EFFECT OF CAPITAL STRUCTURE DETERMINANTS ON FINANCIAL PERFORMANCE OF NON-FINANCIAL FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE, KENYA

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DECLARATION

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

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DEDICATION

I dedicate this work to the members of my family; my father, Mr. Zedekiah Bongoye; my mother, Mrs. Alice Bongoye, my brothers; Evans Bongoye, Richard Bongoye and Robert Bongoye, and Sister Beatrice Gechemba for their prayers and encouragement. May the Lord, God Almighty bless them abundantly.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis Of Variance
AT	Asset Tangibility
FL	Firm Liquidity
FS	Firm Size
GO	Growth Opportunities
MM	Modigliani and Miller
NSE	Nairobi Securities Exchange
ROA	Return on Asset
ROE	Return on Equity
ROI	Return on Investment
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
US	United States

DEFINITION OF TERMS

Asset Tangibility: This can be defined as the levels to which the investment of a firm is funded by fixed assets. Asset tangibility is measured as the ratio of the fixed asset to the total assets (Olakunle& Oni, 2014).

Capital Structure Determinants: These are the internal factors that are unique to particular firm that help to distinguish one firm from another. These factors depend on the managers' priority areas and the future prospects of the firm (Kaya, 2015).

Financial Performance: Is a measure of efficiency to meet financial obligation by ensuring sound liquidity, solvency and profitability as well maintaining positive value of assets (Pandey, 2005).

Firm Liquidity: This is the firm's ability to meet its short-term financial obligations. Firm liquidity can be measured as current assets divide by to current liabilities (Pandey, 2005).

Firm Size: This is measured as the natural logarithm of the total assets (Boateng, 2004).

Growth Opportunities: This is the future expectations of the firm toincrease its value of the equity as defined by the market value of equity to the book value of equity (Githira, 2015).

ABSTRACT

A review of empirical literatures on capital structure determinants reveals that there exists conflicting results about the correlation of capital structure determinants and financial performance of firms. Therefore, the many years question on how firms choose their capital structure and how it affects their financial performance still remain unanswered. Theconsisted 37 non-financial firms listed at NSE and covering the 5 year period from 2011 to 2015 and adopted descriptive research design.The study's core objective was therefore to explore how capital structure determinants affect the financial performance of non-financial firms listed at NSE, Kenya. While the explicit objectives involved establishing the impact of the following firm specific capital structure determinants (asset tangibility; AT, firm size; FS, firm liquidity, FL and growth opportunities; GO) on ROA as a measure of financial performance. The study revealed that only 5.4% of the variations in the finance performance of non-financial firmswas explained by the variations in the explanatory model variables while 94.6% could be explained by other factors that are not covered by this study. From the study findings, structure determinants generally have a positive relationship with financial performance of listed non-financial firms. Firm size and firm liquidity showed a significant positive relationship with financial performance while growth opportunities have a positive but not significant correlation. The results of the study also revealed that firm liquidity is the most significant or influential variable in the model. Asset tangibility revealed a negative relationship with financial performance of listed non-financial firms but not significant. The results from the hypothesis testing of asset tangibility and growth opportunities were not significant on the financial performance of the listed non-financial firms and therefore were not rejected while those for firm size and firm liquidity were rejected.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The concept of capital structurehas been one of the most puzzling issues in corporate finance literature which has attracted much attention from the financial scholar for many years (Kariuki & Kamau, 2014). According to Pandey (2005), capital structure is the manner in which a firm funds its investments by the use of a mixture of debt and equity. Capital structure choice has been and will continue to be a very vital management decision of firms. Hence the managers need to pay much attention on the optimal capital structure failure to which, firms may not be able to economically use the available resources. The financial performance of any firm is directly influenced by the capital structure decisions thus making it a vital managerial decision. This section provides the break down in the context of global, regional and local perspectives to the area of study.

1.1.1 Global Perspective

Much of the available empirical studies on the capital structure determinants and their effects on firm profitability or financial performance have been done in the developed economies. There are numerous policy concerns that are actually involved in financing decisions of firms.At the external levels, they have impact on the development of capital markets, determination of security prices and interest rate and regulation. While at the internal levels the decisions impact on the structure of capital of a firm, firm development and corporate governance (Green, Murinde & Suppakitjarak, 2002). Much of the literatures are derived from developed countries that enjoy many similarities in their institutions (Booth, Aivazian, Demirguc-Kunt, & Maksimovic, 2001).

Frank and Goyal (2009) in a broad study of the US capital markets, in their findings supported the trade-off theory. There existed a positive relationship between firm gearing andfirm size, the asset tangibility, inflation rates expected and industry characteristics. The unexpected positive changes to profitability may lead to an increase in equity and while debt decreases. Since firms do not immediately adjust their capital structures after the unsodden changes because of the transaction costs involved, a negative relationshipmay be revealed between financial performance and leverage. Colombage (2005) did a study in Sri Lanka to establish the capital structure of firms in that country and found out that trends of financing among Sri Lankan firms agrees with the pecking order hypothesis more than the static trade off theory. More specifically, the overall analysis strongly supports a negative correlation of leverage and retained earnings. On the other hand, Clark *et al*. (2009) using a sample of 26,395 firms from 40 countries supported the static trade off theory.

Brigham and Michael (2001) noted the existence of diverse variations on the structure of capital structure individual firms and amongst industries over a time period. Yong, Kim-Lan, Pei-Lee&Keng-Boon (2008) also asserts that the component of debt in the capital structure of a firm seems to change drastically acrossfirms that are similar. Boateng (2004) argues that decisions on capital structure becomes more complexespecially it is examined in relation to the international context, especiallyin a situation lacking proper institutional guidelines and controls. From the available literatures that seeksconnection that may exist between the structure of capital and firm specific factors or industry features have alldirected their focus on the developed countries (Borgia & Newman, 2012), these countries enjoy institutional stability and they also have these institutions

sharing some common development characteristics. Developing economies have several distinctions in their institutions which, have hardly been involved in carrying out research on the correlation between capital structure determinants and financial performance.

1.1.2 Regional Perspective

Gitira and Nasieku (2015) studied 65 listed firms in East Africa using a panel data covering the period between 2009 and 2013. From the research finding there was a positive but not significant relationship between growth, firm size, profitability and capital structure while asset structure revealed a significant positive correlation. Cost of capital showed a negative correlation with the capital structure but this relationship was not significant.

Ojah and Gwatidzo (2009), using a panel of listed firms in Kenya, Ghana, Zimbabwe, Nigeria, and South Africa investigated corporate capital structure in Africa countries. They mostly emphasized on how cross-country institutional differences and firm characteristics determine the financing decisions by firms. From their findings, firms in Africa have similar characteristics with other emerging economies like South Korea, Brazil, Mexico, Thailand, Turkey and Malaysia. Firms in the African countries rely mostly on internal finance, and wherever they require external resources, they prefer short term debt financing to fund their operational activity hence in agreement with the pecking order theory. Moreover, profitability of the firm, firm size, asset tangibility and firm's age, connect significantly to firm's leverage; and therefore remedies for inadequate institutional development are of value determinants of capital structure in African countries.

1.1.3 Local Perspective

Magara (2012) did a research to establish the major determinants of capital at the Nairobi Securities exchange covering the period 2007-2011. The study revealed a positive and significant correlation between the tangibility, firm size and growth rate and the leverage degree of the firms under study. Though, the study did not involve the macro-economic/external factors like interest rates and inflation. Capital structure is affected by many factors; some of these factors are internal while others are external which the firm has no control such as inflation, taxation etc. The firm specific capital structure determinants are those factors that are unique to a firm, they help to distinguish one firm from another and they depend on the managers' priority areas and the future prospects of the firm. For any specific firm, it has an optimal capital structure determined by the trade-off between the net tax advantage of using additional debt and the costs that may arise from financial distress.

Some researchers and scholars have conducted studies in Kenya to examine the impact of capital structure or leverage on performance. The focus of these studies has been on the effect of capital structure on financial performance using debt ratios as proxies for capital structure (Banafa, Muturi&Ngugi, 2015; Mburu, 2015; Mwangi, Makau & Kosimbei, 2014). This leaves a gap on the capital structure determinants such as asset tangibility, firm size, firm liquidity and growth opportunities that affect financial performance thus the study aims to address this relationship between capital structure determinants on financial performance of non-financial firms listed at Nairobi Securities Exchange in Kenya.

1.2 Statement of the Problem

In spite of the extensive research by scholars of many years, the capital structure decision still remains one of the most puzzling concepts in current corporate finance field. The many years question on what major factors that influence financial performance of a firm, still remain unanswered. Hence, researchers need to conduct studies on the capital structure determinants so as to obtain more evidence on the theory of capital structure. (Vatavu, 2015) argues that most studies that try to analyze the impact of firm's financing decisions on profitability and more specifically financial performance have employed some of the relevant capital structure determinants.The difficulty facing managers in the choice of an optimal capital structure is how these determinants affect firms' financial performance, since financial performance is crucial to firm value and consequently, its survival.

Most of the previous studies (Antoniou *et al.*, 2002; Boateng, 2004; Ngugi, 2008 & Githira, 2015) aimed at examining the significance of the determinants believed to have impact on capital structure decisions and hence at verifying certain capital structure theories. The previous studies have looked at the factors in relation to leverage, the factors studied commonly are: short-term debt, long term debt, dividend payout, macro-economic factors such as tax shield, inflation and capitalization. These studies also focused on the general factors that affect capital structure. This study adopts a different approach so as to fill the gaps left by the previous studies. First, it focuses only on firm specific capital structure determinants, instead of examining a series of factors. Secondly, the significance of these determinants is verified in connection with the financial performance of non-financial firms. Finally, the relationship between capital structure

and financial performance is compared in relation to asset tangibility, firm size, firm liquidity and growth opportunities which is an attempt of in-depth analysis. Therefore, the objective of this study was to establish the effect of capital structure determinants on financial performance ofnon-financial firms listed at NSE.

1.3Objectives of the Study

1.3.1 General objective

The main objective of this study was to establish the effect of firm capital structure determinants on financial performance ofnon-financial firms listed at NSE

1.3.2 Specific objectives

The specific objectives of this study were:

i) To establish the effect of asset tangibility on financial performance ofnon-financial firms listed at NSE, Kenya.
ii) To determine the effect of firm size on financial performance ofnon-financial firms listed at NSE, Kenya.
iii) To examine the effect of firm liquidity on financial performance ofnon-financial firms listed at NSE, Kenya.
iv) To assess the effect of growth opportunities on financial performance of non-financial firms listed at NSE, Kenya.

1.4 Research Hypotheses

The research hypotheses of this study were:

H_{01}: Asset tangibility has no significant effect on financial performance ofnon-financial firms listed at NSE.

H_{02}: Firm size has nosignificant effect on financial performance ofnon-financial firms listed at NSE.

H_{03}: Firm liquidity has no significant effect on financial performance ofnon-financial firms listed at NSE.

H_{04}: Growth opportunities have no significant effect on financial performance of non-financial firms listedat NSE.

1.5 Significance of the Study

This research study is important to the individual firms in the various industries listed at NSE and will help in obtaining information on the correlation between capital structure determinants and financial performance. Information obtained will provide financial institutions, investors and consultants with the necessary updates to plan the financing of their firms and in making sound investment and managerial decisions. The results of the findings of the study will also provide relevant information for the regulatory bodies that promote investment in Kenya, such as the Capital Markets Authorities, to assist thoseanalyses and control the financial resources to firms and form policies that foster investments in developing countries.

The study will be of invaluable assistance to the firm managers in making relevant decisions on the management of firm resources and ways to maximize the value of their firms thushelps to contribute to maximizing of the wealth of the shareholders. Lastly, the study stands to benefit future researchers, scholars, and academicians who may wish to study firm specific capital structure determinants and the financial performance of the firms or any other related subject area.

1.6 Scope of the Study

The study meant to establish the effect of firm capital structure determinants on financial performance of non-financial firms listed at NSE covered37non-financial firms in the period 2011-2015. The researchproject applied secondary panel data obtained from the NSE handbook and the information from individual firms' books of account for the period under study.

The study specifically sought to establish the effect asset tangibility, firm size, firm liquidity and growth opportunities on the financial performance of non-financial firms listed at NSE. This gave a deeper insight of the capital structure topic and helped in providing further literature on the relations between firm capital structure determinants and financial performance. This research tried to establish the effect of firm capital structure determinants on financial performance of non-financial firms listed at the NSE.

1.7 Limitations to the Study

The focus of the studywasonly on the 37 non-financial firms listed at NSE in Kenya for the 5-year period 2011 to 2015. This is a relatively small number since there are many more other firms operating in Kenya though are not listed on the bourse. The time period for the study was also short and the number of firms limited to the listed non-financial firms. Any changes made before or after this period have not been covered in this study. Therefore, the results may not be a representative of the true picture. The study was also faced with a limitation of the model. The model adopted was limited to four independent variables: asset tangibility; firm size; firm liquidity and growth opportunities and one dependent variable; financial performance measured by ROA leaving out other variables that could have been vital to the study.

Apart from that, there was a problem with the firms in the study since they had adopted different accounting policies. In addition, the period for annual closing of accounts was different among the companies. Different accounting policies and periods for annual closing of accounts influenced the accuracy and limited comparison of the results. Data collected for the study was historical data. Historical data is not always accurate in predicting the behavior of variables and as such limits the accuracy of the results obtained. In addition the data collected was only quantitative and as such qualitative aspects of the variables under study were left out.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the relevant theories underlying the area of study; it also gives the conceptual framework that illustrates how the effect of independent variables on the dependent variable. In addition, the chapter evaluates the available empirical evidences documented by other researchers; it provides the summary of the literature on capital structure determinants review and finally shows the research gap. The rationale of the study is to ascertain the effect of firm capital structure determinants on financial performance of non-financial firms listed at NSE. The literature for the study will be obtained from various journals, texts, articlesand websites.

2.2 Theoretical Framework

The work of Modigliani and Miller (1958) formed the foundation of the theories of capital structure. There are a number of theories that been advanced since then notably among which are the pecking order theory and the static trade-off theory that have been in the centre of debate in the corporate finance management field.

2.2.1 Modigliani and Miller Propositions

The foundation of the current capital structure literature is based on the Modigliani and Miller (1958) in their paper: "The Cost of Capital, Corporation Finance and the Theory of Investment". This formed the capital structure irrelevance proposition that argues under perfect markets, the total value of the firm should not be affected by its capital structure. According to Hillier(2013) in reference to the Modgliani and Miller

proposition, capital structure has no impact on the value of a firm and a firm that uses no debt should have the same value to an identical levered firm. This result is commonly known as the MM Proposition I (irrelevant proposition) without corporate taxes, and is has been considered as the foundation of the modern corporate finance literature (Hillier, 2013). Hence, the MM proposition I provide a benchmark which the finance field must constantly reckon.

Modigliani and Miller further argued that in the real world there exist taxes; therefore they developed a model which took into account the existence of taxes. This model is known as MM proposition II with corporate taxes. By including the taxes in their model, firms take advantage of debt that has a tax shied and hence a firm taking on debt will be more worthy than an identical firm that is unlevered. The tax shield is realized since an interest payment is a tax deductible expense, unlike the dividend payments which are made after payment of taxes. Baxter (1976) argued that bankruptcy cost effects the value of a firm in debt. These costs will includes liquidation fees, reorganization costs and legal fees that may be as a result of the firm going bankrupt. Therefore with the existence ofcorporate taxes to firms and bankruptcy costs there is supposed to be an optimum capital structure, where the firm's value is maximized.

The MM irrelevance proposition has been hard to verify. With the presence of debt and the value of a firm both internally controlled and may be affected by other factors such as, asset tangibility, profitability and growth prospects, and the theory's structural test done through the regression of debt value cannot be established (Luigi & Sorin, 2007). Luigi and Sorin (2007) established that Modigliani and Miller theoryfails to give a

realistic explanation on how firms fund their investments but provide a means of finding reasons why financing is of essence.

2.2.2 Static Trade-off Theory

Modigliani and Miller (1963) were the pioneers of this theory, they analyzed the decisions of capital structure in the presence of taxes, and hence payment of interest on debt shields taxation of profits. The theory is based on the assumption that a firm is likely to have an optimal capital structure based on a balance between benefits and costs of using debt. The theory states that an optimal capital structure is obtained where the net tax advantage of debt financing balances leverage rated costs such as financial distress and bankruptcy, holding firm's assets and investment decisions constant (Ngugi, 2008). In essence, the theory asserts that more profitable firms have more debt because they have got more profits that are shielded by the debt from taxes without facing the unexpected bankruptcy costs (Olakunle & Oni, 2014). However, the theory fails to elaborate why firms act conservatively when financing their investments through debt, and also why most countries with divergent taxation system have consistence in leverage is consistence (Popescu, 2009).

According to Myers (1984), the balance betweenthe advantage of debt tax shield and financial distress costs is anticipated to provide an optimum debt levels which may maximize the firm's value. Ngugi (2008) argues that debt has benefits-cost against the use of equity, hence a firm will go for an optimal capital structure that balances between the debt tax shield advantages against the costs associated with bankruptcy. However, researches on trade-off theory conclude mixed results. Rajan and Zingales (1995)and Fama and French (2002) agrees that firms with higher profitability tend apply less debt

therefore being inconsistent with the predictions that firms that earn higher profits use more of debt so that they can reduce the liabilities associated with tax.

Booth *et al*., (2001) in their studies in ten developing countries used three measure of debt ratio; long-term book debt, total debt ratio, and long-term market debt with size of the firm, asset tangibility, average tax rate, average tax rate, business risk and the market to book ratio as independent variables. The study found thatif a firm used more tangible assets it will have a higher long term debt ratio while the total debt ratio will be smaller. Booth *et al*., (2001) concluded in the developing countries the ratio of debt ratio appeared to be affected in similar way by the similar kind of independent variables which were more significant in developed economies. They however pointed out that in the developing economies the long-term debt ratios are considerably lower than those of developed economies.

2.2.3 Pecking Order Theory

Donaldson suggested the Pecking Order Theory in 1961, however it first rigorous theoretical foundation was received by Myers and Majluf (1984). They asserted that firms have a certain preferential order for funds/capital used for financing their business. Pecking order theory has its foundation on the information asymmetry between the insiders and the outsiders in relation to the actual value of the firm and therefore to finance its current investments and future income expectations and prospects, external capital is considered costly as compared to internal capital (Olakunle & Oni, 2014). Myers and Majluf (1984) on the other hand suggested that when firms do not issue new security but opts to use their retained earnings to finance the investment prospects, the information asymmetry issue may be resolved.

Myers (1984) also suggested that whenever external finances are needed by a firm it may issue the safest security, for instance it can issue debt capital then convertible debt and lastly the of useequity may come as a last option. Myer's argument base on firms adheres to a financing source hierarchy and prefers internal financing to external financing when available. When internal finances are not sufficient and there is need for external financing, debt is more preferred to equity. According to Pandey (2005), Myers' argument that states that firm's managementwould always preferred internal financing and issuance of shares is treated as the last resort. The Pecking order theory therefore has suggested an order in which firms follow in financing their investment starting with internal funds, debt and finally equity (Myers, 1984; & Myers &Majluf, 1984).

Ngugi (2008) in his study of 22 listed firms at the NSE to try to establish how pecking order theory is relevant on listed firms in Kenya. The study admits that non-debt tax shields, information asymmetries, and local capital market's infrastructure contributes to firms financing behavior, therefore the pecking order theorythat provides a preference order of financing cannot be rejected. According to him,the deficit in internal financing can be used to identify the financing gap in internal financesthat may triggerto use debt. From the study finding, internal financing gap revealed a positive and significant correlation with debt financing.

2.3 Conceptual Framework

According to Borg, Gall and Gall (2005), conceptual framework can be defined as a diagrammatical or graphical representation of the relationship between independent and dependent variables in a given study. Firm's financial performance depends on the inter-correlations of the explanatory/independent variables which include asset tangibility, firm

size, firm liquidity, and growth opportunities and the dependent variable; financial performance of non-financial firms listed at NSE.

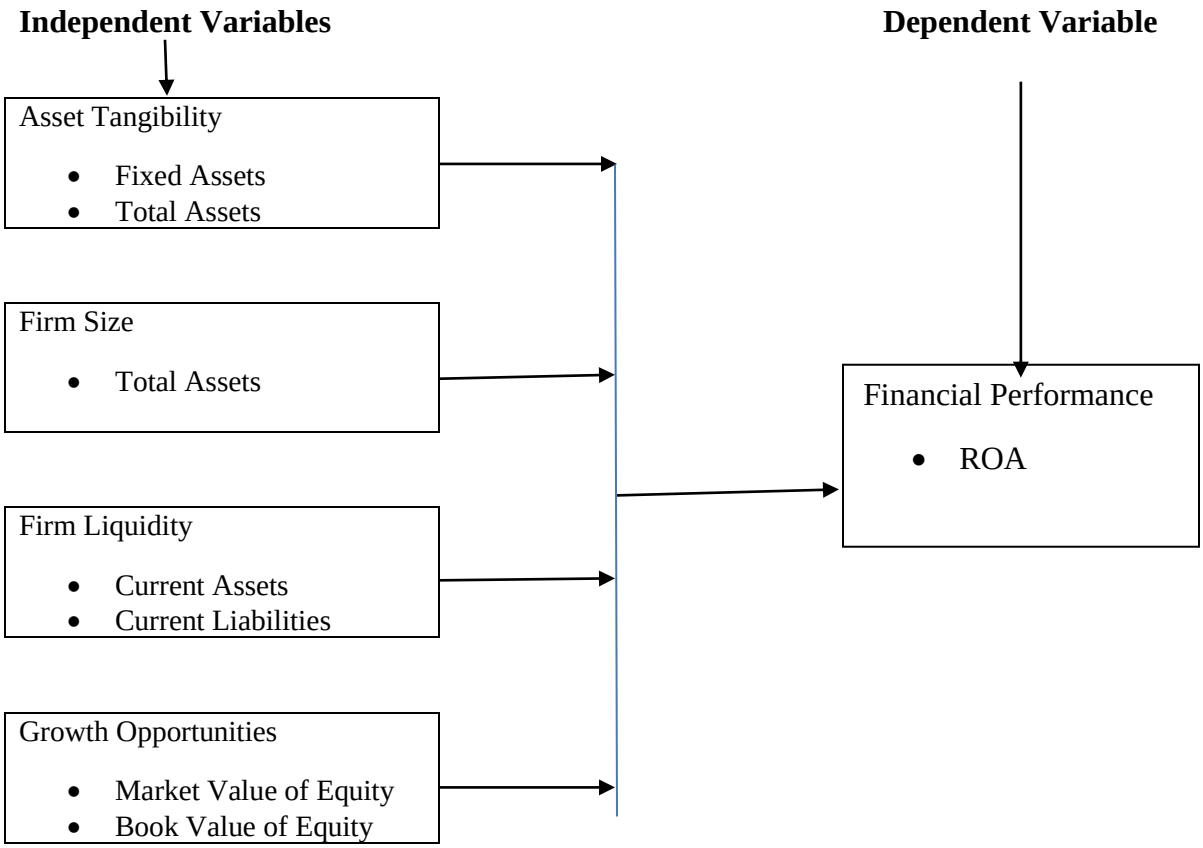

Figure 2.1: Conceptual Framework

2.3.1 Asset Tangibility

Asset tangibility has been an important determinant of capital structure choice and finance performance of firms as evidenced by the various literatures.A firm that has a greater composition of tangible assets in its total assets will have higher ability to raise debt since the fixed assets can be used as security. Empirical review from the previous studies have evidenced a positive correlation between asset tangibility and leverage (Kamau, 2014; Chinaemerem & Anothy, 2012). Drobetz and Fix (2003) did a study to

evaluate the impact of asset tangibility on leverage on 124 large listed firms at the Swiss Stock Exchange. Their study revealed a positive and significant correlation of asset tangibility on leverage which agrees with the results of Pandey (2002) in Malaysia.

When the financial manager of a firm determines the capital structure of their firm, the asset structure plays a significant role. Firms that have a higher degree of asset tangibility are likely to have a greater liquidation value (Hovakimian*et al.*, 2004). Firmshaving heavy investment in tangible assets will have higher financial leverage because they are offered low interest rates on borrowing whenthey use the tangibility assets as security to acquire debt finances. By pledging the firm's tangible assets as security, the costs that come with moral hazards and adverse selection are reduced (Gathogo & Ragui, 2014). The resultant of this is that firms with more tangible assets which have greater liquidation value have relatively easier access to finance at lower cost, consequently leading to higher debt financing.

Some other previous studies have shown a negative correlation between asset tangibility and leverage like Daskalakis and Psillaki (2006). They did a study to establish the effect some factors in which asset tangibility was one of the independent variables on the capital structure decision of firms listed in France and Greek. They measured asset tangibility; they found that asset tangibility had a negative correlation to leverage in both countries. This result of a negative correlation between asset tangibility and leverage agrees with the pecking order theory(Daskalakis & Psillaki 2006). Hence, the firms that have greater tangible assets have already found income stability and therefore they do not need external financing (Kamau, 2014).

2.3.2 Firm Size

The firm's size plays a very vital role in establishing the way the firm interacts within itself and in the environment which it operates (Babalola, 2013). In his argument it states that firms that are larger are more influential to their stakeholders. On the other hand, the rising influences of multinational corporations and conglomerates in today's world economy are good indicators of the role that firm size in the business (Babalola, 2013).In refocusing how important firm size is in corporate finance field, Bhayani, (2010) argued that the most exciting aspect of any economic growth can be identified with the growth of a firm's size in the existing organizations. Citing Rajan and Zingales (1995) who did a study of 43 countries, they showed that much of the expansion of industries in the 1980s, came from the growth in firm size of existing organizations, while only a small about one-third was realized from new ones. Much attention is given to the actual impact of firm's size on the internal composition of organizations and the relationship it has between the firm itself and its major stakeholders (Babalola, 2013).

The concept of firm size has received several queries on its actual influence in the field of corporate finance.It should be noted that firms have been playing a key role in the global and the capitalist economic world and the performance of the firms forms a major interesting aspect that may stakeholders take keen interest on such as shareholders,employees, governments, creditors and suppliers and (Madrid Guijarro *et al*., 2007; Bhayani, 2010). In this line, the analysis of the determinants of firm's profitability or identifying the factors that cause variations in the level of firm's profits has emerged as major research area. Therefore, firm size has been shown as a very important variable that helps to explain the profitability of a firm by researchers and

several studies have tried to determine the effect of the firm's size on the profitability of a firm (Wu, 2006; Serrasqueiro *et al*, 2008).

2.3.3 Firm Liquidity

Liquidity is one of the concepts in finance that has been of interest in the corporate finance field for decades. According to Pandey (2005), firm liquidity is the ability of the firm to meet its short-term financial obligations; which is measured by the current assets divided by current liabilities. From the most recent studies, firm liquidity has been taken to have significantly affected the choice of the structure of their capital by firms (Antoniou *et al*., 2002). Wu (2007) did a study to establish the determinants of capital structure choice among the Chinese firms using firm liquidity as one of the independent variables.In his study, he had categorized firms into two groups; those firms with an average ROE more than 10 % and those with ROE less than 10%. The finding of that study revealed that in both groups, firm liquidity had a negative correlation with debt ratio.

On the same line, Krenusz (2004) did studies to establish factors that determine capital structure in the Germany, USA and Hungary and used firm liquidity ratio was determined as current assets divided by current liabilitiesas one the explanatory variables. From the study findings, it revealed that firm size had a strong negative correlation with firm leverage. On the other hand,a study by Anderson *et al*., (2002) on UK, USA and Belgium firms revealed a positive correlation between firm liquidity and firm gearing of the firms in the Belgium and UK. However, in the USA firms showed a negative correlation agreeing with the study done by Krenusz (2004).

2.3.4 Growth Opportunities

A firm that high growth prospects places much demand on the internal funds and leading to borrowing by the firm to meet its growing demand for extra resources for investment (Hall *et al*., 2004). On the contrary, firms that have higher growth prospects are like to attract higher use of debt to meet the growing needs. Cassar and Holmes (2003) and Hall *et al.,* (2004) in their studies revealed a positive correlation of growth opportunities on both long term and short term debt ratios. Dividend payout by firms greatly affects the capital choice by firms in financing their growth prospects. Generally, those firms that paylow dividendnormally are able to retain more of their earnings in terms of profits to use it to finance their investments. These firms hence depend more on the internal resources and less debt.While, firms that have higher dividend payout will rely heavily on debt finance in financing their growth prospects (Hall *et al*., 2004).

There many studies that agree with the pecking order as far as growth opportunities are concerned some these include Zhao and Wijewardana (2012) who did a study in Sri Lanka, their findings showed that growth opportunities has a positive relationship to financial leverage. On the same line, Kumar *at el*., (2012) and Arabzadeh and Meghaminejad (2012) the studies showed a positive correlation between growth opportunities and financial leverage. In their research study of characteristics of the firm on capital structure of firms listed in Iran Securities market, Ebadi, Thim and Choong (2011), revealed that there was a positive correlation between growth rate and the debt ratio.

Drobetz & Fix(2003) in reference to the trade-off theory, they revealed that the firms' capital structure of firms with higher growth rate have some portion offinancial

obligations since the management gets its reward when their have kept the financial cost of leverage at a minimum and they try to avoid the agency conflicts that may affect its future prospects. Static trade-off theory suggests that higher growth prospects firms normally their debt levels are lower; since the higher growth prospects are most presumably to increase the agency issues amongst creditors and owners, since the latter get a greater incentive of under investing (Myers, 1977).

2.3.5 Measurement of Financial Performance

According to Metcalf and Titard (1976) financial performance is meant to give an understanding to some firm's financial aspects and in its analysis the areas of financial strengths and weaknesses are identified. Mwangi (2010) tried to determinethe effects of financial structure on the financial performance of firms listed at the NSE. The study used a structure questionnaire in the collection of the relevant data for the study.It revealed a strong correlation of short term debt and the financial performance as measure by ROE, liquidity, and ROI. These findings are centrally to the findings of other studies, which hold the view that the short term financing benefit is considered less than its negative aspects.They go ahead to suggest finance managers prefer to first finance their firm's investment opportunities through internal funds before moving to raise the resources from the external sources (Jensen & Meckling, 1976).

The factor of financial performance iscentered on the two main capital structure theories; the Pecking order and Trade-off Theory.The static trade-off theory suggests thatfirms go forlevels of debt that stabilizes the tax shield advantages of using additional debt against the possible financial distress costs. It therefore predicts a moderate level of borrowing by those firms that pay taxes.On the contrary, the pecking order theory suggeststhat a firm

will follow the order of internal funds, debts and lastly issuing equity comes as a last resort whenthere is no sufficient funds for investment. Thus the total composition of debt in the capital structure will reflect the cumulative need of a firm for external sources of finances (Myers, 1984).

2.4 Empirical Review

Pouraghajan and Malekian (2012) conducted a research to establish the impact capital structure would have on the financial performance of firms listed in the Tehran Stock Exchange. The study used a sample of 400 listed firms in the Tehran Stock Exchange from 12 industrial groups for the period 2006 to 2010. They measured financial performance of the listed firms using return on ROE and ROA. Their study revealed that there was a positive and significant correlation between asset tangibility, firm size, and growth opportunities with the measures of financial performance. Firm size revealed a positive and significant correlation with ROE and ROA hence financial performance. Equally, the study showed that asset tangibility a significant and statistically positive relation with financial performance as measured by ROE and ROA. Finally, the results indicated positive and significant correlation between growth opportunities and financial performance measured by ROA and ROE.

Kamau (2014) sought to establish the impact internal factors would have on the profitability of private hospitals in Kenya, using Karen Hospital as the study used a case study. The study targeted the finance staff and the departmental heads to fill the questionnaires. The study used stratified random sampling technique in collecting primary data through a semi-structured questionnaire. The study found a positive correlation of asset tangibility, firm size and volume of capital on profitability of private

hospitals and while leverage showed a negative correlation. The results of the study deduced that asset tangibility, leverage, firm size and capital volume affect profitability of private hospitals in Kenya.

Chinaemerem and Anothy (2012) conducted a study to determine the effects of capital structure on the financial performance of Nigerian companies sampling using 30 non-financial companies listed on the Nigerian Stock Exchange between 2004 and 2010. The study used asset tangibility as one of the independent variables while financial performance(ROA & ROE). The results showed a negative and significant correlation between company's asset tangibility and ROA against theoretical expectations. They concluded that companies that have higherasset tangibility ratio would have lower financial performance ratio (ROA and ROE). On the other hand, asset tangibility showed a positive but not significant correlationwith ROE. The study concluded that the sampled companies failed to use their tangible assets component in the total asset prudently to influence on their financial performance.

Babalola (2013) did a study to determine the effect of firm size on the financial performance of manufacturing firms listed in the Nigerian Stock Exchange. The study analyzed secondary panel data from the firms sampled between the year 2000 and 2009. In the study ROA was used to measure financial performance, while firm size was measured using both total sales and total assets. From the study, it was deduced that firm size, both measured using total sales and total assets, revealed a positive correlation on financial performance (ROA) of manufacturing firms in Nigeria. This showed that firm size is a very vital factor in establishing the financial performance of firms in Nigeria and therefore big firms are likely to perform better financially.

Lartey, Antwi and Boadi (2013) did a study to establish the correlation between the firm liquidity and the financial performance of banks listed on the Ghana Stock Exchange for the period 2005 to 2010. They collected and analyzed data of 7 from the 9 listed banks. They did the analysis of relevant documents as the main procedure of their research for the collection of secondary data for the study. They measured firm liquidity as the ratio of current assets and current liabilities while financial performance used ROE and ROE ratios as the proxies for its measurement. In data analysis the study used time series analysis to establish the trend between firm liquidity and financial performance. The results revealed a positive but weak correlation of firm liquidity and financial performance of the banks listed in Ghana Stock Exchange.

2.5 Critique of Relevant Literature

The empirical review of the literature relevant to this study shows that various researches on the effect of capital structure and financial performance have been conducted. From the review of those studies there are several factors that have an impact on capital structure of a firm. Most of the past studies have mainly sought to establish the determinants of capital structure (Ross, 1977; Myers, 1977; Nagano, 2003; Krenusz, 2004; Ngugi, 2008 & Mahmud *et al.*, 2009). The main aim of any firm to be in business is to maximize its value. Therefore, by merely determining how the firm finances its investment without linking it with their financial performance can be considered as incomplete work and hence there is need to do another research to connect the findings with performance.

From the above analysis, it is clear that the studies have concentrated on capital structure using short term debt, long term debt and total debt as the proxies for the capital structure. In such instances the other capital structure determinants have not been covered well in most developing countries. Similarly, the studies have also concentrated in the developed countries and those countries that were developing at a higher rate than Kenya. The challenges and dynamics facing firms in developing economies such as Kenya are not the same hence conclusions from those countries may not be applicable in Kenya.

2.6 Summary

The foundational work done Modigliani and Miller (1958), provided the benchmark with which other authors have developed their studies and come up with new literature on the capital structure topic. The studies have tried to describe the various ways which researchers have tried to establish the ratio of debt to equity in the firm's capital structure. The pecking order theory in comparison with the trade-off theory argues that pecking order behavior is adopted when firms opts for internal sources of finance first; retained earnings before going for external sources which they prefer debt to equity.

Bundala (2012) argued that with the fast growth of empirical literature on capital structure topic, the available literature cannot be claimed to be exhaustive. Although there have been substantial contributions to the topic and related components of capital structure, so far the results produced have failed to provide a sound basis for determining; in a conclusive way, based on the validity of the various theories so far established. Probably the most eclectic, prevalent and non-controversial view, with respect to the contention surrounding the firm capital structure theory is Myers's argument that it is a

puzzle (Bundala, 2012). From the empirical review, it is evident that there is no comprehensive theory that can explain the firm's strategic financing decisions.

2.7 Research Gap

Most of the capital structure studies have been carried out in developed countries (Frank & Goyal, 2009) but there is minimal researches that have been conducted about the firms' capital structure in developing countries. With the little studies in the developing countries, it's not clear whether the theoretical conclusions and empirical literature from developed countries are valid to the countries that are developing too; or whether conclusions from researches are portable across countries in general (Booth, *et al.,* 2001). On this note, several researchers (Gharaibeh, 2015; & Okako*et al*., 2015) agree that developing countries face unique market problems namely inefficient markets, incomplete information and market irregularities. Therefore studies carried out in developed markets cannot be adopted in developing countries.

Some researchers and scholars have conducted studies in Kenya to examine the effect of capital structure or leverage on performance. The focus of these studies has mainly been on the effect of capital structure on financial performance using debt ratios as proxies for capital structure (Banafa, Muturi&Ngugi, 2015; Mburu, 2015; Mwangi, Makau & Kosimbei, 2014). This leaves a gap on the capital structure determinants such as asset tangibility, firm size, firm liquidity and growth opportunities that affect financial performance thus the study aims to address this correlationbetween capital structure determinants on financial performance of non-financial firms listed at Nairobi Securities Exchange in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter highlights the methodology of research the research used from the data collection, analysis and finally interpretation of the results. It clearly sketches out the research methodology such as the research design, sampling frame, sample size and sampling techniques, target population, data collection methods and finally how data was processed and analyzed.

3.2 Research Design

The research study adopted a descriptive research design to establish the effect of capital structure determinants on financial performance of non-financial firms listed at NSE, Kenya. Descriptive research design is one in which a researcher/scholar givesa numeric description of some parts of the population (Oso & Onen, 2009).The survey is ideally suitable for studies where independent variables are described as they are. According to Iraya and Musyoka (2013), descriptive research design mainly relates to finding out "what is" and can either be qualitative or quantitative because it helps to collect data which describes events and then organizes and tabulates it for easier interpretation.

3.3 Target Population

Bryman and Bell (2007)has defined a population is a set of units from which a sample is to be selected. The target population of this research project comprised of 37 non-financial firms listed at NSE for the 5 year period from 2011 to 2015. A census was carried out due to the small number of non-financial firms listed at NSE. There are thirty

seven listed non-financial firms and all these firms will be included as the target population in this study (Appendix I).

3.4 Sampling Frame

Zikmund(2010) has defined sampling frame to be a list of all elements in a set from which a sample will be selected. On the other hand, Baryman and Bell(2007) argued that a sample frame represents elements in a target population which has the list of all the elements in that population. This study's sampling frame contains the list of all the non-financial firms listed at NSE in Kenya. This study's sampling frame was obtained from the NSE website since it has the most updated, accurate and complete list of the listed firms in Kenya.

3.5 Sample and Sampling Technique

Kothari (2011) defines sampling as the choice of parts of an aggregate or totality on which the researchers base their inference or judgement on the aggregate or the totality. Mugenda (2008) and Baryman and Bell (2007) argue that sampling is commonly used in inferential statistics to make predictions on the behaviour of the population. This study involved 37 non-financial firms listed at NSE covering the period 2011 to 2015. The study did not include financial and insurance firms because they are highly regulated and hence their financing decision is controlled by the regulator. The study did not also include those firms which were not listed during the period 2011-2015 and those without complete records during the same period.

3.6 Data Collection Method

The study applied secondary data collection method and panel data for the period under study that consisted of cross-sections and time series was used. The published financial reports and statements helped to provide the secondary data for all the study variables for the listed non-financial firms for the period 2011-2015.The annual NSE published hand books provided the data for the study. The data gathered gave all the information on the dependent and the independent variables for all the 37 non- financial firms listed during the period of the study.

3.7 Data Processing and Analysis

The collected data from the NSE handbook wassubjected into correlation analysis, descriptive statistics and finally multiple regression analysis helped to examine the correlation between the explanatory and dependent variables. SPSS Version 22.0 software was used in the data analysis to provide the required information for analysis. Baryman and Bell (2007) argues that multiple regressionis the most suitable for studies that involve two or more explanatory variables. A general equation model was adopted that enabled the study to examine data with much flexibility and develop the deviations in the behavior of the cross-section elements. The effect of capital structure determinants on financial performance was established using the model below:

$$\mathbf{Y= \alpha_0 + \beta_1 AT+ \beta_2 FS + \beta_3 FL+ \beta_4 GO+ \varepsilon}$$

Where:

Y = Financial performance measure by Return on Assets (ROA); given by Earning after tax divided by Equity.

$\boldsymbol{\alpha_0}$ = Constant or intercept.

β_{1-4} = Coefficients of explanatory variables.

AT = Asset Tangibility; given by fixed assets divided by total assets.

FS = Firm Size; given by natural logarithm of total assets.

FL = Firm Liquidity; given by current assets divided current liabilities.

GO = Growth Opportunities for a firm.

ε = Standard Error term.

3.7.1 Hypothesis Testing

Hypothesis testing explained whether the selected independent variable explain the financial performance of non-financial firms listed at NSE in Kenya. The hypotheses' conclusions are drawnby considering the significance levels of the coefficient of regression of the variables while the coefficient's sign of each variable shows the relationship between the explanatory and the dependent variables choice, in which case – shows a negative correlation while + shows a positive correlation. The null hypothesis was tested using the student's t-test.Where the p-value established from the regression analysis was greater than the 5% significance level the hypothesis was rejected while where it was less than the 5% significance level value the hypothesis was not rejected.

Table 3.1: Measurement and Hypothesis Testing of Study Variable

Variable	Name of Variable	Measurement	Hypothesis Testing
Dependent	Financial Performance (ROA)	ROA = (Earnings after Tax) ÷ (Total Assets)	Student t-test/ 2 tail test
	Asset Tangibility (AT)	AT = (Fixed Assets) ÷ (Total Assets)	Student t-test/ 2 tail test
	Firm Size (FS)	FS = Natural Logarithm of Total Assets	Student t-test/ 2 tail test
Independent	Firm Liquidity (FS)	FL = (Current Assets)÷ (Total Liabilities)	Student t-test/ 2 tail test
	Growth Opportunities (GO)	GO = (Market Value of Equity)÷ (Book Value of Equity)	Student t-test/ 2 tail test

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The chapter provides the findings from the data collected to establish the effect of capital structure determinants on financial performance of non-financial firms listed at NSE in Kenya. The secondary data was obtained from the NSE handbooks containing the firms' financial reports. Multiple regressions and correlation analysis helped to establish the correlation between the independent and dependent variables under study and ANOVA for significance test. The population of this study was made up of 37 non-financial firms listed at NSE. Financial data for the 5-year period from 2011 to 2015 was collected and analyzed using SPSS version 22.0.

4.2 Research Findings

4.2.1 Averages for the Variables

Table 4.1 Averages for the Study Variables

Variable	2015	2014	2013	2012	2011
Return on Assets (ROA)	0.061	0.027	0.057	0.062	0.090
Asset Tangibility (AT)	0.605	0.580	0.561	0.560	0.545
Firm Size (FS)	7.038	6.951	6.971	6.913	6.837
Firm Liquidity (FL)	1.936	2.091	2.514	2.639	2.547
Growth Opportunities (GO)	2.775	2.458	1.920	1.465	1.093

From Table 4.1, the listed non-financial firms performed better in the year 2011 with an average ROA of 9.0% while they had their lowest performance of 2.7 in the year 2014.

The firms are fairly financed by fixed assets since they have recorded a high of 60.5% in the year 2015 and the low of 54.5% in 2011, the trend shows that asset tangibility has been increasing over the year for the period under study.

4.2.2 Descriptive Statistics

Table 4.2 Descriptive statistics

	ROA	AT	FS	FL	GO
Mean	0.0565	0.5704	6.9419	2.3452	1.9421
Standard Error	0.0089	0.0159	0.0545	0.2088	0.3920
Median	0.053	0.610	6.95	1.46	0.75
Standard Deviation	0.1216	0.2169	0.7409	2.8406	5.3318
Range	1.771	0.86	3.25	18.66	55.54
Minimum	-0.540	0.080	5.280	0.100	0.020
Maximum	0.628	0.940	8.530	18.760	55.56
Count	185	185	185	185	185

The descriptive statistics table shown in Table 4.2 shows the information of the descriptive parameters from the variables data. The descriptive statistics of the independent and dependent variables analyzed are presented to look at the validity and nature of the data used. All the information about variables are based upon accounting figures and thus simultaneously determined.

4.2.3Correlation of the Variables

Table 4.3: Correlation Matrix of Variables:

	ROA	AT	FS	FL	GO
ROA	1				
AT	-0.08688	1			
FS	0.04878	0.18163	1		
FL	0.20208	-0.02285	-0.37945	1	
GO	0.07518	-0.02418	-0.20105	0.29051	1

The data is checked for multicollinearity problem to establish if there is any correlation among the independent variables. This was aimed at detecting any near multicollinearity among them by use of correlation matrix of variables as show in Table 4.3. Detection of multicollinearity problem will help solve it before actual analysis. Multicollinearity is important for: first, the contribution of highly correlated variables in the general regression model is hard to establish. Also, if there are any small changes in variable specification the regression model would be more sensitive. Lastly, where there are near multicollinearity that would lead to inappropriate conclusions for the test, thus wrong inference made. Generally, the independent variables with correlation value above 0.7 should not be included in the regression analysis model (Dougherty, 2007). From the table the highest correlation value was 0.2905 hence there is no multicollinearity problem for the study variables.

4.2.4Significance Testing

Table 4.4 Analysis of Variance (ANOVA)

	df	SS	M	F	Significance
Regression	4	0.19646	0.04912	3.50256	0.00882
Residual	180	2.52407	0.01402		
Total	184	2.72053			

The ANOVA Table 4.5 indicated that the regression model predicted the outcome variables well. This can be seen from the regression row under the significance column. This indicated the statistical significance of the regression model that was applied. Here, P is 0.0088 which is less than 0.05 indicates that in general, the model applied is significantly good enough in predicting the outcome dependent variable(financial performance measured by ROA) using asset tangibility, firm size, firm liquidity and growth opportunities as independent variables.

4.2.5 Regression Model Analysis

Table 4.5 Regression Analysis

	Coefficients	Standard Error	t- statistic	P-value
Intercept	-0.13156	0.09287	-1.41667	0.158307
AT	-0.06257	0.04099	-1.52660	0.12862
FS	0.02833	0.01303	2.17397	0.03101
FL	0.01094	0.00342	3.19479	**0.00165**
GO	0.00075	0.00172	0.04372	0.66249
Multiple R	0.26873			
R Square	0.07221			
Adjusted R^2	0.05156			
Standard Error	0.11842			
Observations	185			

The following regression equation was established from the analysis:

Y = -0.132 - 0.063AT + 0.028FS + 0.011FL + 0.0008GO + 0.118

The table 4.5 shows that firm liquidity with p-value of 0.00165 is the most influential variable in the study. From the above regression model it was revealed that holding firm size, asset tangibility, firm liquidity and growth opportunities of the firm to a constant zero, financial performance of non-financial firms listed at NSE in Kenya would stand at -0.014. A single unit increase in asset tangibility would lead to decrease in financial performance by a 0.063 factor, while a single unit increase in firm size would lead to an increase in financial performance by a 0.028 factor. A single unit increase in firm liquidity would lead to an increase in financial performance by a 0.011 factor, and a single unit increase in growth opportunities would lead to an increase in financial performance of by a 0.0008 factor.

4.3 Effect of Capital Structure Determinants and Financial Performance

From the research findings, the adjusted coefficient of determination calculated is 0.0516. This shows that only 5.16% of the variations in financial performance (ROA) of non-financial firms in Kenya is explained by the dependent variables; asset tangibility, firm size, firm liquidity and growth opportunities while 94.84% remains unexplained and would therefore may be caused by others factors other than those under the study. From these findings, there is a positive correlation between independent variables (capital structure determinants) and the dependent variable (financial performance) as measured by ROA of non-financial firms listed at NSE in Kenya.

4.3.1 Effect of Asset Tangibility on Financial Performance

The effect of asset tangibility on financial performance of non-financial firms formed the first objective of the study. From the research findings of the analysis, asset tangibility show a -0.06257 coefficient value and the p-value of 0.12862 at 0.05 significance level. This result therefore revealed a negative relationship betweenasset tangibility and financial performance as measured by ROA but not significant hence in agreement with Onaolapo and Kajola (2010)'s results.

4.3.2 Effect of Firm Size on Financial Performance

Firm size is also an important corporate finance concept and has gained a lot of attention from many researcher, it therefore formed the second objective of the study. It study tried to establish its effect on financial performance and measured as the logarithm of market value of equity to book value. According to these results; the value coefficient of 0.02833 and a p-value of 0.03101 at 0.05 level of significance were established. This showed a positive and significant relationship of firm size onfinancial performance as measured by ROA and is in-line with the findings of Kamau (2014).

4.3.3 Effect of Firm Liquidity on Financial Performance

For any firm to be able to meet its short term financial obligations it must have a desired levels of cash and cash equivalent. Firm liquidity formed the third objective of the study and its effect on financial performance was evaluated. From the regression analysis firm liquidity has a coefficient value of 0.01094 and a p-value of 0.00165 at 0.05 level of significance. The result revealed a positive and significant correlation between firm

liquidity and financial performance and therefore the result are consistent with those found by Lartey, Antwi and Boadi (2013).

4.3.4 Effect of Growth Opportunities on Financial Performance

The final objective was to establish the effect of growth opportunities on financial performance of non-financial firms listed at NSE in Kenya. From the study growth opportunities has a coefficient of 0.00075 while the p-value is 0.66249 at 0.05 significance level. The study showed a positive correlation between growth opportunities and financial performance but not significant, the research findings agreed with the results found by Pouraghajan and Malekian (2012).

4.4 Hypotheses Testing

H_{01}: Asset Tangibility has no significant effect on financial performance of non-financial firms listed at NSE

From Table 4.5, the coefficient value of asset tangibility is -0.06257 while the p-value is 0.12862 which is greater than 0.05 (0.12862>0.05). The results revealed statistically a negative correlation between asset tangibility and financial performance as measured by ROA but the correlation is not significant. Therefore, from the findings the first hypothesis that stated asset tangibility has no significant effect on financial performance of non-financial firms listed at NSE is not rejected.

H_{02}: Firm Size has no effect on financial performance of non-financial firms listed at NSE

The effect of firm size on the financial performance as measured by ROA formed the second hypothesis. The hypothesis stated that firm size has no significant impact on financial performance of non-financial firms listed at NSE in Kenya. From the findings,

the test indicatedthat firm size has a coefficient of 0.02833 and a p-value of 0.03101< 0.05. This revealed that firm size has a positive and significant correlation on financial performance. Therefore, the second hypothesis is rejected.

H_{03}: Firm Liquidity has no significant effect on Financial Performance of non-financial firms listed at NSE

The effect of firm liquidity on the financial performance of the firms under study formed the third hypothesis which stated that firm liquidity does not have a significant effect on financial performance of non-financial firms listed at NSE in Kenya. The research findings revealed that the value of coefficient of firm liquidity on the general regression model is 0.01094 and p-value of 0.00165 < 0.05. From the p-value of firm liquidity in the general model at 0.05 level of significance there is a positive correlation between firm liquidity and financial performance and therefore the third hypothesis is rejected.

H_{04}: Growth Opportunities has no significant effect on Financial Performance of non-financial firms listed at NSE

Finally, the growth opportunities of the firms under study formed the forth hypothesis that stated that growth opportunities has no significant impact on financial performance of listed non-financial firms at NSE. The findings from the model indicated the coefficient value of 0.00075 and p-value of 0.66249 > 0.05, therefore a positive correlation between firm's growth opportunities and financial performance as measured by ROA. Hence, the forth hypothesis is not rejected.

4.5 Discussion of Results

The research findings from the first hypothesis show that there is a negative correlation between asset tangibility and financial performance (ROA) but not significant. This research result agrees with the findings of Chinaemerem and Anothy (2012);Onaolapo and Kajola (2010) and Zeitun and Tian (2007). Therefore, a firm with high composition of tangible assets in its total assets base is more likely to influence the firm's financial performance in a negative way. However, a firm that maintains large investments of tangible/fixed assets is likely to have lowerfinancial distress costs than one which relies on intangible/current assets. According to the findings however, a firm that have higher proportion of tangible assets will have a negative effect on its financial performance.

From the results of the second hypothesis, firm size has a positive and significant correlation with financial performance of listed non-financial firms listed at NSE in Kenya. The research findings on the firm size agree with the findings of Babalola (2013);Kamau (2014); Pouraghajan and Malekian (2012) andZeitun and Tian (2007). Hence, the firm size is a significant factor affecting the financial performance of listed non-financial firms at NSE in Kenya. The positive correlation which the analysis has established of firm size onfinancial performance (ROA) would be interpreted as the existence of economies of scope and scale in the operations of non-financial firms listed at NSE in Kenya. Hence once firms become bigger and bigger their ability to generate more returns/profits appears to improve gradually.

The third hypothesis showed a significant positive correlationbetween firm liquidity and financial performance of non-financial firms listed at NSE in Kenya. This result is congruent with the findings of Lartey, Antwi and Boadi (2013) and Gatete (2015). In this

findings firm liquidity has some bearings on the financial performance, therefore there is need for non-financial firms manage their liquidity ratios very well. For these firms to improve their financial performance they should hold adequate liquid/current assets in the composition of total assets. A sufficient liquidity helps the firms reducefinancial crisis and liquidity risks. However, where there is high proportion of liquid assets there is a likelihood of financial performance diminishing. In reality liquid assets normally have little or no interest generating ability.

The fourth hypothesis revealed that growth opportunities has a positive correlation with financial performance but not significant. The results revealed from the study is in line with the findings of Pouraghajan and Malekian (2012). From the findings firms that have high market value to book value ratios of equity have higher growth prospects. There is also higher threat of bankruptcy and high costs of financial distress associated with high growth firms once they start facing financial problems. The firms that have high growth opportunities/prospects are expected to maintain a lower leverage ratio so as to minimize the creditors' constraints and maximize financial performance. Such firms are expected to have low dividend payout ratios so as to use the retaining earning in financing their expansion.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter comprises of four subdivisions namely; summary, conclusions, recommendations and suggestions for further studies. The first section gives a summary of the important elements of the study that includes the study objectives, methodology, and the findings. The following subsequent section discusses the major findings of the study with regards to the specific objectives. Section three discusses the conclusions based on the specific objectives, while the last sub-division provides the recommendations based on the specific objectives and also provides the suggestions for further research.

5.2 Summary

Table 5.2 Regression Model Analysis

	Coefficients	Standard Error	t- statistic	P-value
AT	-0.06257	0.04099	-1.52660	0.12862
FS	0.02833	0.01303	2.17397	0.03101
FL	0.01094	0.00342	3.19479	0.00165
GO	0.00075	0.00172	0.04372	0.66249
R Square	0.07221			
Adjusted R^2	0.05156			

The study's main objective was to establish the correlation between capital structure determinants and financial performance of non-financial firms listed at NSE. The specific objectives were to establish the effect of the independent variables on financial

performance of non-financial firms listed at NSE. The study findings found a positive correlation of capital structure determinants and financial performance of non-financial firms listed at NSE. The result of the regression model summary, showed coefficient of determination (R^2) value of 5.16% of the financial performance as measured by ROA of non-financial firms listed at NSE. This can be interpreted as the independent variables (asset tangibility, firm size, firm liquidity and growth opportunities) will only account for 5.16% of the financial performance of the firms under study while 94.84% could not be explained by those factors. Thus, the 94.84% unexplained could be attributed to other factors that are not included in this study.

5.2.1 Asset Tangibility and Financial Performance

The first research objective was to find the effect of asset tangibility on financial performance of non-financial firms listed at NSE. Various analytical methods were used to arrive at the study findings. These methods included correlation, descriptive statistics, and regression analysis. From the research findings asset tangibility revealed a negative effect on financial performance of non-financial firms listed at NSE but not significant.The insignificance of tangible assets on financial performance may be attributed to inability of the asset to yield immediate returns since most of them are long term investment. It may also be because the tangible assets requires high maintenance costs compared to intangible assets. Thirdly they cannot help in meeting short-term financial obligations or investment opportunities that may be very profitable to the firm.

Under this variable the first hypothesis indicated that asset tangibility has no significant effect on financial performance of non-financial firms listed at NSE. The research findings revealed that asset tangibility has anegative effect in explaining financial

performance of non-financial firms listed at NSE but this effect was not significant. This implied the null hypothesis that asset tangibility does not influence financial performance of non-financial firms was not rejected. The study findings on the effect of asset tangibility on the financial performance is consistent with those of Chinaemerem and Anothy (2012);Onaolapo and Kajola (2010) and Zeitun and Tian (2007).

5.2.2 Firm Size and Financial Performance

The second objective was to examine the effect of firm size on financial performance of non-financial firms listed at NSE. Various analytical methods were used to arrive at the findings. These methods included descriptive statistics, ANOVA, regression analysis and correlation analysis. The findings indicated that firm size had a positive and significant effect and contributed highly on financial performance of non-financial firms listed at NSE. The significance of firm size on financial performance me be attributed to the ability of bigger firms to bargain for better discounts, enough economies of scale and also the can attract external investors since their shares are doing well in the securities market. They can also have the best management team.

The variable had a study hypothesis which stated that firm size has no significant effect on financial performance of non-financial firms listed at NSE. The results revealed that firm size was statistically significant in explaining financial performance of non-financial firms listed at NSE. This implied that the null hypothesis that firm size does not have a significant influence on financial performance of non-financial firms listed at NSE was rejected. The research findings from the analysis of firm size on its effect on financial performance of the firms under study is in agreement with the findings of other studies

done by Babalola (2013);Kamau (2014); Pouraghajan and Malekian (2012) andZeitun and Tian (2007).

5.2.3 Firm Liquidity and Financial Performance

The third research objective was to determine the impact of firm liquidity on financial performance of non-financial firms listed at NSE. Various analytical methods were used to arrive at the research findings. These methods included descriptive analysis, ANOVA, regression analysis and correlation analysis. The findings indicated that there was significant positive effect of firm liquidity on financial performance of non-financial firms listed at NSE.The ability of a firm to meet its short term financial obligations is likely to attract other investor to the firm. Also, liquid firms are able to take advantage of those profitable investments that require quick investment and hence may yield high returns in short period.

The study had a hypothesis that firm liquidity does not have a significant effect on financial performance of non-financial firms listed at NSE. The research findings revealed that firm liquidity was statistically significant in explaining financial performance of non-financial firms listed at NSE. This implied that the null hypothesis that firm liquidity does not have significant influence on financial performance of non-financial firms listed at NSE is rejected. These findings are in congruent with the findings of Lartey, Antwi and Boadi (2013) and Gatete (2015).

5.2.4 Growth Opportunities and Financial Performance

The forth objective was to establish the impact of growth opportunities on financial performance of non-financial firms listed at NSE. Various analytical methods were used

to arrive at the research findings. These methods included descriptive statistics, ANOVA, regression analysis and correlation analysis.From the findings, it was established that growth opportunities has a positive impact on financial performance of listed non-financial firms but not significant. This also showed that high growth prospects firm have a higher financial performance as measured by ROA. The insignificance effect of growth opportunities on financial performance may be attributed to the injecting of resources into the viable investments which may not bring immediate positive returns. Growth opportunities is an investment that the firm will take using available or borrowed resources with no immediate return especially when investment is for a longer period of time.

The fourth study hypothesis was to establish thatgrowth opportunitiesdoes not have a significant impacton financial performance of non-financial firms listed at NSE. The results revealed that growth opportunities was statistically explainedthe financial performance of non-financial firms listed at NSE but had a weak positive correlation. This implied that the null hypothesis that growth opportunities does not have significant influence on financial performance of non-financial firms listed at NSE is not rejected. The study findings from the analysis of growth opportunities agree with the findings of Pouraghajan and Malekian (2012).

5.3 Conclusions

Conclusions were arrived at the influence of explanatory variables; asset tangibility, firm size, firm liquidity and growth opportunities on dependent variable of financial performance of non-financial firms listed at NSE. The conclusions are provided on each of the explanatory variables in relation to the dependent variable in the study.

5.3.1 Asset Tangibility and Financial Performance

Asset tangibility is very critical as a capital structure factor element in any firm. The researcher studied the element of the fixed asset on the total assets owned by the non-financial firms listed at NSE. The researcher found that non-financial firms need to address the amount of tangible assets in the total assets of the firm critically to ensure that there is no holding of excess or less fixed asset within the firms to ensure optimal financial performance since the firms are from different sectors with great contribution to the Kenyan economy and achievement of the millennium goals of development and the Vision 2030. Investment in fixed assets however may be of important since it can be used by the firms as collateral to raise external funds. Fixed assets may also be sold out during financial distress or liquidation of firm to offset debts.

5.3.2 Firm Size and Financial Performance

The firm size has been measured by the natural logarithm of total assets and its impacts on the financial performance of non-financial firms was established under objective two. It was found that firm size and financial performance had a statistically significant positive relationship. This is an indication that bigger non-financial firms have better financial performance. Bigger firms usually take advantage of trading in large scale or economies of scale and have greater bargaining power hence they are able to meet their financial needs. They are able to bargain for greater discounts since they will rely on the economies of scale and scope.

5.3.3 Firm Liquidity and Financial Performance

The third objective was to examine the correlation between firm liquidity and financial performance of non-financial firms at NSE. The result revealed a positive and significant

correlation between firm liquidity and financial performance. Since firm liquidity has been seen to have some level of influence on the financial performance, it is prudent that managers of non-financial firms manage their liquidity very well. Where the firms hold enough liquid/current assets, their liquidity ratio will improve and hence resulting in an increase in financial performance. Adequate firm liquidity helps the non-financial firms minimize liquidity risk. The firms can be able to withstand any possible shocks that are unforeseen caused by unanticipated need for increase in short term financial obligations. However, if a firm holds excessive current assets its financial performance is likely to diminish since liquid assets have no or little ability to generate interest.

5.3.4 Growth Opportunities and Financial Performance

Lastly the fourth objective was to evaluate the impact of growth opportunities on financial performance of non-financial firms listed at NSE. The non-financial firms have significantly high growth prospects while they also have a positive correlation with financial performance. These shows that the managers will retain more earnings so that they can meet their growth demands since these also lead to a positive impact on financial performance.

5.5 Recommendations

From the study findings the first objective on effect of asset tangibility on financial performance reveals that firms should not over-invest in fixed asset since they do not increase financial performance. The firms should hold only those necessary fixed assets for the operations of the business. They should hold an optimal level of fixed assets since holding too little may also make the firms miss on loans that the financial institutions given by providing fixed assets as collateral.

Firm size is also important in the financial performance of non-financial firms; bigger firms have an advantage over the smaller ones since they enjoy economies of scale. The bigger the firm the more bargaining power it has hence better financial performance. Bigger firms have greater investment assets and hence in a period of financial distress and liquidity risk they can easily liquidate their assets to financial settle the financial obligations. They high investment in both current and fixed assets.

The third objective was to establish the effect of firm liquidity on financial performance. The findings revealed a positive relationship between firm liquidity and financial performance of non-financial firms listed at NSE. The firms with higher liquidity ratios show they have a bigger ability to meet their short term financial obligations without touching their fixed assets or borrowing from financial institutions. The management of these firms should establish an optimal current ratio since holding excess of current assets will not lead to improved financial performance since they have no ability to generate interest while having a high current liabilities may lead to inability of firms to meet their short term financial obligations.

Finally the forth objective was to determine the effect of growth opportunities on financial performance of non-financial firms listed at NSE. Firms with greater growth prospects should have low dividend payout ratio so as to use their retained earnings for investment projects. These firms should also have high ability to obtain extra sources of funds when the internal resources are not sufficient. The researcher also recommends that these firms should look for funds from external sources to finance their expansion prospects.

5.6Suggestions for Further Studies

From the research findings of the study the general power of explanatory variables on the independent variable is very low and therefore there is need for further study using more or different factors from those used in this study. One of the major areas that could be a fruitful extension is the identification of the effects of the industry in which a firm operates on financial performance. Of much importance also is the effect of direct foreign investment on the performance of such firms that have external investment. Moreover, qualitative data could be used to supplement the financial data obtained from the financial statements; information such as organization culture, management style, and also motivation employed to employees.

This study was done using non-financial firms listed at NSE; thus further research should also look into the other sectors like banks and insurance firms to help find out the correlation between capital structure determinants and financial performance using similar variables. It is suggested also that further studies be done on unlisted companies even though it might be challenging to obtain financial information from private companies. Further research should also be done using other capital structure determinants such as inflation, tax-shield, profitability and many others to determine the correlation between financial performance and capital structure.

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APPENDICES

Appendix 1: List of Non-Financial Firms

1. Eaagads Ltd	19. Crown Berger Ltd
2. Kakuzi Ltd	20. East African Cables
3. Kapchorua Tea Ltd	21. East Africa Portland Cement ltd
4. Limuru Tea Ltd	22. KenGen
5. Sasini Tea	23. Kenolkobil Ltd
6. Williamson Tea Kenya	24. Kenya Power & Lighting Co.
7. Car and General Company Ltd	25. Total Kenya Ltd
8. Marshalls (E.A) Ltd	26. Centum Investment Co (ICDCI)
9. Sameer Africa Ltd	27. Olympia Capital Holdings Ltd
10. Kenya Airways Ltd	28. TransCentury Ltd
11. Longhorn Publishers Ltd	29. BOC Kenya Ltd
12. Nation Media Group Ltd	30. British American Tobacco Ltd
13. Standard Group Ltd	31. Carbacid Investments Ltd
14. TPS Eastern Africa Ltd	32. East African Breweries Ltd
15. Uchumi Supermarket Ltd	33. Eveready East Africa Ltd
16. Scangroup Ltd	34. Kenya Orchards Ltd
17. Athi-River Mining Ltd	35. Mumias Sugar Company Ltd
18. Bamburi Cement Ltd	36. Unga Group Ltd
	37. Safaricom Ltd

Date: August, 2016

Source: NSE Website

Appendix 2: Variables Data for 2015

FIRM NAME	ROA	AT	FS	FL	GO
1. Eaagads Ltd	0.034	0.93	5.79	0.89	1.83
2. Kakuzi Ltd	0.123	0.66	6.56	4.14	1.48
3. Kapchorua Tea Ltd	-0.012	0.68	6.30	5.63	0.27
4. Limuru Tea Ltd	0.024	0.52	5.53	5.80	55.56
5. Sasini Tea	0.072	0.87	7.21	4.40	0.24
6. Williamson Tea Kenya	-0.032	0.68	6.95	8.58	0.31
7. Car and General Company Ltd	0.014	0.41	6.95	1.06	0.33
8. Marshalls (E.A) Ltd	-0.037	0.77	5.74	0.48	0.60
9. Sameer Africa Ltd	-0.048	0.26	6.57	2.21	0.42
10. Kenya Airways Ltd	-0.170	0.81	8.20	0.51	0.12
11. Longhorn Publishers Ltd	0.104	0.33	5.84	1.50	1.20
12. Nation Media Group Ltd	0.175	0.41	7.10	2.10	3.95
13. Standard Group Ltd	-0.066	0.61	6.64	0.95	0.89
14. TPS Eastern Africa Ltd	-0.009	0.85	7.20	1.04	0.34
15. Uchumi Supermarket Ltd	-0.543	0.72	6.80	0.34	2.91
16. Scangroup Ltd	0.102	0.19	7.10	2.76	1.29
17. Athi-River Mining Ltd	-0.056	0.85	7.72	0.38	0.65
18. Bamburi Cement Ltd	0.142	0.57	7.62	2.36	1.85
19. Crown Berger Ltd	0.053	0.27	6.71	1.31	0.63
20. East African Cables	-0.171	0.65	6.92	0.93	0.51
21. East Africa Portland Cement	0.310	0.86	7.36	0.94	0.26
22. KenGen	0.034	0.94	8.53	0.10	0.17
23. Kenolkobil Ltd	0.143	0.39	7.24	1.24	1.61
24. Kenya Power & Lighting Co.	0.027	0.76	8.44	1.64	4.82
25. Total Kenya Ltd	0.047	0.31	7.53	1.53	0.61
26. Centum Investment Co	0.110	0.41	7.86	1.70	1.32
27. Olympia Capital Holdings Ltd	0.009	0.71	6.19	1.60	1.02
28. TransCentury Ltd	-0.111	0.60	7.34	0.63	0.29
29. BOC Kenya Ltd	0.064	0.46	6.37	2.06	1.16
30. British American Tobacco Ltd	0.266	0.49	7.27	1.45	0.35
31. Carbacid Investments Ltd	0.133	0.62	6.47	4.51	1.59
32. East African Breweries Ltd	0.628	0.62	7.83	0.62	5.72
33. Eveready East Africa Ltd	-0.051	0.58	6.18	0.98	0.74
34. Kenya Orchards Ltd	0.367	0.57	7.90	2.08	0.02
35. Mumias Sugar Company Ltd	-0.228	0.86	7.31	0.19	0.53
36. Unga Group Ltd	0.050	0.37	6.94	2.37	0.56
37. Safaricom Ltd	0.209	0.81	8.18	0.62	6.52

Appendix 3: Variables Data for 2014

FIRM	ROA	AT	FS	FL	GO
1. Eaagads Ltd	-0.0935	0.93	5.65	0.87	2.29
2. Kakuzi Ltd	0.041	0.69	6.59	6.66	0.73

3. Kapchorua Tea Ltd	-0.012	0.67	6.29	5.10	0.30
4. Limuru Tea Ltd	-0.001	0.61	5.53	8.08	38.47
5. Sasini Tea Ltd	0.003	0.92	7.17	2.33	0.22
6. Williamson Tea Kenya	0.087	0.68	6.93	8.21	0.31
7. Car and General Company Ltd	0.034	0.38	6.91	1.20	0.46
8. Marshalls (E.A) Ltd	-0.005	0.70	5.78	0.59	0.48
9. Sameer Africa Ltd	-0.023	0.26	6.59	2.52	0.61
10. Kenya Airways Ltd	-0.022	0.80	7.69	0.46	0.22
11. Longhorn Publishers Ltd	0.130	0.27	5.87	1.75	1.22
12. Nation Media Group Ltd	0.206	0.38	7.08	2.37	5.62
13. Standard Group Ltd	0.054	0.64	5.61	1.22	0.99
14. TPS Eastern Africa Ltd	0.010	0.86	7.20	0.80	0.50
15. Uchumi Supermarket Ltd	0.056	0.67	6.84	0.67	0.96
16. Scangroup Ltd	0.090	0.18	7.12	2.46	1.96
17. Athi-River Mining Ltd	0.040	0.78	7.57	0.47	2.10
18. Bamburi Cement Ltd	0.095	0.59	7.61	2.30	1.47
19. Crown Berger Ltd	0.051	0.27	6.63	1.30	1.41
20. East African Cables Ltd	0.085	0.51	6.90	1.17	0.89
21. East Africa Portland Cement	-0.025	0.79	7.20	0.95	0.59
22. KenGen	0.011	0.89	8.40	1.10	0.11
23. Kenolkobil Ltd	0.060	0.35	7.38	0.95	1.70
24. Kenya Power & Lighting Co.	0.032	0.77	8.34	1.03	3.72
25. Total Kenya Ltd	0.044	0.32	7.51	1.49	0.92
26. Centum Investment Co	0.103	0.37	7.47	1.62	0.45
27. Olympia Capital Holdings Ltd	0.029	0.77	6.19	1.17	1.31
28. TransCentury Ltd	-0.117	0.58	7.29	1.59	2.37
29. BOC Kenya Ltd	0.100	0.49	6.36	2.14	1.40
30. British American Tobacco	0.233	0.51	7.26	1.25	0.35
31. Carbacid Investments Ltd	0.194	0.61	6.40	6.30	2.13
32. East African Breweries Ltd	0.109	0.68	7.80	0.72	6.45
33. Eveready East Africa Ltd	-0.191	0.18	5.97	1.33	2.14
34. Kenya Orchards Ltd	-0.503	0.42	7.70	1.77	0.04
35. Mumias Sugar Company Ltd	-0.115	0.82	7.37	0.41	0.34
36. Unga Group Ltd	0.051	0.34	6.87	2.27	0.57
37. Safaricom Ltd	0.171	0.79	8.13	0.74	5.14

Appendix 4: Variables Data for 2013

FIRM	ROA	AT	FS	FL	GO
1. Eaagads Ltd	-0.119	0.91	5.70	1.33	1.77
2. Kakuzi Ltd	0.044	0.69	6.57	7.95	0.69
3. Kapchorua Tea Ltd	0.061	0.60	6.32	2.12	0.34
4. Limuru Tea Ltd	0.083	0.60	5.54	16.87	24.01
5. Sasini Tea Ltd	0.010	0.86	6.96	1.77	0.36
6. Williamson Tea Kenya	0.107	0.67	6.90	3.63	0.27

7. Car and General Company Ltd	0.046	0.39	6.84	1.11	0.32
8. Marshalls (E.A) Ltd	-0.214	0.71	5.71	0.67	0.61
9. Sameer Africa Ltd	0.109	0.23	6.56	3.37	0.51
10. Kenya Airways Ltd	-0.064	0.77	8.09	0.56	0.26
11. Longhorn Publishers Ltd	0.137	0.29	5.84	1.62	1.29
12. Nation Media Group Ltd	0.221	0.34	7.06	2.43	5.92
13. Standard Group Ltd	0.046	0.60	6.62	1.16	0.78
14. TPS Eastern Africa Ltd	0.028	0.86	7.21	0.87	0.61
15. Uchumi Supermarket Ltd	0.064	0.69	6.75	0.70	1.52
16. Scangroup Ltd	0.065	0.18	7.11	2.46	2.15
17. Athi-River Mining Ltd	0.045	0.77	7.47	0.95	1.98
18. Bamburi Cement Ltd	0.085	0.63	7.63	2.68	1.90
19. Crown Berger Ltd	0.073	0.26	6.47	1.38	1.29
20. East African Cables Ltd	0.058	0.47	6.78	1.30	1.04
21. East Africa Portland Cement	0.110	0.78	7.21	1.09	0.40
22. KenGen	0.028	0.87	8.28	1.42	0.19
23. Kenolkobil Ltd	0.020	0.31	7.45	0.93	1.88
24. Kenya Power & Lighting Co.	0.024	0.80	8.27	0.97	0.19
25. Total Kenya Ltd	0.033	0.245	7.60	1.28	0.93
26. Centum Investment Co	0.055	0.29	7.28	7.28	0.69
27. Olympia Capital Holdings Ltd	0.004	0.61	6.28	2.80	0.09
28. TransCentury Ltd	0.026	0.63	7.38	1.49	0.44
29. BOC Kenya Ltd	0.077	0.54	6.42	2.23	1.17
30. British American Tobacco Ltd	0.219	0.50	7.23	1.26	0.36
31. Carbacid Investments Ltd	0.216	0.60	6.34	10.09	2.25
32. East African Breweries Ltd	0.113	0.68	7.76	0.70	8.13
33. Eveready East Africa Ltd	0.048	0.27	5.97	1.54	1.14
34. Kenya Orchards Ltd	0.034	0.30	7.85	1.93	2.01
35. Mumias Sugar Company Ltd	0.061	0.74	7.44	0.84	0.34
36. Unga Group Ltd	0.033	0.28	6.91	1.53	0.60
37. Safaricom Ltd	0.136	0.80	8.11	0.69	2.60

Appendix 5: Variables Data for 2012

FIRM	ROA	AT	FS	FL	GO
1. Eaagads Ltd	0.038	0.85	5.76	18.76	0.96
2. Kakuzi Ltd	0.106	0.65	6.55	8.47	0.54
3. Kapchorua Tea Ltd	0.040	0.62	5.94	1.65	0.31
4. Limuru Tea Ltd	0.318	0.59	5.51	12.41	11.17
5. Sasini Tea Ltd	0.014	0.88	6.95	1.90	0.30
6. Williamson Tea Kenya	0.118	0.66	6.86	2.41	0.32
7. Car and General Company Ltd	0.047	0.40	6.76	1.16	0.29
8. Marshalls (E.A) Ltd	-0.292	0.65	5.75	1.13	0.44
9. Sameer Africa Ltd	0.055	0.22	6.53	2.83	0.48
10. Kenya Airways Ltd	0.021	0.72	7.89	0.92	0.12
11. Longhorn Publishers Ltd	-0.034	0.33	5.82	1.12	1.23
12. Nation Media Group Ltd	0.235	0.32	7.03	2.25	5.54
13. Standard Group Ltd	0.052	0.64	6.54	1.12	0.75
14. TPS Eastern Africa Ltd	0.037	0.85	7.13	0.89	0.53

15. Uchumi Supermarket Ltd	0.055	0.68	6.69	0.72	1.75
16. Scangroup Ltd	0.090	0.12	6.92	2.25	5.10
17. Athi-River Mining Ltd	0.046	0.71	7.43	1.22	1.08
18. Bamburi Cement Ltd	0.113	0.62	7.63	2.35	1.86
19. Crown Berger Ltd	0.059	0.30	6.35	1.54	0.82
20. East African Cables Ltd	0.084	0.51	6.80	1.20	0.84
21. East Africa Portland Cement	0.070	0.82	7.15	1.02	0.47
22. KenGen	0.017	0.86	8.21	1.49	0.13
23. Kenolkobil Ltd	-0.192	0.25	7.51	0.97	2.71
24. Kenya Power & Lighting Co.	0.034	0.79	8.13	0.90	0.29
25. Total Kenya Ltd	-0.006	0.29	7.52	1.30	0.58
26. Centum Investment Co	0.103	0.35	7.06	7.06	0.75
27. Olympia Capital Holdings Ltd	0.004	0.63	6.27	2.27	0.10
28. TransCentury Ltd	0.040	0.66	7.34	1.28	0.40
29. BOC Kenya Ltd	0.099	0.45	6.30	2.08	1.32
30. British American Tobacco	0.216	0.53	7.18	1.18	0.36
31. Carbacid Investments Ltd	0.193	0.68	6.30	4.26	2.28
32. East African Breweries Ltd	0.207	0.67	7.73	0.80	5.57
33. Eveready East Africa Ltd	0.061	0.24	6.06	1.26	0.92
34. Kenya Orchards Ltd	0.004	0.33	7.84	1.73	0.63
35. Mumias Sugar Company Ltd	0.074	0.74	7.44	1.26	0.43
36. Unga Group Ltd	0.054	0.27	6.81	1.91	1.31
37. Safaricom Ltd	0.104	0.83	8.09	0.56	1.52

Appendix 6: Variables Data for 2011

FIRM	ROA	AT	FS	FL	GO
1. Eaagads Ltd	0.201	0.76	5.55	5.94	1.64
2. Kakuzi Ltd	0.144	0.69	6.58	3.35	0.39
3. Kapchorua Tea Ltd	0.089	0.52	6.20	2.10	0.35
4. Limuru Tea Ltd	0.212	0.48	5.28	18.29	2.16
5. Sasini Tea Ltd	0.048	0.87	6.98	2.13	0.31
6. Williamson Tea Kenya	0.147	0.61	6.78	3.38	0.30
7. Car and General Company Ltd	0.052	0.37	6.75	1.12	0.31
8. Marshalls (E.A) Ltd	0.169	0.83	6.03	0.27	0.50
9. Sameer Africa Ltd	0.031	0.27	6.49	3.02	0.52
10. Kenya Airways Ltd	0.045	0.70	7.90	1.06	0.26
11. Longhorn Publishers Ltd	0.180	0.26	5.85	1.77	1.26
12. Nation Media Group Ltd	0.136	0.36	6.95	2.31	3.50
13. Standard Group Ltd	0.042	0.63	6.55	1.08	0.80
14. TPS Eastern Africa Ltd	0.047	0.82	7.08	1.50	0.71
15. Uchumi Supermarket Ltd	0.097	0.65	5.61	0.91	1.23
16. Scangroup Ltd	0.107	0.08	6.93	2.05	2.52
17. Athi-River Mining Ltd	0.056	0.82	6.40	0.84	0.97
18. Bamburi Cement Ltd	0.175	0.60	7.53	2.62	1.60
12. Crown Berger Ltd	0.058	0.29	6.35	1.46	0.43
20. East African Cables Ltd	0.063	0.52	6.70	1.16	0.91
21. East Africa Portland Cement	0.041	0.77	7.13	1.51	0.63
22. KenGen	0.013	0.88	8.21	1.74	0.20
23. Kenolkobil Ltd	0.071	0.13	7.66	1.22	1.11
24. Kenya Power & Lighting Co.	0.035	0.71	8.08	1.16	0.42
25. Total Kenya Ltd	-0.002	0.28	7.55	1.10	0.36
26. Centum Investment Co	0.186	0.29	7.09	7.09	0.64
27. Olympia Capital Holdings Ltd	0.033	0.54	6.03	1.69	0.34
28. TransCentury Ltd	0.027	0.58	7.35	1.22	0.51
29. BOC Kenya Ltd	0.083	0.51	6.26	1.94	1.44
30. British American Tobacco Ltd	0.225	0.49	7.14	1.31	2.93
31. Carbacid Investments Ltd	0.174	0.77	6.24	8.84	1.84
32. East African Breweries Ltd	0.182	0.67	7.70	1.05	4.51
33. Eveready East Africa Ltd	-0.123	0.28	6.00	1.12	1.03
34. Kenya Orchards Ltd	0.010	0.33	7.85	1.54	0.69
35. Mumias Sugar Company Ltd	0.083	0.72	7.37	2.20	0.54
36. Unga Group Ltd	0.077	0.28	6.76	2.52	0.67
37. Safaricom Ltd	0.116	0.81	8.06	0.64	1.91