EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF NON FINANCIAL FIRMS LISTED AT THE NAIROBI SECURITY EXCHANGE

BY:

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DECLARATION

I declare that this research project is my original work and that it has not been presented in any other University for academic credit

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

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DEDICATION

I dedicate this research project to my wife Susan Wambui and my son Ryanellis

Ringui.

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My special appreciation goes to the Almighty God who has given me the strength, direction and wisdom during my Post Graduate studies.

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LIST OF ABBREVIATIONS

ANOVA   Analysis Of Variance

GPM   Gross Profit Margin

MM   Modigliani and Miller

MOU   Memorandum of Understanding

NPM   Net Profit Margin

NSE   Nairobi Securities Exchange

ROA   Return on Assets

ROCE   return on Capital Employed

ROE   Return on Equity

SPSS   Statistical Software for Social Science

ABSTRACT

The company's financial health is measured by the cash flows, if the cash inflows are more than the cash outflows at any given time; it is considered a good sign for the organization. In Kenya, interest on debt is tax deductible, thus the use of debt to finance the operations of a firm is an advantage on one side as debt interest will be tax deductible. Every organization expects a capital structure best fitted to its situation and one that simultaneously minimizes the cost of capital and maximizes the value of the firm. This study sought to investigate the impact of capital structure on financial performance of non listed financial firms. The study adopted descriptive research design. The target population for the study consisted of 47 non financial firms listed at NSE. The collected data was analyzed using SPSS software. The study found out that 17.5% change in capital structure among non financial firms listed on the NSE is explained by the four independent variables of the study (Financial Leverage, Solvency, Size, and GPD Growth Rate), moderate negative correlation exists between financial leverage of non financial firms listed at NSE and financial performance, a strong positive relationship exists between solvency and financial performance and that a strong positive correlation exists between the size of the non financial firm and financial performance. The study concludes that capital structure affects financial performance of the non financial firms listed at NSE. The study further concludes that statistically significant association exists between the independent variables (leverage, solvency, and size and GDP growth rate) and the dependent variable financial performance among non financial listed firms on NSE. The study recommends that the management of all non financial firms listed at NSE should judiciously strike a balance between the debts and equity in their capital structure. Non financial listed firms should not have too much debt (leverage) in their capital structure as this increase the risk of insolvency. Non financial firms listed at NSE should have considerable levels of debts in their capital structure so as to enjoy the interest tax shield that accrue from the use of debts in the capital structure, non financial firms listed at NSE should also enhance their solvency positions by proper working capital management practices. This calls for shortening of their cash conversion cycles. Sound management of accounts receivables, accounts payables, inventory and cash of non financial firms will also enhance their solvency and therefore their ability to meet short term obligations as and when they fall due, there is also need for non financial listed firms at NSE to employ growth strategies that will see their increment in sizes. An increase in size will enable non financial firms to enjoy the advantages of economies of scale that accrue out of large scale of operations. This will enhance their financial performance and the central bank of Kenya CBK should put in place sound fiscal and monetary policies that will enhance growth in GDP. Some of these policies should include devaluation of the local currency in respect to foreign currencies and improvement in infrastructure. Devaluation of the domestic currency will boost the exports and therefore growing the GDP that will increase financial performance of non financial firms listed at the NSE.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial health of an organization is measured using cash flows, if the cash inflows are more than the cash outflows at any given time; it is considered a good sign for the organization. The firm's assets can be financed by shares, retained earnings, debentures or term loans. The most important issue in corporate finance which has been debated among many academicians, financial institutions and the companies is how to choose the ratio of debt to equity. The debate on capital structure relevance has strengthened for more than a large portion of a century since the work of Modigliani and Miller (MM) 1958. This has come about to an issue of whether if a remarkable mix of obligation and value capital amplifies the organizations esteem and provided that this is true, what components impact an organizations ideal capital structure, this have been liable to successive verbal confrontation in the capital structure writing. Exact work around there has falled behind the hypothetical research maybe in light of the fact that the pertinent firms qualities are as far as genuinely unique ideas that are not straightforwardly noticeable (Titman and Wessels, 1988).

According to the classical hypothesis, capital structure is said to be unimportant in examining how well an organization has utilized the resources at its disposal in its operations, considering that in a splendidly focused world, performance of organizations is impacted just by real factors (Kakani, Biswatosh, & Reddy, 2001). There are later schools of thought on the relevancy of capital structure in organization performance hypotheses, repudiating this hypothesis contending that

capital structure has essential impact in deciding corporate execution (Kakani, Biswatosh, and Reddy, 2001). Barton and Gordon (1998) propose that organizations with higher profitability will remain levered low as a result of their capacity to fund their activities.

In Kenya, interest on debt is an allowable expense for the purposes of taxation which makes it cheaper for organizations using debt as their source of capital to finance operations (Gachoki, 2005). Debt interest is a tax deductible while on the hand creditors is an exercise greater control; this will result to an increase in agency costs between shareholders and creditors (Gachoki, 2005). This makes it difficult to establish what the capital structure that will give optimal shareholders' wealth because of costs associated with debt like collateral among other things (Chepkemoi, 2013).

1.1.1 Capital Structure

This refers to the proportions of different sources of capital grouped into financial liabilities and assets. Financial supplies can exercise control and influence over firms as it determines how well an organization is able to undertake projects with positive net present values (Harris and Raviv, 1991). Different liability classifications bear different degrees of risk to an organization's financial performance. Therefore, capital structure is the way an organization funds its net worth through a mix of shareholders' contribution, long term and short term debt obligations and other capital securities. Debt can take different forms including bond issuance or long term notes payables while shareholders equity might take

the form of common stock which has no preference, preference shares and undistributed earnings.

As indicated by Harris and Raviv (1991), an organization's level of leverage increases with fixed assets, shield not arising from debt, investments opportunities and the size of the firm and reductions in volatility and unique characteristics of the product concerned. According to Titman and Wessels (1988), the structure of these leverage aspects are key factors affecting the existing level of debt to equity ratio of a firm as explained by different schools of thought. As a firm continues to use debt in financing its projects, the ratio of equity to debt increases which also increases the monitoring costs in terms of auditing among other expenses.

1.1.2 Financial Performance

Organization performance checks the efficiency of management in the utilization of resources entrusted to them by the shareholders in generating wealth within a given time period (Berger and Patti, 2002). It is measured by ratios at different points in time to establish how well the resources of the firm have been applied in generating wealth. Different ratios have been applied depending on the purpose of the measurement.

According to Berger and Patti (2002), ratios indicate if the firm is utilizing the resources at its disposal in achieving the objective set by the owners of a business of making them wealthier. The ratios are used to standardize measurement so as to enable comparison across the industry, same firm over a period of years or

other firms in other industries. The main objective of checking financial performance of an organization is to establish how well the resources of the organization have been utilized in generating profits and wealth for the owners.

1.1.3 Capital Structure and Financial Performance

Financial leverage affects the performance of organizations when measured by return on assets and investments (Baker, 1973). As the level of leverage increases, the firm's savings on taxes increases up to a level when it reaches optimum such that taking on more leverage reduces profitability because of the agency costs that come with debt (Roden and Lewellen, 1995). According to Fame and French (1998) application of debt financing in excess brings about agency challenges in monitoring the investing behaviors of management staff. The management may find themselves holding excess cash flows which may influence them to undertake some projects for their own mileage as opposed to the wealth creation for the shareholders.

Hammes (2003) conducted a study on the how mixing of debt and equity among other long term liabilities in an organization affect financial performance of Hungarian firms. The analysis applied paneled data and established that different proportions of debt to equity usage in companies led to different levels of financial performance. The mixture of debt and equity is however subject to firm size and the ability to repay debt as and when they fall due without compromising the cash flow positions. Organizations therefore have to rethink their capital structure and balance it out with the cash flow requirements. Njagi (2013) from her scholarly work established that revenue influence financial performance of non-financial firms of Kenya, this showed that capital structure affect financial

performance and she concluded that short term debt of non-financial firms was positively related to financial performance.

1.1.4 Non Financial Firms Listed at the Nairobi Securities Exchange

The Nairobi Securities Exchange (N.S.E) was founded as a voluntary grouping of stock brokers in 1954 and has grown to become the most active security market in East African and among most active security markets in Africa. The NSE is charged with a major important role in economic development process. The market is divided into four main segments which classify firms in similar industry together.

Non financial firms' stocks are firms not involved in provision of financial services. They are either involved in manufacturing, services but not provision of financial services. According to statistics at NSE, there are 46 non financial firms listed at the NSE (Appendix 1).

1.2 Research Problem

Every organization expects a capital structure best fitted to its situation and one that simultaneously keeps at minimal the cost of funds and optimizes firm value. Selection of an appropriate capital structure that keeps cost of funds optimal is vital in every firm; however a perfect optimal capital structure is almost impossible to have in practice due to several variables that influence the capital structure. Various sectors categorized by NSE undergo through different business environments and economic conditions, in the case of agricultural sector, there

has been consistent growth in the recent past due to introduction of new farming methods such as green houses, mechanized farming and irrigation schemes.

Zeitun and Tian (2007) established that capital structure significantly influences firm performances. As firm leverage increases, the monitoring costs also increase which increases the chances of bankruptcy (Ebaid, 2007). Chiang et al (2002) established that capital structure influences the returns of firms by influencing the financing costs which form the operating expenses. This in turn reduces firm returns on assets.

Wandeto (2005) established that changes in capital structure affect the level of profitability of firms listed at the NSE. In another study, Gachoki (2005) established that pecking theory is an important aspect of capital structure but was least applied by firms listed at the NSE. Lutomia (2002) established that capital structure plays an important role in the systematic risk of common stocks. Mwangi (2010) established that leverage has significant effect on firm return on equity and return on investments. Chepkemoi (2013) revealed that capital structure negatively affect firm profitability but has positive effect on sales growth.

Previous studies have focused mainly on capital structure determinants of all listed firms and the determinants of capital structure of specific sectors of the economy but have not focused mainly on capital structure and financial performance particularly for non financial firms. This study sought to answer the question: What is the impact of capital structure on financial performance of listed non-financial firms in Kenya?

1.3 Research Objective

To determine the effect of capital structure on financial performance of non financial firms listed at the Nairobi Security Exchange

1.4 Value of the Study

The findings would be of benefit investors in the listed non-financial firms, shareholders, academicians and the financial researchers as well as the managers of the non-financial firms.

The current and prospective investors in these firms will be able to have a better understanding of the capital structure of the firms they plan to invest in and the impact on financial performance, how a change in capital structure impacts on the firms value and if the firms return can cause it to change its capital structure and what the consequences of such a choice would be.

Capital structure being a wide area and research having been done, there is yet no empirical evidence that it has been exhaustively covered and that all options that relate to it have been researched and reviewed therefore this research would serve as an additional reference to future researchers.

This study would also be important to the policy makers in the agricultural sector as they would be able to know how capital mix contributes to the financial results posted by organizations and how it can be employed by an organization to gain and retain a competitive advantage.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses theoretical perspectives, determinants of firm performance, empirical review and conceptual framework. It examines the work of other researchers so as to establish the gaps in their study so as to justify the undertaking of this research. It also identifies the contributions of other scholars and how it informs this study.

2.2 Theoretical Literature Review

The study is founded on the irrelevance theory my Modiglian and Miller (1958), the trade off theory, pecking order theory and free cash flows theory. More information is provided below:

2.2.1 Capital Structure Irrelevance

Formulated by Modigliani and Miller (1958), this theory examines the role played by capital structure in the determination of firms value. The theory argues that in perfect market where no taxes, transaction costs and bankruptcy exist, the value of a firm that uses debt in its financing options is similar to that not using debt as a source of capital. The theory has several stands which explain the value of firms. First proposition holds the view that firm value is not determined by its mix of debt and equity and the average cost of capital. Second proposition holds that firms leverage has no significant effect on the weighted cost of capital while the third proposition is that firms' value is not affected by its dividend policy (Abdul Jumal et al., 2013). Modigliani and Miller emphasis that debts finance

increases corporate value because interests on debt are tax deductible while equity costs are not tax deductable.

2.2.2 Trade off Theory

This theory explains the benefit of using leverage in financing operations of an organization because of the advantages that accrue as a result of using debt. It recognizes the advantages of using debt because interest on debt is tax deductible which in turn reduces tax liability thus increasing tax shield, if a company debt proportion is high, investors view it as a risky venture to invest in such that in order for the to set aside their funds for this, they have to be promised greater returns. Thus it assumes that as a firm substitutes debt for equity, its agency costs increase up to a level where it becomes uneconomical to use more debt in the place of equity. The conservative nature of a firm is not explained in the theory when using borrowed capital (Popescu, 2009).

2.3 Determinants of Financial Performance

There are several factors that determine the level of returns on equity, assets and investment of organizations. Some of these factors are discussed below:

2.3.1 Capital Structure

Research studies by various scholars reveal the presence of relationships between firms' leverage level and its financial performance. In the Philippine, Aquino (2010) established that the ratio of debt to equity of a firm played an important role in its performance. The study notes that because of the agency and monitoring costs associated with each source of finance, there needs to be a clear criterion on how firm are to mix equity and debt in their capital mix.

According to Oguna (2014) the level of debt used by the firm regardless of whether it is short or long term will have a bearing on its financial performance. However, long term debt has been found to have a negative significant relationship with return on equity because of the conditions that come with it. This therefore means that usage of long term debt needs to be restricted as it may come with some conditions which may not be favorable to the financial performance of the involved firms.

2.3.2 Firm Size

The amount of assets owned by an organization determine it size (Amato and Burson, 2007). It is argued that large firms have adequate resources to undertake a number of large projects with better returns than firms with small amounts of total assets. In addition, firms with large amounts of total assets have adequate collateral which they can pledge to access credit and other debt facilities compared to their smaller counterparts (Lee, 2009). According to Amato and Burson (2007) financial sector firms reported report a mixture of relationships between return on assets, equity and the mixture of debt and equity applied.

Lee (2009) established a the total assets controlled by a firm as measured by the total assets have an influence on the level of profitability recorded from one year to another. According to Njoroge (2014), large firms have economies of scale which they can exploit for better financial performance. Small firms suffer a number of challenges because of their size that negatively affect their financial performance. Njoroge (2014) finds that firm size has positive linear correlation with financial performance of firms.

2.3.3 Financial Leverage

The balance between debt and equity in financing firm operations has some level of influence on the level of returns on equity and Return on assets recorded in firms. As argued in the capital structure irrelevant theory, in perfect markets, it is assumed that there is perfect flow of information hence no room for arbitrage (Lee, 2009). This means that the net worthy of an organization is not affected in any way by the leverage. However, in real world, taxes exist and affect the way organization operates in terms of their capital structure (Njoroge, 2014).

Usage of debt comes with some agency costs like the existence of constraints put by the firm providing debt on how an organization is to run its affairs (Lee, 2009). This may bring about inflexibility in undertaking some projects even if they promise greater return on equity (Amato and Burson, 2007). This may negatively affect the overall performance of the organization.

2.4 Empirical Literature Review

Globally, regionally and locally, there are a number of studies that have been conducted on the usage of different sources of capital in terms of debt and equity and the level of returns on equity and return on assets recorded by firms. There are several determinants components of how an organization mixes debt and equity in its financing decision (Rajan and Zingales, 1995). Of many organizations in seven substantial nations covering the period 1987 to 1991 with a sample of 4566 organizations and established that financial leverage greatly affected performance of firms. Specifically, the findings show that leverage affected the market value to book ratio of companies and the general profitability.

In Jordan, Zeitun and Tian (2007) established that capital structure negatively impacted firm performance. The study covered a sample of 168 firms with data covering the period 1989 to the year 2003. The findings show that different mixes of debt and equity in different proportions lead to different levels of returns on equity and assets. As firms continue applying debt, their profitability increases until a point before remaining constant and then declining.

In Pakistan at the Karachi Stock Exchange, Javed and Akhtar (2012) focused on capital structure and how it affected the financial performance of quoted firms. The result the mix of different capital sources like debt and equity have different effects on the returns on investment recorded by firms. It is argued that as per the agency theory, usage of debt brings about constraints which may chock an organization or boost its performance. They therefore established a two way relationship between leverage and firm performance.

In Egypt, Ebaid (2009) examined how capital structure influences the performance where performance in terms of ROE, ROA and GPM. The findings show that the amount of debt used to finance capital projects has a significant influence on the level of profitability. It was however noted that in order to avoid cash flow challenges, there needs to be a match between short term and long term loans to ensure that short term loans are not used to finance long term projects.

In Kenya, Wandeto (2005) sought to build the profile on the relationship between changes in the divided and earnings, cash flows and capital structure and established that divided changes communicated important information on the optimistic of an organizations management of future prospects through earnings. They argue that payment of higher dividends communicate high optimism among

management of sustained future high earning. This is however determine by the level of cash flow as the some opportunities may slip off if there is no ready cash to finance the projects.

In another study, Gachoki (2007) examined how the choice of different sources of capital influences returns on assets and equity realized by organizations. The study identified some order of capital structure important for both small and large firms and how they affected the returns on assets and equity recorded by firms. It was founded on the pecking order school of thought and may not be highly applicable in the current study settings.

Maniagi et al. (2013) in the study on the extent of effect that an organization's mix of debt and equity in financing decisions has on the level of return on invements of firms listed companies on the stock exchange in Kenya using a 5 year data (2007-2011), concluded that conclude that firms listed at the NSE and established that there was some order that firms needed to observe when choosing financing options for their businesses. The study identified a number of financing options but cautions firms against adopting any as each has a bearing on the recorded financial performance.

Kamau (2010) established that the way an organization combines equity and debt has a bearing on the returns on equity and assets beside general profitability of insurance companies in Kenya. Njagi (2012) studied how capital structures affects financial performance of non-financial firms found that short term and revenue influence financial performance of firms, the study used the debts of different maturity period and the revenue generated as a measure of the firm

performance, he concluded that debt and revenue have a significant relationship to firm performance.

2.5 Conceptual Framework

| Independent Variable | Dependent Variable |

| **Financial Leverage** (Debt/Equity) |

| **Solvency**
Total current liabilities to total
asset ratio of company |

| Financial
(ROE) |

| **Firm Size**
Total Assets |

| Gross Domestic Product growth
rate |
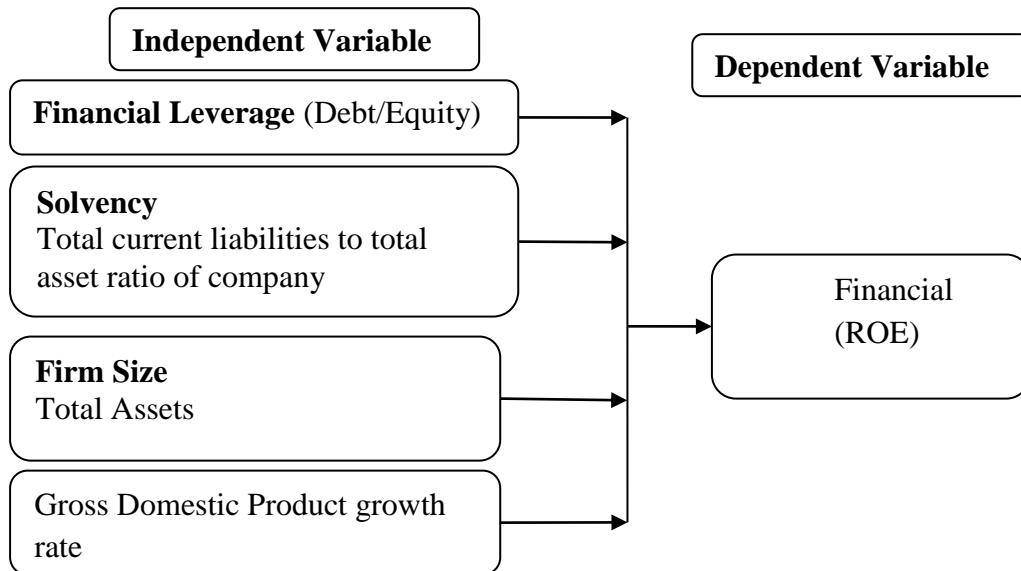
Figure 2.1: Conceptual

2.6 Summary of Literature Review

Various studies have been examined above on how the build on the concepts under study. International authors (Javed and Akhtar, 2012; Zeitun and Tian, 2007; Ebaid, 2009) all conducted studies on a global scene with differing macroeconomic variables hence limiting the application of their study findings to the current study setting. This therefore left a research gap that the study sought to fill.

Other like Adekule (2009) was conducted on the regional front which still limits their application in the current study setting. Locally, Maina and Kondongo (2013); Kamau (2010); Stephen (2012) and Njagi (2012) all studied capital structure but focusing of different segments with different scope hence their finding may not apply to the current study settings.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Here, methodology applied in the study is presented to ensure exhaustive achievement of the study objectives. It is subdivided into different subsections including research design, study population, sampling design, data collection and data analysis.

3.2 Research Design

Mathoko et al (2007) defines a research design as a master plan developed by a researcher to guide their data collection and analysis process with the aim of achieving study objectives. Descriptive research design was adopted to ensure the objective of the study is exhaustively met. This enabled the researcher to employ secondary quantitative data which was obtained from NSE handbooks and from published books of accounts of the non financial listed firms at the NSE for a period of 5 years (2011-2015).

3.3 Study Population

Population of a study refers to the entire elements or individuals over which the study findings are to be generalized. It represents elements that have common observable characteristics that are in interest to the researcher (Polit and Hungler, 1999). The population consisted of all the 47 non financial firms listed at the NSE (Appendix 1).

3.4 Data Collection

The process of collecting responses from the respondents is called data collection. (Polit and Hungler, 1999). Different methods have been applied by researchers to collect data including: observations, experiments, questionnaires, interview guides among others. Two types of data exist: secondary and primary. Secondary data was collected from annual reports of the non financial companies listed at NSE, NSE handbooks and published books of accounts for the years 2011 to 2015.

3.5 Data Analysis

Data analysis is a process synthesizing the responses collected from the field so as to make meaning from the collected data (Niles et al., 2007). In this research, data was analyzed using quantitative methods; it was validated, given unique numbers and examined for any errors and omissions. The quantitative data was analyzed using a data analysis software for the ease of analysis. The hypothesis testing was performed, and regression analysis using coefficient of determination (r^2) tested the hypothesis and give the levels of association among the variables. This analysis model took the form:

$$ROE_{it}=\alpha+\beta_1 FINL_{it}+\beta_2 (Solv)_{it}+ +\beta_3 Size_{it}+\beta 4 GDPGR_t+\varepsilon$$

Where

ROE_{it}=return on equity of company i at time t

$FINL_{it}$=financial leverage of firm i at time t

$Solv_{it}$= (Solvency) Total current liabilities to total asset ratio of company i at time t

Size $_{it}$=size of company (measured as logarithm of total assets) of company i at time t

GDPGR$_t$= Gross Domestic Product growth rate (Change in GDP rate)

α =Constant term

β^s= coefficient of the explanatory variables

ε =composite error term

The study also conducted correlation analysis.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter outlines the findings as collected from research data. Secondary data was collected by reviewing the documents, annual reports of the company, the NSE handbooks and published books of accounts over the years 2011 - 2015. The collected data was analyzed using Excel and SPSS version 22. The findings in this chapter are presented in sections as: descriptive statistics, regression analysis, correlation analysis and then discussion.

4.2 Descriptive Statistics

Descriptive statistics of the study were computed and summarized as shown in Table 4.1.

Table 4.1: Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
Leverage	235	-.08	2.91	.3167	.33518
Solvency	235	.04	55.68	1.4753	5.50306
Size	235	3.13	8.41	6.7431	.87393
GDP Growth Rate	235	4.60	6.10	5.4548	.50012
ROE	235	-8.60	1.00	.1456	.64632

The table above shows that the minimum value of leverage among is -0.08 with a maximum being 2.91, the mean was 0.3167 with standard deviation of 0.33518. On solvency, the minimum value was 0.04, with maximum value of 55.68; the mean was 1.4753 and standard deviation of 5.50306. The findings on the size of the company established a maximum value of 8.41, the minimum being 3.13, the mean was 6.7431 and standard deviation was 0.87393. On GDP growth rate, the minimum value is 4.6% with a maximum of 6.10%, the mean was 5.4548% with standard deviation of 0.50012. The findings of financial performance indicated a

minimum value of -8.60, the maximum being 1 with mean of 0.1456 and standard deviation of 0.64632.

4.3 Regression Analysis

In order to establish the overall variations in return on equity that can be explained by the four variables under study(ial Leverage, Solvency, Size, and GPD Growth Rate), the study conducted a multiple regression analysis. The findings of the regression model are presented in subsequent Tables.

Table 4.2: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.418	.175	.160	.59226

From Table 4.2, the value of R is 0.418, R squared is 0.175 and adjusted R squared is 0.160. This finding indicates that 17.5% change in capital structure among non financial firms listed on the NSE is explained by the four independent variables of the study (Financial Leverage, Solvency, Size, and GPD Growth Rate). However, 82.5% of the change in capital structure among non financial firms listed on NSE is explained by other variables.

Table 4.3: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.071	4	4.268	12.166	.000
Residual	80.679	230	.351		
Total	97.750	234			

The ANOVA findings at 5% level of significance indicate that F calculated is 12.166 while F critical is 2.410894. It can be seen from the findings that F calculated is greater than F critical, (12.166>2.410894). This clearly implies that the regression model used was statistically relevant in explaining the variations in

return on equity. The model was therefore reliable in testing and establishing relationship between the variables of the study.

Table 4.4: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.282	.515		.548	.004
Leverage	-.817	.117	-.424	-6.969	.000
Solvency	.014	.007	-.003	2.000	.002
Size	.055	.045	.075	1.227	.021
GDP Growth Rate	.046	.078	.036	.593	.004

The findings in Table 4.3 give a resultant equation as:

$$ROE_{it}=0.282-0.817FINL_{it}+0.014 \text{ (Solv) }_{it}+ +0.055Size_{it}+0.046GDPGR_t+\varepsilon$$

This means that when all the variables are maintained, capital structure among non financial firms would be at 0.282, a unit decrease in leverage holding other variables constant would increase financial performance among non financial firms listed on NSE by 0.817, a unit increase in solvency holding other variables constant would increase financial performance of non financial firms listed on NSE by 0.014, a unit increase in size of the firm holding other variables constant would increase financial performance of non financial firms by 0.055 and a unit increase in GPD growth rate with other factor held constant would improve financial performance of non financial firms by 0.046. The p value of independent variables; (leverage, solvency, size and GDP growth rate) indicated as 0.000, 0.002, 0.021 and 0.004 were all less than 0.05. This therefore indicates that statistically significant association exists between the independent variables (leverage, solvency, and size and GDP growth rate) and the dependent variable financial performance among non financial listed firms on NSE.

The study therefore rejects the null hypothesis and accepts the alternative that the mix of debt and equity affects the levels of return on equity and assets. These findings is inconsistent with Kamau (2010) who conducted a study on the relationship between ratios of debt and equity on financial performance in insurance companies in Kenya.

4.4 Correlation Analysis

Correlation ranges from -1 to +1. It checks on the strength of the relationship between variables under study. In interpretation, coefficients of between 0.10 to 0.29 is considered weak, 0.30 to 0.49 is considered medium and from 0.50 to 1.0 is considered strong.

Table 4.5: Correlation Analysis

		ROE	Leverage	Solvency	Size	GDP Growth Rate
ROE	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	235				
Leverage	Pearson Correlation	-.410	1			
	Sig. (2-tailed)	.000				
	N	235	235			
Solvency	Pearson Correlation	.956	-.009	1		
		235				
	Sig. (2-tailed)	0.004	.892			
	N	235	235	235		
Size	Pearson Correlation	.963	.168	-.077	1	
	N	235	235			
	Sig. (2-tailed)	0.003	.010	.242		
	N	235	235	235	235	
GDP Growth Rate	Pearson Correlation	.778	-.036	-.033	.025	1
	Sig. (2-tailed)	0.019	.587	.615	.706	
	N	235	235	235	235	235

From Table 4.5, the Pearson correlation between ratios of debt and equity on financial ratios showing how well the resources have been used of the non financial listed firms at the NSE is -0.410 with p value of 0.000. This indicates that a moderate negative correlation exists between financial leverage of non financial firms listed at NSE and financial performance. The finding contradicts Long & Maltiz (1985) who observed that financial leverage of firms is positively related to a firm's profitability, given that a firm must seek an outside and outward source of funds, its choice between debt and equity will depend on part

the magnitude of potential agency costs of debt. As the p value; 0.000 is less than 0.05, this implies statistically significant association exists between the leverage and financial performance.

Findings established that Pearson correlation between solvency and financial performance among firms as 0.956 with p value of 0.004. This suggests that a strong positive relationship exists between solvency and financial performance. The p value is also less than 0.05 and therefore statistically significant. On the size of the firma and financial performance, the Pearson Correlation was 0.963 with a p value of 0.003. This implies that a strong positive correlation exists between the size of the non financial firm and financial performance. The p value; 0.003 was also less than 0.05 and therefore statistically significant. The findings on the GDP growth rate indicated a Pearson correlation of 0.778 with a p value of 0.019. This means that strong positive significant relationship exists between GDP growth rate and financial performance of the firms.

4.5 Discussion

The findings of the study indicated that a unit decrease in leverage holding other variables constant would increase financial performance among non financial firms listed on NSE by 0.817. The study further revealed that a moderate negative correlation exists between financial leverage of non financial firms listed at NSE and financial performance. In this study they choose 4557 companies as samples and established that financial leverage has negative relationship with profitability and market value to book value ratio and positive relationship with the value of tangible fixed assets and firm size.

The study revealed that a Pearson Correlation of 0.963 with a p value of 0.003. This implies that a strong positive correlation exists between the size of the non financial firm and financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is divided into several subsections. The chapter gives a summary of the reach findings. The conclusion section is in with the objectives. Recommendations with relevant implications to theory, practice and policy. The chapter further presents the recommendation for further research that is relevant to future scholars, academicians and researchers.

5.2 Summary of the Findings

The findings of descriptive statistics indicated that the minimum value of leverage is -0.08 with a maximum being 2.91, the mean was 0.3167 with standard deviation of 0.33518. On solvency, the minimum value was 0.04, with maximum value of 55.68; the mean was 1.4753 and standard deviation of 5.50306. The findings on the size of the company established a maximum value of 8.41, the minimum being 3.13, the mean was 6.7431 and standard deviation was 0.87393. On GDP growth rate, the minimum value is 4.6% with a maximum of 6.10%, the mean was 5.4548% with standard deviation of 0.50012. The findings of financial performance indicated a minimum value of -8.60.

Regression analysis results revealed that 17.5% change in capital structure firms is explained by the four independent variables (Financial Leverage, Solvency, Size, and GPD Growth Rate). However, 82.5% of the change in the ratio of debt to equity is explained by other variables. Furthermore, statistically significant association exists between the independent variables (leverage, solvency, and size

and GDP growth rate) and the dependent variable financial performance among non financial listed firms on NSE.

The findings from correlation analysis indicated that the Pearson correlation between ratio of debt to equity and the level of return on equity is -0.410 with p value of 0.000. This indicates that a moderate negative correlation exists between ratio of debt to equity and the level of return on equity. As the p value; 0.000 is less than 0.05, this implies statistically significant association exists between the leverage and financial performance. The findings of the study further indicated Pearson correlation between solvency and the level of return on equity as 0.956 with p value of 0.004. This suggests that a strong positive relationship exists between solvency and financial performance. The p value is also less than 0.05 and therefore statistically significant. On the size of the firms and return on equity, the Pearson Correlation was 0.963 with a p value of 0.003. This implies that a strong positive correlation exists between the size and return on equity. The p value; 0.003 was also less than 0.05 and therefore statistically significant. The findings on the GDP growth rate indicated a Pearson correlation of 0.778 with a p value of 0.019. A strong positive significant relationship exists between GDP growth rate and return on equity.

5.3 Conclusion

Capital structure affects returns on equity of the firms. Statistically significant association exists between the independent variables (leverage, solvency, and size and GDP growth rate) and the dependent variable.

A moderate negative correlation exists between different ratios of debt and equity and returns on equity recorded by firms. There is also strong positive correlation between; (solvency, size. GDP growth rate) and financial performance of non financial firms listed at NSE.

5.4 Recommendations of the Study

The firms studied should judiciously strike a balance between the debts and equity in their capital structure. Non financial listed firms should not have too much debt (leverage) in their mix of sources of capital as this increase the risk of insolvency. Non financial firms listed at NSE should have considerable levels of debts in their mix of sources of capital so as to enjoy the interest tax shield that accrue from the use of debts in the mix of sources of capital.

Non financial firms listed at NSE should also enhance their solvency positions by proper working capital management practices. This calls for shortening of their cash conversion cycles. Sound management of accounts receivables, accounts payables, inventory and cash of non financial firms will also enhance their solvency and therefore their ability to meet short term obligations.

There is also need for non financial listed firms at NSE to employ growth strategies that will see their increment in sizes. An increase in size will enable non financial firms to enjoy the advantages of economies of scale that accrue out of large scale of operations. This will enhance their financial performance.

The central bank of Kenya CBK should put in place sound fiscal and monetary policies that will enhance growth in GDP. Some of these policies should include devaluation of the local currency in respect to foreign currencies and

improvement in infrastructure. Devaluation of the domestic currency will boost the exports and therefore growing the GDP that will increase the returs on equity of listed firms.

5.5 Recommendations for Further Research

Future studies should be carried out in other segments at the NSE for example the Agriculture, Automobile and Accessories, Commercial and Services and Manufacturing segments. Future studies should also be carried out among the firms that have cross listed their share or foreign owned firms in Kenya. Similar future studies should cover other aspects of capital structure for example the effects of debts on financial performance.

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APPENDIX

Appendix I: NSE Non Financial Listed Companies

	FIRM	SECTOR
1	Kakuzi Ltd.	Agriculture
2	Rea Vipingo Plantations Ltd	Agriculture
3	Kapchorua Tea Co. Ltd	Agriculture
4	Eaagads Ltd	Agriculture
5	Sasini Ltd	Agriculture
6	Williamson Tea Kenya Ltd	Agriculture
7	Limuru Tea Co. Ltd	Agriculture
1	Car and General (K) Ltd	Automobile and Accessories
2	Sameer Africa Ltd	Automobile and Accessories
3	Marshalls (E.A.) Ltd	Automobile and Accessories
1	Express Ltd	Commercial & services
2	Kenya Airways Ltd	Commercial & services
3	Nation Media Group	Commercial & services
4	Standard Group Ltd	Commercial & services
5	TPS Eastern Africa (Serena) Ltd	Commercial & services
6	Scangroup Ltd	Commercial & services
7	Uchumi Supermarket	Commercial & services
8	Hutchings Biemer Ltd	Commercial & services
9	Longhorn Kenya Ltd	Commercial & services
10	Atlas Development & Support Services	Commercial & services
1	Athi River Mining	Construction and allied
2	Bamburi Cement	Construction and allied
3	Crown Berger Ltd	Construction and allied
4	E.A. Cables Ltd	Construction and allied
5	E.A. Portland Cement Ltd	Construction and allied
1	KenolKobil Ltd	Energy and Petroleum
2	Total Kenya Ltd	Energy and Petroleum
3	KenGen Ltd	Energy and Petroleum
4	Kenya Power & Lighting Co. Ltd	Energy and Petroleum
5	Umeme Ltd	Energy and Petroleum
1	Olympia Capital Holdings Ltd	Investment
2	Centum Investment Co. Ltd	Investment
3	Trans-Century Ltd	Investment
4	Home Afrika Ltd	Investment
5	Kurwitu Ventures Ltd	Investment
1	Nairobi Securities Exchange Ltd	Investment services
1	A.Baumann& Co. Ltd	Manufacturing and Allied
2	B.O.C. Kenya	Manufacturing and Allied
3	British American Tobacco Kenya	Manufacturing and Allied
4	Carbacid Investments	Manufacturing and Allied
5	East African Breweries	Manufacturing and Allied
6	Eveready E.A.	Manufacturing and Allied
7	Kenya Orchards	Manufacturing and Allied

8	Mumias Sugar Co. Ltd	Manufacturing and Allied
9	Unga Group	Manufacturing and Allied
10	Flame Tree Group Holdings	Manufacturing and Allied
11	Safaricom Ltd.	Telecommunication and Technology

Appendix II: Raw Data 2011

FIRM	Current Assets	Current Liabilities	Leverage	ROE	SIZE	Solvency
Kakuzi Ltd.	623,606	243,005	0.17	0.019847	6.019712	0.389677
Rea Vipingo Plantations Ltd	2,985,002	230,608	0.12	-0.01172	6.536761	0.077256
Kapchorua Tea Co. Ltd	1,747,597	613,252	0.26	0.016512	6.315233	0.350912
Eaagads Ltd			0.32	-0.03453	5.92	#DIV/0!
Sasini Ltd	357,447	179,263	0.53	-0.04519	5.994764	0.501509
Williamson Tea Kenya Ltd	581,515	521,131	0.10	0.193123	6.064381	0.896161
Limuru Tea Co. Ltd	33,260,000	438,090	0.41	0.10313	7.651989	0.013172
Car and General (K) Ltd	1,652,782	13,992,000	0.05	0.270081	6.848094	8.465726
Sameer Africa Ltd	2,051,000	3,645,725	0.01	0.108661	6.646085	1.777535
Marshalls (E.A.) Ltd	4,112,657	1,158,900	0.38	0.04412	6.701117	0.281789
Express Ltd	921,667	735,586	0.25	0.313501	7.23	0.798104
Kenya Airways Ltd	104,226,000	532,616	0.09	0.0309	5.991631	0.00511
Nation Media Group	33,112,194	158,798	0.15	-0.78116	7.06	0.004796
Standard Group Ltd	9,861,078	2,764,724	0.35	0.434585	8.017976	0.280367
TPS Eastern Africa (Serena) Ltd	3,936,899	91,146	0.53	0.139465	7.519988	0.023152
Scangroup Ltd	78,315,052	158,798	0.65	0.622576	6.993924	0.002028
Uchumi Supermarket	32,583,569	520,465	0.04	0.133625	6.611991	0.015973
Hutchings Biemer Ltd	3,696,063	289,026	0.00	0.092468	7.893845	0.078198
Longhorn Kenya Ltd	16,384,422	1,691,929	0.35	0.048083	7.512999	0.103264
Atlas Development & Support Services	11,590,704	418,492	0.54	0.151279	6.567739	0.036106
Athi River Mining	72,841,617	12,698,983	0.67	0.055037	7.214431	0.174337
Bamburi Cement	20,585,232	1,030,036	0.76	-0.11379	7.06411	0.050038
Crown Berger Ltd	107,972	1,654,379	0.46	0.073546	7.86238	15.3223

E.A. Cables Ltd	745,540	1,821,000	0.00	0.228357	7.313556	2.442525
E.A. Portland Cement Ltd	3,698,596	540,213	0.06	0.051583	6.25	0.146059
KenolKobil Ltd	306,715	894,683	0.13	-0.00709	5.033311	2.916985
Total Kenya Ltd	10,039,511	10,583,627	0.29	0.183545	6.78	1.054197
KenGen Ltd	971,269	86,095	0.15	0.146654	7.11	0.088642
Kenya Power & Lighting Co. Ltd	2,181,627	3,382	0.47	0.348981	6.5103	0.00155
Umeme Ltd	5,851,910	180,090	0.04	0.262822	6.207532	0.030775
Olympia Capital Holdings Ltd	1,949,388	6,156,647	0.11	0.125387	6.796117	3.158246
Centum Investment Co. Ltd	2,428,626	321,502	0.09	0.126366	6.56	0.13238
Trans-Century Ltd	11,532,000	70063	0.04	0.239127	6.021863	0.006076
Home Afrika Ltd	393,340	4,863	0.03	0.102995	7.698225	0.012363
Kurwitu Ventures Ltd	4,768,043	123564	0.05	0.1874	6.506024	0.025915
Nairobi Securities Exchange Ltd	22,284,793	122,312	0.11	-0.03663	6.385361	0.005489
A.Baumann& Co. Ltd	2,774,021	143265	0.31	-0.21278	6.767298	0.051645
B.O.C. Kenya	43,156	123,541	0.02	0.058526	6.587539	2.862661
British American Tobacco Kenya	461,324	122,321	0.15	0.77	7.185766	0.265152
Carbacid Investments	532,156	125,432	0.06	1.00	6.09957	0.235705
East African Breweries	654,231	124,213	0.59	1.00	6.887645	0.189861
Eveready E.A.	4,567,823	236,132	0.18	0.10	7.554269	0.051695
Kenya Orchards	543,217	126,578	0.35	0.02	7.032525	0.233016
Mumias Sugar Co. Ltd	432151	123,987	0.11	0.05	6.93	0.286907
Unga Group	765432	132,176	0.08	0.09	6.34	0.172682
Flame Tree Group Holdings	654,321	127,651	0.51	0.26	4.1324	0.195089
Safaricom Ltd.	45,321	176132	0.37	0.13	3.132	3.886322

Raw Data 2012

	Current Assets	Current Liabilities	Leverage	ROE	Size	Solvency
Kakuzi Ltd.	687,267	245,958	0.16	0.130581	6.027774	0.357878
Rea Vipingo Plantations Ltd	3,248,788	295,812	0.13	0.052435	6.583373	0.091053
Kapchorua Tea Co. Ltd	1,902,126	592,149	0.29	0.22872	6.360394	0.311309
Eaagads Ltd			0.22	0.290752	6.23	#DIV/0!
Sasini Ltd	336,664	142,705	0.56	-0.01484	6.035529	0.42388
Williamson Tea Kenya Ltd	699,712	608,605	0.11	0.223301	6.155764	0.869794
Limuru Tea Co. Ltd	2,087,200	538,014	2.03	0.119947	7.252257	0.257768
Car and General (K) Ltd	5,147,995	15,819,000	0.07	0.288304	6.782705	3.072847
Sameer Africa Ltd	47,506	3,861,940	0.07	0.098856	6.723486	81.29373
Marshalls (E.A.) Ltd	504,392	1,436,400	0.34	0.094576	6.788174	2.847785
Express Ltd	117,722,000	657,005	0.46	0.312025	6.092121	0.005581
Kenya Airways Ltd	40,368,662	766,958	0.13	0.139098	6.110662	0.018999
Nation Media Group	9133831	549,526	0.24	0.046935	6.94	0.060164
Standard Group Ltd	4,752,584	192,182	0.00	0.432144	8.070858	0.040437
TPS Eastern Africa (Serena) Ltd	21,737,391	3,425,267	0.00	0.140908	7.606044	0.157575
Scangroup Ltd	15,356,375	83,286	0.00	0.443823	6.960653	0.005424
Uchumi Supermarket	81,014,123	1,081,698	0.14	0.12511	5.553226	0.013352
Hutchings Biemer Ltd	26,062,413	364,315	0.16	0.078448	5.37	0.013979
Longhorn Kenya Ltd	3,197,514	2820597	0.03	0.070613	7.18	0.882122
Atlas Development & Support Services	800,015	769,336	0.99	0.16717	6.67693	0.961652
Athi River Mining	4210277	13,873,011	0.56	0.153396	7.337207	3.295035
Bamburi Cement	20,024,484	1,257,251	0.88	0.113881	7.186289	0.062786
Crown Berger Ltd	158,010	8,278,132	0.68	0.113983	7.908561	52.38992
E.A. Cables Ltd	661,926	2,007,043	0.78	0.283251	7.416015	3.032126

E.A. Portland Cement Ltd	10,908,686	1,304,461	0.55	0.529581	7.301561	0.11958
KenolKobil Ltd	985,687	10,688,392	0.68	-0.0447	5.198685	10.8436
Total Kenya Ltd	2,991,682	393,429	0.04	0.205989	8.02	0.131508
KenGen Ltd	22,787,238	5,070,579	0.04	0.110615	4.32	0.222518
Kenya Power & Lighting Co. Ltd	2,829,117			0.42	0.400732	6.629163	0
Umeme Ltd	175,468	26,588	0.03	0.417554	6.09	0.151526
Olympia Capital Holdings Ltd	53,111,388	2,585	0.69	0.217097	6.78	4.87E-05
Centum Investment Co. Ltd	433216	223,816	0.24	0.18838	7.12	0.516638
Trans-Century Ltd	453,786	214325	0.07	0.32608	6.280635	0.472304
Home Afrika Ltd	543,126	384,273	0.03	0.12569	7.746	0.707521
Kurwitu Ventures Ltd	332,137	103,803	0.06	0.18423	6.520038	0.312531
Nairobi Securities Exchange Ltd	765,421	5,238	0.03	0.155469	7.125135	0.006843
A.Baumann& Co. Ltd	9,876,132	8,278,132	0.02	0.036785	6.99	0.838196
B.O.C. Kenya	4,531,247	2,007,043	0.19	-0.06126	5.78	0.442934
British American Tobacco Kenya	5,432,165	1,304,461	0.08	0.42	6.41	0.240136
Carbacid Investments	13,234,512	12,124,956	0.63	0.11	6.47	0.916162
East African Breweries	1,324,321	96,534	0.18	0.25	6.93	0.072893
Eveready E.A.	54,321	21,342	0.65	0.46	7.04	0.392887
Kenya Orchards	764,432	123,564	0.15	0.21	6.02	0.161642
Mumias Sugar Co. Ltd	654,321	234,152	0.09	1.00	5.963339	0.357855
Unga Group	7,654,231	6,543,214	0.36	1.00	7.811399	0.854849
Flame Tree Group Holdings	654,321	231,523	0.45	0.09	6.123	0.353837
Safaricom Ltd.	764,321	231,452	1.00	0.46	5.231	0.30282

Raw Data 2013

	Current Assets	Current Liabilities	Leverage	ROE	Size	Solvency
Kakuzi Ltd.	693,907	297,394	0.14	0.02567	6.066983	0.428579
Rea Vipingo Plantations Ltd	3,298,435	259,979	0.16	-0.07728	6.582767	0.078819
Kapchorua Tea Co. Ltd	2,036,407	429,922	0.29	0.230783	6.375068	0.211118
Eaagads Ltd	257,799,269		0.35	-0.16341	8.412581	0
Sasini Ltd	518,687	192,168	0.48	0.070368	6.099612	0.370489
Williamson Tea Kenya Ltd	770,571	600,905	0.09	-0.08564	6.310797	0.779818
Limuru Tea Co. Ltd	56,984,000	965,848	0.53	0.135589	7.887767	0.016949
Car and General (K) Ltd	1,699,189	14,563,000	0.03	0.26295	6.968897	8.570559
Sameer Africa Ltd	2,284,200	5,006,369	0.05	0.132236	6.771177	2.191738
Marshalls (E.A.) Ltd	5,384,313	1,895,400	0.26	0.150892	6.831144	0.352023
Express Ltd	141,757	1,327,959	0.00	0.311647	6.245096	9.367855
Kenya Airways Ltd	1,273,139	1,146,493	0.32	0.03272	6.343846	0.900525
Nation Media Group	157,655,668	702,317	0.16	0.259867	7.25	0.004455
Standard Group Ltd	43,262,781		0.00	0.411854	8.19771	0
TPS Eastern Africa (Serena) Ltd	10,369,255	73,226	0.57	0.148066	7.636114	0.007062
Scangroup Ltd	8,062,468	4,463,278	0.35	0.366315	7.015748	0.553587
Uchumi Supermarket	120,479,553	490,720	0.99	0.193177	6.925416	0.004073
Hutchings Biemer Ltd	41,414,272	1,066,348	0.65	0.071154	8.080913	0.025748
Longhorn Kenya Ltd	5,901,463	396,672	0.65	0.065711	7.61715	0.067216
Atlas Development & Support Services	31,281,018	3,544,446	0.56	0.258204	6.77096	0.11331
Athi River Mining	53,129,246	1,435,432	0.35	0.179077	6.92	0.027018
Bamburi Cement	325,131	18,103,247	0.06	0.188272	5.23	55.67986
Crown Berger Ltd	832,809	2,066,940	0.02	0.095059	6.88	2.48189
E.A. Cables Ltd	5,276,633	7,700,702	0.35	0.266543	7.495281	1.459397
E.A. Portland Cement Ltd	3,321,696	17,846,004	0.46	0.464013	7.725334	5.372558

KenolKobil Ltd	981,352	7,761,162	0.33	0.06988	5.512058	7.908642
Total Kenya Ltd	13,002,948	644,475	0.12	0.172894	6.23	0.049564
KenGen Ltd	936,354	7,234,189	0.03	0.097029	4.25	7.725912
Kenya Power & Lighting Co. Ltd	3,285,946	609,363	0.37	0.441095	6.653728	0.185445
Umeme Ltd	8213280	34,051	0.03	0.459943	6.269557	0.004146
Olympia Capital Holdings Ltd	1607109	10,067	0.11	0.232921	6.967635	0.006264
Centum Investment Co. Ltd	13,632,000	210,304	0.10	0.13532	6.14	0.015427
Trans-Century Ltd	554,034		0.21	0.320436	6.506	0
Home Afrika Ltd	5,768,197	256,195	0.04	0.108866	7.724367	0.044415
Kurwitu Ventures Ltd	28,283,300	71318	0.00	0.219959	7.11	0.002522
Nairobi Securities Exchange Ltd	2,737,629	5,494	0.55	0.233668	7.123749	0.002007
A.Baumann & Co. Ltd	184,038	1,435,255	0.65	0.078375	6.914517	7.798688
B.O.C. Kenya	91,515,544		0.03	0.159204	6.206045	0
British American Tobacco Kenya	544,321	213,251	0.20	0.20	6.72	0.391774
Carbacid Investments	54,321	32,145	0.07	0.11	6.03	0.59176
East African Breweries	213,425	123452	0.70	0.32	6.38	0.578433
Eveready E.A.	163,452	123,560	0.15	1.00	7.675582	0.755941
Kenya Orchards	543,216	2,345,152	0.76	1.00	7.09749	4.317163
Mumias Sugar Co. Ltd	8,342,615	2,341,563	0.09	0.23	6.075335	0.280675
Unga Group	54,321	23,165	0.31	0.36	8.008314	0.426446
Flame Tree Group Holdings	234,671	231,531	0.12	0.08	5.23	0.98662
Safaricom Ltd.	321,661	123,111	0.10	0.06	4.23	0.382735

Raw Data 2014

	Current Assets	Current Liabilities	Leverage	ROE	SIZE	Solvency
Kakuzi Ltd.	840,611	554,440	0.12	0.018436	6.213109	0.659568
Rea Vipingo Plantations Ltd	5,824,508	361,223	0.25	0.111375	6.832266	0.062018
Kapchorua Tea Co. Ltd	2,223,158	408,889	0.23	0.191724	6.424991	0.183923
Eaagads Ltd	701,470		0.02	0.098876	6.176235	0
Sasini Ltd	538,411	439,026	0.37	0.040787	6.082104	0.815411
Williamson Tea Kenya Ltd	921,188	519,142	0.23	0.124292	5.964348	0.563557
Limuru Tea Co. Ltd	55,347,000	1,413,637	0.66	0.141465	7.743094	0.025541
Car and General (K) Ltd	1,910,382	14,113,000	0.13	0.410479	6.28112	7.387528
Sameer Africa Ltd	2,590,900	6,947,732	0.02	0.112395	6.820252	2.68159
Marshalls (E.A.) Ltd	5,257,076	2,172,900	0.27	0.130154	6.813476	0.413329
Express Ltd	180,133	1,017,357	0.35	0.298475	6.577577	5.64781
Kenya Airways Ltd	1,532,058	1,690,428	0.31	0.090961	6.429751	1.103371
Nation Media Group	61,478,875	845,209	0.09	0.200467	7.86834	0.013748
Standard Group Ltd	168,510,000	25,243,720	0.23	0.435675	8.226626	0.149805
TPS Eastern Africa (Serena) Ltd	42,695,700	67,721	0.46	0.222997	7.65	0.001586
Scangroup Ltd	6,094,129	337,503	0.07	0.376158	4.24	0.055382
Uchumi Supermarket	56,145,697	0	0.06	0.272519	5.49064	0
Hutchings Biemer Ltd	20,202,824	4400433	-0.05	0.102884	7.32	0.217813
Longhorn Kenya Ltd	99,019,571	38,309	-0.08	0.091974	7.630384	0.000387
Atlas Development & Support Services	42,619,119	1,188,676	0.43	0.246141	6.784912	0.027891
Athi River Mining	78,879,000	8,867,918	0.46	0.183805	7.749316	0.112424
Bamburi Cement	500,720	2,075,045	0.35	0.07102	7.305412	4.144122
Crown Berger Ltd	83,485,855	16,301,749	0.65	0.111669	7.995721	0.195264
E.A. Cables Ltd	13,665,599	1,842,931	0.76	0.288632	7.629604	0.134859
E.A. Portland Cement Ltd	4,467,467	1,176,375	0.65	0.371435	7.896961	0.26332

KenolKobil Ltd	919,958	18,517,743	0.15	0.062312	5.699595	20.1289
Total Kenya Ltd	5,684,334	9,508,962	0.45	0.145163	7.921613	1.672837
KenGen Ltd	664,378	384,139	0.55	0.090542	7.135629	0.578193
Kenya Power & Lighting Co. Ltd	1,070,195	7,924,944	0.38	0.352446	6.802586	7.40514
Umeme Ltd	15,719,734		0.66	0.418571	5.963768	0
Olympia Capital Holdings Ltd	1,823,246	25,606	0.10	0.239053	7.013039	0.014044
Centum Investment Co. Ltd	18,179,000	25,606	0.14	-0.00724	6.030034	0.001409
Trans-Century Ltd	571,798	276,030	0.16	0.241751	6.483359	0.48274
Home Afrika Ltd	6,411,608		0.07	0.122254	7.52216	0
Kurwitu Ventures Ltd	342,161	509,539	0.02	0.248841	6.723568	1.489179
Nairobi Securities Exchange Ltd	98,641	117,585	0.00	0.225039	7.326178	1.19205
A.Baumann& Co. Ltd	32,165	10,259	0.56	0.093895	7.37	0.318949
B.O.C. Kenya	125,123	98,652	0.14	0.120765	6.260845	0.78844
British American Tobacco Kenya	123,456	23,145	0.34	1.00	7.25957	0.187476
Carbacid Investments	1,234,167	123,652	0.05	1.00	6.290577	0.100191
East African Breweries	1,254,321	98,765	0.43	1.00	6.957618	0.07874
Eveready E.A.	765,432	212,341	0.84	-1.28	7.316806	0.277413
Kenya Orchards	3,412,654	235,111	0.00	-0.06	7.071555	0.068894
Mumias Sugar Co. Ltd	345,231	231,654	0.14	-0.87	5.804596	0.671012
Unga Group	345,123	215,132	2.91	-8.60	7.026101	0.623349
Flame Tree Group Holdings	4,563,213	112,345	0.08	0.06	4.12	0.02462
Safaricom Ltd.	564,132	43,125	0.11	0.05	5.721	0.076445

Raw Data 2015

	Current Assets	Current Liabilities	Leverage	ROE	Size	Solvency
Kakuzi Ltd.	911,560	224,412	0.15	-0.03537	6.150524	0.246185
Rea Vipingo Plantations Ltd	6,957,222	407,361	0.24	0.139076	6.903094	0.058552
Kapchorua Tea Co. Ltd	2,254,817	304,131	0.35	0.193036	6.458215	0.134881
Eaagads Ltd	1,719,600		0.27	-0.01984	6.36479	0
Sasini Ltd	878,398	547,410	0.23	-0.01395	6.157217	0.623191
Williamson Tea Kenya Ltd	1,019,391	626,752	0.07	0.047085	6.505812	0.61483
Limuru Tea Co. Ltd	56,270,000	1,681,144	0.49	0.203605	7.881025	0.029876
Car and General (K) Ltd	1,733,969	21,722,000	0.15	0.275096	6.340633	12.52733
Sameer Africa Ltd	2,806,800	338,505	0.03	0.064597	6.448211	0.120602
Marshalls (E.A.) Ltd	5,473,915	1,769,400	0.36	0.095259	6.738298	0.323242
Express Ltd	719,703	988,035	0.02	0.40008	5.857153	1.372837
Kenya Airways Ltd	1,922,168	1,555,306	0.30	0.113217	6.47754	0.809142
Nation Media Group	74,179,798	850,966	0.77	0.197883	7.870286	0.011472
Standard Group Ltd	164,876,000	35,760,664	1.00	0.403037	8.217157	0.216894
TPS Eastern Africa (Serena) Ltd	127,690,950	537,906	1.00	0.221605	8.10616	0.004213
Scangroup Ltd	18,239,359		0.76	0.449815	7.26101	0
Uchumi Supermarket	6,231,330	193,997	0.43	0.320037	6.80605	0.031133
Hutchings Biemer Ltd	195,011,548	3,353,762	0.12	0.078406	8.29006	0.017198
Longhorn Kenya Ltd	51,404,408	2314512	0.14	0.077029	7.711	0.045026
Atlas Development & Support Services	7,563,815	4,467,006	0.35	0.208881	6.878741	0.590576
Athi River Mining	66,679,080	66,549	0.87	0.209582	7.82399	0.000998
Bamburi Cement	23,736,372	1,247,084	0.45	0.141573	7.375414	0.052539
Crown Berger Ltd	123,778,972	19,293,187	0.65	0.142036	8.092647	0.155868
E.A. Cables Ltd	47,558,241	3,760,339	0.65	0.327805	7.677226	0.079068
E.A. Portland Cement Ltd	100,812,000	2,085,012	0.76	0.336751	8.003512	0.020682

KenolKobil Ltd	511,767	4,944,000	0.07	0.066116	5.709072	9.660646
Total Kenya Ltd	110,678,091	923,649	0.87	0.164563	8.044062	0.008345
KenGen Ltd	15,000,633	1,512,392	0.89	0.153067	7.17611	0.100822
Kenya Power & Lighting Co. Ltd	8,778,345	5,867,743	0.38	0.357981	7.083936	0.668434
Umeme Ltd	1,017,943		0.45	0.464396	6.007723	0
Olympia Capital Holdings Ltd	23,142	6,250	0.31	0.311082	6.609058	0.270072
Centum Investment Co. Ltd	12,341	6,250	0.13	0.078775	7.17	0.506442
Trans-Century Ltd	12,345,431	179,735	0.25	0.157377	7.29	0.014559
Home Afrika Ltd	234,123	112143	0.26	0.180506	6.94	0.478992
Kurwitu Ventures Ltd	930,329	501,750	0.14	0.273316	7.38	0.539325
Nairobi Securities Exchange Ltd	6,118,200	206,571	0.38	0.185364	7.494145	0.033763
A.Baumann& Co. Ltd	12,363,783	17,138	1.00	0.08986	7.242488	0.001386
B.O.C. Kenya	1,732,684	132451	0.10	0.148284	6.745785	0.076443
British American Tobacco Kenya	19,339,000	1,613,245	0.08	0.06	7.15	0.083419
Carbacid Investments	532,286	123,653	0.14	-0.05	7.23	0.232306
East African Breweries	8,922,932	653,124	0.06	-0.08	6.36	0.073196
Eveready E.A.	50,306,733	4,613,241	0.41	0.59	7.701626	0.091702
Kenya Orchards	10,782,755	34,125,123	0.37	-0.09	7.03273	3.164787
Mumias Sugar Co. Ltd	202,418	213,452	2.32	-2.15	5.306249	1.054511
Unga Group	95,855,120	67,543,123	0.36	0.90	8.035782	0.704638
Flame Tree Group Holdings	6,512,342	432,152	0.53	0.02	5.32	0.066359
Safaricom Ltd.	3,421,643	213,452	0.45	0.14	4.234	0.062383