of the companies (**Engle, 2004**). This is because the sector immensely affects the operations of the other sectors and also the capital market. This study was limited to the companies listed on the Nairobi Securities Exchange. Studies have shown numerous determinants of financial performance but this study focused on six determinants only and one intervening variable. Capital adequacy, corporate hedging, corporate income tax, financial leverage, Firm ownership, Market capitalization and Board composition.

1.8 Limitations of the study

The main limitation of the study was that most companies listed on the NSE were reluctant to provide the information required because they considered it confidential. This was overcome by the introductory letter from the University reassuring them that the information was strictly for academic purpose and would be treated with utmost confidentiality. Due to time and resource constraints the study only reviewed a sample of only 59 publically listed companies. Therefore generalization of our results to private or small companies must be made with this limitation in mind. However, this provides an opportunity for further research. The non-response or return on incomplete questionnaires in the survey was detrimental on sampling errors such as under-coverage where the sampling frame may not include other important element in the population affect the results of the study. Sampling errors such as lack of specific consideration to equal sample in gender caused by the existing in balance in the target population may imply that making generalizations especially those that may have gender as a moderating variable may affect the results.

The fixed sample quantitative data obtained from secondary data of the qualifying 59 companies implied that there was need for a similar response rate from the questionnaire used for the construction of the qualitative primary information collected using the questionnaires for the purpose of comparison. To ensure a 100% response rate, drop and pick method of administrating questionnaires could not work effectively. Administration of the questionnaires was therefore personally done with the help of the research assistant and intensive follow-up which was costly and took a longer time than forecasted in the research plan. However this enhanced the achievement of all the intended study objectives. Further the study used questionnaires limited to Likert scale questions and secondary information from published financial statements; therefore

there is need in future studies to include open ended questions to bring more qualitative information in terms of views and opinions of different categories of the investors.

Finally, the study only collected information and views from the company's financial statements and their employees and ignored other interested stakeholders and therefore there is need to bring on board views of other outside stakeholders and investors.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter deals with the review of the empirical and theoretical literature relevant to moderate board composition on the relationship between capital structure and financial performance and shows its linkage to the research questions. It indicates what has been done by other researchers including the methodologies used and identifies the gaps. The conceptual framework is then laid out to show the interaction between the variables and finally a summary of the literature review is provided.

2.2 Theoretical Framework

The relevant theories explaining these variables are explored, indicating the existing studies and their conclusions. According to this study, the theoretical framework involved the following theories;- Trade off theory, Irrelevance Modigliani and Miller theory (M&M theory), agency cost theory and Stakeholder theory

2.2.1 Trade-Off Theory

The trade –off theory’s main idea is that benefits and costs of debt financing yield an optimal debt- to- assets ratio for a company. This theory came as a result to “correct” the Miller and Modigliani’s proposition 1. There has to be both positive and negative effects of debt financing for there to be a trade-off result. **Wu and Wang (2005)**, the proponents of static trade-off model argue that firms balance debt and equity positions by making trade – offs between the value of tax shields on interest, and the cost of bankruptcy or financial distress. **Scott (1977)** postulates that increase of debt as opposed

to equity enhances the financial position of the firm in that, debt is tax deductible whereas equity is not. The agency cost of cash flows is also lower with debt financing, since a higher level of debt decreases the cash flows through interest payments hence decreasing the likelihood of unwise investments.

This therefore implies that as the level of debt financing increases, so should the value of the firm. Furthermore, in a case of bankruptcy creditors have a claim to the residual earnings whereas shareholders do not (Lazonick, 2013). There is however a limit to the tax deductible debt because for a firm with a negative or zero operating income, an interest deduction does not help much. Furthermore, (Lee, 2006) postulates that firms with a lower tax bracket have less tax incentive than those with a higher tax bracket. **Hovakimian et al., (2001)** found that even if past returns seem to matter for leverage, firms move towards a trade-off predicted capitalization when issuing or retiring more substantial amounts of capital. **Fama and French (2002)** pointed out that the empirical predictions shared by the trade-off and the pecking order theory are confirmed.

Graham (2003) postulates that high tax rate firms use debt more than lower tax rate firms in order to take advantage of tax shields on interest payments. **Thornhill et al., (2004)** explains that firms in goods producing industries will have higher debt to equity ratio than the ones in the service industry. The difference is brought by one requiring asset collateral and the service industry is based on intellectual. **Gaud et al., (2005)** after an empirical study on 104 Swiss companies concluded that the trade –off model works for the capital accordance with the age and size of the company (**Namusonge, 2010**) large firms are likely to have a higher level of debt because of the fact that they have diversified risk and have easier access to market bonds. The other supporters of static trade- off are; Mackay (2003), who postulates that company leverage is positively related to flexibility in investments for firms and **Pittman (2002)**, who points out that young firms rely more on investment tax shields than debt tax shields in supporting this

theory include **Parrino a**, Poteshman, **Weisbach (2005)**, **Cassar and Holmes (2003)** and **Strebulaev (2007)** among others.

The static trade-off choice encompasses several aspects, including the exposure of the firm to bankruptcy and agency cost against tax benefits associated with debt use. Bankruptcy cost is a cost directly incurred when the perceived probability that the firm will default on financing is greater than zero. One of the bankruptcy costs is liquidation costs, which represents the loss of value as a result of liquidating the net assets of the firm. This liquidation cost reduces the proceeds to the lender, should the firm default on finance payments and become insolvent. Given the reduced proceeds, financiers will adjust their cost of finance to firms in order to incorporate this potential loss of value. The trade –off theory’s main idea is that benefits and costs of debt financing yield an optimal debt- to- assets ratio for a company.

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tax deductible debt because for a firm with a negative or zero operating income, an interest deduction does not help much. Furthermore, (Lee, 2006) postulates that firms with a lower tax bracket have less tax incentive than those with a higher tax bracket. **Hovakimian et al., (2001)** found that even if past returns seem to matter for leverage, firms move towards a trade-off predicted capitalization when issuing or retiring more substantial amounts of capital. **Fama and French (2002)** pointed out that the empirical predictions shared by the trade-off and the pecking order theory are confirmed. Graham (2003) postulates that high tax rate firms use debt more than lower tax rate firms in order to take advantage of tax shields on interest payments. Firms will, therefore, incur higher finance costs due to the potential liquidation costs (**Cassar & Holmes, 2003**). Another cost that is associated with the bankruptcy cost is distress cost. This is the cost a firm incurs if non-lending stakeholders believe that the firm will discontinue. If a business is perceived to be close to bankruptcy, customers may be less willing to buy goods and services due to the risk of a firm not being able to meet its warranty obligations.

In addition, employees might be less inclined to work for the business and suppliers less likely to extend trade credit. These stakeholders' behaviour effectively reduces the value of the firm. Therefore, firms which have high distress cost would have incentives to decrease debt financing so as to lower these costs. Given these bankruptcy costs, the operating risk of the firm would also influence the capital structure choice of the firm because firms which have higher operating risk would be exposed to higher bankruptcy costs, making cost of debt financing greater for higher risk firms. Research had found that high growth firms often display similar financial and operating profiles (**Hutchinson & Mengersen, 1989**). Debt financing may also lead to agency costs. Agency costs are the costs that arise as a result of a principal-stakeholder relationship, such as the relationship between equity-holders or managers of the firm and debt holders.

Myers and Majluf (1984) showed that, given the incentive for the firm to benefit equity-holders at the expense of debt holders, debt-holders need to restrict and monitor the firm's behaviour. These contracting behaviours increase the cost of capital offered to the firm. Thus, firms with relatively higher agency costs due to the inherent conflict between the firm and the debt-holders should have lower levels of outside debt financing and leverage. Firms also consider within the static trade-off framework, the tax benefits associated with the use of debt. This benefit is created as the interest payments associated with debt are tax deductible while payments associated with equity such as dividends are appropriated from profit. This tax effect encourages the use of debt by firms as more debt increases the after-tax proceeds to the owner. The theory among other things predicts a positive relationship between tax and leverage.

The trade-off theory has contributed a lot in finance. It yields an intuitively pleasing interior optimum for firms and gives a rationale for cross-sectional variation in corporate debt ratios i.e. firms with different types of assets will have different bankruptcy and agency costs and different optimal debt ratios. However, the theory has limitations i.e. debt ratios as produced by this theory are significantly higher than observed. Secondly, in many industries, the most profitable firms often have the lowest debt ratio, which is the opposite of what the tradeoff theory predicts (**Sunder & Myers, 1999**). According to Myers (1984) the trade-off theory also fails to predict the wide degree of cross-sectional and time variation of observed debt ratios.

2.2.2 Irrelevance Modigliani and Miller Theory (M&M Theory)

Modigliani and Miller (1958) came out with two main propositions namely; M and M proposition 1 and M and M proposition 11. M and M proposition 1, put forward by Modigliani and Miller (1958), states that a firm's cost of capital which is represented by weighted average cost of capital remains stable at all levels of leverage, the import of this is that, there is no optimal capital structure for a particular company and for that

matter an industry. Their notion was that, it is completely irrelevant how a firm chooses to arrange its finance. In other words, the value of the firm is independent of its capital structure. They concluded that an individual can borrow at the same rate and conditions as corporations, such that if individuals can borrow at a higher rate, one can easily show that corporations can increase firm value by borrowing. Secondly, that the capital markets were perfect, this assumption was central to means that, bankruptcy risk could be ignored so that distressed companies could always raise additional finance in a perfect market. The notion of the perfect capital market is also defined by, the stocks of different companies are homogenous and there can serve as perfect substitute. Investors are in a consensus about the expected future returns for all shares and all securities are traded under perfect market conditions. In sum according to the theory the way in which a firm arrange its assets can have no impact on the value of the firm,. The value of a firm is derived from the net present value of investments the firm has committed its current resources into.

Modigliani and Miller (1963) amended their model in their second paper and the results was the proposition 11. The amendment according to **Watson and Head (2010)** was done in relation to their acknowledgement of the existence of corporate tax and the tax deductibility of interest payment. This means that as the firm increases its leverage, by replacing equity with debt, it shields more and more of its profits from tax. However they indicated that although varying capital structure of the firm may not change the firm's total value; it does cause important changes in the firm's debt and equity. M and M 11 demonstrated that, as the firm raises its gearing proportion, the increase in leverage raises the risk of the equity and therefore the required return, or cost of equity (KE). **Modigliani and Miller (1963)**, proposition 11 indicated that the cost of equity depends on three things; the required rate of return on the firm's assets; the firms cost of debts and the firm's debt –equity ratio.

Modigliani and Miller (1963), proposition 11 therefore states that, a firm's cost of equity capital has a positive linear relationship with its capital structure. Modigliani and Miller therefore concluded that the cost of capital or the required rate of return on the firm's assets (K_A) does not depend on the debt-equity ratio. The import of this is that the firm's overall cost of capital is unaffected by its capital structure.

In addition this theory's proponents are **Villamil (2008)** in their seminar paper "The cost of capital, corporation finance, and the theory of investment" (**Kumar, 2008**). They postulated that the firm value is independent of its leverage as long as there are no tax subsidies on interest payment, no transaction costs, and the interest rate on borrowing is the same for Corporations and individuals. Villamil (2008) challenged the traditional held notion that a firm could increase its value by using debt as part of its capital structure. In their proposition they explain that the investors can create any leverage that they wanted but were not offered, or the investors can get rid of any leverage that the firm took on but was not

Further to the original Modigliani and Miller paper, important contributions include papers by **An (2012)**. Other studies promoting the proposition include Ono (2006) who investigated valuation effects of exchangeable debt calls and concluded that the respective shareholders do not experience any significant wealth changes. Miller and Modigliani in their second "irrelevance" proposition indicate that given a firm's investment policy, the dividend payout it chooses to follow will affect neither the current price of its shares nor the total return to its shareholders (**Baral, 2004**). In other words, in perfect markets, neither capital structure choices nor dividend policy decisions matter.

Studies have shown the use of certain factors in determining the financial leverage of the firm, hence the financial performance. These studies include **Fama and French (2012)**, **Avramov, Chordia and Jostova, (2009)**, **Kumar (2008)** points out that numerous documented researches showing a fall in equity prices just before the

announcement of new equity issue and in the few years that follow hence validating the M&M leverage “irrelevance” theory.

2.2.3 Agency Theory

Agency relationship is one in which one or more persons (the principal(s)) engages another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. **Jensen and Meckling (1976)** developed agency theory where agency costs are defined as the sum of the monitoring expenditures by the principal, bonding costs by the agent, and a residual loss. The existence of agency problem will arise due to the conflicts either between managers and shareholders (agency cost of equity) or between shareholders and debt holders (agency costs of debt).

The Agency theory was advanced by **Jensen and Meckling (1976)** and rests on the assumption that the role of organizations is to maximize the wealth of the shareholders (**Blair, 1995**). Further the Agency theory explains a fundamental problem for absent or distant owners who employ professional executives to act on their behalf. **Eisenhardt (1989)** observes that most businesses operate under conditions of incomplete information and uncertainty which exposes them to two agency problems: adverse selection and moral hazard. Adverse selection occurs when owners cannot ascertain whether an agent accurately represents his ability to do the work for which he is paid to do while moral hazard is a condition under which a principal cannot be sure if an agent has put forth maximal effort. The conflicting demands justify actions that may be criticized as immoral or unethical depending on the stakeholder group and this study focuses how such conflict affects the financial performance of the firm. These professionals may be more interested in their personal welfare than in the welfare of the firm’s shareholders (**Berle & Means, 1967**) and by the fact that superior information is

available to them; they take the advantage over owners of firms. The agency theory is then adopted for this study because according to **Eisenhardt (1989)** agency theory is concerned with analyzing and resolving problems that occur in the relationship between shareholders and their professional agents. Further it tries to understand how to best organize relationships between the principal(owners) and the agents(Professionals) and determines the work, which the agent should undertake and the measures the owners should put in place to maximize their returns (**Eisenhardt, 1989**).

Donaldson and Davis (1991) argue that managers will not act to maximize returns to shareholders unless appropriate governance structures are implemented to safeguard the interests of shareholders. According to **Wheelen and Hunger (2002)** the problems arises because agents (professional) are not willing to bear responsibility for their decisions since they don't own a substantial amount of stock in the firms and hence don't stand to benefit by perusing wealth maximizing objective. **Mallin (2004)** advocates that a firm's top management should have a significant ownership of the firm in order to secure a positive relationship between corporate governance and the amount of stock owned by the top management. However, **Donaldson and Davis (1991)** argues that the demands of private firms such as foreign or institutions owned are different as they are ready to seek costly information and put stringent measures to monitor the actions of the top management. In summary, **Rhoades (2000)** observed that managers will not act to maximize the returns to shareholders unless appropriate governance structures are implemented in the large corporation to safeguard the interests of shareholder and recommends that selection of appropriate governance mechanisms between owners and managers will insure an efficient alignment of the principal and agent's interest.

The existence of agency problem will arise due to the conflicts either between managers and shareholders (agency cost of equity) or between shareholders and debt holders (agency costs of debt). A reliable tool to control agency cost can be the use of debt capital. Leverage will force managers to generate and pay out cash, simply because interest payments are compulsory. Interest payments will reduce the amount of remaining cash flows. The agency theory focuses on the divergence of interests between managers and stockholders. **Okiro (2014)** postulates that stockholders are wealth maximizers while managers maximize utility function that include remuneration, power, job security and status.

2.2.4 Stakeholder Theory

Stakeholders' theory challenges the primacy assumption of shareholder interests and advocates that a company should be managed in the interests of all its stakeholder (**Freeman, 1994**). The theory is based on the assumption that values are necessarily and explicitly a part of doing business and that managers need to articulate the shared sense of value they create to bring its key stakeholders together. When stakeholders get what they want from a firm, they return to the firm for more (**Freeman, 1984; Freeman & McVea, 2001**). **Ulrich et al. (2008)** argues that stakeholders can be instrumental to corporate success and therefore, corporate leaders have to consider the claims of stakeholders when making decisions and conduct business responsibly towards the interests of all stakeholders. The stakeholder theory argues that managers should make decisions so as to take account of the interests of all stakeholders in a firm including not only financial claimants, but also employees, customers, communities and governmental officials (**Manville & Ober, 2003; White, 2009**).

Freeman (1994) argues that advocates of stakeholder theory refuse to specify how to make the necessary trade-offs among these competing interests, they leave managers

with a theory that makes it impossible for them to make purposeful decisions. According to **Kaptein and Van Tulder (2003)** with no way of keeping a balanced score, stakeholder theory makes managers unaccountable for their actions making them adopt a reactive approach which does not integrate stakeholders into corporate decision making processes. This results into a misalignment of organizational goals and stakeholder demands (**Mackenzie, 2007**). **Turnbull (2002) and Watkins (2003)** attribute scandals such as those of Enron and WorldCom to the failure of the managers to consider stakeholder concerns in decision making. Following these scandals, **Adams (2002)** observes that some governments set up new regulations to align the interests of stakeholders with corporate conduct giving example of the Sarbanes-Oxley Act (SOX) which was passed as a result of the collapse of Enron and WorldCom. Cornett(2007) advocates that a proactive approach should be used by corporations to integrate stakeholders' concerns into their decision-making processes and to the necessary governance structures and recommends that the stewardship theory remains the theoretical foundation for much regulation and legislation. Rothman & Friedman (2001) argues that involving participation of stakeholders in corporate decision-making can enhance efficiency and reduce conflicts. **Wheelen and Hunger, (2002)** argues that the choice of value maximization as the corporate scorecard must be complemented by a corporate vision, strategy and tactics that unite participants in the organization in its struggle for dominance in a competitive arena. **Freeman (1994)** concludes that a firm cannot maximize market value if it ignores the interest of its stakeholders in the long-term. **Clarke (2004)** over time, a firm's board of directors and its CEO, acting as stewards, are more motivated to act in the best interests of the firm rather than for their own selfish interests as they tend to view a firm as an extension of themselves.

Mallin,(2004) argues that compared to agency theory, enlightened stakeholders theory which utilizes much of the structure of shareholders theory advocates that, a firm's top management cares more about the firm's long term success and accepts maximization of

the long run value of the firm as the criterion for making the requisite trade-offs among its stakeholders. **Freeman (1994)** concludes that a firm cannot maximize market value if it ignores the interest of its stakeholders in the long-term. Stakeholders' theory is therefore adopted in this study to help us analyse and understand how different ownership structures adopts a proactive approach to integrate all stakeholders' concerns into their decision-making processes and to lay the necessary governance structures to maximize firms financial performance in the long- term.

2.3 Conceptual Framework

A conceptual framework is a concise description of the phenomenon under study represented by graphical depiction of the major variables of the study (**Mugenda, 2003**). As a foremost mentioned in section 2.0 each of the theories in 2.2 provides a background of each of the variables in the conceptual framework. For example, Independent variables are explained by the Determinants, Moderating variable provide information by board composition and Dependent variable is explained by the financial performance. For this study the conceptual framework looked at the moderating effect of board composition on the determinants of financial performance of companies listed on the NSE in Kenya.

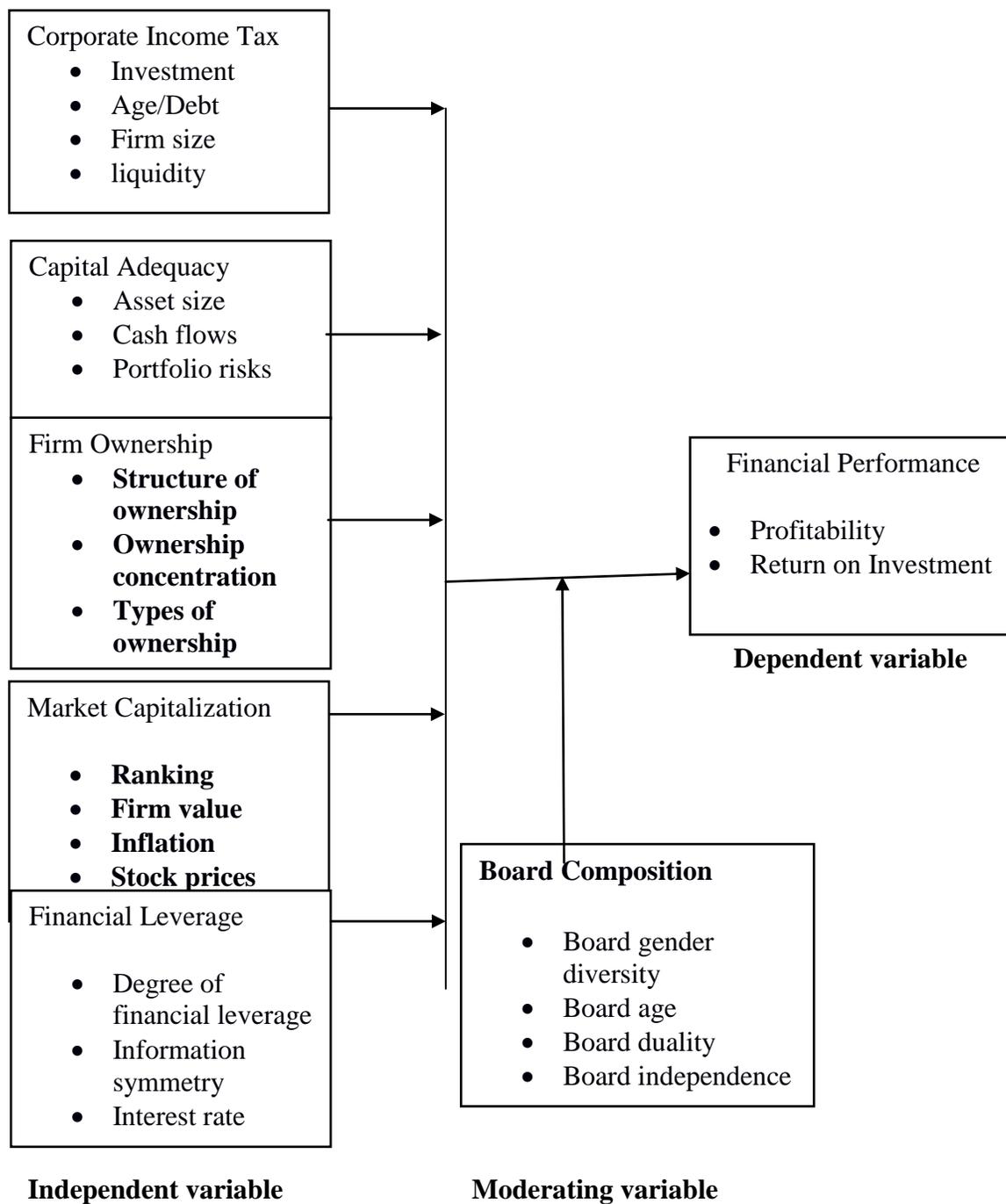


Figure 2.1 Conceptual Framework

2.4 Empirical Review

Ongore et al., (2013) employed capital adequacy, asset quality, management efficiency and liquidity management on financial performance of companies listed on the NSE in Kenya. **Namusonge and Ng'anga, (2016)** selected government ownership, foreign ownership and local ownership on financial performance of companies listed on the MSE in Kenya. **Ongore, K' Obonyo and Ogutu (2011)** employed government ownership, foreign ownership, institution ownership, diverse ownership and manager (insider) ownership on financial performance of companies listed on the NSE in Kenya. For the purposes of this study, the researcher concentrated on corporate income tax, capital adequacy, firm ownership, market capitalization, financial leverage financial performance of companies listed on the NSE in Kenya.

2.4.1 Corporate Income Tax

Corporate income tax is expected to influences financial performance of the companies listed on the NSE in Kenya. This can be attributed to the fact that taxation of corporate profits, as an important component of fiscal policy. By imposing taxes, the state seeks to collect financial resources to the budget. This is supported by **Jens and Schwellnus (2008)** examined the effects of corporate income taxes on two of the main drivers of growth, profitability and investment of firms in European OECD member countries over the time period of 1996-2004; through stratified sampling. The results suggest that corporate income taxes reduce investment through an increase in the user cost of capital. Taxation of corporate profits, as an important component of fiscal policy, is a topical issue of great interest impacting both macroeconomic and microeconomic. By imposing taxes, the state seeks to collect financial resources to the budget.

When referring to the economic, tax, representing a sampling of financial resources at their disposal to the state, have the effect of reducing economic and financial performance achieved. Government in both developed and developing countries collect taxes to fund public services, including education, healthcare, water, security, roads and social security among others. **(Marine et al., 2002)**, argues that, “taxation is the only known practical manner for collecting resources in order to finance public expenditure for goods and services consumed by any citizens” As such, taxes are compulsory payments that do not necessarily bear any relationship to the benefits of government goods and services received.

Taxation is the single largest source of government budgetary resources. Between 1995 and 2004, tax revenue constituted 80.4% of total government revenue including grants. Kenya’s dependency on foreign aid and borrowing has declined over the five years. The role of taxation has been applied to meet two objectives. First taxation is used to raise sufficient revenue to fund public spending without resource to excessive public sector borrowing. Second it is used to mobilize revenue in ways that are equitable and that minimize its disincentive effects on economic activities **(Gleenday, 2002)**.

Rohaya, Nor’Azam and NurSyazwani, (2010), conducted a study on corporate income taxes and revealed an association between income tax and profitability of corporate institutions. The study related to the impact of corporate income tax liabilities on different variables of a firm as gross profit, cost of sales and expenses. The conclusion was that corporate income tax adversely affects the profitability of corporate institutions.

Jens and Schwellnus (2008) examined the effects of corporate income taxes on two of the main drivers of growth, profitability and investment of firms in European OECD member countries over the time period of 1996-2004; through stratified sampling this is found to be true across firms of different size and age classes, except for young and

small firms. The results suggest that corporate income taxes reduce investment through an increase in the user cost of capital. This may be partly explained by the negative profitability effects of corporate income taxes if there is an increase in the corporate tax rate. **Noor and Fadzillah (2010)** conducted a study on corporate income taxes and revealed an association between income tax and profitability of corporate institutions.

The study related to the impact of corporate income tax liabilities on different variables of a firm as gross profit, cost of sales, expenses etc. A sample of 7,306 companies was taken from the hotels and restaurants sector, includes 6,594 in business services and 1,484 in transport manufacturing sectors, for the accounting periods 1995 to 2000. The conclusion was that corporate income tax adversely affects the profitability of corporate institutions but has a positive relationship with the firm size and age of companies. Apart from these authors, **De Mooij and Ederveen, (2001)** all found a negative relationship between corporate taxation and financial performance therefore it is valid to develop a hypothesis that there is a negative association between corporate tax and financial performance of firms.

According to the Modigliani-Miller, the firm is inversely proportional to the weighted average cost of capital. Therefore, changes in tax law that lowers tax rates should increase firm value. The researcher used the framework of **Zeitun and Tian (2007)** with the extension in their regression model by adding liquidity and non-debt tax shield and applied this regression model simultaneously on textile and food sectors of Pakistan. The findings of **Zeitun and Tian (2007)** indicated that leverage has a significant and negative relationship with firm's performance. They used leverage, growth, size, tax, risk and tangibility as independent variable to see their effect on firm's performance. They concluded that firm's size and tax have positive and significant relationship with firm's performance while risk and tangibility have negative and significant relationship with firm's performance.

2.4.2 Capital Adequacy

Capital adequacy may influence financial performance of companies listed on the NSE in Kenya. This implies that well capitalized banks tend to acquire higher bank financial strength ratings issued by capital intelligence. This study finding agreed with the studies conducted by **(Diamond, 2000) and (Laruccia and Revoltella, 2000)**

Capital is one of the bank specific factors that influence the level of bank profitability. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation **(Athanasoglou, Sophocles, & Matthaios, 2013)**. Capital is one of the bank specific factors that influence the level of banks profitability. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation **(Athanasoglou et al. 2005)**. Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress **(Diamond, 2000)**. However, it is not without drawbacks that it induce weak demand for liability, the cheapest sources of fund capital adequacy is the level of capital required by the banks to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential losses and protect the bank's debtors. According to **Dang (2011)**, the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the profitability of banks by determine its expansion to risky but profitable ventures or areas **(Sangmi and Nazir, (2010)**

The adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis.

Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the profitability of banks by determining its expansion to risky but profitable ventures or areas (**Sangmi & Nazir, 2010**). Capital adequacy for commercial banks is measured by different variables including the log of total assets (LTA), Loan Loss provisions to total loans, loans to assets, tax to operating profit before tax, overhead expenses to total assets, non-interest income to total assets, total revenue to number of employees and shareholders' equity to total assets. All these measures aim to measure capital adequacy of commercial banks from different perspectives. The idea behind the measures is to determine the level of capital held compared to equity and other balance sheet activities. For instance, capitalization which is regarded as the principal measure of capital adequacy is a measure ratio of shareholder's equity to total assets. The lower the capitalization or capital ratio is the riskier the banking institution is and vice versa.

2.4.3 Firm Ownership

Firm ownership is expected to influence financial performance through appointments of the board of directors who may not be very effective and qualified. This can be attributed to the fact that good ownership structure advocates for good governance mechanisms that boosts a firms' capacity to attract investors, ensure effective monitoring mechanisms of the board and the decisions – making process are in place to protect and promote shareholders' interests and improve the overall firms' performance. This study finding agreed with the study conducted by **Weir & Laing (2012)**.

Namusonge & Ng'ang'a (2017) conducted a study on effect of ownership structure on financial performance of companies listed at the NSE in Kenya. The findings indicated that all types of ownership structure had a significant positive influence on the firms' financial performance. **Ongore, K' Obonyo and Ogutu (2011)** analyzed ownership

identify of forty two firm in Kenya based on five elements: government; foreign; institution; diverse; and manager (insider). The study found a significant positive relationship between insider ownership, foreign ownership, institutions ownership, diverse ownership and firm performance. However, there was a significant negative relationship between government ownership and firm performance. **Alulamusi (2013)** supported their findings that government ownership had a negative relationship with financial performance and attributed this to asset quality and low management efficiency due to laxity in prudent credit management practices and inefficiency of operations and poor returns.

Kim and Chung (2007) reviewed these studies well. After assessing existing literature on the relative performance of private and public firms, they concluded that efficiency of private companies is considerably better than that of state-owned enterprises and partially privatized enterprises. These previous studies employed various sample data sets: from one country, from one industrial sector or from many countries. In spite of the difference in the information set, the outcome is incredibly robust and enough to generalize those state-owned enterprises usually tend to perform worse than private companies. Examination of the efficiency of state ownership forms ends up with fewer disputes in scholastic circles. Recently, SOEs have actually been traditionally criticized as ineffective. For example, **De Alessi (1980)** mentions that the certain feature of such a business are that a citizen does not have a direct right to receive residual income. **Ehrlich, Gallais-Hamonno, Liu and Lutter (1994)** have given proof on productivity differences between state-owned and privately owned firms. They used data of 23 international airline companies of different (and in some cases changing) ownership categories over the period 1973-1983. They developed a model of endogenous, firm-specific productivity growth. The authors found a significant link between ownership and firm-specific rates of productivity growth. Their results reveal that private ownership leads to higher rates of productivity growth and reducing expenses in the long

run and these differences are not affected by the degree of market competition or regulation. Their outcomes show that the change from complete state ownership to private ownership would increase productivity growth by 1.6 to 2 percent a year and costs would decline by 1.7 to 1.9 percent.

Majumdar (1996) examines differences in efficiency between government-owned, mixed, and private sector firms in India. In his research he used industry survey records and found that SOEs owned by the government have performance scores on an average level with values of 0.658 and 0.638, combined enterprises have scores of 0.92 and private enterprises have scores of 0.975. **Meggison, Nash and Randenbourgh (1994)** compared 61 companies from 18 countries in the period before and after privatization. The results of this study indicate that for most companies in the sample, there was an increase in profitability, efficiency, output, employment and payment of dividends. **D'Souza and Megginson (1999)** conducted similar research, but on a sample of 85 companies from 28 countries. Their results confirm previous claims except regarding increase in employment. **Omran (2002)** evaluates the financial and operating performance of newly privatized Egyptian state-owned companies to see if the results vary among companies as a result of their new ownership structure. Egypt's privatization program offers a unique post-privatization data of (state) and institutional ownership is significantly positive to company profit, while negative to the market value. Zeitun and **Tian (2007)** offers another study carried out on 825 companies listed on the Shanghai Stock Exchange, out of which 513 are with mixed-ownership and 312 private firms. He discovered that private firms perform better than mixed ownership firms. D'Souza, Megginson and Nash (2005) evaluated performance of 129 privatized companies coming from 23 OECD countries, focusing on influence of ownership on relative change of ROS, sales and investments. The results show growth in profitability, productivity and investments after privatization.

There is significant impact on performance of private and foreign ownership and level of capital market development. In the same period **Boubakri, Cosset and Guedhami (2005)** performed analysis of performance on 230 companies from 32 countries. They used regression analysis to measure the influence of macroeconomic factors, ownership and size of company on ROS, ROE and ROA change. Due to the reforms in selected countries there are differences in results among them, but as in other studies, results also show growth in profitability, investments and effectiveness after the privatization.

2.4.4 Market Capitalization

Market capitalization is expected to influence financial performance this agreed with the study conducted by **Choudhary, (2011)**, it was evident most of the respondents agreed that market capitalization influences financial performance of firms listed on the NSE in Kenya to a very high extend

Capital market, unlike a money market is a financial market for raising medium and long term capital. A capital market is not a single entity, but a network of specialized financial institutions linking suppliers and users of medium to long term funds. It provides resources for financing the growth of industries. A capital market is a barometer with which to measure the state of a national economy. It comprises both primary and secondary markets. A primary market is meant for new issues of securities.

According to **Fosback (1991)** and **RaghbendraJha (2003)**, “new issues comprise a category of stocks which falls outside the usual evaluation technique.” A new issue can be said to be the first sale of stock by a company to the public. Companies sell their stocks to the public when their physical resources have been utilized to the maximum and they need new capital for expansion and other related purposes. However, the need for this market arises when business prospects become bright and more capital is raised

to meet these prospects. As a nation's economy grows and develops, the volume of new issues of securities also increases. The modes of offers of securities traded in this market include offer for subscription, right issue, offer for sale and private placement.

Liquidity can simply be defined as the ability of the stock market to convert assets to cash and transferring assets from one person to another without any loss in value. Capital markets make securities liquid by facilitating the buying and selling of securities by a large number of investors without incurring any significant cost. In the capital market, forces of demand and supply determine prices. All information on securities is made known to all investors and this provides a platform for determining fair prices of securities. While the level of economic activities influences the stock market, the stock market also influences the level of economic activities. A capital market is an acknowledged leading indicator of the general economic cycle.

Sarkar and Goswami (2012) throw some light on the financial performance of Indian Aviation sector means of a comparative study between Air India and Kingfisher Airlines, the two key companies in infrastructure sector. The financial performance has been analyzed with the help of some key measures relating to the efficiency in working capital management on the overall financial performance of the selected companies during the period from 2000-01 to 2006-07. Finally, the study ends with some valid suggestions which deserve the attention of the management of both the concerned companies under study and Government. **Pachori and Totala (2012)** explored the effect of financial leverage on shareholders' return and market capitalization of automotive cluster companies of Pithampur, India. The seven major automotive public companies were undertaken for representation of the cluster.

Simple linear regression analysis was carried out to judge the impact of financial leverage on shareholders' return and market capitalization individually to find out the

state of influence of the leverage. The study discussed the probable causes of the findings opening the new avenues of research. They suggested that bankers and debt providers should help the industry out by charging lower cost of debt. Choudhary (2011) identifies the determinants of firm's financial performance (both capital market based and accounting based) in Indian context. In his study the data of a sample of 233 companies' issued to evaluate the financial performance measured in terms of shareholders' value, growth and profitability using a set of independent variables during the period ranging from 1996 to 2008. **Bhattacharyya and Saxena (2012)** analyzed the manufacturing firms' data from the steel and Electrical & Electronics (EE) sectors for the period from 2004-05 to 2006-07.

The result showed that the firm's size affected current profitability: positively in steel sector and negatively in the other. Bank credit was found negatively significant in both the industries.

Market share of firms and industry concentration ratio were the other significant determinants of firms' performance. Firms' market value was found positively significant for other industries. This signified that high market value of firms reflected their goodwill, knowledge stock and prospective investment opportunities which positively influenced the firms' performance. Interestingly, the impact of size was affected by firms' market value and firm size positively affected profitability. A study by **Prasetyantoko and Rachmadi (2008)** spotted the factors determining corporate performance of listed companies in Indonesia especially in the aftermath of the 1997 financial crisis. The study concludes that a firm's size was positively related to firms Profitability, but it was related to market capitalization. It implied that the size of a firm mattered on the fundamental value of the firms but it could not be an important variety for market value of the firms. By employing panel data of 238 listed companies in Jakarta Stock Exchange (JSX) in the period 1994-2004 as the sample the study establish

the macro factors are more significant variables inducing firm performance than the firm-specific factors. Result also indicated that ownership firm mattered significantly on the a firm by demonstrating that firm with majority foreign ownership registered a higher performance on firm measure viz., return on asset (ROA) and market capitalization growth than domestically owned firms.

Chander & Aggarwal (2007) brought about the determinants of growth of selected 50 companies in drugs and pharmaceutical industry for a period of ten years from 1995-96 to 2004-05. The growth of firms was measured in terms of growth in average total assets and average total sales. In order to study the determinates of growth, ten explanatory variables size, profitability, age , advertising expenditure, retention ratio, liquidity, efficiency, ratios, long-term finance, market share and research and development expenditure were chosen for empirical investigation. Multiple regression analysis was used to develop a model to identify determinants of growth of firms in the industry. The result revealed that size, advertising expenditure, age, efficiency ratio, profitability and research and development were statistically significant in determining the growth of firms. **Morck et al. (1988)** examine the relationship between management ownership, as measured by the combined stake of all board members, and market value of the firm, as measured by Tobin's Q, for a 1980 cross-section of 371 Fortune 500 firms. To test two hypotheses of the convergence-of-interest and entrenchment, they estimate piecewise linear regressions allowing for slopes to change at two turning points, 5 and 25 percent. The results show that in some ranges of ownership (below 5 percent and over 25 percent), Tobin's Q is positively related to board ownership, but in others, a negative relation is found.

2.4.5 Financial Leverage

Financial leverage may have significant positive effect on financial performance this agreed with the studies conducted by **Berger and Bonaccorsi di Patti (2006)**, **Margaritis and Psillaki (2007)** and **Majundar and Chhibber (1999)** which showed that financial leverage influences financial performance of firms listed on the NSE to a very high extend.

Leverage is that part of the fixed cost which represents a risk to the firm; it could also be operating leverage (**Shim & Siegel, 2007**). The leverage decision depends on the allocation between debt and equity in financing the firm; an “unlevered” firm uses all equity for financing, while a highly levered firm employs more debt to equity financing. **Kumar (2008)** postulates that the guiding principle of leverage it to choose the course of action that maximizes the firm’s value. Dynamic trade off models can also be used to consider the option values embedded in deferring leverage decisions to the next period. **Goldstein et al., (2001)** observe that a firm with low leverage today has the subsequent option to increase leverage. Under their assumptions, the option to increase leverage in the future serves to reduce the otherwise optimal level leverage today. **Strebulaev (2007)** analyzed a model quite similar to that of **Fischer et al., (1989)** and **Goldstrein et al., (2001)**. Again, if firms optimally finance only periodically because of transaction costs, then the debt ratios of most firms will deviate from the optimum cost of the time. In the model, the firm’s leverage responds less to short run equity fluctuations and more to long run value changes.

Berger and Bonaccorsi di Patti (2006) examined the dualistic relationship between leverage and firm performance for the U.S. banking industry, using a parametric measure of profit efficiency as an indicator to measure agency costs. They confirmed the agency cost theory: higher leverage is associated with better firm performance.

Margaritis and Psillaki (2007) considered a similar relationship for a sample of New Zealand small and medium sized enterprises using distance functions as a measure of firm performance, and also found support for the agency cost theory.

Many recent studies addressed influence of leverage on firm performance for developing markets. Majumdar and Chhibber (1999) showed, that in India leverage was negatively related to firm performance measured as profitability. **Pushner (1995)** found negative effect of leverage on firm performance measured as the total factor productivity (TFP) in **Japan**. **Nickell et al (1997)** and **Nickell and Nikolitsas (1999)** in their studies for the United Kingdom observed some positive relationship between indebtedness and TFP. **Booth et al. (2001)** in their study of 10 developing countries found negative relation between leverage and firm performance. **Onalapo and Kajola (2010)** found a significant negative impact of leverage on financial measures of firm performance in Nigeria. The idea that high leverage disciplines managers was initially associated with leveraged buy-out (LBO) procedures, where it was noted that an increase in debt increases productivity.

The boom of LBO in the USA was followed by several studies on the post-LBO firm performance (Lichtenberg and Siegel, 1990). Since LBO procedure implies an increase in debt-to-equity ratio, researchers appealed to performance of firm after LBO. Palepu (1990) showed the increase in operational efficiency of firms involved in leveraged buyouts. Kaplan (1989) and **Smith (2004)** also considered leveraged buyouts and discovered the increase in return on equity after LBO. Denis and Denis (1993) found the increase in return on equity in the firms after leveraged recapitalization. There were several empirical papers regarding Ukrainian practice. **Myroshnichenko (2004)**, **Zheka**

(2010), considered leverage as dependent variable and studied its determinants. They found that in Ukraine, the pecking order theory holds for short-term financing, and the trade-off theory holds for long-term financing (Myroshnichenko, 2004); observed leverage is not a desired leverage (Zheka, 2010), and financial frictions and access to capital markets strongly affect the choice of debt maturity.

Zheka (2010) also showed that profitability has no effect on leverage. Grechaniuk (2009) studied the influence of CEO gender on firms leverage controlling on ROA and discovered that ROA negatively affects debt-to-equity ratio. All these studies aim to find out which factors affect a particular choice of debt level. Still, to the author's knowledge, there are no studies about the effect of leverage on firm performance controlling for other performance determinants. Besides, it is worth differentiating long- and short-term debt as those with different risk-return profiles, as well as investigating the relationship between leverage and firm performance across different industries.

2.4.6 Moderating effect of Board composition

Board composition is expected to influence financial performance this agreed with study conducted by Kitui (2013) on effect of Board composition on financial performance of firms listed on NSE in Kenya. The findings showed that board composition variable; age, gender, independence and ethnicity had a significant positive influence on the financial performance. Other studies including studies by Pachori & Totala (2012), Sarkar & Goswami (2012) and Dang (2011), have concentrated on the relationship between board composition and financial performance. On the other hand, studies that have been conducted linking the moderating effect of board composition on the determinants of financial performance have been conducted in other countries mostly developed countries.

Christopher, (2013) studied on the effect of board composition on financial performance of listed companies in the Nairobi securities exchange. Recent global events concerning high-profile corporate failures such as Enron in the US have put back on the policy agenda and intensified debate on the efficacy of board composition as a means of increasing corporate financial performance.

The main objective of the study was to establish the effect of board composition on financial performance of companies listed in Nairobi Securities Exchange. Therefore, a descriptive research design was used to study whether there is an effect of board composition on financial performance of firms listed in Nairobi Securities Exchange. The population of interest in this study constituted all listed companies quoted at the NSE in Kenya for the period of five years from 2008 to 2012. Secondary financial data sources were used for the study, where annual financial reports of individual listed firms were used over the five-year period where profitability was extracted and used as a measure of financial performance.

According to **Ebrahim (2014)** study on the moderating effect of board diversity on the relationship between board of director's characteristics and firm performance in Oman. The study had two main substantial targets, the examination of the relationship between the board of director characteristics namely, board size, board independence, board meeting, CEO tenure and CEO duality and firm performance. The sample of this study covered non-financial companies in two years (2011 and 2012). This study used multiple regressions to analyze the association between the independent variables and dependent variable. In addition, this study uses hierarchical multiple regression to examine the relationship between moderator's variable and dependent variable. The study found a positive relationship between board size, board meeting, CEO tenure and CEO duality with ROA but no significant. On the other hand, a negative but not significant

relationship was revealed between board independence and ROA. Moreover, this study found moderating but not significant effect of board diversity on the board of director-ROA relationship. The finding regarding to this relationship between the board independence and firm performance are still inconclusive.

The study concluded that to achieve two main aims namely, to examine the relationship between board of director's characteristics and firm performance (ROA) and to explore the moderating effect of board diversity (foreign members on the board and the board commitment of the board) between board of director namely, board size, board independence and board meeting on the form performance. Moreover, it selected non-financial companies in 2011 and 2012.

Although, this study examined the main internal corporate governance mechanisms with firm performance, the results failed to support the hypotheses because of the provided various reasons. This study is among the rare studies that investigated the relationship between corporate governance and firm performance in the Gulf countries in general and in Oman, in particular. Moreover, this study employed two theories namely the agency theory and resource dependence theory, which both turned out to be unsuitable for Omani environment.

The study recommended that future research to add other main internal variables of corporate governance to firm performance such as, experience and qualification of board, compensation of board, interlock of board, audit committee characteristics, executive committee characteristics, purchase committee, risk committee, ownership structure and other variables that may lead to improved firm performance. Secondly, future authors should extend sampling to many years and many sectors in order to examine extensive firm performance.

They also recommended that other scholars should employ other measurements of performance such as, marketing measurement, balance scorecard and others. Thirdly, this study suggests future research to integrate the internal and external variables of corporate governance in order to enhance the performance and enrich existing literature and also, it recommends the investigation of the relationship between corporate governance and firm performance through stewardship theory, institutional theory, stakeholder theory, transaction cost theory, political theory and ethical theories. Fourthly, this study suggests future authors to examine this relationship between two Gulf countries in order to provide a clear picture of corporate governance practice.

2.4.7 Financial Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. It is the process of measuring the results of a firm's policies and operations in monetary terms (Mwangi, 2016). It identifies the financial strengths and weaknesses of a firm by establishing relationships between the items of the financial position and income statement. The term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure firms' performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales (Njeru, 2012). Quantitative measures of firm performance include profitability measures such as gross margin, net margin for example return on sales, return on equity ,economic value added, return on equity less cost of equity and return on capital employed. Other measures of performance include cash flow measures such as free cash flow over sales and growth measures for example historical revenue growth. Ideally,

forward-looking measures such as expected profitability, cash flow and growth should be used to measure a firm's performance (**Kiaritha, 2015**).

Management researchers prefer accounting variables as performance measures such as return on equity (ROE), return on investment (ROI), and return on assets (ROA). Other common measures of performance include Earnings per share (EPS); Price/Earning (P/E) ratio and net interest margin (NIM). The NIM variable is defined as the net interest income divided by total assets. **Okiro (2014)** use net interest margin and before tax profit/total assets as measures of financial performance. Earlier studies typically measure accounting rates of return. These include: Return on Investment (ROI), return on capital (ROC), return on assets (ROA) and return on sales (ROS). The idea behind these measures is perhaps to evaluate managerial performance-how well is a firm's management using the assets to generate accounting returns per unit of investment, assets or sales (**Memba, 2011**).

The problems with these measures are well known. Accounting returns include depreciation and inventory costs and affect the accurate reporting of earnings. Asset values are also recorded historically. Return of total assets (ROA) is the ratio of net income after taxes divided by total assets and reflects how well management uses the firms real investments resources to generate profit (**Ongore, 2013**). Return on assets indicates how profitable a business is relative to its assets. **Nyabwanga, Ojera, Otieno and Nyakundi, (2013)** assert that return on assets must be positive and the standard figure for return on assets is 10% -12%. The higher the ROA the better because the business is earning more money on the capital invested. ROA takes into consideration the return on investment (ROI) and indicates the effectiveness in generating profits with its available assets. Return on equity (ROE) is a frequently used variable in judging top management performance, and for making executive compensation decisions. ROE is

defined as net income (income available to common stockholders) divided by stockholders equity. Return on equity (ROE) indicates the return on owners' equity, hence the higher the better. Earnings per share (EPS) indicate the dollar amount earned on behalf of each common share, thus the higher the better. Price/earnings (P/E) ratio is the amount investors are willing to pay for each dollar of earnings, that is indicates investors' confidence (**Herrmann & Mihaljek 2010**). Liquidity is also a measure of financial performance. Liquidity measures the ability to meet financial obligations as they fall due without disrupting the operations of the firm (**Mwirie et. al., 2015**).

Ongore, (2013) concluded that quality of assets has a significant influence on performance. Total assets can have a positive effect on financial performance because larger firms can use this advantage to get some financial benefits in business relations. The advantages of financial measures are the easiness of calculation and that definitions are agreed worldwide. According to **Cornett et. al.,(2006)**, analyzing financial statement using ratio analysis is one way of identifying weaknesses and problem areas of firms as well as evaluating financial performance. Brigham and **Ehrhardt, (2010)**, commenting on analysis of financial statements, observe that financial statement analysis involves comparing the firms performance with that of other firms in the same industry and evaluating trends in the firm's financial position overtime. They note that financial ratios provide a useful tool to evaluate financial statements and single out return on equity (ROE) as the most important accounting ratio.

Regression analysis is the most common methodology of relating the measures of financial performance to variables posited to be the determinants of financial performance (Capon et. al., 2006). This study focused on those measures that are strategically important for the success of the company. Many Scholars had used various measures to measure financial performance of companies such as; Return on Asset (ROA) and Return on Equity (ROE) (**Peters & Bagshaw, 2014; Ahamed et al. 2014;**

Ofori et al. (2014), while **Mujahid and Abdullah (2014)** employed accounting terms like ROA and ROE and shareholders wealth measures like EPS and stock price. **Flammer (2013)** employed Return on Asset (ROA) and Net Profit Margin (NPM). **de Morais and Ziberman (2014)** used company's stock return and **Chetty et al. (2015)** considered stock return performance over time, **Cherobon (2014)** employed volume of sales, number of customers and employee retention, Singh (2014) used assets (ROA) and Tobin's Q, and total shareholder returns (TSR), **Cavaco and Crifo (2013)** considered return on assets (ROA) and Tobin's Q. Return on Equity (ROE) refers to the amount of net income returned as a percentage of shareholders equity. **Yasser et al. (2011)** used return on equity (ROE) and profit margin (PM) for the measurement of firm performance as it measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. It's computed as: $ROE = \frac{\text{net profit}}{\text{equity - in book value}}$.

Therefore, the study measured the financial performance of the companies by looking at profitability and Return on Investment. **Matolcsy and Wright (2011)** measured firm performance by using return on assets. It was decomposed as follows: $\text{Return on Assets} = \frac{\text{EBIT}}{\text{Average total Assets}}$ – in book value. It also shows the percentage of net earning relative to the company's total assets, in other words who a company generate for every one dollar of assets after tax profit. This also measures the asset intensity of business meaning the lower the profit per dollar of assets the more assets intensive a company is in contrast, the higher the profit per dollar of assets, the less asset intensive a company is. Highly asset intensive companies require big investments to purchase machinery and equipment to generate income. Return on Investment (ROI) measures the amount of return on an investment relative to the investment's cost. To calculate ROI, the benefit (or return) of an investment is divided by the cost of the investment, and the result is expressed as a percentage or a ratio.

2.5 Critiques of Existing Literature

The determination of financial performance of listed companies in NSE is well researched and has received increased attention over the past years.

There have been a large number of empirical studies on financial performance around the world (**Ebrahim, 2014; Ben, 2013; Christopher, 2013**). However, little has been done on financial performance in listed companies on the NSE in Kenya with a board composition as moderating factor. However, with the deteriorating health of company's failures as a result of the current global financial crisis, it is justified that companies' financial performance receives increased investigation from both scholars and industry specialists.

Ekanem (2003) and **RagbendraJha (2003)** have argued that stock markets might even be a good predictor of the economy of a nation, since stock prices may be a leading indicator of the general economic expansion and contraction. **Jens and Schweltnus (2008)** also indicated that corporate income taxes reduce investment through an increase in the user cost of capital. This may be partly explained by the negative profitability effects of corporate income taxes if there is an increase in the corporate tax rate. Modigliani-Miller (2007) concluded that firm's size and tax have positive and significant relationship with firm's performance while risk and tangibility have negative and significant relationship with firm's performance.

Chander Subhash and Priyanka Aggarwal, (2015) asserted that growth of companies is measured in terms of compounded annual growth rate of net sales and market capitalization. In order to study the determinants of growth, fourteen explanatory variables-size (total assets or net sales), profitability (net profit ratio), age, advertising intensity, retention ratio, solvency position (current ratio or quick ratio), efficiency ratio

(asset turnover ratio), leverage, diversification, market share, research and development intensity, export ratio, market value added ratio and industry type were chosen for empirical investigation. Multiple regression analysis is used to develop a model to identify the determinants of growth of companies. The results reveal that size of a company, advertising intensity, age, profitability, and research and development intensity, solvency, leverage, efficiency, diversification and nature of industry are statistically significant in determining the growth of Indian firms.

Bartram, (2015) indicated that there is no evidence of corporate speculation with derivatives for firms in individual countries or for different types of derivatives, except for marginally higher net commodity price exposure of firms using commodity price derivatives. Firms use derivatives for hedging purposes independent of access to derivatives or country-level corporate governance. While there are no differences in risk between firms in countries with strong and weak shareholder rights, the reduction in risk is larger for firms in countries where creditor rights are weak or where derivatives are readily available. Consequently, policy makers could facilitate corporate hedging activities by pursuing strategies that encourage the development of local-currency derivatives markets. Given the similarity in the use and effect of derivatives across countries, internationally harmonized regulation of derivatives markets may be adequate. **Jensen, (2016)** noted that many managers are caught in a dilemma: between a desire to maximize the value of their companies and the demands of "stakeholder theory" to take into account the interests of all the stakeholders in a firm. The way out of the conflict lies in a new way of measuring value that melds together what he calls "enlightened value maximization" and "enlightened stakeholder theory."

Ongore et al., (2015) conducted a study on board composition and financial performance: Empirical analysis of companies listed at the Nairobi Securities Exchange. They noted that studies investigating effects of board composition on financial

performance have yielded mixed results, due largely to contextual variables and varying roles of boards in different jurisdictions. Independent members, gender diversity and board size are some of the key attributes of boards that have been linked to financial performance of companies in industrialized countries, but which, unfortunately have not attracted much scholarly interest in developing countries. .

The purpose of the study was to establish the effect of corporate governance and capital structure on performance of firms listed at the East African community securities exchange. Specifically the study sought to establish the effect of capital structure on the relationship between corporate governance and firm performance of listed companies in Kenya, Tanzania, Uganda, Rwanda and Burundi. Based on the agency theory this study builds a comprehensive framework to answer the research question on whether good corporate governance affects firms performance by integrating capital structure into the governance model..

Tarus et al., (2016) looked at the board composition and capital structure: evidence from Kenya. The purpose of this study is to examine the effect of board composition on capital structure of a firm. The paper used data from firms listed in Nairobi Securities Exchange covering the period 2004-2012. Fixed effect regression model was estimated to test the effect of board composition on capital structure and how chief executive officer (CEO) tenure moderates the relationship. The paper finds that board composition has important implications on capital structure decisions. Specifically, director independence is positively related to leverage, whereas CEO duality and tenure have negative and significant effect on leverage. In addition, the interaction effect of CEO tenure indicates that when CEOs have long tenure, the power of independent directors to influence capital structure decisions diminishes. Further, the study found that under long CEO tenure, long-tenure boards use less leverage in their capital structure. As expected, dual CEO with long tenure uses less leverage.

Iraya, Mwangi & Muchoki (2015) looked at the effect of corporate governance practices on earnings management of companies listed at the Nairobi securities exchange.

The objective of the study was to establish the effect of corporate governance practices on earnings management of companies listed at the Nairobi Security Exchange (NSE).

Mutende, Mwangi, Njihia & Ochieng (2017) focused on the moderating role of firm characteristics on the relationship between free cash flows and financial performance of firms listed at the Nairobi securities exchange. Their paper sought to find out the influence of firm characteristics on the relationship between free cash flows and firm financial performance. Specifically, the objectives of the study were two-fold: first, to establish the relationship between free cash flows and financial performance of firms listed at the NSE; and secondly, to determine the influence of firm characteristics on the relationship between free cash flows and financial performance of firms listed at the NSE..

Ngulumbu & Aduda (2017) conducted a study on the relationship between board composition and financial performance of companies listed at the Nairobi Securities Exchange. The study findings indicated that the overall financial performance of listed companies was determined by the corporate governance practices. Results also revealed that there was an increasing trend in board Size, independent directors (non-executive directors), number of board committees, number of founder directors, gender mix, level of education of directors and age of the directors over the three years.

Namusonge & Ng'ang'a (2017) conducted a study on effect of ownership structure on financial performance of companies listed at the NSE in Kenya. The findings indicated that all types of ownership structure had a significant positive influence on the firms'

financial performance. **Kitui (2013)** conducted a study on effect of Board composition on financial performance of firms listed on NSE in Kenya.

The findings showed that board composition variable; age, gender, independence and ethnicity had a significant positive influence on the financial performance. **Amoll (2015)** conducted a study on effect of Directors composition on financial performance of companies listed on the NSE. The findings indicated that Board age, ethnicity, size, gender and independence had positive significant influence on the financial performance.

According to **Iravo, Ongore & Munene (2013)** raised concerns as to why some organizations succeed while others fail and this has influenced a study on moderating effect of board composition on the relationship between capital structure and financial performance of firms listed on the NSE in Kenya. According to **Ebrahim (2014)** study on the moderating effect of board diversity on the relationship between board of director's characteristics and firm performance in Oman. Most Kenyan studies, **Mbabul (2013); Nafula (2013); Miring'u and Muoria (2011); Manyuanyi (2011); Wanjiru (2011); Ongore and Obonyo(2011)** on board composition and from firm performance have been contradictory in theory and findings moreover there are also been dominated by studies conducted in developed countries. However, there is an increasing awareness that theories originating from developed countries such as the USA & the UK may have limited applicability to emerging markets. Studies investigating on moderating effect of board composition on the relationship between capital structure and financial performance have been limited to only two variables mainly capital structure and financial performance as the major studies and board composition and financial performance as the other set of major studies. For example, existing studies such as the studies by Onaolapo and Kajola (2010), Zheka, (2010), Zeitum (2014) and Rajangan *et*

al (2014) examined the effects of capital structure and financial performance without the moderating effect of board composition.

However, the only studies which have been done close to the current study include; Ongore *et al.*, (2015) conducted a study on board composition and financial performance, Tarus *et al.*, (2016) looked at the board composition and capital structure: evidence from Kenya. Mutende, Mwangi, Njihia and Ochieng (2017) focused on the moderating role of firm characteristics on the relationship between free cash flows, Amoll (2015) conducted a study on effect of Directors composition on financial performance of companies listed on the NSE. The findings indicated that Board age, ethnicity, size, gender and independence had positive significant influence on the financial performance, Tarus, Tarus, Ayabei and Ayabei (2016) conducted a study on the board composition and capital structure: evidence from Kenya. The study found that board composition has important implications on capital structure decisions.

Kitui (2013) conducted a study on effect of Board composition on financial performance of firms listed on NSE in Kenya and financial performance of firms listed at the Nairobi securities exchange Ngulumbu and Aduda (2017) conducted a study on the relationship between board composition and financial performance of companies listed at the Nairobi Securities Exchange.

The study therefore intended to fill those pertinent gaps in the literature by using a comprehensive approach to study how moderating of board composition affects financial performance of companies, give an insight and shed light into corporate finance on the moderating of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya.

2.6 Research Gaps

From the studies reviewed above, it is evident that the concept of board composition, capital structure and financial performance are not grey areas for researchers and scholars. However, an interrelationship between the board, capital structure and financial performance has not been sufficiently explored with minian; studies in this area as noted by (Athanasoglou, Sophocles, & Matthiaos, 2013). Existing studies such as the studies by Onaolapo and Kajola (2010), Zheka, (2010), Zeitum (2014) and Rajangan *et al* (2014) examined the effects of capital structure and financial performance without the moderating effect of board composition. Fernandes and Francisco (2015) investigated the link between firm performance, board structure and top executive pay.

From empirical literature reviewed, there are several literature gaps that are filled by this study. Firstly, there is lack of knowledge with respect to the level of board composition thresholds among Kenyan listed firms. Iravo, Ongore and Munene (2013) raised concerns as to why some organizations succeed while others fail and this has influenced a study on moderating effect of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya. From this perspective, studying moderating effect of board composition on the relationship between capital structure and financial performance among Kenyan companies helps Government policies to avert poor performance and consequently bankruptcy of listed companies and enlighten the investors who will be interested in the study as they will be in a position to protect their investments and direct them to the best performing companies at the Nairobi Securities Exchange which will in turn spur economic growth in the long-term

From methodological perspective, empirical literature Ongore *et al.*, (2015), Tarus *et al.*, (2016), Mutende, Mwangi, Njihia and Ochieng (2017), Amoll (2015) Tarus, Tarus,

Ayabei and Ayabei (2016), Kitui (2013) and Ngulumbu and Aduda (2017) have focused on the quantitative measures derived from financial statements. These studies have totally ignored the qualitative aspects and the fact that board composition has an economic relation with financial performance of listed firms. Most of the studies carried out have both empirical and methodological conflicting results Ongore *et al.*, (2015) found out that board composition on financial performance have yielded mixed results, due largely to contextual variables and varying roles of boards in different jurisdictions. Mutende, Mwangi, Njihia and Ochieng (2017) found out that free cash flows influences performance positively. Ngulumbu and Aduda (2017) found out that the overall financial performance of listed companies was influenced by the corporate governance practices. Results also revealed that there was an increasing trend in board Size, independent directors (non-executive directors), number of board committees, number of founder directors, gender mix, level of education of directors and age of the directors over the three years. Kitui (2013) concluded that board composition variable; age, gender, independence and ethnicity had a significant positive influence on the financial performance. Amoll (2015) found out that board age, ethnicity, size, gender and independence had positive significant influence on the financial performance and Tarus, Tarus Ayabei, and Ayabei (2016) found that board composition has important implications on capital structure decisions. Ebrahim (2014) conducted on the moderating effect of board diversity on the relationship between board of director's characteristics and firm performance in Oman. The study findings indicated that board composition influence financial performance positively.

Literature is still in complete darkness with regard to how the Kenyan capital markets react to board composition. Capital structure have a great effect on corporate governance adopted by a firm and according to Miring'u and Muoria (2011) the governance structure of any corporate entity affects the firm's ability to respond to external factors that have some bearing on its performance, survival and growth. Performance of the

firms is becoming highly exposed to scrutiny by potential investors due to the risks involved including adverse publicity brought about by collapsing of some firms and others are under receivership.

Namusonge and Ng'ang'a (2017) conducted a study on effect of ownership structure on financial performance of companies listed at the NSE in Kenya. The findings indicated that all types of ownership structure had a significant positive influence on the firms' financial performance. Other studies including studies by Pachori and Totala (2012), Sarkar and Goswami (2012) and Dang (2011), have concentrated on the relationship between board composition and financial performance. On the other hand, studies that have been conducted linking board composition to capital structure and financial performance have been conducted in other countries mostly developed countries. There is therefore clear evidence that the relationship between the three variables, that is, board composition, capital structure and financial performance have not been studied simultaneously.

Attempts to study these variables have led to study of either of the two of the variables. Consequently there is need to study the relationship that exists between these three variables. It is on the background of the above mixed reports and the fact that the Kenyan economy is undergoing transition from emerging to developed market opening opportunities for small investors that this study seeks to fill this gap by focusing on the moderating effect of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya and spillover effects to economy at large and shed new light into corporate finance. This is a significant literature gap given that Kenya is an emerging market and the fact that the economies of the world are becoming more and more globally integrated.

This study want to bridge this gap as there is overwhelming evidence of knowledge gap in board composition in developing economies where the markets are undercapitalized.

2.7 Summary

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. Performance of the firms is becoming highly exposed to scrutiny by potential investors due to the risks involved including adverse publicity brought about by collapsing of some firms and others are under receivership. Kenya has been experiencing turbulent times with regard to its organizational practices in the last two decades. This resulted in generally low profits across the economy.

Board composition in corporate governance has been identified to be critical in corporate performance especially in emerging and transition economies. It is a subject that has received increased attention during the last three decades. Listed companies especially in the last decades have realized the importance of composing effective boards of directors in order to maximize firm performance. In this case, capital structure decisions are influenced by board decision; thus, it is expected that their decisions might increase a company's risks or lead to success in investments, which could also affect a company's performance.

Recent global events concerning high-profile corporate failures such as Enron in the US have put back on the policy agenda and intensified debate on the efficacy of board composition as a means of increasing corporate financial performance. There is concerned as to why some organizations succeed while others fail and this has influenced a study on moderating effect of board composition on the relationship between capital structure and financial performance of firms listed on the NSE in Kenya.

Its important therefore to identify policy makers with useful input for formulating Government policies to avert poor performance and consequently bankruptcy of listed companies and enlighten the investors who will be interested in the study as they will be in a position to protect their investments and direct them to the best performing companies at the Nairobi Securities Exchange in Kenya which will in turn spur economic growth in the long-term and there should be other capital structure policies of the listed companies which is heavily influenced by the board's decisions since hypotheses is a major problem for these companies affecting their financial performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the research methodology which includes the research design, target population of study, sampling frame, sample size, sampling procedures, data collection and data analysis procedures. The study adopted both a qualitative and quantitative approach. Data analysis was undertaken by means of standardized statistical procedures. Questionnaire was used to capture qualitative and quantitative data from management of the listed companies under consideration.

3.2 Research Design

This study adopted mixed research design which comprised of both qualitative and quantitative methods. Mixed research design is a type of research in which a researcher or team of researchers combines elements of qualitative and quantitative viewpoints, data collections, analysis, inference techniques for the purpose of breadth and depth of understanding (Johnson & Onwuegbuzie, 2007). The design was preferred due to its ability to combine quantitative and qualitative methods (Weeks & Namusonge, 2016). The design was chosen since the researcher gains in breadth and depth of understanding and corroboration, while offsetting the weaknesses inherent to using each approach by itself and also there is possibility of triangulation (Johnson & Onwuegbuzie, 2007)

The study adopted qualitative data to collect information from respondents on their attitudes and opinions on financial performance (Namusonge, 2010). The quantitative design was also adopted. This is a formal, objective, systematic processing which numeric data are used to obtain information about the world (Burns & Grove, 2005).

This data was extracted from the questionnaires as well as from the NSE database, NSE Handbooks, annual reports, financial statements, balance sheets of the listed companies at NSE in Kenya. The companies were clustered in twelve different sectors; Agriculture, Banking, Automobile and Accessories, Construction and Allied, Commercial and Services, Energy and Petroleum, Insurance, Investment, Manufacturing and Allied, Telecommunication and Technology, Real Estate Investment and Trust Investment Services.

3.3 Target Population

According to Ogula, (2005), target population refers to any group of institutions, people or objects that have common characteristics. The population of interest in this study was all the companies that have been listed on the NSE between 2005 and 2015 and had compiled their financial reports for the relevant period of study. The population should have some observable characteristics, to which the researcher intends to generalize the results of the study (Mugenda & Mugenda, 2003). According to NSE Handbook on profits and performance of listed companies (2005-2015) there were sixty nine firms listed at the NSE (Appendix C). For the purpose of this study, target population was represented by the number of companies from different sectors listed on the NSE in Kenya from 2005-2015. Mugenda and Mugenda, (2003), define population as an entire group of individuals, events or objects having common observable characteristics. The study target population was 69 listed companies in Nairobi Securities Exchange. The reason as to why listed companies were chosen was due to the availability and the reliability of the financial statement as they are subject to the mandatory audit by internationally recognized audit companies as well as regulators

Table 3.1 Target population

Sectors	Target Population
Agriculture	7
Banking	10
Automobile and Accessories	4
Construction and Allied	5
Commercial and Services	12
Energy and Petroleum	9
Insurance	6
Investment	3
Manufacturing and Allied	10
Telecommunication and Technology	1
Real Estate Investment Trust	1
Investment Services	1
TOTAL	69

The reason as to why listed companies were chosen was due to the availability and the reliability of the financial statement as they are subject to the mandatory audit by internationally recognized audit companies as well as regulators.

The study was limited to only listed companies on the NSE in Kenya because of reliable and consistent source of information needed for comparison purposes and also since the information is in real time therefore always updated.

3.4 Sampling frame

A sampling frame for this study consist of all the registered companies in the Nairobi Securities Exchange as at December 2005-2015 as they appear on the NSE in Kenya listing manual (2015) and also as laid on appendix D. Polit and Beck (2003) refers to a sampling frame as the technical name for the list of the elements from which the sample is chosen from while Mugenda and Muganda (2003) and Kothari (2004) define the term sampling frame as a list that contains the names of all the elements in a universe. The ten years' period is selected because it is considered a reasonable amount of time to have overcome the challenges a company faces initially after listing. The major reason for choosing companies listed in Nairobi Securities Exchange in Kenya is due to accessibility to the required data by the fact that it's a legal requirement of the companies Act Cap 482 for listed companies to publish their audited financial statements which provided data required by this study.

3.5 Sample and Sampling Techniques

According to Bhandarkah and Wilkinson (2003), a sample as the part of the target population that has been procedurally selected to represent it. Sample size is a representation of the whole population that seeks to present the qualities of the whole population (Kothari 2007). According to Kothari (2007) sampling is a procedure, process or technique of choosing a sub group from a population to participate in the study.

The study sample was derived from all companies listed on the NSE in Kenya. Using the NSE listing manual (2015) 69 companies were listed. For a company to be included in the study sample it was screened to satisfy the following selection criteria.

The company should have been listed for the last ten years and has not been suspended for trading during the period under review. The company should also have consistently posted audited reports on the NSE during the period under review. Polit and Beck (2003), strongly recommend that it is more practical and less costly to collect data from a sample than from an entire population.

Therefore, the study adopted two sampling techniques: first it adopted satisfied random sampling to stratify the companies into twelve different sectors; Agriculture, Banking, Automobile and Accessories, Construction and Allied, Commercial and Services, Energy and Petroleum, Insurance, Investment, Manufacturing and Allied, Telecommunication and Technology, Real Estate Investment and Trust Investment Services.

Based on the target population of 69 listed companies, the study adopted Census method since the target population is so small. To ensure equal representation of all the strata's proportionate random sampling was then applied to select samples from each stratum. The actual respondent from the selected companies is, the finance manager from each firm. The second sampling technique was purposive sampling to identify specific respondents in the companies since it is clear which employees in the company has knowledge and access to the information required in the study, since most of the information required financial knowledge, in each identified company, the finance manager filled the questionnaire. The main reason for choosing finance manager is to complement the financial statement prepared by the accountant and by the fact that he uses the statement for decision making giving a wide scope of undertaking them.

3.6 Data Collection Methods

The studies used primary and secondary data collection sources and were gathered as follows:

3.6.1 Primary Data

The primary data was collected through self – administered questionnaires. The structured questionnaire had a customized five - part likert scale which was used to collect qualitative data on the independent variables from the respondents. Respondents were asked to indicate agreement with each item. Each item had a five point scale ranging from 1= Strongly Agree, 2= Agree, 3 = Neither Agree or Disagree, 4= Disagree and 5 = Strongly Disagree. The data collected was edited to ensure consistency across respondents and detected omissions. Schwab, (2005) defines questionnaires as measuring instruments that asked respondent to answer a set of questions or respond to a set of statement to beef up facts and information of interest to the researcher. According to Mugenda and Mugenda (2003), and Kothari (2004) agree that questionnaires have various merits; it is free from the bias of the interviewer; answers are in respondents' own words, respondents have time to give well thought out answers; there is low cost even when the universe is large. Most of our respondents were busy and could not be easily accessible and therefore the choice of the questionnaires was most appropriate for the study.

3.6.2 Secondary Data

Secondary data involved information not collected directly but from published materials and other sources obtained. Secondary data collection sheet was developed and adopted to collect quantitative secondary data using document analysis method. The data was

extracted from annual reports of listed companies for the period 2005-2015. The annual reports and Handbooks were obtained from NSE to supplement published annual financial statements. The purpose for collecting secondary data was to cross validate the primary data collected.

3.7 Data collection procedures

The primary data was collected through the administration of questionnaires to the finance manager in each company. Two research assistants were engaged mainly to assist the researcher to self – administer the questionnaires and where they faced challenges the researcher made a personal follow up through telephone contact given at the appendix A. The entry point to the firms was mainly through public relation officer and research departments for those companies which had research department. Louis, Lawrence and Morrison (2007) describes primary data as those items that are original to the problem under study while Ember and Ember (2009) describe primary data as data collected by the investigator in various field sites explicitly for a comparative study.

Secondary data was obtained from the company’s annual report from Nairobi Securities Exchange. Dawson (2009) states that secondary research data involves the data collected using information from studies that other researchers have made of a subject. Ember and Ember (2009) describe secondary data as data collected by others and found by the comparative researcher in ethnographies, censuses and histories.

3.8 Pilot study

The study carried out a pilot test to test the validity and reliability of the questionnaires in gathering the data required for purposes of the study. The questionnaires were validated by discussing it with the supervisors and three randomly selected finance

managers. Their views were evaluated and incorporated to enhance content and construct validity of the questionnaire. The three selected companies formed 5% of the target sample.

The pilot test sample was within the recommended range as the rule of the thumb suggests that 5% to 10% of the target sample should constitute the pilot test (Cooper and Schchilder, 2011; Creswell, 2003; Gall and Borg, 2007)

The major purpose for pilot testing was to test whether the questionnaires could obtain the required results (Dawson, 2002). According to Wheeler and Hunger, (2002), pilot studies also known as pre-exercise are not usually used in qualitative studies but are used by novice researchers who often conduct interviews to get used to the type of data collection for their research. This being a study which involved qualitative and quantitative data, a pilot study was necessary. According to Beck *et al.*, (2003), a pilot study is a small scale version, or trial run, done in preparation for a major study. Beck *et al.*, (2003) states that the purpose of a pilot study is not so much to test research hypotheses, but rather to test protocols, data collection instruments, sample recruitment strategies, and other aspects of a study in preparation for a larger study. The advantages of conducting the pilot test include enhancing the training of field staff, review of the instrument, prevention of wasteful expenditures on a full blown survey whose results may not be applicable. Piloting involves testing the validity and reliability of the data collection instrument and in this case the questionnaires. Validity in qualitative research refers to credibility and trustworthiness of the data presented (Johnson & Christensen, 2008). Reliability in relation to qualitative research data is the measure that the data provided is consistent with what previous research literature has said or if similar research with a different group of participant's yields a similar set of data.

3.8.1 Reliability of the Research Instruments

Reliability refers to the ability of a research instrument to consistently measure characteristics of interest over time. It is concerned with consistency, dependability or stability of a test (Nachmias & Nachmias, 1996). Reliability is measure of the degree to which a research instrument yields consistent result after repeated trials (Mugenda & Mugenda, 2003).

According to Sekaran and Bougie (2010) the measurement of the reliability and the validity of a data instrument help the researcher to gauge the goodness of the variables of measurement. Reliability was measured using Cronbach's Alpha coefficient which is used to measure the internal consistency of the variable measures. Factor Analysis was further used to determine the underlying dimensions of variables and to determine the key factors from a large number of variables.

Reliability in research is influenced by random error. According to Zikmund (2010), errors may arise from inaccurate coding, ambiguous instruction to the subjects, fatigue, interview bias etc. These errors results to inconsistencies in the measurement, which ultimately affect the reliability of the data collected (Mugenda & Mugenda, 2003). Cronbach's Alpha which measures how well a set of items or variables, measures a single un-dimensional latent construct that is a coefficient of reliability or consistency was used for this study. Cronbach's Alpha was adopted since it was used with continuous and non - dichotomous data. In particular, it was used for testing questionnaires using a Likert scale. The study employed test re-tests method to determine the reliability tool.

Cronbach's alpha general increase when the correlations between the items increase. The coefficient measures the internal consistency of the test. A commonly accepted rule

of thumb is that an alpha of 0.7 indicates acceptable reliability and 0.8 or higher indicates good reliability (Gliem & Gliem, 2003). Very high reliability (0.95 or higher) is not necessary desirable, as this indicates that the items may be entirely redundant. Kinyua and Ali (2016) argued that Cronbach's Alpha determines if each objective would produce consistent result should the research be replicated later. The reliability of the questionnaires was tested using the Cronbach's Alpha correlation coefficient with the aid of Statistical Package for Social Sciences (SPSS) software. For this study all constructs depicted a value of Cronbach's Alpha which were greater than 0.7, Gliem & Gliem, (2003) asserts that Cronbach Alpha reliability coefficient value of 0.7 or higher is considered sufficient thus, all the study constructs were reliable. The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.836 in table 4.1

3.8.2 Validity of the Research Instruments

Validity measure ensures that the research tool is measuring what researcher intends to measure (Polit & Hunger, 1985). There are three methods to measure the validity of the research tool, which are: content validity, criterion related validity and construct validity. Evidence of validity is reported as a validity coefficient, which can range from 0 to + 1.00. The validity scores approaching 1 provide strong evidence that the tests scores are measuring the construct under investigation, (Kurpius & Stanfford, 2006) further point out that the validity coefficient for a test's score cannot be greater than the square root of the test's reliability. The study adopted content validity and the questionnaire was validated by discussing it with three randomly selected finance managers of the three listed companies. Further with the help of the supervisors their views were evaluated and incorporated to enhance content and construct validity of the questionnaire.

3.9 Data Analysis and Presentation

Data was analyzed through statistical procedures which covered a broad range of descriptive analysis, from simple procedures that are used regularly like computing an average to complex and sophisticated methods. Besides using frequencies and descriptive analysis, the study used multiple linear regression analysis to test the statistical significance of the various independent variables. According to Faraway (2002) multiple linear regressions is used in situations where the number of independent variables is more than one and hence was suitable for this study as it has more one independent variable.

According to International Business Machines (IBM) (2010), the assumptions of linear regression must be met by the data to be analyzed, these assumptions state that the coefficients must be linear in nature, the response errors should follow a normal distribution and the errors should have a common distribution. The study applied normality test which included one sample Shapiro-Wilk Test to test whether the data was normally distributed.

The study sought to ascertain the causal effect of one variable upon another and to explore such issues; the researcher collected data on the underlying variable of interest and employed regression to estimate the quantitative effect of the causal variable upon the variable that they influence. The study assessed the statistical significance of the estimated relationships, through (t-test) to check whether there was a significance difference between the means of the two groups in the dependent variable when the independent variable was held constant. IBM Base (2010), states that a pared samples t-test compares the means of two variables for a single group. Analysis of Variance (ANOVA – F test) was also used to determine the effect of independent variables and the control variable on the dependent variable, separately and in combination. According

to Jackson (2009) multiple regression analysis involves combining several predictor variables in a single regression equation. Therefore with multiple regression analysis; the study was able to assess the effect of multiple predictor variables on the dependent measures.

3.9.1 The Qualitative Analysis

Qualitative data collected through questionnaires was first edited and response rate calculated. The data was then categorized into different themes according to research variable and descriptive statistics such as mean, standard deviation and frequency distribution which according to Kothari (2012) measures the point about which items have a tendency to cluster and describe the characteristics of the data collected was computed.

Qualitative data for the study was derived from the questionnaires and the purpose for analyzing them was to establish, evaluate, examine, determine, assess and to investigate moderating of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya.

3.9.2 The Quantitative Analysis

Quantitative data was analyzed using inferential statistics where both parametric (Chi-Square test) and non- parametric (Pearson correlation coefficient) test were used. Chi-square test was used to test statistically significant difference between large and mutually unrelated parametric samples. The aim was to determine if the means of two unrelated samples differ. Pearson correlation test was conducted to test level of significance between all independent variables and dependent variables. Pearson's correlation coefficient was used as a measure of linear correlation. The measure is

symbolized by letter R and varies between -1 and +1, with 0 indicating no linear relationship while Coefficient of determination (R^2) measures the amount of variation in the dependent variable explained by independent variables. The closer the R^2 is to 1 the better the regression line to the actual data (Sekaran, 2000). ANOVA was used to test whether the regression analysis model used is fit or the relationship of the variables just occurred by chance. Significance of F ratio was used to determine whether model used was fit or not. When the F ratio is significant the model used is considered fit and vice versa (Weeks & Namusonge, 2016). A P- value of less than 0.05 indicates that the P - statistics is high and that the null hypothesis of independent needs to be rejected since it's not true.

3.9.3 Empirical Model

In multivariate analysis, multi-linear regression model was used in explaining decision to financial performance by testing variables used as the independent variables of the study. The idea was to identify meaningful, stable relationship among the sets of data. Regression measures the causal relationship between one dependent and one independent variable. Multiple regression analysis measures the effects of multiple independent variables on one dependent variable. Multiple regressions was therefore adopted to measure the effects of multiple independent variables on the dependent variable and effects of multiple independent variable on the moderating variable (Okello *et al.*, 2015). The five independent variables were regressed against dependent variable on a multiple linear regression analysis and a combination of the five independent variables were then regressed on financial performance while controlling for board composition, to ascertain the moderating effect of board composition.

The study builds on the models developed by Kajola (2008) and advanced by Okougbo (2011) in his study of corporate and firm performance; empirical evidence from selected listed companies in Nigeria which specifies the model given below;

The multiple linear regression models before moderating effect is specified as follows:-

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \dots \dots \dots \text{equation (i)}$$

Where:

Y = Financial performance

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are regression coefficients to be estimated

X_1 = Corporate income tax

X_2 = Capital adequacy

X_3 = Firm ownership

X_4 = Market Capitalization

X_5 = Financial Leverage

ε = Error term

The multiple linear regression model after moderating effect of board composition to be as follows:-

$$Y = \beta_0 + \beta_1 x_{1z} + \beta_2 x_{2z} + \beta_3 x_{3z} + \beta_4 x_{4z} + \beta_5 x_{5z} + \varepsilon \dots \text{equation (ii)}$$

Where z is the moderating variable.

The model was tested to know if it is valid in investigating the effect of moderating of board composition on the relationship between capital structure and financial performance of firms listed on the NSE in Kenya. Inferential statistics such as non-parametric test which include analysis of variance (ANOVA) were used to test the significance of the overall model at 5% level of significance. The null hypothesis for the test asserts that independent variables have no influence on financial performance (Ho: the model is not significant). The alternative hypothesis asserts that the independent variables have an influence on financial performance (Ho: the model is significant). The Pearson's Chi-square Test of Association (χ^2) is used to test for the significance of relationship between variables cross-classified in a bivariate table. The results of the equation where the p-value is less than the critical value, 0.05 the null hypothesis is rejected, and the alternative hypothesis accepted existing between the independent variables, to determine if they move in the same direction.

The data from NSE included the balance sheets and profit and loss accounts of the listed companies under consideration. Crino (2010), points out that panel data sets for economic research possess a major advantage over convectional cross-sectional or time series data sets hence Panel data analysis was used for the analysis of this data in addition to the SPSS Version 24. An electronic spreadsheet was used for data storage, both raw and coded and the findings were presented using tables, pie charts, bar graphs and equations.

3.9.4 Variable definition and Measurement

The dependent variable in this study is financial performance and independent variables are capital structure denoted by the financial leverage, capital adequacy, market capitalization, firm ownership, and corporate income tax. The moderating variable is board composition. Specific to this study, the variables have been defined in section 2.4. The measurement of the variables is represented in Table 3.3. Measurement of financial performance of the companies constituted the use of Profitability and Return on Investment (ROI). Corporate income tax was measured using investment, age, firm size and liquidity. Capital adequacy was measured using capital structure, asset size, cash flows and portfolio risk. Firm ownership was measured using structure of ownership, ownership concentration, type of ownership and management structure. Market capitalization was measured using ranking, firm value, inflation, stock price and stock market liquidity. Financial leverage was measured using degree of financial leverage, information symmetry, interest rate and pecking order framework. Board composition was measured using board gender, board age, board duality and board independence.

Descriptive data was collected using the questionnaire. Gilim and Gliem, 2003 reiterate the use of Likert- type scales in gathering information in marketing business and finance and this was used in this study. Questions used were drawn from various sub-scales. “Corporate income tax” was assessed using a 5-point Likert scale (5 questions), “Capital adequacy” was assessed using a 5-point Likert scale (5 questions), “Firm ownership” was assessed using a 5-point Likert scale (5 questions), “Market capitalization” was assessed using a 5-point Likert scale (5 questions),

“Financial leverage” was assessed using a 5-point Likert scale (5 questions), “Financial performance” was assessed using a 5-point Likert scale (5 questions) and “Board composition” was assessed using a 5-point Likert scale (5 questions). Coding preceded the entry of each of the variables separately.

Table 3.3 Measurement of Variable

VARIABLE NAME	INDICATORS	MEASUREMENTS
Firm performance	Profitability RO1	Discrete measure 5- point likert scale In the scale of 1-5 used
Corporate income tax	Investment Age/Debt Firm size Liquidity	5- point likert scale In the scale of 1-5 used, 5 5- point likert scale
Capital adequacy	Total assets (TA) Cash flows Portfolio risks	In the scale of 1-5 used
Firm ownership	Capital structure Structure of ownership Ownership concentration Type of ownership Management structure	5 – point likert scale In the scale of 1-5 used, 5
Market capitalization	Ranking	5- point likert scale
Firm value	, Inflation Stock prices	In the scale of 1-5 used
Financial leverage	Degree of financial leverage Information symmetry Interest rate Pecking order framework	5- point likert scale In the scale of 1-5 used
Board composition	Board gender diversity Board age Board duality Board independence	5-point likert scale In the scale of 1-5 used

3.9.5 Diagnostic tests

Data collected was initially screened with the purpose of cleaning any errors that could have occurred either due instruments of data collection and procedures, mistakes of research assistants or fatigue due to pressure of the respondents on deadline of collecting the instruments. Before data was exposed to statistical procedures and test such as

multiple regressions, researcher checked the assumptions that the study variables were normally distributed and whether samples selected were adequate. To ensure that there was no violation of the assumptions, this study tested for multicollinearity, homoscedasticity, and autocorrelation and normality test. The following tests were undertaken.

a) Multicollinearity test

Multicollinearity or excessive correlation amount explanatory variables can complicate or prevent the identification of an optimal set of explanatory variables for a statistical mode. Cohen et al, (2013)'s definition of variance inflation factor (VIF) is that it provides an index of the amount that the variance of each regression coefficient is increased relative to a situation in which all of the predictor variables are uncontrolled" and suggest VIF to be too large hence not suitable. The study adopted the variance inflation factors and the tolerance levels. Variance Inflation Factor (VIF) and the Tolerance are indicators of multicollinearity. Low levels of VIF are preferred since higher levels are deemed to adversely affect the results from the regression analysis. VIF indicates the magnitude of the inflation in the standard errors associated with Multicollinearity (Ayako & Wamalwa, 2015). A VIF of more than 10 (VIF >10 indicates a problem of multicollinearity (Montgomery, 2001) The commonly used cut-off points for determining the presence of multicollinearity are (tolerance value of less than 10, or a VIF value of above 10). To determine whether multicollinearity existed, collinearity test was conducted using, Tolerance and Variance Inflated Factor (VIF).

The VIF presented in table 4.18 does not suffer from multicollinearity since the results indicated that the variables have a VIF that is less than 10 and tolerance value more than 0.1 ruling out the possibility of multicollinearity. Therefore, the results imply that there was no multicollinearity problem among the variables.

b) Heteroskedasticity Test: Breusch-Pagan

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it. In this study, Heteroscedasticity was tested by performing the Breusch-Pagan test. Breusch-Pagan test the null hypothesis that the error variances are all equal versus the alternative that the error variances are a multiplicative function of one or more variables.

Homoscedasticity is to be evident when the value of “Prob > Chi-square” is greater than 0.05 (Park, 2008). Results in table 4.19 showed that the constant variance (Chi-square= 1.459) is insignificant (P = 0.918). Thus the study fail to reject the null hypothesis and conclude that the error variance is equal thus heteroscedasticity is not a problem in the data.

c) Autocorrelation test

Autocorrelation was tested using Durbin Watson test. This tested whether there is a (linear) correlation between the error term for one observation and the next. A Durbin Watson test value (d) takes on values between 0 and 4. A value of $d = 2$ means there is no autocorrelation. A value substantially below 2 (and especially a value less than 1) means that the data is positively auto correlated, i.e. on average a data element is close to the subsequent data element. A value of (d) substantially above 2 means that the data is negatively auto correlated, i.e. on average a data element is far from the subsequent data element. Based on the results in table 4.20 showed that the Durbin Watson test value (d) was 2.001(close to two) and therefore implied that there was no autocorrelation

d) Normality test

The Shapiro-Wilk Test was carried out to test whether the score of the samples were normally distributed with the same mean and standard deviation. If the test is significant ($P < 0.05$) then the distribution is not significantly different from a normal distribution, but if the test is non – significant ($P > 0.05$) then the distribution of the sample is significantly different from a normal distribution (Kilungu et al., 2015). The tests results in table 4.21 showed that the p-values for the variables > 0.05 . The tests f reject the hypothesis of normality when the p-value is greater than 0.05 (Sharpiro & Wilk, 1965) illustrating that the standardized residuals were significantly normally distributed. The probabilities of all the variables tested were less than 0.05 and therefore the data was normally distributed and hence parametric method was applicable to test the hypothesis.

3.9.6 Secondary data collection form

This form was used by the researcher to collect secondary data among the fifty nine selected companies which formed the sample size of the study. The data collected was based on two important variables which included: profitability and Return on Investment The variables helped the researcher to analyze the financial performance in terms of Return on Investment and Profitability. A table in appendix D was used to collect the data for the duration of the study.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter represents the analysis, presentation and interpretation of the findings. In addition the findings are also discussed in relation to literature reviewed. It gives the empirical findings and results following the application of the variables using the techniques mentioned in chapter three in methodology. The general objectives of this study were to investigate moderating of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya. In an attempt to address the specific objectives of the study, this chapter provides details description of descriptive and inferential statistics and research findings and discussions, clearly outlining how each of the hypothesis as stated in chapter three was tested.

4.2 Response rate

The response rate for the study is important because it reflects the suitability of the study procedure. This is based on the assertion of Bailery, (2000) that a response rate of 50 is considered good, and response greater than 70% is considered very good. Response rate was critical for this study due to the fact that the fixed sample quantitative data obtained from secondary data of the qualifying 59 firms implied that there was need for a similar response rate from the questionnaire used for the construction of the qualitative primary information for the purpose of comparison. Out of 59 questionnaires administered the researcher ensured a 100% response rate by personally administering the questionnaires with the help of research assistants.

This study achieved 100% response rate from a sample of 59 questionnaires administered. This can be attributed to the enough time set aside for data collection and the cooperation by the study participants. The response rate is presented in Table 4.1 below.

Table 4.1: Response Rate

Response Rate	Frequency	Percent
Returned	59	100
Unreturned	0	0
Total	59	100

4.3 Reliability test results

Reliability is measure of the degree to which a research instrument yields consistent result after repeated trials (Mugenda & Mugenda, 2003). The study consisted of five independent variables; corporate income tax, capital adequacy, firm ownership, market capitalization and financial leverage, one dependent variable (financial performance) and one controlling variable (board composition). The Cronbach's Alpha was used in this study to measure the internal consistency of the variables. The results are depicted in tale 4.2 below.

Table 4.2: Reliability tests results

Constructs	Reliability	Comment
	Cronbach's alpha	
Corporate income tax	0.863	Accepted
Capital adequacy	0.781	Accepted
Firm ownership	0.791	Accepted
Market Capitalization	0.893	Accepted
Financial Leverage	0.813	Accepted
Financial performance	0.819	Accepted
Board composition	0.896	Accepted

The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.836 while specific findings indicated that, corporate income tax had a coefficient of 0.863, capital adequacy had a coefficient of 0.781, firm ownership has a coefficient of 0.791, market capitalization had a coefficient of 0.893, financial leverage had a coefficient of 0.813, financial performance had a coefficient of 0.819 and board composition has a coefficient of 0.896. Reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test. According to Cronbach (1951) a threshold of a Cronbach alpha of 0.7 and above is acceptable. For this study all constructs depicted a value of Cronbach's Alpha which were greater than 0.7, Gliem & Gliem, 2003) asserts that Cronbach Alpha reliability coefficient value of 0.7 or higher is considered sufficient thus, all the study constructs were reliable.

4.4 Test of Assumptions of the Study Variables

When the assumptions of the linear regression model are correct, ordinary least squares (OLS) provides efficient and unbiased estimates of the parameters (Long & Ervin, 1998). To ensure that there was no violation of the assumptions, this study tested for multicollinearity, homoscedasticity, and autocorrelation and normality test.

a) Multicollinearity

To determine whether multicollinearity existed, collinearity test was conducted using, tolerance, and variance inflated factor (VIF). The collinearity results are presented in Table 4.3.

Table 4.3: Multicollinearity Test Results for the study of independent variables

Model	Collinearity Tolerance	Statistics VIF
Corporate Income Tax	.816	1.226
Capital Adequacy	.890	1.124
Firm Ownership	.845	1.183
Market Capitalization	.757	1.321
Financial Leverage	.802	1.247

a. Dependent Variable: Financial Performance

Table 4.3 shows that the variables have a VIF that is less than 10 and tolerance value more than 0.1 ruling out the possibility of multicollinearity. Therefore, the results imply that there was no multicollinearity problem among the variables.

b) Heteroscedasticity

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it. In this study, Heteroscedasticity was tested by performing the Breuch-pagan. Breusch-Pagan test the null hypothesis that the error variances are all equal versus the alternative that the error variances are a multiplicative function of one or more variables. Homoscedasticity is to be evident when the value of “Prob > Chi-square” is greater than 0.05 (Park, 2008). Results in table 4.19 showed that the constant variance (Chi-square= 1.459) is insignificant (P = 0.918).

Table 4.4: Breusch-Pagan Test for Heteroscedasticity

Breusch-Pagan and Koenker test statistics and sig-values		
	LM	Sig.
BP	1.459	.918
Koenker	4.013	.548

Null hypothesis: heteroskedasticity not present (homoskedasticity)

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it.

In this study, Heteroscedasticity was tested by performing the Breusch-Pagan. Breusch-Pagan test the null hypothesis that the error variances are all equal versus the alternative that the error variances are a multiplicative function of one or more variables. Homoscedasticity is to be evident when the value of “Prob > Chi-square” is greater than 0.05 (Park, 2008). Results above shows that the constant variance (Chi-square= 1.459) is insignificant (P = 0.918). Thus we fail to reject the null hypothesis and conclude that the error variance is equal thus heteroscedasticity is not a problem in the data.

c) Autocorrelation test

Autocorrelation was tested using Durbin Watson test. This tested whether there is a (linear) correlation between the error term for one observation and the next. A Durbin Watson test value (d) takes on values between 0 and 4. A value of $d = 2$ means there is no autocorrelation.

Table 4.5: Autocorrelation test

Model	Durbin-Watson
1	2.001

a. Predictors: (Constant), Financial Leverage, Capital Adequacy, Firm Ownership, Corporate Income Tax, Market Capitalization
b. Dependent Variable: Financial Performance

Autocorrelation was tested using Durbin Watson test in Table 4.5. This tested whether there is a (linear) correlation between the error term for one observation and the next. A Durbin Watson test value (d) takes on values between 0 and 4. A value of $d = 2$ means there is no autocorrelation. A value substantially below 2 (and especially a value less than 1) means that the data is positively auto correlated, i.e. on average a data element is close to the subsequent data element. A value of d substantially above 2 means that the data is negatively auto correlated, i.e. on average a data element is far from the subsequent data element. Based on the results the Durbin Watson test value (d) was 2.001(close to two) and therefore implied that there was no autocorrelation.

d) Normality test)

The Shapiro-Wilk Test was carried out to test whether the score of the samples were normally distributed with the same mean and standard deviation. If the test is significant ($P < 0.05$) then the distribution is not significantly different from a normal distribution, but if the test is non – significant ($P > 0.05$) then the distribution of the sample is significantly different from a normal distribution (Kilungu et al., 2015).

Table 4.6: Tests of Normality

Shapiro-Wilk			
	Statistic	df	Sig.
Capital Adequacy	.971	59	.171
Corporate Income Tax	.974	59	.229
Financial Leverage	.966	59	.098
Firm Ownership	.984	59	.629
Market Capitalization	.986	59	.731
Financial Performance	.965	59	.088
Board Composition	.990	59	.910

Normality was tested by use of Shapiro-Wilk test as shown in Table 4.6. The tests results showed that the p-values for the variables > 0.05 as shown in table above. The tests f reject the hypothesis of normality when the p-value is greater than 0.05 (Sharpiro & Wilk, 1965) illustrating that the standardized residuals were significantly normally distributed.

4.5. Descriptive results

4.5.1 Effect of corporate income tax on financial performance

The study sought to establish the effect of corporate income tax on financial performance of the companies listed on the NSE in Kenya. Specifically, the study focused on the profitability, investment, Age/Debt, firm size and liquidity. Descriptive statistics results for corporate income tax were conducted and presented on table 4.7 below.

Table 4.7: Corporate Income tax

Statement	SA	A	N	D	SD	Mean/ (sd)
The firm has been consistently profitable in the last ten years.	28.8	61	8.5	1.7	0	1.8(0.6)
The investment made by the firm over the last 10 years have been affected by taxes paid	8.5	49.2	33.9	8.5	0	2.4(0.8)
Debt of the company is on the rise	5.1	10.2	45.8	33.9	5.1	3.2(0.9)
The firms growth is limited by taxation	3.4	22	47.5	23.7	3.4	3.0(0.8)
Liquidity position of the firm has been stable for ten yrs.	10.2	62.7	27.1	0	0	2.2(0.6)

The findings on the statement of corporate income tax of the firm over the consistent profitable in the last ten, 28.8 percent of the respondents strongly agreed, 61 percent of the respondents agreed, 8.5 percent of the respondents undecided and 1.7 percent of the respondents disagreed respectively that the firm has been consistently profitable in the last ten years. This show that majority of the respondents agreed to the statement that the firm has been consistently profitable in the last ten years.

Regarding the statement of investment made by the firm over the last ten years have been affected by taxes paid, 8.5 percent of the respondents strongly agreed, 49.2 percent of the respondents agreed, 33.9 percent of the respondents undecided and 8.5 percent of the respondents disagreed respectively that the firm has been consistently profitable in the last ten years. This shows that majority of the respondents agreed to the statement that the investment made by the firm for the last ten years have been affected by taxes paid. Regarding the statement of debt of the company is on the rise, 5.1 percent of the respondents strongly agreed, 10.2 percent of the respondents agreed, 45.8 percent of the

respondents undecided and 33.9 percent of the respondents disagreed and 5.1 percent of the respondents strongly disagreed respectively that the debt of the company is on the rise. This shows that the majority of the respondents were undecided to the statement that the debt of the company is on the rise. Regarding the statement of the firms growth is limited by taxation, 3.4 percent of the respondents strongly agreed, 22 percent of the respondents agreed, 47.5 percent of the respondents undecided and 23.7 percent of the respondents disagreed and 3.4 percent of the respondents strongly disagreed respectively that the debt of the company is on the rise. This shows that the majority of the respondents were undecided to the statement that the firms growth is limited by taxation. Regarding the statement of liquidity position of the firm has been stable for ten years, 10.2 percent of the respondents strongly agreed, 62.7 percent of the respondents agreed and 27.1 percent of the respondents undecided respectively.

Corporate income tax was assessed using five measures and the overall mean score or responses regarding corporate income tax were 2.52 on a 5-point scale which indicates that majority of the respondents agreed that corporate income tax affects the financial performance of companies listed on the NSE in Kenya.

The average overall standard deviation of 0.74 infers that 68% of the response was spread within one standard deviation of the overall mean. The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the documents. This means that one standard deviations has 68% of the data spread around the mean and 95% for two standard deviations and 99.7% for three standard deviation. The study findings are supported by a number of studies which includes De Mooij and Ederveen, (2001) all found a negative relationship between corporate taxation and financial performance therefore it is valid to develop a hypothesis that there is a negative association between corporate tax and financial performance of firms.

4.5.2 Effect of Capital adequacy on financial performance

The study sought to evaluate the effect of capital adequacy on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya. Specifically, the study focused on the capital structure, asset size, cash flows, portfolio risks and growth. Descriptive statistics results for capital adequacy were conducted and presented on table 4.8 below.

Table 4.8: Capital adequacy

Statement	SA	A	N	D	SD	Mean/(sd)
The firm's capital structure is policy based	49.2	45.8	3.4	1.7	0	1.6(0.6)
Asset size of the company is increasing yearly as the firm's capital increase	27.1	59.3	11.9	1.7	0	1.9(0.7)
Cash flows are not enough for firms operations	13.6	25.4	45.8	11.9	3.4	2.7(1.0)
The portfolios risk of the company has been stable	11.9	37.3	42.4	5.1	3.4	2.5(0.8)
The company's growth is over 3% annually	11.9	64.4	22	0	1.7	2.2(0.7)

The findings on the statement of capital adequacy of the firm's capital structure is policy based, 49.2 percent of the respondents strongly agreed, 45.8 percent of the respondents agreed, 3.4 percent of the respondents undecided and 1.7 percent of the respondents disagreed respectively that the firm's capital structure is policy based. This shows that majority of the respondents strongly agreed to the statement that the firm's capital structure is policy based.

Regarding the statement of the asset size of the company is increasing yearly as the firm's capital increase, 27.1 percent of the respondents strongly agreed, 59.3 percent of the respondents agreed, 11.9 percent of the respondents undecided and 1.7 percent of the respondents disagreed respectively that the asset size of the company is increasing yearly as the firm's capital increase. This shows that majority of the respondents agreed to the statement that the asset size of the company is increasing yearly as the firm's capital increase. Regarding the statement of cash flows are not enough for the firms operations, 13.6 percent of the respondents strongly agreed, 25.4 percent of the respondents agreed, 45.8 percent of the respondents undecided and 11.9 percent of the respondents disagreed and 3.4 percent of the respondents strongly disagreed respectively that the cash flows are not enough for the firms operations. This shows that the majority of the respondents were undecided to the statement that the cash flows are not enough for the firms operations. Regarding the statement of the portfolios risk of the company has been stable, 11.9 percent of the respondents strongly agreed, 37.3 percent of the respondents agreed, 42.4 percent of the respondents undecided and 5.1 percent of the respondents disagreed and 3.4 percent of the respondents strongly disagreed respectively that the portfolios risk of the company has been stable. This shows that the majority of the respondents were undecided to the statement that he portfolios risk of the company has been stable. Regarding the statement the company's growth is over 3% annually, 11.9 percent of the respondents strongly agreed, 64.4 percent of the respondents agreed, 22 percent of the respondents undecided and 1.7 of the respondents strongly disagreed respectively that the company's growth is over 3% annually. This shows that the majority of the respondent agreed to the statement that the company's growth is over 3% annually.

Capital adequacy was assessed using five measures and the overall mean score or responses regarding capital adequacy were 2.18 on a 5-point scale which indicates that majority of the respondents agreed that capital adequacy affects the financial

performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.76 infers that 68% of the response was spread within one standard deviation of the overall mean. The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the documents. This means that one standard deviations has 68% of the data spread around the mean and 95% for two standard deviations and 99.7% for three standard deviation. These results are similar to the findings of Dang, (2011). However, the results corroborated by (Sangmi & Nazir, 2010).

4.5.3 Effect of firms ownership on financial performance

The study sought to examine the effect of firms ownership on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya. Specifically, the study focused on the structure of ownership, ownership, concentration, types of ownership and management structure. Descriptive statistics results for firm ownership were conducted and presented on table 4.9 below.

Table 4.9: Firms Ownership

Statement	SA	A	N	D)	SD	Mean/(sd)
The ownership structure of the company has significantly changed over the last 10 years	25.4	64.4	6.8	1.7	1.7	1.9(0.7)
The firm has strict policy on ownership concentration based on shareholding	20.3	71.2	8.5	0	0	1.9(0.5)
The type of ownership of this firm affects the days business	11.9	57.6	13.6	13.6	3.4	2.4(1.0)
The composition of management in the firm is influenced by the ownership of the firm	5.1	72.9	18.6	3.4	0	2.2(0.6)
The ownership structure of the company has significantly on the financial performance of companies listed on NSE	13.6	59.3	22	3.4	1.7	2.2(0.8)

The findings on the statement of the ownership structure of the company has significantly change over the last ten years, 25.4 percent of the respondents strongly agreed, 64.4 percent of the respondents agreed, 6.8 percent of the respondents undecided, 1.7 percent of the respondents disagreed and 1.7 percent of the respondents strongly disagreed respectively that the ownership structure of the company has significantly change over the last ten years. This shows that majority of the respondents agreed to the statement that the ownership structure of the company has significantly change over the last ten years. Regarding the statement of the firm has strict policy on ownership concentration based on shareholding, 20.3 percent of the respondents strongly agreed, 71.2 percent of the respondents agreed, 8.5 percent of the respondents undecided respectively that the ownership structure of the company has significantly

change over the last ten years. This shows that majority of the respondents agreed to the statement that the ownership structure of the company has significantly change over the last ten years. Regarding the statement of the type of ownership of this firm affects the days business, 11.9 percent of the respondents strongly agreed, 57.6 percent of the respondents agreed, 13.6 percent of the respondents undecided, 13.6 percent of the respondents disagreed and 3.4 percent of the respondents strongly disagreed respectively that the type of ownership of this firm affects the days business. This shows that the majority of the respondents agreed to the statement that the type of ownership of this firm affects the days business. Regarding the statement of the composition of management in the firm is influenced by the ownership of the firm, 5.1 percent of the respondents strongly agreed, 72.9 percent of the respondents agreed, 18.6 percent of the respondents undecided and 3.4 percent of the respondents disagreed respectively that the composition of management in the firm is influenced by the ownership of the firm. This shows that the majority of the respondents agreed to the statement that the composition of management in the firm is influenced by the ownership of the firm. Regarding the statement of the ownership structure of the company has significantly on the financial performance of companies listed on NSE, 13.6 percent of the respondents strongly agreed, 59.3 percent of the respondents agreed and 22 percent of the respondents undecided, 3.4 percent of the respondents disagreed and 1.7 percent of the respondents strongly disagreed respectively that the ownership structure of the company has significantly on the financial performance of companies listed on the NSE. This shows that the majority of the respondent agreed to the statement that the ownership structure of the company has significantly on the financial performance of companies listed on the NS in Kenya.

Firm ownership was assessed using four measures and the overall mean score or responses regarding firm ownership were 2.12 on a 5-point scale which indicates that majority of the respondents agreed that firm ownership affects the financial performance

of companies listed on the NSE in Kenya. The average overall standard deviation of 0.72 infers that 68% of the response was spread within one standard deviation of the overall mean. The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the documents. This means that one standard deviation has 68% of the data spread around the mean and 95% for two standard deviations and 99.7% for three standard deviation. These results are similar to the findings of Weir & Laing (2012) argues that good ownership structure advocates for good governance mechanisms that boosts a firms' capacity to attract investors, ensure effective monitoring mechanisms of the board and the decisions – making process are in place to protect and promote shareholders' interests and improve the overall firms' performance

4.5.4 Effect Market capitalization on financial performance

The study sought to determine the effect of market capitalization on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya. Specifically, the study focused on the ranking, firm value, inflation, stock prices and stock market liquidity. Descriptive statistics results for market capitalization were conducted and presented on table 4.10 below.

Table 4.10: Market Capitalization

Statement	SA	A	N	D)	SD)	Mean/ (sd)
The firms rank in the capital market reflects a true picture of its financial performance	13.6	37.3	45.8	3.4	0	2.4(0.8)
The firms value affects its current operations	3.4	37.3	52.5	5.1	1.7	2.6(0.7)
Inflation is a key determinant rectify of how the firm performs	1.7	15.3	74.6	8.5	0	2.9(0.5)
Stock prices are misleading the public on the company's performance	0	16.9	72.9	6.8	1.7	2.9(0.6)
Stock markets liquidity frequently affect the firms performance	0	25.4	67.6	6.8	0	2.8(0.5)

The findings on the statement of the firms rank in the capital market reflects a true picture of its financial performance, 13.6 percent of the respondents strongly agreed, 37.3 percent of the respondents agreed, 45.8 percent of the respondents undecided and 3.4 percent of the respondents disagreed respectively that the firms rank in the capital market reflects a true picture of its financial performance . This shows that majority of the respondents were undecided to the statement that the firms rank in the capital market reflects a true picture of its financial performance. Regarding the statement of the firms value affects its current operation, 3.4 percent of the respondents strongly agreed, 37.3 percent of the respondents agreed, 52.5 percent of the respondents undecided, 5.1 percent of the respondents disagreed and 1.7 percent of the respondents strongly disagreed respectively that the firms value affects its current operation. This shows that majority of the respondents were undecided to the statement that the firms value affects its current operations. Regarding the statement of inflation is a key

determinant rectify of how the firm performs, 1.7 percent of the respondents strongly agreed, 15.3 percent of the respondents agreed, 74.6 percent of the respondents undecided and 8.5 percent of the respondents disagreed respectively that the inflation is a key determinant rectify of how the firm performs. This shows that the majority of the respondents were undecided to the statement that inflation is a key determinant rectify of how the firm performs. Regarding the statement of stocks prices are misleading the public on the company's performance, 16.9 percent of the respondents agreed, 72.9 percent of the respondents undecided, 6.8 percent of the respondents disagreed and 1.7 percent of the respondents strongly disagreed respectively that stocks prices are misleading the public on the company's performance. This shows that the majority of the respondents were undecided to the statement that stocks prices are misleading the public on the company's performance. Regarding the statement of stock markets liquidity frequently affects the firms performance, 25.4 percent of the respondents agreed, 67.6 percent of the respondents undecided and 6.8 percent of the respondents disagreed respectively that stock markets liquidity frequently affect the firms performance. This shows that the majority of the respondent were undecided to the statement that stock markets liquidity frequently affect the firms performance.

Market capitalization was assessed using four measures and the overall mean score or responses regarding market capitalization were 2.72 on a 5-point scale which indicates that majority of the respondents agreed that market capitalization affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.62 infers that 68% of the response was spread within one standard deviation of the overall mean.

The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the documents. This means that one standard deviations has 68% of the data spread around the mean and 95% for two standard deviations and 99.7% for three standard deviation. These results are similar to the findings of Choudhary, (2011), it was evident most of the respondents agreed that market capitalization influences financial performance of firms listed on the NSE in Kenya to a very high extend.

4.5.5 Effect financial leverage on financial performance

The study sought to assess the effect of financial leverage on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya. Specifically, the study focused on the degree of financial leverage, information symmetry, interest rate and pecking order framework. Descriptive statistics results for financial leverage were conducted and presented on table 4.11 below.

Table 4.11: Financial leverage

Statement	SA	A	N	D	SD	Mean/ (sd)
There is a high degree of financial leverage for this company	11.9	5.1	35.6	33.9	13.6	3.3(1.2)
Information symmetry has been at its worst over the last 5 years	3.4	11.9	42.4	28.8	13.6	3.4(1.0)
The pecking order framework is not much followed when undertaking the financial leverage	3.4	8.1	44.1	39	5.1	3.3(0.8)
Exchange rate risk do not effect on daily business operations	5.1	10.2	61	22	1.7	3.1(0.8)
The company rarely uses retained earnings to meet interest payment and debt at maturity.	3.4	13.6	67.8	15.3	0	3.0(0.7)

The findings on the statement of there is a high degree of financial leverage for this company, 11.9 percent of the respondents strongly agreed, 5.1 percent of the respondents agreed, 35.6 percent of the respondents undecided, 33.9 percent of the respondents disagreed and 13.6 percent strongly disagreed respectively that there is a high degree of financial leverage for this company. This shows that majority of the respondents were undecided to the statement that there is a high degree of financial leverage for this company. Regarding the statement of information symmetry has been at its worst over the last 5 years, 3.4 percent of the respondents strongly agreed, 11.9 percent of the respondents agreed, 42.4 percent of the respondents undecided, 28.8 percent of the respondents disagreed and 13.6 percent of the respondents strongly disagreed respectively that the information symmetry has been at its worst over the last 5

years. This shows that majority of the respondents were undecided to the statement that the information symmetry has been at its worst over the last 5 years. Regarding the statement of the pecking order framework is not much followed when undertaking the financial leverage, 3.4 percent of the respondents strongly agreed, 8.1 percent of the respondents agreed, 44.1 percent of the respondents undecided, 39 percent of the respondents disagreed and 5.1 of the respondents strongly disagreed respectively that the pecking order framework is not much followed when undertaking the financial leverage. This shows that the majority of the respondents were undecided to the statement that the pecking order framework is not much followed when undertaking the financial leverage. Regarding the statement of the exchange rate risk do not affect on daily business operations, 5.1 percent of the respondents strongly agreed, 10.2 percent of the respondents agreed, 61 percent of the respondents undecided, 22 percent of the respondents disagreed and 1.7 percent of the respondents strongly disagreed respectively that the exchange rate risk do not affect on daily business operations. This shows that the majority of the respondents were undecided to the statement that the exchange rate risk do not affect on daily business operations. Regarding the statement of the company rarely uses retained earnings to meet interest payment and debt at maturity, 3.4 percent of the respondents strongly agreed, 13.6 percent of the respondents agreed, 67.8 percent of the respondents undecided and 15.3 percent of the respondents disagreed respectively that the company rarely uses retained earnings to meet interest payment and debt at maturity. This shows that the majority of the respondent were undecided to the statement that the company rarely uses retained earnings to meet interest payment and debt at maturity.

Financial leverage was assessed using four measures and the overall mean score or responses regarding capital adequacy were 3.22 on a 5-point scale which indicates that majority of the respondents agreed that financial leverage affects the financial performance of companies listed on the NSE in Kenya. The average overall standard

deviation of 0.9 infers that 68% of the response was spread within one standard deviation of the overall mean. The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the documents. This means that one standard deviations has 68% of the data spread around the mean and 95% for two standard deviations and 99.7% for three standard deviation. The results agree with the findings by Berger and Bonaccorsidi Patti (3006), Margaritis and Psillaki (2007) and Majundar and Chhibber (1999). Most of the respondents agreed that financial leverage influences financial performance of firms listed on the NSE to a very high extend.

4.5.7 Board composition

The study sought to find out effect of board composition on financial performance of the companies listed on the Nairobi Securities Exchange. Descriptive statistics results for financial performance were conducted and presented on table 4.13 below.

Table 4.13: Board Composition

Statement	SA	A	N	D	SD	Mean/ (sd)
The board has a balanced ratio in terms of gender	64.4	23.7	3.4	6.8	1.7	1.6(1.0)
The board has a balanced distribution in terms of age	45.8	35.6	11.9	6.8	0	1.8(0.9)
The board has a balanced ratio in terms of executive versus non-executive members	49.2	20.3	18.6	11.9	0	1.9(1.1)
The board has a policy on CEO duality	44.1	35.6	13.6	6.8	0	1.8(0.9)
The board independence has an effect on financial performance	45.8	33.9	13.6	6.8	0	1.8(0.9)

The findings on the statement of the board has a balanced ratio in terms of gender, 64.4 percent of the respondents strongly agreed, 23.7 percent of the respondents agreed, 3.4

percent of the respondents undecided, 6.8 percent of the respondents disagreed and 1.7 percent of the respondents strongly disagreed respectively that the board has a balanced ratio in terms of gender. This shows that majority of the respondents strongly agreed to the statement that the board has a balanced ration in terms of gender.

Regarding the statement of the board has a balanced distribution in terms of age, 45.8 percent of the respondents strongly agreed, 35.6 percent of the respondents agreed, 11.9 percent of the respondents undecided and 6.8percent of the respondents disagreed respectively that the board has a balanced distribution in terms of age. This shows that majority of the respondents strongly agreed to the statement that the board has a balanced distribution in terms of age. Regarding the statement of the board has a balanced ratio in terms of executive versus non executive members, 49.2 percent of the respondents strongly agreed, 20.3 percent of the respondents agreed, 18.6 percent of the respondents undecided and 11.9 percent of the respondents disagreed respectively that the board has a balanced ratio in terms of executive versus non-executive members. This shows that the majority of the respondents strongly agreed to the statement that the board has a balanced ratio in terms of executive versus non-executive members. Regarding the statement of the board has a policy on CEO duality, 44.1 percent of the respondents strongly agreed, 35.6 percent of the respondents agreed, 13.6 percent of the respondents undecided and 6.8 percent of the respondents disagreed respectively that the board has a policy on CEO duality. This shows that the majority of the respondent strongly agreed to the statement that the board has a policy on duality. Regarding the statement of the board independence has an effect on financial performance, 45.8 percent of the respondents strongly agreed, 33.9 percent of the respondents agreed, 13.6 percent of the respondents undecided and 6.8 percent of the respondents disagreed respectively that the board independence has an effect on financial performance. This shows that the majority of the respondent strongly agreed to the statement that the board independence has an effect on financial performance.

Board composition is a subject that has received increased attention during the last three decades. Listed companies especially in the last decades have realized the importance of composing effective boards of directors in order to maximize firm performance. Boards with relevant knowledge, skills, and abilities have the potential for proffering unique tactical and strategic advantages to corporations (Finkelstein and Hambrick, 2014). The study sought to investigate the extent to which board composition influences financial performance of firms listed on the NSE in Kenya. Golden and Zajac (2001) argues that demographic features of board of directors may influence the inclination of the company in terms of financial performance. This is particularly important because board composition will require the involvement of the board; in terms of advising, review, and approval of strategic decisions.

Individual constructs of Board composition were tested and it was evident most of the respondents (70.5%) agreed that Board composition influences financial Performance to a very high extend. This is also supported by the core assumption of Hambricks and Manson's (1984) perspective is the belief that demographic characteristics of corporate executives serve as surrogates for their cognitive orientation, beliefs, values, perceptions and knowledge base, with implications for financial performance. The results agree with the findings by Ebrahim (2014).

4.5.6 Financial performance

The study sought to establish the effect of Return on Investment (ROI) and profitability on financial performance of the companies listed on the Nairobi Securities Exchange. Descriptive statistics results for financial performance were conducted and presented on table 4.12 below

Table 4.12: Financial Performance

Statement	SA	A	N	D	SD	Mean/ (sd)
ROI is the main indicator of financial performance	37.3	54.2	8.5	0	0	1.7(0.6)
Profitability of the firm is the net income to average assets of the firm	27.1	57.6	13.6	1.7	0	1.9(0.7)
Profitability is used to measure the financial performance of the firm	39	54.2	5.1	1.7	0	1.7(0.7)
The higher the assets turnover, the higher the Profitability of the firm	30.5	66.1	3.4	0	0	1.2(0.5)
ROI as a ratio is used to measure the financial performance of the firm	33.9	52.5	13.6	0	0	1.8(0.7)

The findings on the statement of ROI is the main indicator of financial performance, 37.3 percent of the respondents strongly agreed, 54.2 percent of the respondents agreed and 8.5 percent of the respondents undecided respectively that ROI is the main indicator of financial performance. This shows that majority of the respondents agreed to the statement that ROI is the main indicator of financial performance. Regarding the statement of the profitability of the firm is the net income to average assets of the firm, 27.1 percent of the respondents strongly agreed, 57.6 percent of the respondents agreed, 13.6 percent of the respondents undecided and 1.7 percent of the respondents disagreed respectively the profitability of the firm is the net income to average assets of the firm. This shows that majority of the respondents agreed to the statement that the profitability of the firm is the net income to average assets of the firm. Regarding the statement of profitability is used to measure the financial performance of the firm, 39 percent of the respondents strongly agreed, 54.2 percent of the respondents agreed, 5.1 percent of the respondents undecided and 1.7 percent of the respondents disagreed respectively that profitability is used to measure the financial performance of the firm. This shows that

the majority of the respondents agreed to the statement that profitability is used to measure the financial performance of the firm. Regarding the statement of the higher the assets turnover, the higher the profitability of the firm, 30.5 percent of the respondents strongly agreed, 66.1 percent of the respondents agreed and 3.4 percent of the respondents undecided respectively that the higher the assets turnover, the higher the profitability of the firm. This shows that the majority of the respondents agreed to the statement that the higher the assets turnover, the higher the profitability of the firm. Regarding the statement of the ROI as a ratio is used to measure the financial performance of the firm, 33.9 percent of the respondents strongly agreed, 52.5 percent of the respondents agreed and 13.6 percent of the respondents undecided respectively that the ROI as a ratio is used to measure the financial performance of the firm. This shows that the majority of the respondent agreed to the statement that ROI as a ratio is used to measure the financial performance of the firm.

Financial performance was assessed using four measures and the overall mean score or responses regarding financial performance were 1.66 on a 5-point scale which indicates that majority of the respondents agreed that financial performance affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.64 infers that 68% of the response was spread within one standard deviation of the overall mean. The standard deviation statistical rule of 68%, 95% and 99.7% applies in all the interpretations in the rest of the documents. This means that one standard deviations has 68% of the data spread around the mean and 95% for two standard deviations and 99.7% for three standard deviation. These results are similar to the findings of Matolcsy and Wright (2011)

The results findings are supported by Mukulu, Nteete and Namusonge (2012) who argued that performance measurement is important for organizations as a means of continuous improvement and also as a means of determining whether or not

organizations are achieving their objectives. Nambiro (2007) argues that the firm performance can be improved by putting up mechanisms in place to make management accountable to the shareholders whose investment is at risk, maintaining a harmonious relationship as well as giving them the freedom and the incentives to control over the resources they need to create and seize investment opportunities in a competitive market environment. Such mechanism should embrace both internal and external mechanism, further she advances a number of mechanisms which can be used to align the interests of the executives and those of the shareholders which include but not limited to boards of directors, executive compensation, active use of ownership prerogatives by large shareholders like institutional investors (internal mechanisms) and the market for corporate control like acquisitions (external mechanisms).

4.5.7 Factor analysis results for Financial Performance

Factor analysis was performed on seven (7) financial performance measures in order to examine their dimensionality on financial performance and also to find out if all the variables were significant to firm's financial performance. Bartholomew, Knott and Moustaki (2011) argued that factor analysis operates on the notion that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable which is known as reducing dimensionality.

Factor analysis was conducted using Principal Components Method (PCM) approach. The extraction of the factors followed the Kaiser Criterion where an Eigen value of 1 or more indicates a unique factor. The other objective was to group the common factors and to retain a small number of factors which had the highest influence (Noor, Chen, & Romiza, 2011). The results were presented on table 4.13 below.

Table 4.13: Total Variance Explained for Financial Performance Factors

Initial Eigen values Extraction Sums of Squared Loadings

Component	total	%of Variance	Cummulative %	total	% of variance	Cumulative
1	4.071	58.151	58.151	4.071	58.151	58.151
2	.960	13.720	71.871			
3	.866	12.370	84.241			
4	.424	6.063	90.303			
5	.340	4.862	95.165			
6	.214	3.058	98.224			
7	.214	77.16	100.000			

Extraction Method: Principal Component Analysis.

The seven measures of financial performance were subjected to factor analysis but only four factors attracted coefficients of more than 0.4. Therefore, only the four (4) statements were retained for analysis. According to Rahn (2010) and Zandi (2006) a factor loading equal to or greater than 0.4 is considered adequate. Further the results showed that there was only one critical factor influencing financial performance which accumulated to 58.151% of the total variance in this construct.

Table 4.14: Rotated Component Financial Performance measures

1 Reduced agency costs has resulted to increase revenue for the last five years	.604
2 Strictly adherence to International Financial Reporting has resulted to increased profitability for the last five years	.665
Strictly adheres to legal stipulations and guidelines when procuring assets has resulted to increase of quality assets for the last five years	.846
4 Opportunities and risks information provided in the annual report has greatly contributed to the increase of investors for the last five years	.743
5 Forward-looking information providing balanced highlights of positive and negative events has helped our	.850
6 Earnings per share to improve for the last five years Inclusion and participation of shareholders in company financial decision making has resulted to increase of return on equity for the last five years	.732
7 sound acquisition, usage and disposal policy on asset has led to increase of return on assets for the last five years	.841
<hr/>	
Cronbach Alpha.....	706
Mean	3.86

Key: Scale 1.0- 1.8 Strongly disagree, 1.9- 2.6 Disagree, 2.7- 3.4 Neutral, 3.5- 4.2 Agree, and 4.3- 5.0 Strongly agree

From the rotation matrix in Table 4.14 there was one major factor which deemed to be influencing financial performance. This factor had seven items with very high loadings

and significance namely tremendous increase on asset at 0.846 increased customer base at 0.732, increased Earnings per share at 0.841, revenue has increased at 0.604 and profitability has improved at 0.665 while increase in return assets was at 0.842 and finally increase in return on equity at 0.731 . Using the factors, a scale was created using the average means of each construct. A scale of 1-5 was created and all the means of all the items in each component were analyzed. Any factor not included in this group was not included in further analysis because it was deemed to have a low mean and as such much of its influence could be explained by the other factors.

4.4.3 Correlation Result for financial performance

b) Secondary Data

Correlation analysis was conducted on the secondary data to determine the relationship that existed between financial performance and different determinants of financial performance was measured in terms of return on investment and profitability. The results were presented in Table 4.15 below.

Table 4.15: Correlations Coefficients

	R.O.A	R.O.E	E.P.S	Gov't	CI	CA	FO	MC	FL
Pearson correlation Return on Investment			1.000						
Profitability Earnings per Share		0.42	1.000	0.46	0.34	1.000			
Corporate		-0.18	0.13	0.17	1.000				
Income Capital		0.36	0.20	0.18	0.32	1.000			
Adequacy Firm		0.75	0.62	0.55	0.45	0.34	1.000		
Ownership Market		0.67	0.62	0.54	0.38	0.42	0.66	1.000	
Capitalization Financial		0.75	0.62	0.55	0.45	0.34	1.000		
Leverage									
Sig. (2-tailed)									
Return on									
Investment			1.000						
Profitability		0.032	1.000	0.041	0.32	1.000			
Corporate		0.086	0.046	0.048	1.000				
Income		0.75	0.62	0.55	0.45	0.34	1.000		
Capital Adequacy			0.033	0.035	0.037	0.042	1.000		
Firm Ownership				0.005	0.015	0.038	0.040	1.000	
Market Capitalization					0.000	0.003	0.039	0.044	1.000
Financial ownership							0.000	0.003	0.039

Table 4.15, the correlation coefficient between return on investment and profitability and financial leverage was found to be 0.75, 0.62 and 0.55 respectively. This indicated a positive relationship between financial performance of listed companies and corporate income tax. The significance probability for this relationship was found to be 0.000, 0.005 and 0.015 respectively and all of them were less than 0.05 indicating that the relationship between financial performance and Capital adequacy was statistically significant at 5% level of significance. The correlation coefficient between Return on investment, Profitability and firm ownership was found to be 0.360, 0.20 and 0.18 respectively. This reflects a weak positive relationship between financial performance and local ownership. This correlation had a significance probability of 0.033, 0.035 and 0.037 respectively. Noting that all of them are less than 0.05, the relationship between financial performance and Market capitalization was statistically significant at 5% level of significance. The correlation coefficient between return on investment and profitability financial leverage was found to be -0.18, 0.13 and 0.17 respectively. This reflects a weak negative relationship between return on asset and financial leverage. This is attributed by the fact most government have either excess idle or absolute assets which are under-utilized due bureaucratic disposal procedures. This correlation had a significance probability of 0.086, 0.046 and 0.48 respectively.

Noting that only one was slightly above 0.05 while other were below we can conclude that at least the relationship between financial performance and government ownership was partially statistically significant at 5% level of significance. The correlation coefficient between return on return on investment and profitability on Corporate income tax was found to be 0.67, 0.62 and 0.54 respectively. This reflects a moderate positive relationship between financial performance and Capital adequacy. This correlation had a significance probability of 0.000, 0.000 and 0.003 respectively. All of them are less than 0.05, and therefore the relationship between financial performance and Firm ownership was statistically significant at 5% level of significance.

4.4.4 Anova for Independent variables and Return on Investment

Analysis for variance was conducted for all independent variables and return on assets and the results were presented on Table 4.16 below

Table 4.16: Analysis of Variance results

Model	Sum of square	df	Mean square	F
SigRegression	5163.925	7 114	2.431	16.941 .0213
Residual	1786	8.107	210	87.354
Total	23032.	032 2 17		

a. Predictors: (Constant), Corporate income tax Capital adequacy, Firm ownership

Market capitalization, and Financial leverage

b. Dependent Variable: Return on Investment

Table reported analysis of variance. From the Table 4.16 the F statistic was found to be 16.941 with a significance probability of 0.0213. Because significance probability of 0.0213 is less than 0.05, the overall regression was found to statistically significant at 5% level.

Table 4.17: Model summary for return on investment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
					Sig. F Change
	.462.	.234	.104	1273746	2.978

Table 4.17 reported the coefficient of determination R-square to be 0.234. This meant that variations in the percentage corporate income tax, capital adequacy, firm ownership, market capitalization and financial leverage jointly explained 21.4% of the variations in return on assets. This indicated that the variables were statistically significant in explaining the financial performance of companies listed on the NSE. The Durbin-Watson test was used to test autocorrelation among the dependent variables using the null hypothesis. The Durbin-Watson statistic ranges in value from 0 to 4. A value towards 0 indicates positive autocorrelation while a value towards 4 indicates negative autocorrelation. The Durbin-Watson results were of 2.916 then it was concluded that there was no autocorrelation among the model residual.

4.4.5 ANOVA for Independent variables and Profitability

Analysis for variance was conducted for all independent variables and return on equity and the results were presented on Table 4.16 below

Table 4.18: ANOVA for Independent variables and Profitability

Model	Sum of squares	df	Mean square	F	Sig
1 Regression	42223.532	6	.021	14.941	.031
Residual	16297.313	208	.016		
Total	21120.845	215			

a. Predictors: (Constant), Corporate income tax , Capital adequacy, Firm ownership, Market capitalization and financial leverage.

b. Dependent Variable: Profitability

The results of analysis of variance reported in Table 4.18 indicate that the F statistic was 14.941 with a significance probability of 0.031. Because significance probability of 0.031 is less than 0.05, the overall regression was found to statistically significant at 5% level; therefore we conclude that different determinants of financial performance had positive contribution on profitability of listed firms.

Table 4.19: Model summary for independent variables and profitability

Model	R	R Square	Adjusted R Square	Std. Error of the Estima	Durbin-
					Watson
					Sig. F Change
	.462.	.234	.104	1273746	2.978
	478	.328	.196	9.73265	2.416

Table 4.19 reported the coefficient of determination R-square to be 0.328. This meant that variations in the percentage of different corporate income tax and capital adequacy

jointly explained 33.7% of the variations in profitability. This indicated that the variables were statistically significant in explaining the financial performance of companies listed at the NSE. The Durbin-Watson test was used to test autocorrelation among predictor variables using the null hypothesis. The Durbin-Watson statistic ranges in value from 0 to 4: a value toward 0 indicates positive autocorrelation while a value toward 4 indicates negative autocorrelation. A value from 2 and above indicates non autocorrelation and Since the Durbin-Watson value results were 2.416, then it was concluded that there was no autocorrelation among the predictor variables.

4.5 Correlation results on independent variables

Correlation shows the relationship existing between variables in the study. The study's dependent variable is financial performance and the independent variables consist of corporate income tax, capital adequacy, firm ownership, market capitalization and financial leverage.

The results depicted in table 4.14 below

Table 4.14: Correlation between independent variable and dependent variable

		FP	CIT	CA	FO	MC	FL
FP	Pearson Correlation	1	.446**	.468**	.441**	.363**	.488**
	Sig. (2-tailed)	-	.000	.000	.000	.005	.000
	N	59	59	59	59	59	59
CIT	Pearson Correlation	.446**	1	.313*	.233	.295*	.379**
	Sig. (2-tailed)	.000		.016	.075	.023	.003
	N	59	59	59	59	59	59
CA	Pearson Correlation	.468**	.313*	1	.135	.110	.343**
	Sig. (2-tailed)	.000	.016	-	.307	.408	.008
	N	59	59	59	59	59	59
FO	Pearson Correlation	.441**	.233	.135	1	.337**	.389**
	Sig. (2-tailed)	.000	.075	.307	-	.009	.002
	N	59	59	59	59	59	59
MC	Pearson Correlation	.363**	.295*	.110	.337**	1	.409**
	Sig. (2-tailed)	.005	.023	.408	.009	-	.000
	N	59	59	59	59	59	59
FL	Pearson Correlation	.488**	.379**	.343**	.389**	.409**	1
	Sig. (2-tailed)	.000	.003	.008	.002	.000	-
	N	59	59	59	59	59	59

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

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

The results in table 4.14 indicated that corporate income tax had positive and significantly related to Financial Performance ($r = 0.446$, $p\text{-value}=0.00<0.05$) as indicated in table above. This implies that corporate income tax was linearly related to financial performance. The result also revealed that capital adequacy had a positive and significantly related to financial performance ($r = 0.468$, $p\text{-value}=0.00<0.05$). The findings of this study corresponded with literature reviewed which show that high capital strength ratios result in better bank ratings (Laruccia and Revoltella, 2000) and hence implies that well capitalized banks tend to acquire higher bank financial strength ratings issued by capital intelligence.

Equally, the study showed that firm ownership had a positive and significantly related to financial performance ($r = 0.441$, $p\text{-value}=0.00<0.05$). The findings of this study agreed with the study conducted by Megginson, Nash and Randenbourgh (1994) compared 61 companies from 18 countries in the period before and after privatization. The study indicated that most companies in the sample had an increase in profitability, efficiency, output, employment and payment of dividends. Also, the revealed that market capitalization was found to be positive and significantly related to Financial Performance ($r = 0.363$, $p\text{-value}=0.00<0.05$). This study concur with the literature reviewed in this study that capital markets make securities liquid by facilitating the buying and selling of securities by a large number of investors without incurring any significant cost. Hence increase the performance of firms. Lastly, the study showed that financial leverage had a positive and significantly related to Financial Performance ($r = 0.488$, $p\text{-value}=0.00<0.05$).

This study finding agreed with the study conducted by Berger and Bonaccorsi di Patti (2006) which showed that the agency cost theory: higher leverage is associated with better firm performance.

4.8 Quantitative Results

This study finding agreed with the study conducted by Berger and Bonaccorsi di Patti (2006), Margaritis and Psillaki (2007) and Majundar and Chhibber (1999) which showed that financial leverage influences financial performance of firms listed on the NSE to a very high extend.

4.6 Multiple Regression model

A multiple regression analysis was conducted to investigate the joint causal relationship between the independent variables and dependent variable financial performance. This is represented by the overall model $Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \epsilon \dots$

The coefficient of multiple determinants denoted by R Squares is a measure of proportion of the variation of the regress and explained and by the corresponding explanatory variables. The values of R squared lies between zero and unity, $0 < R^2 < 1$. A value of unity implies that 100% of the variation of Y has been explained by the explanatory variables. On the other hand a value of zero implies that no variation have been explained at all (Ithai, 2013). The overall goodness of fit was obtained through regressing the goodness of fit for all the independent variables. The results of the multiple regression indicate $R^2 = .501$ and adjusted $R = .454$ as shown in Table 4.15. This is an indication that there is a strong relationship between independent variables and financial performance.

Table 4.15: Model Summary for independent and dependent variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.708 ^a	.501	.454	.71721	2.001

a. Predictors: (Constant), Financial Leverage, Capital Adequacy, Firm Ownership, Corporate Income Tax, Market Capitalization

b. Dependent Variable: Financial Performance

From the model summary The R square value in Table 4.15 is 0.501 which clearly suggests that there is a strong relationship between Financial Leverage, Capital Adequacy, Firm Ownership, Corporate Income Tax, Market Capitalization and Financial Performance as indicated in table above. This indicates that Financial Leverage, Capital Adequacy, Firm Ownership, Corporate Income Tax, Market Capitalization share a variation of 50.1% of Financial Performance of companies listed on the NSE in Kenya.

Table 4.16: ANOVA for independent and dependent variables

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.386	5	5.477	10.648	.000 ^b
	Residual	27.263	53	.514		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Financial Leverage, Capital Adequacy, Firm Ownership, Corporate Income Tax, Market Capitalization

The overall model significance was presented using the ANOVA test table. The results in Table 4.16 shows that the overall model was a good fit since (F-value=10.468 and p-value=0.000<0.05) for all independent variables meaning that null hypothesis is rejected and concludes that there is a relationship between different independent and dependent variables . The findings there imply that all independent variables were statistically

significant in explaining financial performance of companies listed on the NSE in Kenya.

ANOVA was used to test whether the regression analysis model used is fit or the relationship of the variable just occurred by chance. Significance of F ratio is used to determine whether model used was fit or not. If the F ratio is significant the model used is considered fit and vice versa (Weeks & Namusonge, 2016). A P - value of less than 0.05 indicates that the F statistics is high and that the null hypothesis of independent needs to be rejected since it's not true. In this case the F ratio (F=10.648, P=.000^b) was found to be significant hence the model used for analysis was fit.

Table 4.17: Coefficients of Overall Regression Model

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.196	.095	-	2.065	.043
	Corporate Income Tax	.222	.097	.244	2.276	.027
	Capital Adequacy	.351	.099	.365	3.550	.001
	Firm Ownership	.297	.097	.324	3.072	.003
	Market Capitalization	.229	.104	.246	2.208	.032
	Financial Leverage	.227	.094	.263	2.429	.019

a. Dependent Variable: Financial Performance

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \dots \dots \dots$$

$Y = 0.196 + 0.222X_1 + 0.351X_2 + 0.297X_3 + 0.229X_4 + 0.227X_5$ were significant with p-values of 0.027, 0.001, 0.003, 0.032 and 0.019 respectively.

4.6.1 Hypothesis testing

In order to test the research hypothesis, standard multiple regression analysis was conducted using Corporate Income tax, Capital adequacy, Firm ownership, Market capitalization, Financial Leverage and Board composition as the predicting variables and Financial performance as the dependent variable.

a) Corporate income tax

To establish the effect of corporate income tax on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

Hypothesis One: HO₁: Corporate income tax has no significant effect on financial performance of the companies listed on the NSE in Kenya. The results are depicted in table 4.18 below.

Table 4.18: Model Summary of corporate Income Tax

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.446 ^a	.199	.185	.87626	1.997

a. Predictors: (Constant), Corporate Income Tax

b. Dependent Variable: Financial Performance

The R square value in table 4.18 in this case is 0.199 which clearly suggests that there is a strong relationship between Corporate Income Tax and Financial Performance as indicated in table above. This indicates that Corporate Income Tax share a variation of 19.9% of Financial Performance.

Table 4.19: ANOVA of corporate Income Tax

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.882	1	10.882	14.172	.000 ^b
	Residual	43.767	57	.768		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Corporate Income Tax

The ANOVA result in Table 4.19 showed that the overall model was a good fit since (F-value =14.172 and p-value=0.000<0.05).

Table 4.20: Coefficients of corporate Income Tax

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.259	.115	-	2.257	.028
	Corporate Income Tax	.405	.107	.446	3.7.65	.000

a. Dependent Variable: Financial Performance

Table 4.20 indicates that the regression weight for corporate income tax was positive and significant ($\beta = 0.405$, $t = 3.765$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that corporate income tax has a significant relationship with financial performance of the companies listed on the Nairobi Securities Exchange. The regression estimate for corporate income tax was 0.405; this indicates that a unit increase in corporate income tax would result in 40.5% increase in financial performance of the companies listed on the Nairobi Securities Exchange.

b) Capital adequacy

To evaluate the effect of capital adequacy on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

Hypothesis Two: HO₂: Capital adequacy has no significant effect on financial performance of the companies listed on the NSE in Kenya. The results are depicted in table 4.21 below.

Table 4.21: Model Summary of Capital Adequacy

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.468 ^a	.219	.206	.86515	2.005

a. Predictors: (Constant), Capital Adequacy

b. Dependent Variable: Financial Performance

The R square value in Table 4.21 was 0.219 which clearly suggested that there is a strong relationship between Capital Adequacy and Financial Performance. This indicates that Capital Adequacy share a variation of 21.9% of Financial Performance.

Table 4.22: ANOVA of Capital Adequacy

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.986	1	11.986	16.013	.000 ^b
	Residual	42.663	57	.748		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Capital Adequacy

The ANOVA Table in 4.22 indicates that the overall model was a good fit since (F-value=16.013 and p-value=0.000<0.05).

Table 4.23: Coefficients of capital Adequacy

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.210	.103	-	2.042	.046
	Capital Adequacy	.451	.113	.468	4.002	.000

a. Dependent Variable: Financial Performance

Table 4.23 indicates that the regression weight for Capital Adequacy was positive and significant ($\beta = 0.451$, $t = 4.002$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that Capital Adequacy has a significant relationship with financial performance of the companies listed on the Nairobi Securities Exchange. The regression estimate for Capital Adequacy was 0.451; this indicates that a unit increase in Capital Adequacy would result in 45.1% increase in financial performance of the companies listed on the Nairobi Securities Exchange.

c) Firm ownership

To examine the effect of firm ownership on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

Hypothesis Three: H_{O3} : Firm ownership has no significant on financial performance of the companies listed on the NSE in Kenya. The results are depicted in table 4.23 below.

Table 4.24: Model Summary of Firm Ownership

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.441 ^a	.194	.180	.87899	1.995

a. Predictors: (Constant), Firm Ownership

b. Dependent Variable: Financial Performance

The R square value in Table 4.24 is 0.194 which clearly suggests that there is a strong relationship between Firm Ownership and Financial Performance as indicated in table above. This indicates that Firm Ownership share a variation of 19.4% of Financial Performance.

Table 4.25: ANOVA of Firm Ownership

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.609	1	10.609	13.732	.00 ^b
	Residual	44.039	57	.773		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Firm Ownership

The ANOVA able in 4.25 indicates that the overall model was a good fit since (F-value=13.732 and p-value=0.000<0.05).

Table 4.26: Coefficients of Firm Ownership

Model		Unstandardized		Standardize		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.259	.116	-	2.236	.029
	Firm Ownership	.404	.109	.441	3.706	.000

a. Dependent Variable: Financial Performance

Table 4.26 indicates that the regression weight for Firm Ownership was positive and significant ($\beta = 0.404$, $t = 3.706$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that Firm Ownership has a significant relationship with financial performance of the companies listed on the Nairobi Securities Exchange. The regression estimate for Firm Ownership was 0.404 this indicates that a unit increase in Firm Ownership would result in 40.4% increase in financial performance of the companies listed on the Nairobi Securities Exchange.

d) Market capitalization

To determine the effect of market capitalization on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

Hypothesis Four: H_{04} : Market capitalization has no significant effect on financial performance of the companies listed on the NSE in Kenya. The results are depicted in table 4.26 below.

Table 4.27: Model Summary of Market Capitalization

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.363 ^a	.132	.117	.91234	2.008

a. Predictors: (Constant), Market Capitalization

b. Dependent Variable: Financial Performance

From table 4.27 shows that R square value is 0.132 which clearly suggests that there is a strong relationship between Market Capitalization and Financial Performance as indicated in table above. This indicates that Market Capitalization share a variation of 13.2% of Financial Performance

Table 4.28: ANOVA of Market Capitalization

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.204	1	7.204	8.655	.005 ^b
	Residual	47.444	57	.832		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Market Capitalization

The ANOVA table in Table 4.28 indicates that the overall model was a good fit since (F-value=8.655 and p-value=0.000<0.05).

Table 4.29: Coefficients of Market Capitalization

Model		Unstandardized		Standardized		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.215	.095	-	2.262	.027
	Market Capitalization	.338	.115	.363	2.942	.005

a. Dependent Variable: Financial Performance

Table 4.29 indicates that the regression weight for Market Capitalization was positive and significant ($\beta = 0.338$, $t = 2.942$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that Market Capitalization has a significant relationship with financial performance of the companies listed on the Nairobi Securities Exchange. The regression estimate for Market Capitalization was 0.338; this indicates that a unit increase in Market Capitalization would result in 33.8% increase in financial performance of the companies listed on the Nairobi Securities Exchange.

d) Financial leverage

To evaluate the effect of financial leverage on financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

Hypothesis Five: H_{O5} : Financial leverage has no significant effect on financial performance of the companies listed on the NSE in Kenya. The results are depicted in table 4.30 below.

Table 4.30: Model Summary of Financial Leverage

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.488 ^a	.238	.225	.85449	1.989

a. Predictors: (Constant), Financial Leverage

b. Dependent Variable: Financial Performance

The R square value in Table 4.30 is 0.238 which clearly suggests that there is a strong relationship between Financial Leverage and Financial Performance as indicated in table above. This indicates that Financial Leverage share a variation of 23.8% of Financial Performance

Table 4.31: ANOVA of Financial Leverage

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.030	1	13.030	17.846	.000 ^b
	Residual	41.619	57	.730		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Financial Leverage

From the ANOVA table in Table 4.31 indicates that the overall model was a good fit since (F-value=17.846 and p-value=0.000<0.05).

Table 4.32: Coefficients of Financial Leverage

Model		Unstandardized		Standardize		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.226	.106	-	2.134	.037
	Financial Leverage	.382	.090	.488	4.224	.000

a. Dependent Variable: Financial Performance

Table 4.32 indicates that the regression weight for Financial Leverage was positive and significant ($\beta = 0.382$, $t = 4.224$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that Financial Leverage has a significant relationship with financial performance of the companies listed on the Nairobi Securities Exchange. The regression estimate for Financial Leverage was 0.382, this indicates that a unit increase in Financial Leverage would result in 38.2% increase in financial performance of the companies listed on the Nairobi Securities Exchange.

e) Board composition

To find out the moderating effect of board composition on the relationship between capital structure and financial performance of the companies listed on the Nairobi Securities Exchange in Kenya.

Hypothesis Six: H_{O6} : Moderating effect of board composition has no significant effect on the relationship between capital structure and financial performance of the companies listed on the NSE in Kenya. The results are depicted in table 4.32 below.

Table 4.33: Model Summary of Moderated Composite capital structure

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.808 ^a	.653	.634	.58744	1.991

a. Predictors: (Constant), Capital X Board, Board Composition, Capital Structure

b. Dependent Variable: Financial Performance

The R square value in Table 4.33 is 0.653 which clearly suggests that there is a strong relationship between Capital X Board, Board Composition, Capital Structure and Financial Performance. This indicates that Capital X Board, Board Composition, Capital Structure share a variation of 65.3% of Financial Performance.

Table 4.34: ANOVA of Moderated Composite capital structure

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.669	3	11.890	34.454	.000 ^b
	Residual	18.980	55	.345		
	Total	54.649	58			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Capital X Board, Board Composition, Capital Structure

The ANOVA table in Table 4.34 indicates that the overall model was a good fit since (F-value=34.454 and p-value=0.000<0.05).

Table 4.35: Coefficients of Moderated Composite capital structure

Model		Unstandardized		Standardize		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.244	.082	-	2.970	.004
	Capital Structure	.510	.069	.668	7.350	.000
	Board Composition	.340	.074	.382	4.627	.000
	CapitalXBoard	.171	.062	.202	2.758	.008

a. Dependent Variable: Financial Performance

Table 4.35 indicates that the regression weight for Capital Structure and Financial Performance was positive and significant ($\beta = 0.510$, $t = 7.350$, $p < .05$). The regression weight between Board Composition and Financial Performance was positive and significant ($\beta = 0.340$, $t = 4.627$, $p < .05$) and the regression weight between the moderated path Capital X Board and Financial Performance was positive and significant ($\beta = 0.171$, $t = 2.758$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that board composition significant moderated the relationship capital structure and financial performance of the companies listed on the Nairobi Securities Exchange.

4.7.2 Summary of the entire study hypothesis tested

The summary results of the entire study hypothesis tested were presented on Table 4.35 below.

Table 4.36: Summary results of hypotheses tested

Statement	P-value	Decision
HO₁. Corporate income tax has no significant effect on financial performance of the companies listed on the NSE in Kenya	P-value=0.000<0.05).	Reject the null hypothesis
HO₂. Capital adequacy has no effect on financial significant performance of the Companies listed on the NSE in Kenya	P-value=0.000<0.05).	Reject the null hypothesis
HO₃. Firm ownership has no significant effect on financial performance of the companies listed on the NSE in Kenya	P-value=0.000<0.05).	Reject the null hypothesis
HO₄. Corporate income tax has no significant effect on financial performance of the companies listed on the NSE in Kenya	P-value=0.000<0.05).	Reject the null hypothesis
HO₅.Market capitalization has no significant effect on financial erformance of companies listed on the NSE in Kenya	P-value=0.000<0.05).	Reject the null hypothesis
HO₆. Board composition has nosignificant effect on financial performance of the companies listed on the NSE in Kenya	P-value=0.000<0.05).	Reject the null hypothesis

Table 4.36 above presents the level of significance also called the p - value. This is the coefficient that is used to test hypothesis and the significance of the independent variables. The level of significance for this study is 0.05 and therefore if the p - value is less that 0.05 we fail to accept the null hypothesis and accept is the p-value is greater than 0.05.

4.7.3 Overall Moderated Regression Model

Table 4.37: Model Summary of Overall Moderated Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.800	.641	.599	.61461	1.998

b. Dependent Variable: Financial Performance

The R square value in Table 4.37 is 0.641 which clearly suggests that there is a strong relationship between a. Predictors: (Constant), Financial Leverage X Board, Firm Ownership X Board, Capital Adequacy X Board, Board Composition, Market Capital X Board, Corporate Income tax X Board. This indicates that Capital X Board, Board Composition, Capital Structure share a variation of 64.1% of Financial Performance.

Table 4.38: Model Summary of Overall Moderated Regression Model

Model		Sum of Squares	df	Mean Square	F	Sig. (P-value)
1	Regression	30.441	6	5.074	10.898	.000 ^b
	Residual	24.208	52	.466	-	-
	Total	54.649	58	-	-	-

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Financial Leverage X Board, Capital Adequacy X Board, Board Composition, Market Capital X Board, Firm Ownership X Board, Corporate Income tax X Board

The ANOVA table in Table 4.38 indicates that the overall model was a good fit since (F-value=10.898 and p-value=0.000<0.05).

Table 4.39: Coefficients of Overall Moderated Regression Model

Model	Unstandardized		Standardize		Sig (P-value)
	B	Std. Error	Beta	t	
1 (Constant)	.317	.101		3.120	.003
Board Composition	.559	.089	.628	6.303	.000
Co. Income tax X Board	.203	.071	.342	2.868	.006
Capital Adequacy X Board	.332	.112	.305	2.966	.005
Firm Ownership X Board	.185	.088	.212	2.089	.042
Market Capital X Board	.186	.087	.230	2.133	.038
Financial Leverage X Board	.237	.072	.327	3.314	.002

a. Dependent Variable: Financial Performance

$$Y = \beta_0 + \beta_1 x_{1Z} + \beta_2 x_{2Z} + \beta_3 x_{3Z} + \beta_4 x_{4Z} + \beta_5 x_{5Z} + \varepsilon,$$

$Y = 0.317 + 0.203X_1 + 0.332X_2 + 0.185X_3 + 0.186X_4 + 0.237X_5$ were significant with p-values of 0.000, 0.006, 0.005, 0.042, 0.038 and 0.002 respectively

Y=Table 4.39 indicates that the regression weight for moderated path Board Composition and Financial Performance was positive and significant ($\beta = 0.559$, $t = 6.303$, $p < .05$). The regression weight between moderated path Capital Income tax X Board and Financial Performance was positive and significant ($\beta = 0.203$, $t = 2.868$, $p < .05$).

The regression weight between the moderated path Capital Adequacy X Board and Financial Performance was positive and significant ($\beta = 0.332$, $t = 2.966$, $p < .05$). The regression weight between the moderated path Firm Ownership X Board and Financial Performance was positive and significant ($\beta = 0.185$, $t = 2.089$, $p < .05$). The regression weight between the moderated path Market Capital X Board and Financial Performance

was positive and significant ($\beta= 0.186$, $t= 2.133$, $p < .05$). The regression weight between the moderated path Market Financial Leverage X Board and Financial Performance was positive and significant ($\beta= 0.237$, $t= 3.314$, $p < .05$). Therefore, the null hypothesis was rejected at $P < 0.05$ level of significance implying that board composition significant moderated the relationship capital structure and financial performance of the companies listed on the Nairobi Securities Exchange.

Table 4.40 Correlations of Moderated Board Composition

		Financi al	Board Compo	C Incometax	Capital Adequacy	Firm Owner	Market CapXB	Financial LeverageX
Financi al	Pearso Sig.	1	.529**	.309*	.437**	.363**	.128	-.295*
	N	59	59	59	59	59	59	59
Board Compo	Pearso Sig.	.529**	1	.065	-.063	.198	-.155	.231
	N	59	59	59	59	59	59	59
C Income	Pearso Sig.	.309*	.065	1	.404**	.351**	.441**	-.231
	N	59	59	59	59	59	59	59
Capital Adequa	Pearso Sig.	.437**	-.063	.404**	1	.163	.063	-.060
	N	59	59	59	59	59	59	59
Firm Owners	Pearso Sig.	.363**	.198	.351**	.163	1	.211	-.009
	N	59	59	59	59	59	59	59
Market Cap	Pearso Sig.	.128	-.155	.441**	.063	.211	1	-.309*
	N	59	59	59	59	59	59	59
Financi al Levera	Pearso Sig. N	-.295*	.231	-.231	-.060	-.009	-.309*	1
		.023	.078	.078	.649	.945	.017	
		59	59	59	59	59	59	59

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

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

The results in Table 4.40 indicated that board composition had positive and significantly related to Financial Performance ($r = 0.529$, $p\text{-value}=0.00<0.05$) as indicted. This implies that board composition was linearly related to financial performance. The result also revealed that capital adequacy moderated with board composition had a positive and significantly related to financial performance ($r = 0.43$, $p\text{-value}=0.00<0.05$). Equally, the study showed that firm ownership and board composition had a positive and

significantly related to financial performance ($r = 0.363$, $p\text{-value}=0.00<0.05$). Also, the study revealed that market capitalization and board composition had a positive and significantly related to Financial Performance ($r = 0.128$, $p\text{-value}=0.00<0.05$). Lastly, the study showed that financial leverage and board composition had a negative not significantly related to Financial Performance ($r = -0.295$, $p\text{-value}=0.00<0.05$). This study finding agreed with the study conducted by Ebrahim (2014) that the effect of moderating board diversity had not significant effect on the board of director-ROA.

4.8 Discussion of key Findings

The key findings of the study are discussed in this section as per study objectives.

4.8.1 Corporate income tax and financial performance

Corporate income tax was assessed using five measures and the overall mean score or responses regarding corporate income tax were 2.7 on a 5-point scale which indicates that majority of the respondents agreed that corporate income tax affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.775 infers that 68% of the response was spread within one standard deviation of the overall mean.

Further collinearity analysis was done and the results showed that corporate income tax had positive and significantly related to financial Performance ($r = 0.446$, $p\text{-value}=0.00<0.05$). This implies that corporate income tax was linearly related to financial performance. The results agree with the findings by Jens and Schellnus (2008).

4.8.2 Capital adequacy and financial performance

Capital adequacy was assessed using five measures and the overall mean score or responses regarding capital adequacy were 2.18 on a 5-point scale which indicates that majority of the respondents agreed that capital adequacy affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.76 infers that 68% of the response was spread within one standard deviation of the overall mean. Further collinearity analysis was done and the results revealed that capital adequacy had a positive and significantly related to financial performance ($r = 0.468$, $p\text{-value}=0.00<0.05$). The findings of this study corresponded with literature reviewed which shows that high capital strength ratios result in better bank ratings (Laruccia and Revoltella, 2000).

4.8.3 Firm ownership and financial performance

Firm ownership was assessed using four measures and the overall mean score or responses regarding capital adequacy were 2.12 on a 5-point scale which indicates that majority of the respondents agreed that firm ownership affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.72 infers that 68% of the response was spread within one standard deviation of the overall mean. Further collinearity analysis was done and the results showed that firm ownership had a positive and significantly related to financial performance ($r = 0.441$, $p\text{-value}=0.00<0.05$).

The findings of this study agreed with the study conducted by Megginson, Nash and Randenbourgh (1994). These results are similar to the findings of Weir & Laing (2012) argues that good ownership structure advocates for good governance mechanisms that boosts a firms' capacity to attract investors, ensure effective monitoring mechanisms of

the board and the decisions – making process are in place to protect and promote shareholders' interests and improve the overall firms' performance

4.8.4 Market capitalization and financial performance

Market capitalization was assessed using four measures and the overall mean score or responses regarding market capitalization were 2.72 on a 5-point scale which indicates that majority of the respondents agreed that market capitalization affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.62 infers that 68% of the response was spread within one standard deviation of the overall mean. Further collinearity analysis was done and the results showed that market capitalization was found to be positive and significantly related to Financial Performance ($r = 0.363$, $p\text{-value}=0.00<0.05$). This study concur with the literature reviewed in this study that capital markets make securities liquid by facilitating the buying and selling of securities by a large number of investors without incurring any significant cost. Hence increase the performance of firms. These results are similar to the findings of Choudhary, (2011), it was evident most of the respondents agreed that market capitalization influences financial performance of firms listed on the NSE in Kenya to a very high extend

4.8.5 Financial leverage and financial performance

Financial leverage was assessed using four measures and the overall mean score or responses regarding capital adequacy were 3.22 on a 5-point scale which indicates that majority of the respondents agreed that financial leverage affects the financial performance of companies listed on the NSE in Kenya. The average overall standard deviation of 0.9 infers that 68% of the response was spread within one standard deviation of the overall mean. Further collinearity analysis was done and the results

showed that financial leverage had a positive and significantly related to Financial Performance ($r = 0.488$, $p\text{-value}=0.00<0.05$). This study finding agreed with the study conducted by Berger and Bonaccorsi di Patti (2006), Margaritis and Psillaki (2007) and Majundar and Chhibber (1999) which showed that financial leverage influences financial performance of firms listed on the NSE to a very high extend.

4.8.6 Board composition and financial performance

The sixth objective of the study was to find out the effect of moderating board composition on financial performance of companies listed on the NSE in Kenya. Methods used to arrive at the findings included descriptive statistics, analysis of variance and regression analysis. The study found out that moderating board composition had a significant positive influence on companies' financial performance. The overall mean score of responses regarding moderating board composition indicated that majority of the respondents agreed that moderating board composition affects the financial performance of the companies listed on the NSE in Kenya. Further collinearity analysis was done and the results showed indicated that board composition had positive and significantly related to Financial Performance ($r = 0.529$, $p\text{-value}=0.00<0.05$) as indicted. This implies that board composition was linearly related to financial performance.

Individual constructs of Board composition were tested and it was evident most of the respondents agreed that Board composition influences financial Performance to a very high extend. This study finding agreed with the study conducted by Ebrahim (2014)

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter presents the summary of major findings of the study, relevant discussions, conclusions and the necessary recommendation. The study sought to investigate moderating of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya. The summary is done in line with the objectives of the study based on the output of the descriptive and inferential statistical analysis guided to test the research hypothesis of the study. Each recommendations traces directly to each conclusions in line with practice and policy.

5.2 Summary of the findings

The findings of the study have been summarized below as per the study objectives. The findings were supported by the frequencies of the responses

5.2.1 Corporate income tax

The first objective of the study was to establish the effect of corporate income tax on financial performance of companies listed on the NSE in Kenya. Methods used to arrive at the findings included descriptive statistics, analysis of variance and regression analysis. The study found out that corporate income tax had a significant positive influence on companies' financial performance. The overall mean score of responses regarding corporate income tax indicated that majority of the respondents agreed that corporate income tax affects the financial performance of the companies listed on the NSE in Kenya.

The reliability analysis results showed that all the coefficients of the constructs were positive and significant. This can be attributed to the fact that taxation of corporate profits, as an important component of fiscal policy. By imposing taxes, the state seeks to collect financial resources to the budget.

5.2.2 Capital adequacy on financial performance

The second objective of the study sought to evaluate the effect of capital adequacy on financial performance of the companies listed on the NSE in Kenya. Descriptive statistics, regression analysis and analysis of variance were conducted. The study found out that capital adequacy had a significant positive influence on company's financial performance.

The overall mean score of response regarding capital adequacy and financial performance indicated that majority of the respondents agreed that capital adequacy affects the financial performance of companies listed on the NSE in Kenya. Correlation results indicated that there was a positive and significant relationship between capital adequacy and financial performance. It was therefore concluded that capital adequacy has significant positive effect on financial performance.

This can be attributed to the fact that capital adequacy creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress.

5.2.3 Firm ownership on financial performance

The third objective of the study sought to examine the effect of firm ownership on financial performance of the companies listed on the NSE in Kenya. Descriptive statistics, regression analysis and analysis of variance were conducted. The study found

out that firm ownership had a significant positive influence on company's financial performance.

The overall mean score of response regarding firm ownership and financial performance indicated that majority of the respondents agreed that firm ownership affects the financial performance of companies listed on the NSE in Kenya. Correlation results indicated that there was a positive and significant relationship between firm ownership and financial performance. It was therefore concluded that firm ownership has significant positive effect on financial performance.

5.2.4 Market capitalization on financial performance

The fourth objective of the study sought to determine the effect of market capitalization on financial performance of the companies listed on the NSE in Kenya. Descriptive statistics, regression analysis and analysis of variance were conducted. The study found out that market capitalization had a significant positive influence on company's financial performance.

The overall mean score of response regarding market capitalization and financial performance indicated that majority of the respondents agreed that market capitalization affects the financial performance of companies listed on the NSE in Kenya. Correlation results indicated that there was a positive and significant relationship between market capitalization and financial performance. It was therefore concluded that market capitalization has significant positive effect on financial performance.

5.2.5 Financial leverage on financial performance

The fifth objective of the study sought to assess the effect of financial leverage on financial performance of the companies listed on the NSE in Kenya. Descriptive

statistics, regression analysis and analysis of variance were conducted. The study found out that financial leverage had a significant positive influence on company's financial performance.

The overall mean score of response regarding financial leverage and financial performance indicated that majority of the respondents agreed that financial leverage affects the financial performance of companies listed on the NSE in Kenya. Correlation results indicated that there was a positive and significant relationship between capital adequacy and financial performance. It was therefore concluded that financial leverage has significant positive effect on financial performance.

5.2.6 Moderating board composition on financial performance

The sixth objective of the study was to find out the effect of moderating board composition on financial performance of companies listed on the NSE in Kenya. Methods used to arrive at the findings included descriptive statistics, analysis of variance and regression analysis. The study found out that moderating board composition had a significant positive influence on company's financial performance. The overall mean score of responses regarding moderating board composition indicated that majority of the respondents agreed that moderating board composition affects the financial performance of the companies listed on the NSE in Kenya. The reliability analysis results showed that all the coefficients of the constructs were positive and significant. Correlation results indicated that there was a positive and significant relationship between moderating board composition and financial performance.

5.3 Conclusions

The aim of the study was to investigate moderating effect of board composition on the relationship between independent variables and financial performance of companies listed on the Nairobi Securities Exchange in Kenya.

Data collected and analyzed through both descriptive and inferential statistics established that all independent variables were significant effects on company's financial performance. The coefficient of determination R^2 and correlation coefficient (r) was ($R^2 = 0.501$) showing that there was a strong relationship between independent variables and financial performance of listed companies on the NSE in Kenya. Therefore it can be concluded that different independent variables were statistically significant in explaining the financial performance of companies listed on the NSE in Kenya.

First hypothesis, H_{O1} : was Corporate income tax has no significant effect on financial performance of the companies listed on the NSE in Kenya. When this hypothesis was tested the corporate income tax was found to have a significant statistical effect on financial performance of listed companies. Therefore, it can be concluded that corporate income tax was statistically significant in explaining the financial performance of the companies listed on the NSE in Kenya.

Second hypothesis, H_{O2} : was Capital adequacy has no significant effect on financial performance of the companies listed on the NSE in Kenya. When this hypothesis was tested the capital adequacy was found to have a significant statistical effect on financial performance of listed companies. Therefore, it can be concluded that capital adequacy was statistically significant in explaining the financial performance of the companies listed on the NSE in Kenya.

Third hypothesis, HO₃: was Firm ownership has no significant effect on financial performance of the companies listed on the NSE in Kenya. When this hypothesis was tested the firm ownership was found to have a significant statistical effect on financial performance of listed companies. Therefore, it can be concluded that firm ownership was statistically significant in explaining the financial performance of the companies listed on the NSE in Kenya.

Fourth hypothesis, HO₄: was Market capitalization has no significant effect on financial performance of the companies listed on the NSE in Kenya. When this hypothesis was tested the market capitalization was found to have a significant statistical effect on financial performance of listed companies. Therefore, it can be concluded that market capitalization was statistically significant in explaining the financial performance of the companies listed on the NSE in Kenya.

Fifth hypothesis, HO₅: was Financial leverage has no significant effect on financial performance of the companies listed on the NSE in Kenya. When this hypothesis was tested the financial leverage was found to have a significant statistical effect on financial performance of listed companies. Therefore, it can be concluded that financial leverage was statistically significant in explaining the financial performance of the companies listed on the NSE in Kenya.

Sixth hypothesis, HO₆: was Financial leverage has no significant effect on financial performance of the companies listed on the NSE in Kenya. When this hypothesis was tested the moderating of board composition was found to have a significant statistical effect on financial performance of listed companies. Therefore, it can be concluded that moderating of board composition was statistically significant in explaining the financial performance of the companies listed on the NSE in Kenya.

5.4 Recommendations

Following the findings of the study and the implications on the moderating effects of board composition on the relationship between capital structure and financial performance of companies listed on the NSE in Kenya, the study gives the following recommendations.

5.4.1 Managerial recommendations

Performance of the companies is becoming highly exposed to scrutiny by potential investors due to the risks involved including adverse publicity brought about by collapsing of some firms and other are under receivership due to capital inadequacy and bankruptcy of listed companies as was the case with Uchumi supermarket limited, Chase bank, Daima bank, Trust bank, Imperial bank and A Baumann and Company among others. The study recommends that companies operating on the NSE should follow the CMA guidelines to constitute a board with persons of different experiences, skills and perceptions of business operations. These guidelines are expected to ensure an effective board which will steer the organization to greater financial performance.

Secondly, the study found that capital adequacy had significant positive relationship with financial performance of the companies listed on the NSE in Kenya. This means that an increase in capital adequacy enhances financial performance. The study therefore recommends that the managers of the companies listed on the NSE in Kenya should ensure that their companies have capital adequacy to ensure that they can meet any contingencies and to improve their company's financial performance.

Thirdly, capital markets make securities liquid by facilitating the buying and selling of securities by a large number of investors without incurring any significant cost. In the

capital market, forces of demand and supply determine prices. All information on securities is made known to all investors and this provides a platform for determining fair prices of securities. While the level of economic activities influences the stock market, the stock market also influences the level of economic activities. A capital market is an acknowledged leading indicator of the general economic cycle. Due to the changing business environment coupled with global completion and deregulation which opens opportunities for investment globally, the study recommends that there is need of having investors across all the economy so that they adjust their portfolio without making an impulsive decision, if he sell an investment that is in the red, the loss can be used to offset capital gains realized in the same year.

Fourth, the variation in financial performances for listed companies on the NSE in Kenya has raised queries on the board composition which are meant to make investment decisions for these companies. The capital structure policy of the listed companies which are heavily influenced by the board's decision is therefore hypothesised to be a major problem for these companies. Based on the findings board duality was significant in influencing financial performance.

The study recommends that companies should ensure that they have an optimal board duality so as to improve on their financial performance. Further, given that the board independence was also significant, the study recommends that the number of non executive directors be increased as this increase board independence and thus resulting in a scenario where diverse opinions are obtained the day to day activities of the company. In addition, the study recommends that the management should practice good corporate governance and support the rules intended to protect investors since improved investors' confidence will have positive effects on the market values of the companies. Finally, the study recommends that stakeholders in listed companies on the NSE in

Kenya should take into account the board composition issues for example gender, age, duality and board independence when electing board of directors.

5.4.2 Policy recommendations

Taxation of corporate profits, as an important component of fiscal policy, is a topical issue of great interest impacting financial performance of the companies listed on the NSE in Kenya. By imposing taxes, the state seeks to collect financial resources to the budget. The companies that pay corporate income tax in advance, or on installment enhances the collection of taxes and this improves the financial performance of companies listed on the NSE in Kenya. Therefore the study recommends the adoption of corporate income tax in order to improve financial performance of companies listed on the NSE in Kenya. The study findings support the view that corporate income tax has a significant effect on financial performance. The study recommends that policies should ensure that companies pays their corporate income tax promptly and consequently better financial performance of companies listed on the NSE in Kenya.

Performance of the companies is becoming highly exposed to scrutiny by potential investors due to the risks involved including adverse publicity brought about by collapsing of some firms and other are under receivership due to capital inadequacy and bankruptcy of listed companies as was the case with Uchumi supermarket limited, Chase bank, Daima bank, Trust bank, Imperial bank and A Baumann and Company among others. The study recommends that there is need to identify policy makers with useful input for formulating government policies to avert poor performance and consequently bankruptcy of listed companies and enlighten the investors who will be interested in the study as they will be in a position to protect their investments and direct them to the best performing companies at the securities exchange which will in turn spur economic growth in the long term.

It was pointed out that despite the impressive performance of the NSE, companies listed on the NSE in Kenya are still dogged with challenges of ownership structure where some shareholding (controlling shareholders) took the opportunity to use their powers to undertake activities of personal gain at the expense of minority shareholders. This has resulted to financial scandals as evidenced by collapse of some reputable companies such as Daima bank, Trust bank, Chase bank and Uchumi supermarket among others. Further it was observed that Kenya has been experiencing turbulent times with regards to its organizational practices in the last two decades. This resulted in generally low profits across the economy. Based on the above literature review, the study recommends that there should be good ownership /structure policies that advocates for good governance mechanisms that boosts a company's capacity to attract investors, ensure effective monitoring mechanisms of the board and the decision making process are in place to protect and promote shareholders interests and improve the overall company's performance.

5.4.3 Areas for further research

The study suggest more variables to be covered out taking into account the prevailing macro-economic variables as the control variables since they play a major roles in decisions making among the board of directors. The study suggest that other scholars need to exploit the use of Return on Equity, Return on Asset and Tobin's Q as a measure of financial performance of companies listed on the NSE in Kenya as opposed to the current study which only considered Return on Investment and Profitability as a means of financial performance.

The study should also be carried out on the effect of board composition on the relationship between capital structure and financial performance of the companies on the NSE in Kenya incorporating more corporate governance variable as opposed to the

current study which took into consideration only four board composition variables. The study found out that capital adequacy improves financial performance. However, the study did not come up with any optimum point at which the firms should employ it. It is on the above basis that this study recommends further studies to establish other determinants of financial performance. Finally, the study also suggests that there is need for a more embracing study that will include all the non- financial performance companies listed on the NSE in Kenya to reduce the problem of bias that is associated with generalization of findings as opposed to the current study which only considered financial performance of companies listed on the NSE in Kenya.

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APPENDICES

Appendix I: Introduction Letter

Dear Sir/Madam

RE: RESEARCH QUESTIONNAIRE

My name is Marion Otwani Nekesa, a PhD student in the **School of Entrepreneurship, Procurement and Management** at the Jomo Kenyatta University of Agriculture and Technology (JKUAT). I am conducting a study on *Moderating effect of Board Composition between Capital Structure and Financial Performance of Companies listed on the Nairobi Security Exchange in Kenya*. Due to the nature of the information required, I have selected you as my study respondent. Kindly take your time to answer the questions in this questionnaire by indicating the extent to which you agree or disagree with a given statement on the space provided. All the information you disclose will be kept strictly CONFIDENTIAL and will be used for academic purposes only. Your answers will be crucial in giving insight knowledge on moderating of board composition on the relationship between capital structure and financial performance of listed companies on the NSE in Kenya.

Your participation in this study is highly appreciated, but should you require any clarification or have queries, please do not hesitate to contact me on the mobile telephone and email address below..

Yours sincerely

Marion Nekesa Otwani

HD433-C008-0207/2014-0722442434 or email me at marionnaibei@yahoo.co

Appendix II: Financial Performance Questionnaire

SECTION A: GENERAL INFORMATION

Section A: DATA COLLECTION FORM

Briefly highlight the main business of your company and the sector it operates in

Main business: _____

Sector:

B CORPORATE INCOME TAX

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD,**

B	Statement	SA	A	N	D	SD
1	The firm has been consistently profitable in the last ten years					
2	The investment made by the firm over the last 10 years have been affected by taxes paid					
3	Debt of the company is on the rise					
4	The firms growth is limited by taxation					
5	Liquidity position of the firm has been stable for the last 10 years					

C CAPITAL ADEQUACY

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD,**

C	Statement	SA	A	N	D	SD
1	The firm's capital structure is policy based					
2	Asset size of the company is increasing yearly as the firm's capital increase					
3	Cash flows are not enough for firms operations					
4	The portfolios risk of the company has been stable					
5	The company's growth is over 3% annually					

D FIRM OWNERSHIP

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD**

D	Statement	SA	A	N	D	SD
1	The ownership structure of the company has significantly changed over the last 10 years					
2	The firm has strict policy on ownership concentration based on shareholding					
3	The type of ownership of this firm affects the days business					
4	The composition of management in the firm is influenced by the ownership of the firm					
5	The ownership structure of the company has significantly on the financial performance of companies listed on NSE					

E MARKET CAPITALIZATION

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD**)

E	Statement	SA	A	N	D	SD
1	The firms rank in the capital market reflects a true picture of its financial performance					
2	The firms value affects its current operations					
3	Inflation is a key determinant rectify of how the firm performs					
4	Stock prices are misleading the public on the company's performance					
5	Stock markets liquidity frequently affect the firms performance					

F FINANCIAL LEVERAGE

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD**)

F	Statement	SA	A	N	D	SD
1	There is a high degree of financial leverage for this company					
2	Information symmetry has been at its worst over the last 5 years					
3	The pecking order framework is not much followed when undertaking the financial leverage					
4	Exchange rate risk do not effect on daily business operations					
5	The company rarely uses retained earnings to meet interest payment and debt at maturity.					

G FINANCIAL PERFORMANCE

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD**)

G	Statement	SA	A	N	D	SD
1	ROI is the main indicator of financial performance					
2	Profitability of the firm is the net income to average assets of the firm					
3	Profitability is used to measure the financial performance of the firm					
4	The higher the assets turnover, the higher the Profitability of the firm					
5	ROI as a ratio is used to measure the financial performance of the firm					

H BOARD COMPOSITION

Indicate your level of agreement with the following statements by ticking the column that best reflects your opinion. (**Strongly Agree-SA, Agree – A, neither Agree or Disagree – N, Disagree –D, Strongly Disagree – SD**)

H	Statement	SA	A	N	D	SD
1	The board has a balanced ratio in terms of gender					
2	The board has a balanced distribution in terms of age					
3	The board has a balanced ratio in terms of executive versus non-executive members					
4	The board has a policy on CEO duality					
5	The board independence has an effect on financial performance					

THANK YOU.

Appendix III: List of Companies

List of Companies listed on the Nairobi Securities Exchange as at 2015

SECTOR	YEAR OF LISTING
AGRICULTURAL	
Eaagads Ltd P.O BOX 10-00232 Ruiru Tel. 0722-205530	1950
Kapchorua Tea Co. Ltd P.O BOX 12-30301 Nandi Hills Tel. +254 – 053-643012	1953
Kakuzi ord P.O BOX 24-0100 Thika Tel. 254- 060-2033012	1957
Limuru Tea Co. Ltd P.O BOX 104-00217 Limuru Tel. +254-20-2458752	1967
Rea Vipingo Plantations Ltd	1996

P.O BOX 17646-00500 Nairobi Tel. +254-202725386	
Sasini Tea and Coffee Ltd P.O BOX 30151-00100 Nairobi Tel. +254-20342166	1965
Williamson Tea Kenya Ltd P.O BOX 124-20200 Kericho Tel. +254- 72220133	1972
SECTOR	YEAR OF LISTING
COMMERCIAL AND SERVICES	
Express Ltd Tel. +254 -02053112 Kenya Airways Ltd P.O BOX 19002 – 00501 Nairobi Tel. +254 -020 6422000	1975
National Media Group P.O BOX 49010-00100	1954

Nairobi Tel. +254-203288000	
Standard Group Ltd P.O BOX 30080- 00100 Nairobi Tel. +254 - 203222111	1954
TPS Eastern African (Serena) Ltd P.O BOX 48690-00100 Nairobi Tel. +254- 20284	1997
Scangroup Ltd P.O BOX 34537-00100 Nairobi Tel. +254 - 202799000	2005
Uchumi Supermarkets Ltd Tel. +254 0722205442	
Hutchings Biemer Ltd Tel. +254 737 095124	1964
Longhorn Kenya Ltd P.O BOX 18033-00500 Nairobi Tel. +254 0713793734	
SECTOR	YEAR OF LISTING
Atlas Development and Support Service	1959

Tel +254 (020) 2831000	
Deacons (East Africa) Plc Ord Norfolk Towers, Kijabe Street Tel. 0728-28603493	1968
Nairobi Business Ventures Ltd P.O BOX 18638-00500 Nairobi Tel. +254- 0708037189	1967
TELECOMMUNICATION AND TECHNOLOGY	
Safaricom Ltd P.O BOX 46350-00100 Nairobi Tel. +254- 722561985	2012
Automobiles and Accessories	
Car and General (K) Ltd P.O BOX 20001-00200 Nairobi Tel. 020 - 554500	1940
CMC Holdings Ltd P.O BOX 30135 Nairobi Tel. 020693200	1950
Sameer Africa Ltd	1994

P.O BOX 30429-00100 Nairobi Tel. +254- 0203962000	
Marshalls (E,A) Ltd P.O BOX 30366-00100 Nairobi Tel. +254-0722208819	1969
SECTOR	YEAR OF LISTING
BANKING	
Barclays Bank Ltd P.O Box P.O BOX 30120 -00100 Nairobi - Tel. +254 - 203267000	1986
CFC Stanbic Holdings Ltd P.O BOX 30550-00100 Nairobi Tel. +254 (20) 32681	1970
I&M Holdings P.O BOX 30238-00100 Nairobi Tel. +254- 0203221008	2013
Diamond Trust Bank Kenya Ltd P.O BOX 61711- 00200	1972

Nairobi Tel. +254 202 849000	
Housing Finance Co. Ltd P.O BOX 30088-00100 Nairobi Tel. +254 4670600	1992
Kenya Commercial Bank Ltd P.OBOX45129-00100 Nairobi Tel. 020-2249537	1990
NIC Bank Ltd P.O BOX 44599-00100 Nairobi Tel. 020-2888505	1971
SECTOR	YEAR OF LISTING
Standard Chartered Bank Ltd P.O BOX 30001- 00100 Nairobi	1954
Equity Bank Ltd P.O BOX 7504-00200 Nairobi Tel. +254 763076000	2004
The Co-operative Bank of Kenya Ltd	2004

P.O BOX 48231-00100 Nairobi Tel. 020-3276000	
INSURANCE	
Jubilee Holdings Ltd P.O BOX 30376-00100 Nairobi Tel. 020-229930	1984
Pan African Insurance Holdings Ltd Pan African House, Kenyatta Avenue Nairobi Tel. 020-2229367	1963
Kenya Re-Insurance Corporation Ltd P.O BOX 30271-00100 Nairobi Tel. +254 -202240188	1989
Liberty Kenya Holdings Ltd P.O BOX 30364 – 00100 Nairobi Tel. +254-202866510	1997
British- American Investments Company (Kenya) Ltd P.O BOX 30375	2001

Nairobi Tel + 254 0202833000	
SECTOR	YEAR OF LISTING
CIC Insurance Group Ltd P.O BOX 84846-80100 Nairobi Tel. 020 32960000	1965
INVESTMENT	
Olympia Capital Holdings Ltd P.O BOX 30102- 0100 Nairobi Tel. + 254 020552681	1967
Centum Investment Co. Ltd International house, Mama Ngina Street Tel. 0720316303	1977
Trans-Century P.O BOX 42334-00100 Nairobi Tel. +254-202245350	1967
INVESTMENT SERVICES	
Nairobi Securities Exchange Ltd ord P.O BOX 43633-00100	1962

Nairobi Tel. +254 202831000	
MANUFACTURING AND ALLIED	
B.O.C Kenya Ltd P.O BOX 18010 Nairobi Tel. +254 719069000	1969
British American Tobacco Kenya Ltd P.O BOX 30000- Nairobi Tel. 020-533555	1969
Carbacid Investment Ltd P.O BOX 30564 -00100 Nairobi - Tel. +254 – 20535082	1962
SECTOR	YEAR OF LISTING
East African Breweries Ltd P.O BOX 30161- 00100 Nairobi Tel. +254-020864400	1972
Mumias Sugar Co. Ltd P.O BOX Private Bag	2001

<p>Mumias</p> <p>Tel. 0722203891</p>	
<p>Unga Group Ltd</p> <p>P.O BOX 30096-00100</p> <p>Nairobi</p> <p>Tel. +254-203933000</p>	1971
<p>Eveready East Africa Ltd</p> <p>P.O BOX 44765 -00100</p> <p>Nairobi</p> <p>Tel. 020-2216139</p>	2006
<p>Kenya Orchards Ltd</p> <p>P.O BOX 212-01001</p> <p>Thika</p> <p>Tel. +254-2026013</p>	1959
<p>A Baumann Kenya Ltd</p> <p>P.O BOX 3092- 00100</p> <p>Nairobi</p> <p>Tel. 020-536486</p>	1969
<p>Flame Tree Group Holding Ltd Ord</p> <p>P.O BOX 27621 -00100</p> <p>Nairobi</p>	1987

CONSTRUCTION AND ALLIED	
Athi River Mining P.O BOX 41908-00100 Nairobi Tel. 072270670	1985
Bamburi Cement Ltd, P.O BOX 10921-00100, Nairobi	1970
SECTOR	YEAR OF LISTING
Crown Berger Kenya Ltd, P.O Box 78848-00507, Nairobi. Tel. +254-533603	2003
East African Cables Ltd, P. O BOX 18243-00500, Nairobi. Tel. 0722203076	1973
East African Portland Cement Ltd P.O BOX 20 – 00204 Athi River Tel. 07222203076	1965
ENERGY AND PETROLEUM	
Kenol Kobil Ltd P.O BOX 44202, 00100	1987

Nairobi Tel. +254-703022000	
Total Kenya Ltd P.O BOX 30736-00100 Nairobi Tel. +254-202897000	1988
KenGen Ltd P.O BOX 40100 Nairobi Tel. +254-203666000	2006
Kenya Power & Lighting Ltd, P.O BOX30094-00100, Nairobi. Tel. 020-3201622	
Umeme Ltd, P.O BOX 34942 – 00100, Nairobi. Tel. 0722327365	2013
Growth Enterprise Market Segment Tel. + 254 202831000	2002
SECTOR	YEAR OF LISTING
Home Africa <i>Tel.</i> +254-20-3907000	1990
Kurwitu Ventures	1968

<i>Tel.</i> +254 - 0715281211	
REAL ESTATE INVESTMENT TRUST	
StanlibFahari I-REITs P.O. Box 30550-00100 <i>Tel.</i> +254 711076111	1976

Source : Nse (2015)

Appendix IV: Secondary Data Collection Sheet Guide

This sheet was used by the researcher to collect secondary data among the fifty nine selected companies which formed the sample size of the study. The data collected was based on two important variables which included: profitability and Return on Investment and Shares held by Management. The variables helped the researcher to analyze the financial performance in terms of Return on Investment and Profitability. A table was used to collect the data for the duration of the study.

YEAR	Board Independence	Board Tenure	Tax	MC	NPL	Earning before tax
Barclays banks Ltd						
CFC Holdings ltd						
Diamond Trust bank Kenya Ltd						
Housing Finance Co. Ltd						
Kenya Commercial Bank of Kenya						

YEAR	Board Independence	Board Tenure	Tax	MC	NPL	Earning before tax
National Bank of Kenya Ltd						
NIC Bank Ltd Ord.						
Standard Chartered Bank						
Equity Bank Ltd						
The Cooperative Bank of Kenya Ltd						

PROFITABILITY LOCAL OF LISTED FIRMS (‘000)

Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ARM Cement	21594 41	205402 7	756400 0	68485 62	79364 10	372322 1	42400 62	3362746	52222 00	148035 6	907631
Atlas African Industries	15267 93	345353 4	60532 4	15164 44	83464 6	552435	66520 0	173647	74847 6	193338 309	292561 017
B O C Kenya	26839	44973	25133 000	30839 2	28669 2	214948	11468 5	231682		725779 4	570230 5
Bamburi Cement	16317 715	2828981 4	16948 0	55160 00	71760 00	846600 0	75640 00	9596000	76636 00	319881 7	274124 0
Barclays Bank of Kenya	22825 67	2341366	66520 0	18983 1	16834 0	154958	15928 4	155124	16550 7	463295	568826
BAT Kenya	17364 7	748474	15039 977	57711 59	51042 29	466241 6	29395 19	2221219		1689490	1506002
Britam (Kenya)	75908 72	8334189	251183	31961 61	28494 06	172408 6	-		14404 93	201237 59	172081 43
Car & General (K)	68232	53529	12758 45	30597 6	35136 3	295753	57222 4	456918	30597 6	709387 5	701749 8
Carbacid Investments	79525 4	806474	32486 4	63468 6	53544 4	374210	43804 1	367027	46988 1	223567 7	- 661347 9
Centum Investment Co	37649 3	325656	- 33857 1	44808 07	36487 36	159654 7	244912 6	1127730	26605 89	- 108260 00	214600 0
CIC Insurance	17364	748474	38087	16458	16495	787214	60532	277726	99314	5875337	5639303

Group	7		718	74	91		4		5.8	7	7
Co-operative Bank of Kenya	73369 9	840038	72633	55790 238	37439 000	237980 00	25133 000	25133000	28437 074	642434 0	850669 3
Crown Paints Kenya	52000 2	802512	-14869	33344 2	22417 0	200539	16948 0	139818	21348 9	326880 3	294463 5
Deacons East Africa	79606 9	1378576		15164 44	83464 6	552435	66520 0	173647	74847 4	102393	68097
Diamond Trust Bank Kenya	68232	53529	56102 8	33001 498	25302 138	195545 95	15039 977	1128837 8	20837 317	683971	876043
Eaagads	79525 4	806474		46329 5	56882 6	340318	251183	251183	37496 1	568826	340318
East African Breweries	78232	53529	35264 81	15173 576	19815 586	125311 45	12758 452	1156890 9	14369 533	151327	-25949
East African Cables	18634 25	5020045	21136 96	63666 4	80932 3	576901	32486 4	603969	59034 4	110952 8	176402 9
East African Portland Cement	26839	44976	251183	14194 78	10329 14	- 119059	- 33857 1	1881678	36212 2	3602	3534
Equity Group	33627 46	522220 0	108531 4	82890 141	75257 675	521290 35	38087 718	3096878 7	55866 671	181216 8	115685 6
Eveready East Africa	17364 7	748476	97979 71	10239 3	68097	-43707	72633	68232	53529	684856 2	793641 0
Express Kenya	23168 2		32264 44	-1695	- 13236	- 222355	- -14869	25916	- 45247	151644 4	834646
Flame Tree	95960	766360	33804							308392	286692

Group Holdings	00	0	23								
HF Group	15512 4	165507. 4	26710 00	14803 56	90763 1	975795	56102 8	351118	85518 6	551600 0	717600 0
Home Afrika	22212 19		555458 14	19333 8309	29256 1017				24294 9663	189831	168340
I&M Holdings		144049 3	56494 62	72577 94	57023 05	495389 3	352648 1	1794834	536011 8	577115 9	510422 9
Jubilee Holdings	45691 8	305976	16600 16	31988 17	27412 40	219382 8	211369 6	1162148	228194 5	319616 1	284940 6
Kakuzi	367027	469881	72633	46329 5	56882 6	340318	251183	251183	37496 1	305976	351363
Kapchorua Tea Company	11277 30	2660589	94339 7	16894 90	15060 02	129611 0	108531 4	961226	13076 28	634686	535444
KCB Group	27772 6	993145	251183	20123 759	17208 143	151293 74	97979 71	6300361	137119 21	4480807	3648736
KenGen Company	25133 000	284370 74	27403	70938 75	70174 98	564825 9	32264 44	5312599	56597 35	164587 4	164959 1
KenolKobil	13981 8	213489	21798 74	22356 77	66134 79	634634 6	33804 23	206553	11111 04	557902 38	374390 00
Kenya Airways	17364 7	748474	2148	- 10826 000	21460 00	500200 0	26710 00	- 5664000	- 13342 00	333442	224170
Kenya Orchards	11288 378	208373 17	26978 230	58753 377	56393 037	562030 80	555458 14	5503901 6	56386 865	151644 4	834646
Kenya Power & Lighting Co	25118 3	374961	26083 92	64243 40	85066 93	625475 1	56494 62	4782433	632353 5	330014 98	253021 38

Kenya Re	11568 909	143695 33	53806	32688 03	29446 35	203677 7	16600 16	1463862	22748 18	463295	568826
Kurwitu Ventures	60396 9	590344	23407 924	10239 3	68097	73707	72633	68232	53529	151735 76	198155 86
Liberty Kenya Holdings	18816 78	362122	21681 42	68397 1	87604 3	733708	94339 7	795254	80647 4	636664	809323
Limuru Tea Co	30968 787	558666 71	66520 0	56882 6	34031 8	253811	251183	251183	33306 4	141947 8	- 103291 4
Longhorn Publishers	68232	53529	854101 6	15132 7	- 25949	213075	27403	32147	79600	828901 41	752576 75
Mumias Sugar Co	25916	-45247	72633	11095 28	17640 29	264657 5	21798 74	1193161	- 22359 99	102393	68097
Nation Media Group	68397 1	876043	94339 7	3602	3534	2823	2148	1667	2755	-1695	-13236
National Bank of Kenya	35111 8	855186	45365 0	18121 68	11568 56	244385 0	26978 23	2159441	20540 27		
NIC Bank		242949 66	66520 0	50095 71	45179 67	360494 8	26083 92	1526793	34535 34	148035 6	907631
Olympia Capital Holdings	37948 6	536011	13884 25	61125	28858	54240	53806	26839	44973	193338 309	292561 017
Safaricom	11621 48	228194 5	11929 33	28289 814	21025 680	202691 46	23407 924	1631771 5	282898 14	725779 4	570230 5
Sameer Africa	25118 3	374961	374271	2679 613	23267 23	224978 8	21681 42	2282567	234136 6	319881 7	274124 0

Sanlam Kenya	96122 6	1307628	17263 3	15164 44	83464 6	552435	66520 0	173647	748474	463295	568826
Sasini	63003 61	137119 21	94339 7	83231 15	83373 52	887859 2	854101 6	7590872	83341 89	1689490	1506002
CfC Stanbic Holdings	53125 99	565973 5	47263 3	10239 3	68097	-43707	72633	68232	53529	201237 59	172081 43
Standard Chartered Bank Kenya	20655 3	111110 4	113802 12	68397 1	87604 3	733708	94339 7	795254	80647 4	709387 5	701749 8
Standard Group	- 56640 00	- 133420 0	- 253806	30068 0	26536 4	232097	45365 0	376493	32565 6	223567 7	- 661347 9
Stanlib Fahari I-REIT	55039 016	5638686 5	434031 8	15164 44	83464 6	552435	66520 0	173647	74847 4	- 108260 00	214600 0
Total Kenya	47824 33	632353 5	72594 98	20845 17	- 64301	57850	13884 25	733699	84003 8	5875337 7	5639303 7
TPS Eastern Africa	14638 62	227481 8	17640 291	97324 8	97324 8	853133	69293 3	520002	80251 2	642434 0	850669 3
TransCentury	68232	53529	63534	15350 49	19694 32	161806 3	974271	796069	13785 76	326880 3	294463 5
Uchumi Supermarkets	79525 4	806474	71568 566	10239 3	68097	-43707	72633	68232	53529	102393	68097
Umeme	25118 3	333064	45179 6	78397 1	86043	733708	94339 7	795254	80647 4	683971	876043
Unga Group	32147	79600	88858	10239 3	67097	56707	72633	78232	53529	568826	340318

Williamson Tea Kenya	33627 46	522220 0	61025 680	72852 15	62260 24	534534 7	438021 2	1863425	50200 45	151327	-25949
WPP Scangroup	17364 7	748476	63267 23	61125	28858	54240	53806	26839	44976	110952 8	176402 9

FOREIGN PROFITABILITY OF LISTED FIRMS ('000)

Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ARM Cement	21594 41	205402 7	756400 0	68485 62	79364 10	372322 1	42400 62	3362746	52222 00	148035 6	907631
Atlas African Industries	15267 93	345353 4	60532 4	15164 44	83464 6	552435	66520 0	173647	74847 6	193338 309	292561 017
B O C Kenya	26839	44973	25133 000	30839 2	28669 2	214948	11468 5	231682		725779 4	570230 5
Bamburi Cement	16317 715	2828981 4	16948 0	55160 00	71760 00	846600 0	75640 00	9596000	76636 00	319881 7	274124 0
Barclays Bank of Kenya	22825 67	2341366	66520 0	18983 1	16834 0	154958	15928 4	155124	16550 7	463295	568826
BAT Kenya	17364 7	748474	15039 977	57711 59	51042 29	466241 6	29395 19	2221219		1689490	1506002
Britam (Kenya)	75908 72	8334189	251183	31961 61	28494 06	172408 6	-		14404 93	201237 59	172081 43
Car & General (K)	68232	53529	12758 45	30597 6	35136 3	295753	57222 4	456918	30597 6	709387 5	701749 8
Carbacid Investments	79525 4	806474	32486 4	63468 6	53544 4	374210	43804 1	367027	46988 1	223567 7	661347 9
Centum Investment Co	37649 3	325656	- 33857	44808 07	36487 36	159654 7	244912 6	1127730	26605 89	- 108260	214600 0

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CIC Insurance Group	17364 7	748474	38087 718	16458 74	16495 91	787214	60532 4	277726	99314 5.8	5875337 7	5639303 7
Co-operative Bank of Kenya	73369 9	840038	72633	55790 238	37439 000	237980 00	25133 000	25133000	28437 074	642434 0	850669 3
Crown Paints Kenya	52000 2	802512	-14869	33344 2	22417 0	200539	16948 0	139818	21348 9	326880 3	294463 5
Deacons East Africa	79606 9	1378576		15164 44	83464 6	552435	66520 0	173647	74847 4	102393	68097
Diamond Trust Bank Kenya	68232	53529	56102 8	33001 498	25302 138	195545 95	15039 977	1128837 8	20837 317	683971	876043
Eaagads	79525 4	806474		46329 5	56882 6	340318	251183	251183	37496 1	568826	340318
East African Breweries	78232	53529	35264 81	15173 576	19815 586	125311 45	12758 452	1156890 9	14369 533	151327	-25949
East African Cables	18634 25	5020045	21136 96	63666 4	80932 3	576901	32486 4	603969	59034 4	110952 8	176402 9
East African Portland Cement	26839	44976	251183	14194 78	10329 14	- 119059	- 33857 1	1881678	36212 2	3602	3534
Equity Group	33627 46	522220 0	108531 4	82890 141	75257 675	521290 35	38087 718	3096878 7	55866 671	181216 8	115685 6
Eveready East Africa	17364 7	748476	97979 71	10239 3	68097	-43707	72633	68232	53529	684856 2	793641 0
Express Kenya	23168 2		32264 44	-1695	13236	222355	-14869	25916	45247	151644 4	834646

Flame Tree Group Holdings	95960 00	766360 0	33804 23							308392	286692	
HF Group	15512 4	165507. 4	26710 00	14803 56	90763 1	975795	56102 8	351118	85518 6	551600 0	717600 0	
Home Afrika	22212 19		555458 14	19333 8309	29256 1017				24294 9663	189831	168340	
I&M Holdings		144049 3	56494 62	72577 94	57023 05	495389 3	352648 1	1794834	536011 8	577115 9	510422 9	
Jubilee Holdings	45691 8	305976	16600 16	31988 17	27412 40	219382 8	211369 6	1162148	228194 5	319616 1	284940 6	
Kakuzi	367027	469881	72633	46329 5	56882 6	340318	251183	251183	37496 1	305976	351363	
Kapchorua Tea Company	11277 30	2660589	94339 7	16894 90	15060 02	129611 0	108531 4	961226	13076 28	634686	535444	
KCB Group	27772 6	993145	251183	20123 759	17208 143	151293 74	97979 71	6300361	137119 21	4480807	3648736	
KenGen Company	25133 000	284370 74	27403	70938 75	70174 98	564825 9	32264 44	5312599	56597 35	164587 4	164959 1	
Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
KenolKobil	13981 8	213489	21798 74	22356 77	66134 79	634634 6	33804 23	206553	11111 04	557902 38	374390 00	
Kenya Airways	17364 7	748474	2148	10826 000	21460 00	500200 0	26710 00	5664000	- 00	13342 00	333442	224170
Kenya Orchards	11288 378	208373 17	26978 230	58753 377	56393 037	562030 80	555458 14	5503901 6	56386 865	151644 4	834646	
Kenya Power & Lighting Co	25118 3	374961	26083 92	64243 40	85066 93	625475 1	56494 62	4782433	632353 5	330014 98	253021 38	

Kenya Re	11568 909	143695 33	53806	32688 03	29446 35	203677 7	16600 16	1463862	22748 18	463295	568826
Kurwitu Ventures	60396 9	590344	23407 924	10239 3	68097	73707	72633	68232	53529	151735 76	198155 86
Liberty Kenya Holdings	18816 78	362122	21681 42	68397 1	87604 3	733708	94339 7	795254	80647 4	636664	809323
Limuru Tea Co	30968 787	558666 71	66520 0	56882 6	34031 8	253811	251183	251183	33306 4	141947 8	- 103291 4
Longhorn Publishers	68232	53529	854101 6	15132 7	- 25949	213075	27403	32147	79600	828901 41	752576 75
Mumias Sugar Co	25916	-45247	72633	11095 28	17640 29	264657 5	21798 74	1193161	- 22359 99	102393	68097
Nation Media Group	68397 1	876043	94339 7	3602	3534	2823	2148	1667	2755	-1695	-13236
National Bank of Kenya	35111 8	855186	45365 0	18121 68	11568 56	244385 0	26978 23	2159441	20540 27		
NIC Bank		242949 66	66520 0	50095 71	45179 67	360494 8	26083 92	1526793	34535 34	148035 6	907631
Olympia Capital Holdings	37948 6	536011	13884 25	61125	28858	54240	53806	26839	44973	193338 309	292561 017
Safaricom	11621 48	228194 5	11929 33	28289 814	21025 680	202691 46	23407 924	1631771 5	282898 14	725779 4	570230 5

Sameer Africa	25118 3	374961	374271	2679 613	23267 23	224978 8	21681 42	2282567	234136 6	319881 7	274124 0
Sanlam Kenya	96122 6	1307628	17263 3	15164 44	83464 6	552435	66520 0	173647	748474	463295	568826
Sasini	63003 61	137119 21	94339 7	83231 15	83373 52	887859 2	854101 6	7590872	83341 89	1689490	1506002
CfC Stanbic Holdings	53125 99	565973 5	47263 3	10239 3	68097	-43707	72633	68232	53529	201237 59	172081 43
Standard Chartered Bank Kenya	20655 3	111110 4	113802 12	68397 1	87604 3	733708	94339 7	795254	80647 4	709387 5	701749 8
Standard Group	- 56640 00	- 133420 0	- 253806	30068 0	26536 4	232097	45365 0	376493	32565 6	223567 7	- 661347 9
Stanlib Fahari I-REIT	55039 016	5638686 5	434031 8	15164 44	83464 6	552435	66520 0	173647	74847 4	- 108260 00	214600 0
Total Kenya	47824 33	632353 5	72594 98	20845 17	- 64301	57850	13884 25	733699	84003 8	5875337 7	5639303 7
TPS Eastern Africa	14638 62	227481 8	17640 291	97324 8	97324 8	853133	69293 3	520002	80251 2	642434 0	850669 3
TransCentury	68232	53529	63534	15350 49	19694 32	161806 3	974271	796069	13785 76	326880 3	294463 5
Uchumi Supermarkets	79525 4	806474	71568 566	10239 3	68097	-43707	72633	68232	53529	102393	68097
Umeme	25118 3	333064	45179 6	78397 1	86043	733708	94339 7	795254	80647 4	683971	876043
Unga Group	32147	79600	88858	10239	67097	56707	72633	78232	53529	568826	340318

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Williamson Tea Kenya	33627 46	522220 0	61025 680	72852 15	62260 24	534534 7	438021 2	1863425	50200 45	151327	-25949
WPP Scangroup	17364 7	748476	63267 23	61125	28858	54240	53806	26839	44976	110952 8	176402 9

RETURN ON INVESTMENT

Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ARM Cement		0.049	0.177	0.081	0.027	0.015	0.021	0.107	0.127	0.148	0.214
Atlas African Industries	0.053	0.217	0.152	0.091	0.114	0.083	0.054	0.043	0.214	0.091	0.244
B O C Kenya	0.124	0.236	0.244	0.202	0.144	0.148	0.177	0.173	0.244	0.124	0.367
Bamburi Cement	0.072	0.071	0.065	0.225	0.018	0.091	0.152	0.275	0.367	0.072	0.326
Barclays Bank of Kenya	0.101	0.023	0.104	0.196	0.126	0.124	0.244	0.059	0.326	0.101	0.194
BAT Kenya	0.049	0.221	0.063	0.052	0.094	0.072	0.065	0.061	0.194	0.049	0.177
Britam (Kenya)	0.217	0.125	0.230	0.222	0.077	0.101	0.104	0.071	0.177	0.217	0.134
Car & General (K)	0.236	0.096	0.120	0.023	0.034	0.049	0.063	0.023	0.134	0.236	0.272
Carbacid Investments	0.081	0.196	0.028	0.221	0.272	0.217	0.230	0.221	0.272	0.071	0.207
Centum Investment Co	0.091	0.052	0.091	0.125	0.187	0.236	0.120	0.125	0.207	0.023	0.101
CIC Insurance Group	0.202	0.222	0.205	0.096	0.091	0.071	0.028	0.096	0.101	0.221	0.148
Co-operative Bank of Kenya	0.225	0.102	0.322	0.085	0.138	0.023	0.091	0.085	0.148	0.125	0.273
Crown Paints Kenya	0.072	0.343	0.181	0.188	0.263	0.221	0.205	0.188	0.273	0.096	0.231

Deacons East Africa	0.101	0.004	0.055	0.286	0.221	0.125	0.322	0.286	0.231	0.196	0.235
Diamond Trust Bank Kenya	0.049	0.063	0.279	0.236	0.215	0.096	0.181	0.151	0.235	0.052	0.230
Eaagads	0.217	0.363	0.141	0.081	0.092	0.196	0.055	0.067	0.230	0.222	0.102
East African Breweries	0.236	0.236	0.378	0.244	0.186	0.052	0.279	0.363	0.102	0.102	0.063
East African Cables	0.081	0.081	0.092	0.065	0.124	0.222	0.141	0.236	0.063	0.343	0.186
East African Portland Cement	0.091	0.207	0.061	0.104	0.342	0.102	0.378	0.081	0.186	0.004	0.124
Equity Group	0.275	0.101	0.071	0.063	0.053	0.343	0.092	0.091	0.124	0.063	0.151
Eveready East Africa	0.059	0.081	0.023	0.230	0.124	0.004	0.061	0.202	0.151	0.363	0.071
Express Kenya	0.061	0.091	0.221	0.120	0.072	0.063	0.071	0.225	0.071	0.236	0.023
Flame Tree Group Holdings	0.055	0.096	0.125	0.236	0.101	0.363	0.023	0.196	0.023	0.081	0.221
HF Group	0.053	0.085	0.096	0.081	0.049	0.236	0.221	0.052	0.221	0.207	0.125
Home Afrika	0.124	0.188	0.085	0.091	0.217	0.081	0.125	0.222	0.125	0.101	0.096
I&M Holdings	0.072	0.023	0.188	0.202	0.236	0.207	0.096	0.023	0.096	0.081	0.085
Jubilee Holdings	0.101	0.221	0.286	0.225	0.081	0.101	0.085	0.221	0.085	0.148	0.188
Kakuzi	0.049	0.049	0.236	0.196	0.091	0.081	0.188	0.125	0.188	0.091	0.214
Kapchorua Tea Company	0.217	0.217	0.081	0.052	0.202	0.091	0.286	0.096	0.023	0.124	0.244

KCB Group	0.236	0.236	0.091	0.222	0.225	0.096	0.236	0.085	0.221	0.072	0.367
KenGen Company	0.081	0.071	0.202	0.023	0.072	0.085	0.081	0.188	0.125	0.101	0.326
KenolKobil	0.091	0.023	0.177	0.221	0.101	0.188	0.091	0.286	0.096	0.049	0.194
Kenya Airways	0.202	0.221	0.152	0.125	0.049	0.023	0.202	0.236	0.085	0.217	0.177
Kenya Orchards	0.225	0.125	0.244	0.096	0.217	0.221	0.225	0.081	0.188	0.236	0.134
Kenya Power & Lighting Co	0.072	0.096	0.065	0.085	0.236	0.072	0.196	0.244	0.286	0.071	0.272
Kenya Re	0.101	0.196	0.104	0.188	0.081	0.101	0.052	0.065	0.236	0.023	0.207
Kurwitu Ventures	0.049	0.052	0.063	0.286	0.091	0.049	0.222	0.104	0.081	0.221	0.101
Liberty Kenya Holdings	0.217	0.222	0.230	0.236	0.275	0.059	0.018	0.063	0.225	0.125	0.148
Limuru Tea Co	0.236	0.102	0.120	0.081	0.059	0.061	0.126	0.230	0.196	0.096	0.273
Longhorn Publishers	0.081	0.343	0.028	0.244	0.061	0.071	0.094	0.120	0.244	0.196	0.231
Mumias Sugar Co	0.091	0.004	0.091	0.065	0.055	0.236	0.072	0.236	0.096	0.052	0.235
Nation Media Group	0.275	0.063	0.205	0.104	0.027	0.015	0.021	0.107	0.127	0.222	0.230
National Bank of Kenya	0.059	0.363	0.322	0.063	0.114	0.083	0.054	0.043	0.214	0.102	0.102
NIC Bank	0.061	0.236	0.181	0.230	0.144	0.148	0.177	0.173	0.244	0.343	0.063
Olympia Capital	0.055	0.081	0.055	0.120	0.018	0.091	0.152	0.275	0.367	0.004	0.186

Holdings												
Safaricom	0.053	0.207	0.279	0.236	0.126	0.124	0.244	0.059	0.326	0.063	0.124	
Sameer Africa	0.124	0.101	0.141	0.081	0.094	0.072	0.065	0.061	0.194	0.363	0.151	
Sanlam Kenya	0.072	0.081	0.378	0.091	0.077	0.101	0.104	0.071	0.177	0.236	0.071	
Sasini	0.101	0.091	0.092	0.202	0.034	0.049	0.063	0.023	0.134	0.081	0.023	
CfC Stanbic Holdings	0.049	0.096	0.061	0.225	0.272	0.217	0.230	0.221	0.272	0.207	0.221	
Standard Chartered Bank Kenya	0.217	0.085	0.071	0.196	0.187	0.236	0.120	0.125	0.207	0.101	0.125	
Standard Group	0.236	0.188	0.023	0.052	0.091	0.071	0.028	0.096	0.101	0.081	0.096	
Stanlib Fahari I-REIT	0.081	0.023	0.221	0.222	0.138	0.023	0.091	0.085	0.148	0.148	0.085	
Total Kenya	0.091	0.221	0.125	0.023	0.263	0.221	0.205	0.188	0.273	0.091	0.188	
TPS Eastern Africa	0.202	0.049	0.096	0.221	0.221	0.125	0.322	0.286	0.231	0.124	0.023	
TransCentury	0.225	0.217	0.085	0.125	0.215	0.096	0.181	0.151	0.235	0.072	0.221	
Uchumi Supermarkets	0.072	0.236	0.188	0.096	0.092	0.196	0.055	0.067	0.230	0.101	0.125	
Umeme	0.101	0.071	0.286	0.085	0.186	0.052	0.279	0.363	0.102	0.049	0.214	
Unga Group	0.049	0.023	0.236	0.188	0.124	0.222	0.141	0.236	0.063	0.217	0.244	
Williamson Tea Kenya	0.217	0.221	0.081	0.286	0.342	0.102	0.378	0.081	0.186	0.236	0.367	
WPP Scangroup	0.236	0.125	0.091	0.236	0.053	0.343	0.092	0.091	0.124	0.071	0.326	

