

**THE EFFECT OF CAPITAL STRUCTURE ON THE FINANCIAL  
PERFORMANCE OF MANUFACTURING FIRMS IN KENYA**

**BY:**

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**D63/77527/2015**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT  
OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF  
SCIENCE IN FINANCE, UNIVERSITY OF NAIROBI.**

**NOVEMBER 2016**

## DECLARATION

This research project is my original work and has not been submitted for a degree at any other university for examination.

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## **ACKNOWLEDGEMENTS**

I am grateful to God for the opportunity to undertake this research project. Also, I express my appreciation to my supervisor Mr. Herick Ondigo for invaluable support and commitment devoted in making this research project a reality. Special thanks to my boss Sam Omukoko and also to my friends, Brian, John, David and Chris for their invaluable assistance.

Finally, I would also like to give gratitude to Bernard Mugambi, Jane Njeri and Michelle Mwendwa for their support, prayers and understanding through the period of the study.

## **DEDICATION**

I dedicate this research project to my parents Bernard Mugambi and Mrs. Jane Njeri Mugambi for their moral and financial support, encouragement and understanding.

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## **LIST OF ABBREVIATION AND ACRONYMS**

<b>CMA:</b>	Capital Market Authority
<b>MM:</b>	Modigliani and Miller
<b>NSE:</b>	Nairobi Securities Exchange
<b>ROA:</b>	Return on Asset
<b>ROE:</b>	Return on Equity

## ABSTRACT

The research objective was to establish effects of capital structure on the performance in financial perspective of Kenyan manufacturing firms. Theoretically it is assumed that the capital mix a firm uses to finance its operations does not matter and that its future operating income generated by its asset is what determines its value. Multiple linear regression which included return on equity as independent variable, capital structure, liquidity, size and growth as the independent variables. These variables were used to establish whether capital structure decisions affect profitability of manufacturing firms in Kenya. Secondary data was collected from 2009 to 2015 and analyzed with the aid of statistical tools. Descriptive study research design was used to determine frequency of occurrence or extent to which variables were related. The population used in this study was ten manufacturing and allied companies which are all listed at the NSE. The study used mainly secondary data from the NSE hand book, data relating to the research question was also obtained from audited financial statements of respective firms. The correlation coefficient and coefficient of determination were used to test whether the expected values of quantitative variables differed from each other. The results obtained from the regression equations established a negative relation between total debt, size and financial performance which indicates using more of debt or assets are linked to a decrease in performance in financial perspective. The study further found out that financial performance increased with increase in liquidity and sales growth. From the findings outlined above, the study recommends that companies, should consider borrowing less funds and use internal funds economically so that they can consequently reap from such funds and increase their financial performance. Secondly the firm management should take into account their liquidity which is significant and growth as this also turned to be critical factors in determining financial performance.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Back Ground of the Study**

Capital structure plays a critical role which enables an organization address the dilemma of whether or not an optimal capital structure can be achieved. Abor (2005) mentioned that a firm needs to finance its operations and in doing so, they will need to choose a particular combination of equity and debt which forms a capital structure. Therefore, total capital of a firm is composed of both debt and equity which makes up firm's capital structure. Capital structure decisions are considered to be a vital managerial decision as it influences the shareholder risk and return.

Capital structure theories try to explain whether combination of debt and equity matters, and if it does, what might be the optimal capital structure. An optimal capital structure is usually the one that reduces the cost of a company's funds while maximizing the capital gains attributed to the shareholder. Over the years, several theories on this topic have been established by researchers and different academic scholars. These theories include; the theory of Modigliani & Miller (1958) which proposed that the cost of obtaining capital is not linked to the type of funds that a company uses and there isn't any existence of an optimal capital structure, hence the capital structure of a firm is not relevant or has no influence on the value of a firm. However, amendments were done by Modigliani & Miller (1963) on their earlier model of capital structure irrelevance theory in relation to their acceptance that corporate tax and the tax deductibility of interest payment exist.

The trade-off theory suggests that for a firm achieves an optimal capital structure, there must exist a tradeoff between benefits-costs of borrowing and equity financing. The main gain linked with borrowing is tax deductibility of interest and the cost to be incurred are bankruptcy and agency costs (Jesen and Meckling, 1967). According to the pecking order theory, there exists an information asymmetry problem between the agents of a firm who are managers and shareholders who are the owners, in order to reduce this problem firm will prefer to use funds generated internally as compared to external funds (Myers and Majluf, 1984). Therefore, managers have to be very careful when making decisions that relate to the company's capital structure as it has effects on the particular risk and also the returns expected by the shareholders.

### **1.1.1 Capital Structure**

Abor (2005) described capital structure as a precise mix of debt and equity which is normally used to finance the firm's operations. Abor (2005) further added that a firm can select among several alternative sources of capital with different mix of securities. This definition provides its' self for review to firms considering the fact that it emphasizes on specific proportion of debt and equity used for financing organizations. Naveed et al (2010) defined the capital structure concept as the relationship between the various forms of financing. Hence, the term signifies the proportion between equity and debt capital that some firm targets to attain as part of the firm's objectives. However, they did not propose clearly on the proportion of the capital structure concept.

Ross, Westerfield, Jaffe & Kakani (2009) presented the pie model which gives the relationship between value of a firm and various providers of funds, they also pointed out that the amount of debt a firm chooses relative to equity defines its capital structure. Ross et al (2009) pointed out that such a choice is a strategic one which has many implications on the firm, therefore, it should be well managed to ensure that the ultimate interest of the shareholder and other stakeholders of the company are served.

The decisions regarding capital structure are critical to management since it has an impact on the shareholders returns and risks, which also affects firm's market share. This is due to the fact that the mix can have cost implications when it comes to sourcing of the funds for the business and hence its value. Therefore, the firm managers must plan its capital structure and by making critical analysis. There are

### **1.1.2 Financial Performance**

Performance is to a large extent expressed in terms of profits and losses and this is observed by how a business performs over a given period of time (Stanwick, 2002). According to Erasmus (2008) financial performance is considered as the best possible way of as to how a firm generates its' revenues through utilization of its assets. Metcalf & Titard (1976) mentioned that performance in financial perspective involves the act of carrying out financial activity so as to realize the financial objectives within a given time period. It is not only used to determine a given period financial status but also the results of its operations and policies through monetary terms. These measures are important since they can be used for comparison between firms which are on the same or different industry.

Financial performance is firm's ability to generate new resources, from its daily procedures, for a certain time period. Financial performance may also refer to the firm's ability to make good use their resources in an effective and efficient manner for achievement of the firm's objectives and goals (Warsame, 2016). According to Kagoyire and Shukla (2016) financial performance is the firm's ability to efficiently operate, be more profitable, to grow and survive for a long period of time. All organizations strive to utilize it resources effectively to achieve a high performance level especially in financial terms. Thus, financial performance is the outcome of any of many different activities undertaken by an organization (Fujo & Ali, 2016).

Measuring is considered to be a simple task despite its specific complications with many researchers preferring to use market measures and others opting for accounting measures (Waddock, 1997). Accounting as a measure usually use historical information of firms' performance which may be subject to managerial manipulation and as such it becomes difficult to compare firms' performance using accounting information especially if different firms use different accounting procedures. When using accounting measures, different sectors of economy features or characteristics and risk associated with such sectors need to be taken into account (McGuire, 1988).

Ratio is used to summarize large quantities of financial data which can be used as a benchmark to make both qualitative and quantitative judgment about the firm performance. Measures of a firm's financial performance are ROE and ROA (Tharmila & Arulvel, 2013). Rose et al (2009) suggested two broad measures of financial performance namely absolute measure and relative measure. The absolute measure assesses performance based on the absolute quantum of profit. "Profit-equivalent" connotes varied forms of profit (profit before tax, profit after tax, residual income and economic value added). One weakness of the absolute measure is its inability to relate the profit to the resources used to generate profit. Absolute measure may not provide quality information for performance comparison decisions.

Return on asset (ROA) not only does it measure profitability but also the related assets used or employed in profit generation. On breaking down ROA, we get two important measures, that is, profitability ratio and asset turnover ratio. ROA determines the ability f a firm to generate enough returns on its assets. For Return on Equity (ROE), it does not show how a

firm uses its resources but a firm can manage to deliver a very impressive ROE without necessarily being effective at asset utilization to grow the firm.

The other measure that can be used is the market which is a future oriented and focus more on performance of the market and less vulnerable to different accounting procedures. It is a representation of investor's evaluation of the firm's ability to generate more earnings. This measure is able to determine the firm's future earnings rather than looking at the past performance of the firm. The greatest shortcoming of this measure is that, investors' perception about a firm may not be enough to gauge a firm's performance in financial perspective (McGuire, 1988).

### **1.1.3 Effect of Capital Structure on Financial Performance**

Modigliani & Miller (1958) proposed that a type of funds that a firm uses is not linked to its cost and there isn't any existence of a capital structure that is optimal, hence it is irrelevant or has no influence on the value of a firm. The tradeoff theory suggests that when trying to find an optimal capital structure, firms will trade off main benefits which is tax deductibility of interest and costs which is bankruptcy cost of debt and equity financing (Myers, 1977). However, it cannot be concluded from this theory that interest tax shield has a substantial contribution to the debt ratios or the market value of a particular firm. According to pecking order theory, Myers & Majluf (1984) noted that internal finance is preferred over external finance by firms since information asymmetry creates a problem between the firm's agent and the owner. Hence, less debt capital will be used by firms that are considered to be profitable and generate better earnings as compared to those that don't generate high earnings.

Ebaid (2009) assessed effects of capital structure choice on the listed non-financial firms in Egypt from 1997 to 2005. The methodology used was multiple regression analysis on a sample of 64 firms. The study results revealed that short term debt and total debt negatively impacted performance in financial perspective. Amenya (2015) examined effects of capital structure decisions on firms' performance in financial perspective for period of six years between 2008-2013. The study population was 61 firms listed at the NSE but the study narrowed to a sample of 26 firms using random selection sampling technique. The study came to a conclusion that an increase in leverage negative affect firm's performance.

Karani (2015) examined effect of capital structure decisions on firms' performance in financial perspective in energy and petroleum sectors listed at the NSE for period of eleven years between 2004-2014. The study population was 5 firms and analysis was done using multiple regression. The result showed that capital structure generally influences financial performance of the energy and petroleum firms listed at the NSE.

#### **1.1.4 Manufacturing Firms in Kenya**

Over the years, the manufacturing and allied sector has been crucial in supporting economic growth and development in Kenya. It has a diverse industry division and ten among them are listed at the NSE. Some of the notable sub-sectors including tobacco products, beer and spirits, fruit canning, flour milling and sugar refining. The manufacturing sector needs a keen attention in order to ensure that there is a meaningful influence to Kenya's economy. According to the 2016-2017 budget, Kenya has set out to enhance the economic growth by double digits by the year 2030 and this is through prioritizing key industries in the manufacturing sector as the vehicles to deliver these goals (Wakiaga, 2016). As at 2015, manufacturing sector recorded a growth of 3.5 percent compared to 3.2 percent as at 2014. The contribution of the manufacturing sector to the GDP grew to 10.3 per cent in 2015 from 10.0 per cent in 2014 and maintained the second position in ranking. Also, the sector contributed 11.9 per cent of the formal jobs in the country.

The manufacturing sector performance was favorable in 2015 due to the good macroeconomic environment except for the cost of borrowing that somewhat curtailed the availability of cheap credit to fund the sector's activities. It is common with companies in the manufacturing and allied sector to have a more frequent and higher need of raising capital than those in the service sector like professional services. A more common method of raising finance in this sector is through debt or equity which is dominant in their capital structure. Manufacturing firms have a more frequent and higher need of raising capital, this has seen the overall credit to the sector increasing from KSh 237,422 million in 2014 to KSh 290,069 million in 2015 (Economic Survey 2016).

The share prices have gone up since the beginning of 2016 which is attributable to chalked up price gains for five manufacturing stocks among the nine h are actively traded. The manufacturing segment has outperformed other segments like commercial and services, insurance, banking, energy and construction. Standard Chartered conducted a study and firms



in the sector according to them, are experiencing lower input costs at a time when a lot of orders for products have been received and this is due to decrease in inflation and more stable interest rate (Mwaniki, 2016).

## **1.2 Research Problem**

Abor (2005) described capital structure as a precise mix of equity and debt that determines firm's funding profile. From strategic management standpoint, this is a very critical issue because it is connected with a firm's capacity to cater for various stakeholders' demands (Roy and Minfang, 2000). A proper capital structure decision is key for any organization not only in terms of increasing its value and maximizing returns, but also due to the effect such a decision has on its ability to compete favorably.

The manufacturing sector needs a keen attention in order to make meaningful contribution to Kenya's economy. According to the 2016-2017 budget, Kenya has set out to enhance the economic growth by double digits by the year 2030 and this is through prioritizing key industries in the manufacturing sector as the vehicles to deliver these goals (Wakiaga, 2016). As at 2015, manufacturing sector recorded a growth of 3.5 percent compared to 3.2 percent as at 2014. The contribution of the manufacturing sector to the GDP grew to 10.3 per cent in 2015 from 10.0 per cent in 2014 and maintained the second position in ranking. Also, the sector contributed 11.9 per cent of the formal jobs in the country.

Manufacturing firms have a more frequent and higher need of raising capital, this is due to the fact that the overall credit to the manufacturing sector increased from KSh 237,422 million in 2014 to KSh 290,069 million in 2015 (Economic Survey 2016). Due to capital, intensive nature of this sector, they are required to determine their optimal capital mix in order to realize gains from their investments. The manufacturing sector performance was favorable in 2015 due to the good macroeconomic environment except for the cost of borrowing that somewhat curtailed the availability of cheap credit to fund the sector's activities. This call for a need to establishing an optimal structure of capital since its crucial for growth and financial performance of this sector hence the motivation of the research project.

Oguna (2014) examined effect of capital structure on firms' performance in financial perspective under manufacturing, construction and allied sector at NSE from the year 2010 to

the year 2013, from a sample of 14 firms. The findings indicated that there was a positive relation between capital structure and firms' performance in financial perspective. Yabs (2015) did a study on capital structure and performance in financial perspective that sought to determine the relationship between them. This was done on 28 real estate firms in Kenya. The study's conclusion was that financial performance of firms in the real estate was moderately positively impacted by capital structure. Another study was conducted by Amenya (2015) on capital structure and performance in financial perspective relationship on the listed firms at NSE for period of six years between 2008-2013. The study conclusion was that firm performance is negatively affected by increase in leverage.

The above studies have been carried at both international and local level. Due to the contradictory results of the studies, the current study therefore intended to interrogate further the relationships in an attempt to resolve the conflicts. Also, Kenya's capital market is not well developed in comparison to first world countries where most of the studies have been carried out. This research project was therefore motivated by this gap and sought to answer the question: What are effects of capital structure decisions on performance in financial perspective of manufacturing firms in Kenya?

### **1.3 Research Objective**

To establish effect of capital structure decisions on performance in financial perspective of manufacturing firms in Kenya.

### **1.4 Value of the Study**

This study is important as it will help the government see the need to lower the cost associated with borrowing by coming up with various monetary and fiscal policies due to the fact that many companies depend on external sources to fund their operations.

This study will make contribution to managerial practice on financing of firms, hence aligning firms to these aspects and managerial practices so as to avert risk. The Capital Markets Authority will find the study useful as the regulatory agency and might need to come up with regulations relating to strengthen capital structure decision.

This study will be significant and beneficial to current and prospective investors given that they will be able to better understand the impact of capital structure on financial performance

of a firm. Also, this study will be of great help to analysts and consultants as they can utilize it in their consultancy and advisory services with regards to capital structure and financial performance of firms.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section reviews existing literature on capital structure and firm's performance from a financial perspective and theories related to this study. The chapter discusses the theoretical review, the empirical review, determinants of financial performance and conceptual framework.

#### **2.2 Theoretical Review**

The following are some of the theories concerning capital structure and performance from a financial perspective that have been documented in financial literature. These theories are; Modigliani & Miller, trade off theory, pecking order theory and market timing theory.

##### **2.2.1 Modigliani and Miller Theorem**

Modigliani & Miller (1958) proposed that there isn't any existence of an optimal capital structure, hence the firm's capital structure is not relevant or has no influence on the firm's value. However, Modigliani and Miller (1963) amended their earlier model on capital structure irrelevance theory. The amendment according to Watson and Head (2010) was done in relation to the existence of corporate tax and the tax deductibility of interest payment which they acknowledged. Based on this assertion, firms could replace equity with debt. However, Brigham and Gapenski (1996) disagreed with the MM model since it does not hold in practice because of the existence of bankruptcy costs which will increase as a result of trade off between equity and debt. They agreed firms value will improve costs linked with capital will reduce when debt is used because of tax deductibility of interest.

In regards to the assumption that firm's value is not affected by leverage in a perfect market, this study intends to interrogate the same since the Kenyan market is not perfect. Also, in relation to the existence of corporate tax and the tax deductibility of interest payment, this study also seeks to interrogate if a firm will shield more of its profits from tax by increasing its leverage through replacing equity with debt in its capital structure. If so, how will this affect its financial performance?

### **2.2.2 Trade-off Theory**

This theory of trade-off suggest that debt finance is mostly used when a firm has a great level of tangible assets while equity finance is mostly used when a firm has a great portion or level of intangible assets. Thus, a firm should maintain an optimal debt–equity ratio (Al-Tally, 2014). The theory of trade-off states that an optimal debt amount is determined by a comparison of the costs related to debt financing against the benefits that will be obtained if debt financing is used by a firm. Therefore, a great leverage can be taken by a more profitable firm to finance its investments or operations. According to the theory of trade off, most firms try to balance between the tax advantage on the use of leverage against the costs associated with utilization of leverage as a financing means of investments in a firm (Aliu, 2010).

Theory of trade-off holds that firms only borrow to an extent where tax shield on debt financing immediately offset total cost that is usually associated with debt financing (Itiri, 2014). Trade off theory also explains that companies usually borrow from financial institutions in a gradually manner so as to reach its optimal level of debt-equity ratio. At this level, firms are able to maximize market value in summing up present value of expected debt financing costs against the expected benefits of debt financing (Bontempi & Golinelli, 2001).

According to this theory, the benefit gained from use of debt is majorly the tax-shield effect because interest on debt is tax deductible (Ross et al, 2009). Thus, this study seeks to find out if use external funds up to where gains from extra shilling in borrowing is the same as the cost due to increased profitability as a result of financial distress. In addition, the theory does not identify a precise optimal capital structure, hence the reason for the study so as to address this gap.

### **2.2.3 Pecking Order Theory**

Myers & Majluf (1984) noted that, when supporting new investments firms favor internal funds as compared to external funds. If a case arises where the internal funds are not enough for a particular investment opportunity, a firm may seek other alternatives like the external fund. If it does, they will pick among the numerous outside funds in such a way as to ensure that they don't incur any additional costs regarding asymmetric information.

In addition, Myers (1984) indicated that safest securities will be given first priority when the necessity of external financing comes up, firms will most likely follow an order so as to

achieve this by safest security which will be debt, then possibly convertible debt and then equity comes as a last resort. Myer's proposition was that business follows a hierarchy when it comes to determining the financing sources and internal financing is preferred choice and should external financing be needed, debt would be at the top as compared to equity. This argument was also supported by Pandey (2005).

This theory is important since it shows how firms define their capital structure by choosing to maintain their earnings in favor of debt so as to finance its operations. This theory will help determine whether profitable firm use less debt because of high earnings to fund themselves as compared to those with less earnings. In relation to effect of capital on performance in financial perspective, the theory will help to determine whether distinct preference is given to internal finance over external finance. If so, how does this affect the firm's financial performance?

#### **2.2.4 Market Timing Theory**

According to this theory, firm's capital structure is as a result of timing their equity issues. This theory states that manager do a critically analysis and they will issue new shares if they believe those shares will be overvalued. On the other hand, they will buy them back when they are undervalued (Baker and Wurgler, 2002). There is a different version from this theory that points towards capital structure dynamics that are alike. The theory expectations are:

The theory assumes that the economic agents are rational and after positive information, firms are normally assumed to issue equity directly because of reduced information asymmetry between the management of the firm and stockholders. To reduce asymmetric problem after the release of positive information, direct issue to potential investor is done by the companies. When information is shared regularly, the company may increase its stock prices therefore own timing opportunities are created.

Graham and Harvey (2001) noted the managers admitted that it was of great importance to issue or buy back the firm's stock and time the equity market. Baker & Wurgler (2002) concluded that past collective efforts to time the equity market determines the firm's capital structure; this was as a result of positive relation between leverage and measure of market timing.

This theory states that manager should takes advantage of the information gap and makes critical analysis of the funds market. The importance of this is that information asymmetry can be costly to firms if the investors misinterpret the manager's behavior and charge them unfairly hence affecting the firm's performance.

### **2.3 Empirical Review**

Ibrahim (2009) examined the relation between leverage and firms' performance in financial perspective in Egypt using multiple regression analysis. The study concluded that capital structure had no effect on firms' performance in financial perspective. Ebaid (2009) conducted a study on the impact of capital structure choice on firms in Egypt. The findings of the study revealed that financial performance is negatively influenced by short term debt and total debt but there wasn't any significant relationship with long term debt.

Muhoro (2013) examined effect of capital structure decisions on performance in financial perspective of construction and allied firms listed at NSE from 2003 – 2012. The population used in this study was five listed construction and allied companies. The relationship was established using multiple linear regression model. The study established a positive relation between total debt, long term debt, short term debt, size, sales growth and return on equity. Tale (2014) did a study to establish capital structure and performance relationship. The study period was between 2008 to 2013 on 40 non financial firms listed at the NSE. Analysis was done using regression analysis model and the study findings revealed a positive insignificant relationship between financial performance and tangible assets was established.

Tifow and Sayilir (2015) examined capital structure and firm performance so as to establish if there exists any relationship. This study was conducted for the period between 2008 to 2013 on 130 manufacturing firms listed on Borsa Istanbul and panel data analysis was used. The methodology used was multiple regression analysis. The study concluded that leverage has a negative significant association with performance of the firm.

Banafa (2015) conducted a study on manufacturing sector in Kenya focusing on capital structure effects and profitability. Convenience sampling was adopted in the study and the conclusion was that capital structure has a significant positive effect on firms' performance. Amenya (2015) did a stud on capital structure and firms performance in financial perspective in Kenya so as to determine their relationship for a six years period between 2008-2013. The study population was 61 firms listed at the NSE but the study narrowed to a

sample of 26 firms using the random selection sampling technique. The conclusion from the study was that when financial leverage is increased, there exist a negative effect on performance of the firm.

Yabs (2015) did a stud on capital structure and performance in financial perspective for Kenyan real estate firms so as to determine their relationship. The focus of the study was on a sample size of 28 real estate firms for a period of five years. Regression analysis was used and the findings from the study was a positive effect between capital structure and firm's performance in financial perspective. Migiro & Abata (2016) did a study on capital structure and firm performance of the Nigerian firms with an aim of ascertaining if there was any relationship between them. A sample of 30 listed firms was examined between 2005 and 2014 and multiple regression was used. A significantly negative relation between debt/equity mix and ROE was concluded as the study findings.

## **2.4 Determinants of Financial Performance**

A firm's financial performance is affected by different factors and may be viewed from factors related to the firm specific and macro-economic determinants from different visions and in different ways.

### **2.4.1 Capital Structure**

Abor (2005) described capital structure as a precise combination of equity and debt that determines firm's funding profile. Abor (2005) further added that a firm can select among several alternative sources of capital with different mix of securities. This definition provides its' self for review to firms considering the fact that it emphasizes on specific proportion of debt and equity used for financing organizations.

Ross, Westerfield, Jaffe, & Kakani, (2009) presented the pie model which gives the relationship between value of a firm and various providers of funds, they also pointed out that the amount of debt a firm chooses relative to equity defines its capital structure. Ross et al (2009) indicated that such a choice is a strategic one which has many implications on the firm, therefore, it should be well managed to ensure that the ultimate interest of the shareholder and other stakeholders of the company are served.



The capital structure decision is of great importance to managers since it has impact profitability and ultimately on the shareholders returns and risks, which also affects the firm's market share. This is due to the fact that the mix can have effect on general cost of obtaining capital for a business and hence its value. Therefore, the firm managers must plan its capital structure and by making critical analysis since these decisions will influence performance.

### **2.4.2 Liquidity**

Liquidity defines how a firm is at a better position to quickly repay its obligation. This will enable a firm to run its operations smoothly without any funding constraints, besides, this will also reduce the costs associated with borrowing hence improve performance by cutting cost. However, there are conflicting views when it comes to relating liquidity and leverage. According to trade off theory, firms that have proper liquidity prefer using external financing since they have the ability to repay the debt and also benefit from tax shields, hence resulting in a positive relation between liquidity and leverage. Conversely, pecking order theory suggests that when financing new investments, the more liquid firms prefer to use the internal funds as compared to external funds, resulting in negative relationship between liquidity and leverage. However, there isn't many studies have tested effect of liquidity on choice of capital structure. Mazur (2007) and Ahmad et al (2011) current assets to current liabilities ratio as the liquidity measure.

### **2.4.3 Firm Size**

Firm's size determines the level of economics of scale enjoyed by a firm. When a firm becomes larger it enjoys economics to scale and the average production cost is lower and operational activities are more efficient. Hence, larger firms generate larger returns on assets. However, larger firms can be less efficient if the top management lose their control over strategic and operational activities within the firm (Chandrapala & Knápková, 2013). Large firms are also more diversified than small ones and have greater market power and during good times may have relatively more organizational slack.

The size of the firm or enterprise also determines the cash flow sensibility to investments (Predescu, 2008). In measuring the size of the firm size, total number of employees of the firm, volume of sales and amount of property are the main factors that are usually measured (Salman & Yazdanfar, 2012).

#### **2.4.4 Growth**

The firm's future financial performance is influenced by growth (Rajan, 2008). Higher growth also means an increase in future prospect for investors. Economic growth helps a firm to better position itself on the markets, hence a good competitive advantage against its competitors. Growth prospect may be considered as an asset that adds firm's value, but cannot be collateralized and are not subject to taxable income. According to pecking order theory, firms may utilize internal funds as its initial financing instead of borrowing externally to fund its operations (Watson and Head, 2010). It therefore suggests that firms with high-growth prospects will prefer using internally generated funds which is not risky as compared to debt and equity. Rising of external finance is costly due to information asymmetry which might hamper future growth prospect and also reduce future earnings.

#### **2.4.5 Profitability**

Profitability refers to money that a firm can produce with the resources it has. The goal of most organization is profit maximization (Niresh & Velnampy, 2014). Profitability involves the capacity to make benefits from all the business operations of an organization, firm or company (Muya & Gathogo, 2016). Profit usually acts as the entrepreneur's reward for his/her investment. As a matter of fact, profit is the main motivator of an entrepreneur for doing business. Profit is also used as an index for performance measuring of a business (Ogbadu, 2009). Profit is the difference between revenue received from sales and total costs which includes material costs, labor and so on (Stierwald, 2010).

Profitability can be expressed either accounting profits or economic profits and it is the main goal of a business venture (Anene, 2014). Profitability portrays the efficiency of the management in converting the firm's resources to profits (Muya & Gathogo, 2016). Thus, firms are likely to gain a lot of benefits related increased profitability (Niresh & Velnampy, 2014). One important precondition for any long-term survival and success of a firm is profitability. It is profitability that attracts investors and the business is likely to survive for a long period of time (Farah & Nina, 2016). Many firms strive to improve their profitability and they do spend countless hours on meetings trying to come up with a way of reducing operating costs as well as on how to increase their sales (Schreibfeder, 2006).

In, accounting theory profitability shows the surplus of profit over expense for a specified duration that represent earning of commercial banks from the various activities they perform

in a growing economy (Tariq et al., 2014). The profitability of a banking institution can thus be defined as net profit of the bank (San and Heng, 2013). A commercial bank is profitable if it has accrued more gains in financial perspective from invested capital. Thus, the bank's success is determined from the profits it has made in a given financial year (Adeusi, Kolapo and Aluko, 2014). Profitability also shows the association between the absolute amount of income that indicates the capability of the bank to advance loans to its customers and enhance its profit. In today's competitive environment, profitability is a key factor for smooth the running of the business and has a significant effect on banks' performance and economic development as well (Tariq et al., 2014). Profitability is also crucial for a banking institution to maintain its ongoing activities and for shareholders to generate fair returns (Ponce, 2011).

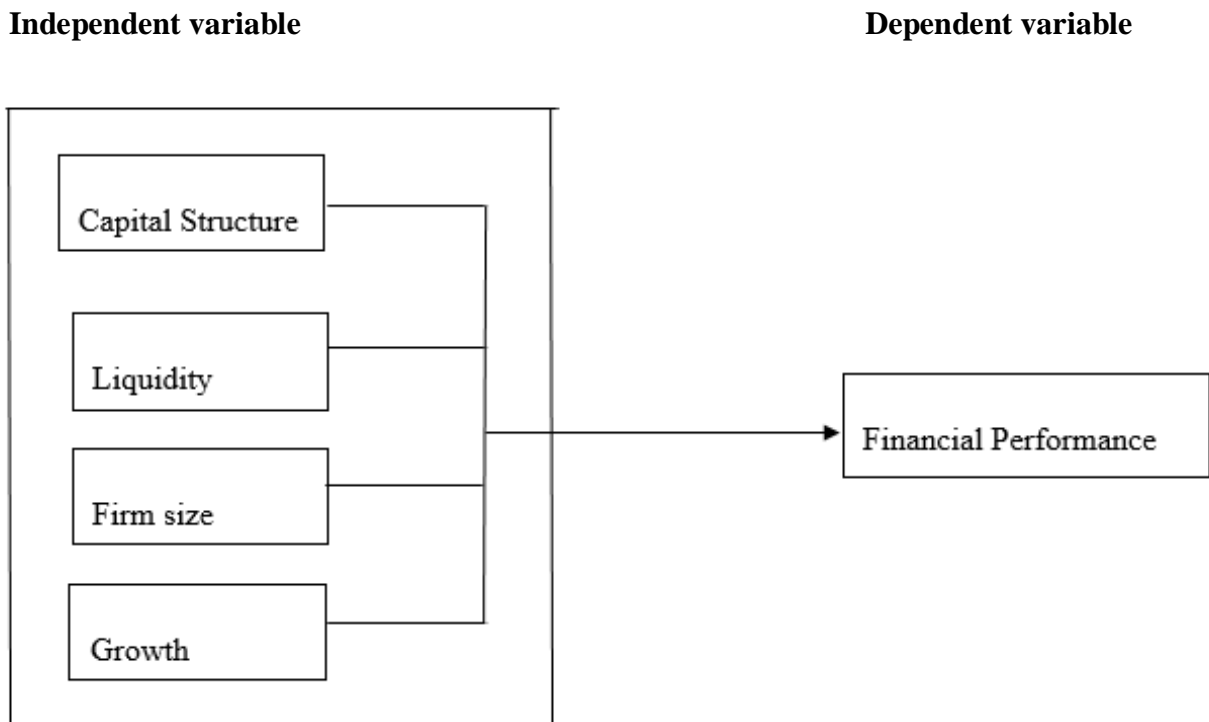
Profitability is one of main aspects of financial reporting for many firms (Farah & Nina, 2016). Profitability is vital to the firm's manager as well as the owners and other stakeholders that are involved or associated to the firm since profitability gives a clear indication of business performance. Profitability ratios are normally used to measure earnings generated by a firm for a certain period of time based on the firm's sales level, capital employed, assets and earnings per share (EPS). Profitability ratios are also used to measure the firm's earning capacity and considered as a firm's growth and success indicator (Majed, Said & Firas, 2012).

Profitability is generally measured using accounting ratios with the commonly used profitability ratio being ROA. ROA determines the amount of the profit earned per shilling of assets. This reflects the efficiency with which the bank's managers use bank's investment resources or assets in generation of income (Sehrish, Irshad and Khalid, 2010). ROA simply connotes the management efficiency and depicts how effective and efficiently the bank management operate as they employ the organization's assets into the earnings. A high ROA ratio is a clear indicator a good performance or profitability of a banking entity (Bentum, 2012).

## **2.5 Conceptual Framework**

Conceptual framework is aschematic arrangement which shows how dependent and independent variable relate to each other. In this study, independent variables are; capital structure, liquidity, firm size and growth whereas Financial performance is dependent variables as measured by ROE.

**Figure 2.1 Conceptual Model**



**Source: Research Findings**

## **2.6 Summary of the Literature**

The existing literature review provides a strong contention on what constitutes an optimal capital structure. Several studies which are relevant to this area have been conducted to find out the balancing between cost and benefit of debt financing. Modigliani and Miller having proved the irrelevance theory of capital structure, numerous arguments has been put forward by other scholars on the relevancy of their assumptions and if it does hold in the real world. It is in the face of this that other theories have also sprung in corporate finance over the years namely the trade off model and pecking order theory. These models are based on tax benefits, asymmetric information, bankruptcy cost and agency cost which are associated with debt use. Clearly, these results are mixed and therefore not conclusive. Also, studies that have been done are mostly from the developed countries, similar studies can be replicated in Kenya since its an emerging economy. Motivated by this gap, this study therefore sought to examine effect of capital structure on performance in financial perspective of Kenyan manufacturing firms.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Chapter three focuses on the study research design, study population, the sample design, data collection techniques and techniques of analysis.

#### **3.2 Research Design**

A research design refers to plan that guide a researcher on how to organize the research activities (Bryman & Bell 2003). A research design presents a framework or arrangement of action for a study. The study adopted a descriptive research design. A descriptive research provides a comprehensive picture of a circumstance or a situation. It is normally done in order to determine and be in a position where one can describe features or characteristics of the given variable of interest for a certain situation.

#### **3.3 Population of Study**

The study population was ten firms which are listed under the manufacturing and allied sector of the main investment market segment at the NSE. The research considered a seven-year period from 2009 to 2015. Listed companies were preferred because financial statements were readily available at NSE handbook and CMA website.

#### **3.4 Data Collection**

The study used secondary data which was collected from the annual reports of the firms.

#### **3.5 Data Analysis**

Analysis on the data collected was done using Statistical Package for Social Science (SPSS version 22). When data was collected, descriptive statistics such as mean and standard deviation were used. Representation of the results was done using tables and explanations done in prose.

### 3.5.1 Analytical Model

The following regression model was used

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where,

Y = Financial performance measured by ROE which is net income divided by average shareholder's equity

$\alpha$  = y intercept of the regression equation.

$\beta_1, \beta_2, \beta_3$  = are regression coefficients of the respective independent variables

$X_1$  = Capital structure which was measured by total debt to equity ratio

$X_2$  = Liquidity, as given by current assets divided by current liabilities

$X_3$  = Size, as given by; Natural logarithm of assets

$X_4$  = Growth of the firm as given by sales for the current year less previous year's sales divided by previous year's sales

$\varepsilon$  = Error term

### 3.5.2 Test of Significance

Regression analysis yielded analysis of variance and correlation coefficient of determination. Correlation coefficient (r) was used to determine and measure the degree of relation between capital structure and performance in financial perspective of Kenyan manufacturing firms. Coefficient of determination (r<sup>2</sup>) measured percentage of variations in financial performance that is explained by the regression of financial performance on capital structure. Analysis of variance will be conducted at a 5% significance level or 95% confidence level.

**CHAPTER FOUR**  
**DATA ANALYSIS, RESULTS AND DISCUSSION**

**4.1 Introduction**

This chapter entails presentation of the study data using tables. The chapter consists of descriptive statistics, correlation matrix, regression analysis and interpretation of the findings.

**4.2 Descriptive Statistics**

This part explains descriptive and inferential statistics that were obtained from the study. The descriptive statistics shows mean and standard deviation of dependent variable (return on equity) and independent variables (total debt/equity, current assets / current liabilities, total assets and sales growth)

**Table 4.1: Descriptive Statistics**

	Mean	Std. Deviation	N
Return on Equity	1.572435	1.8286167	51
Total debt / Equity	1.339688	2.3860418	51
Current Assets / Current Liabilities	.838594	2.3740670	51
Total Assets	200.997835	63.2595462	51
Sales Growth	6.565413	10.5669108	51

**Source: Research Findings**

Table 4.1 above shows the dependent variable return on equity against the independent variables. Return on equity represents the 9 firms among the 10 which are listed under the manufacturing and allied sector of the main investment market segment at the NSE with a mean of 1.572435 and standard deviation of 1.8286167, while total debt / equity ratio has a mean of 1.339688 and a standard deviation of 2.3860418, Current Assets / Current liability has a mean of 0.838594 and a standard deviation of 2.3740670, Total Assets has a mean of 200.997835 and a standard deviation of 63.2595462, and Sales Growth has a mean of 6.565413 and a standard deviation of 10.5669108.

### 4.3 Correlation Matrix

**Table 4.2 Correlation Matrix**

		Return on Equity	Total debt / Equity	Current Assets / Current Liabilities	Total Assets	Sales Growth
Pearson Correlation	Return on Equity	1.000	.167	.433	-.097	.011
	Total debt / Equity	.167	1.000	.414	.021	-.096
	Current Assets / Current Liabilities	.433	.414	1.000	.314	-.080
	Total Assets	-.097	.021	.314	1.000	-.104
	Sales Growth	.011	-.096	-.080	-.104	1.000

**Source: Research Findings**

The findings from research as shown in the table above demonstrate a positive movement between the dependent variable and the independent variables. However, it showed a negative movement between the return on equity and independent variable total assets.

The Pearson’s correlation coefficient between return on equity and total debt / equity ratio is 0.167, this means that the two variables move in the same direction. This implies that an improvement in total debt / equity ratio increases the returns on equity of firms listed at the NSE under the manufacturing and allied sector.

The return on equity and current assets / current liabilities is significant as show by Pearson’s correlation coefficient of 0.433 which implies that an increase in current assets / current liabilities increases return on equity.

Total asset affects return on equity negatively with a Pearson’s correlation coefficient of - 0.097, this implies that an increase in total assets leads to a decrease in return on equity. Return on equity and sales growth shows Pearson’s correlation coefficient of 0.011 which implies that a rise in sales growth increases return on equity.



#### 4.4 Regression Analysis

**Table 4.3 Regression Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.500 <sup>a</sup>	.250	.185	1.6509879	.250	3.834	4	46	.009

a. Predictors: (Constant), Sales Growth, Current Assets / Current Liabilities, Total Assets, Total debt / Equity

b. Dependent Variable: Return On Equity

**Source: Research Findings**

The results on the above table shows that the independent variables explain 25 percent of variance in performance as shown by the R square value of 0.25. This means that 25 percent of Return on Equity can be predicted by total debt / equity ratio, current assets / current liabilities, total assets and sales growth.

**Table 4.4 Analysis of Variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.807	4	10.452	3.834	.009 <sup>a</sup>
	Residual	125.385	46	2.726		
	Total	167.192	50			

a. Predictors: (Constant), Sales Growth, Current Assets / Current Liabilities, Total Assets, Total debt / Equity

b. Dependent Variable: Return On Equity

**Source: Research Findings**

The table above shows analysis of variance results. With F statistic of 3.834, shows that regression as a whole is significant. The result in the table means that total debt / equity ratio, current assets / current liabilities, total assets and sales growth can reliably predicts Return on Equity. The F-value proves that there is a significant relation between profitability (ROE) and capital structure factors.

**Table 4.5 Regression coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	2.769	.851		3.254	.002					
Total debt / Equity	-.037	.109	-.048	-3.338	.737	.167	-.050	-.043	.810	1.235
Current Assets / Current Liabilities	.414	.115	.537	3.605	.001	.433	.469	.460	.735	1.360
Total Assets	-.008	.004	-.262	-1.922	.061	-.097	-.273	-.245	.880	1.137
Sales Growth	.004	.022	.022	.174	.862	.011	.026	.022	.980	1.020

a. Dependent Variable: Return on Equity

**Source: Research Findings**

This study sought to establish a linear regression function of the variables with return on equity as the dependent variable. From the above table the study established the following regression equation.

The theoretical model regression equation:  $Y = \alpha - b_1X_1 + b_2X_2 - b_3X_3 + b_4X_4 + \epsilon$

The established regression equation is:

$$ROE = 2.769 - .037 * \text{total debt / equity ratio} + .414 * \text{Current Assets / Current Liabilities} - .008 * \text{Total Assets} + .004 * \text{Sales Growth} + \epsilon$$

Table 4.5 above presents the regression results for the factors affecting profitability of listed firms under manufacturing and allied sector at the NSE under the study. The result shows that total debt / equity ratio affects the return on equity (ROE) negatively. Beta coefficient of total debt / equity ratio is -0.037. Current Assets / Current Liabilities has a positive beta coefficient of 0.414 which is significant as compared with the other indicators. Total assets have a negative relationship with return on equity with a beta coefficient of -0.008. Sales growth has

a positive beta coefficient of 0.04. The result of the analysis shows that total debt / equity ratio and total assets affect the return on equity negatively, with Current Assets / Current Liabilities having a significant effect. The result also shows that Current Assets / Current Liabilities and sales growth has a positive effect on return on equity.

#### **4.5 Interpretation of the Findings**

From the correlation matrix table the study established that there is a significant positive relationship between current assets / current liabilities and financial performance while total debt/equity and sales growth having an insignificant positive relationship. However, total assets have an insignificant negative relationship with financial performance.

From the analysis of variance, the sum of squares due to regression (41.807) explained by four variables is less than sum of the squares due to residuals (125.385). This implies that the relationship of the variables according to the degree of freedom of the variables is accurate. The result in the table means that total debt/equity, current assets / current liabilities, total assets and sales growth can reliably predict return on equity.

The results from regression analysis show that if total debt/equity, current assets / current liabilities, total assets and sales growth are held constant then the financial performance of manufacturing firms in Kenya will be 2.769. Total debt/equity and total assets have negative coefficients of -0.037 and -0.080 respectively. Current assets / current liabilities and growth have a positive correlation of 0.414 and 0.04 respectively, with current assets / current liabilities being significant. The established linear regression equation is: Return on Equity= 2.769-.037\* total debt / equity ratio + .414\* Current Assets / Current Liabilities - .008\* Total Assets + .004\* Sales Growth

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

Chapter five presents the summary of findings of this research, conclusions, recommendations, limitations of the study and suggestion of areas which may require further consideration as far as future research is concerned.

#### **5.2 Summary**

The objective of the study was to establish effect of capital structure (total debt/equity, current assets / current liabilities, total assets and sales growth) on performance in financial perspective (return on equity) of Kenyan manufacturing firms. The study was able to find the relationship between capital structure factors and performance in financial perspective indicator of Kenyan manufacturing firms. The regression analysis shows total debt/equity and total assets have a negative effect on profitability of manufacturing firms while current assets / current liabilities and sales growth have a positive effect.

Total debt/equity ratio effect on the manufacturing firm's financial performance as shown in correlation matrix table is 0.167 under one tail significance level. The result implies that total debt/equity ratio has an insignificant effect on performance in financial perspective of Kenyan manufacturing firms.

The effect of total current assets / current liabilities on the financial performance of manufacturing firms as shown in correlation matrix table is 0.433 under one tail significance level. The result implies that current assets / current liabilities is significant to performance in financial perspective of Kenyan manufacturing firms.

The effect of total assets on the financial performance of manufacturing firms as shown in correlation matrix table 4.2 is -0.097 under one tail significance level. The result implies that total assets has a weak effect on performance in financial perspective of Kenyan manufacturing firms.

The effect of sales growth on performance in financial perspective of Kenyan manufacturing firms as shown in correlation matrix table 4.2 is 0.011 under one tail significance level. The result implies that sales growth has an insignificant effect on performance in financial

perspective of Kenyan manufacturing firms. The positive effect indicates that sales growth and financial performance (return on equity) move in the same direction. From the regression analysis, the model obtained was:

$$\text{Return on Equity} = 2.769 - .037 * \text{total debt / equity ratio} + .414 * \text{Current Assets / Current Liabilities} - .008 * \text{Total Assets} + .004 * \text{Sales Growth}$$

### **5.3 Conclusions**

The overall objective of the study was to establish effect of capital structure (total debt/equity, current assets / current liabilities, total assets and sales growth) on performance in financial perspective (return on equity) of listed Kenyan manufacturing firms. The findings of the regression equation found out that there exists negative relation between long term debt, total assets and return on equity while there exists a positive relationship between current assets / current liabilities, growth and return on equity.

The study concluded that increase in debt has a negative effect on performance of manufacturing firms listed at NSE. The higher the total debt the less the return on equity as well as reduced shareholder's wealth which indicates a need to increase more capital injection rather than borrowing. The total loans in these firms could lead to high interest expense hence lowering the profitability of the firm. The firms should therefore fund investments from internal sources in order to enhance their performance in financial perspective. This is also supported by Amenya (2015) who found out a negative relation between debt and firms' performance in financial perspective.

The findings of this study are not consistent Modigliani and Miller (1958) theory which affirmed that capital structure is not relevant and has no influence on firm's value. It is also in contradiction with Muhoro (2013) and Banafa (2015) who concluded a significant positive relation between debt to equity ratio and performance in financial perspective.

### **5.4 Recommendations for Policy and Practice**

From research carried out it is evident that borrowings lead to decrease in profits, the study recommends that companies should consider borrowing less and use more of its internal funds so as to enhance the firm performance.

This study recommends that government should lower cost associated with borrowing by coming up with various monetary and fiscal policies due to the fact that many companies depends on external sources to fund their operations. If measures are not taken soon, this is bound to hamper growth in this sector due to the high interest rate in Kenya which is not also in line with the Vision 2030.

It is critical for management to understand impact which capital structure has to a firm since it will make contribution to managerial practice on financing of firms, hence aligning firms to these aspects so as to avert risk.

### **5.5 Limitations of the Study**

Only listed firms at the NSE were used as the case study for the entire population. Thus, other firms with different characteristics which otherwise could provide different results were not considered. Hence, there's room for little variations in the findings with respect to firms.

Time and finance were also other limiting factors. It was highly time consuming to get the financial statements of the listed firms and the time allocated for the research project was limited. The published financial results of various manufacturing firms were hard to get especially the past years thus it took a lot of time getting them. This made it difficult for some of the data to be collected.

### **5.6 Suggestions for Further Research**

Same studies can be done for a longer time period for the purpose of obtaining more improved and reliable findings. If possible more firms from the sectors should be included in the sample so as to increase reliability on the results. Capital structure is a useful tool for growth and expansion and the overall financial performance of any firm.

Further research can be undertaken considering a bigger sample size so as to produce more reliable results. Again, undertaking the same research would help confirm if the observation would have changed. Also, the unquoted firms should be incorporated in future researches to determine whether similar results will be achieved.

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## APPENDICES

### Appendix I: Listed Firms in the Manufacturing and Allied Sector in Kenya as at 31<sup>st</sup> December 2015

1. B.O.C Kenya Ltd
2. British American Tobacco Ltd
3. Carbacid Investments Ltd
4. East African Breweries Ltd
5. Mumias Sugar Co. Ltd
6. Unga Group Ltd
7. Eveready East African Ltd
8. Kenya Orchards Ltd
9. A. Baumann Co. Ltd
10. Flame Tree Holdings Ltd

**Source: Nairobi Securities Exchange**

### Appendix II: Data Collection Sheet

Company Name	Year	ROE	Total Debt / Equity	Liquidity	Total Assets	Growth
	2009					
	2010					
	2011					
	2012					
	2013					
	2014					
	2015					

### Appendix III: Data Summary

Company Name	Year	ROE	Total debt / Equity	Current Assets / Current Liabilities	Total Assets	Sales Growth
B.O.C Kenya Ltd	2009	10%	0.30	2.64	1,988,401	0.00
	2010	5%	0.33	2.48	2,019,810	- 0.10
	2011	11%	0.37	1.94	1,816,803	0.04

	2012	14%	0.37	2.08	1,989,541	0.07
	2013	41%	0.27	2.23	2,633,093	- 0.04
	2014	-12%	0.32	2.14	2,300,320	0.04
	2015	4%	0.35	2.06	2,320,956	- 0.09
BAT Kenya Ltd	2009	31%	1.26	0.98	6,219,531	0.08
	2010	36%	1.17	1.17	11,121,561	0.22
	2011	54%	1.14	1.31	13,750,545	0.49
	2012	55%	1.14	1.18	15,176,495	- 0.04
	2013	51%	1.24	1.26	16,985,923	0.64
	2014	54%	1.25	1.25	18,253,510	- 0.34
	2015	59%	1.11	1.45	18,681,184	0.06
Carbacid Investments Ltd	2009	23%	1.38	10.63	1,376,380	0.43
	2010	25%	1.52	5.79	1,512,166	0.12
	2011	25%	1.39	8.84	1,739,985	- 0.07
	2012	25%	1.32	4.26	2,012,816	0.60
	2013	27%	1.41	10.09	2,204,399	0.03
	2014	22%	1.43	6.30	2,533,163	- 0.13
	2015	17%	1.40	4.51	2,968,727	- 0.02
EABL	2009	31%	0.54	1.69	34,546,993	0.06
	2010	38%	0.61	1.49	38,420,691	0.12
	2011	36%	0.85	1.05	49,712,130	0.16
	2012	63%	5.26	0.80	54,584,316	0.24
	2013	81%	5.94	0.70	58,556,053	0.06
	2014	78%	5.91	0.72	62,865,943	0.03
	2015	85%	4.01	1.02	66,939,778	0.06
Mumias Sugar Co. Ltd	2009	17%	0.74	1.36	17,475,715	- 0.01
	2010	15%	0.67	2.00	18,334,110	0.32
	2011	15%	0.60	2.20	23,176,516	0.01

	2012	13%	0.75	1.25	27,400,113	-	0.02
	2013	-10%	1.04	0.84	27,281,993	-	0.23
	2014	-23%	1.21	0.41	23,563,086		0.09
	2015	-56%	2.44	0.19	20,403,564	-	0.58
Unga Group Ltd	2009	4%	0.77	1.84	5,565,541		0.23
	2010	7%	0.51	2.54	5,064,420	-	0.01
	2011	12%	0.52	2.52	5,708,897		0.15
	2012	9%	0.61	2.36	6,410,259		0.21
	2013	18%	0.89	1.84	8,316,927	-	0.01
	2014	11%	0.67	2.27	8,026,578		0.08
	2015	12%	0.62	2.37	8,671,788		0.10
Eveready East Africa Ltd	2009	7%	1.53	1.51	997,672	-	0.07
	2010	2%	1.96	1.41	1,195,824	-	0.01
	2011	-36%	2.64	1.11	1,016,908	-	0.16
	2012	22%	2.29	1.26	1,150,729	-	0.00
	2013	12%	1.38	1.54	941,797		0.04
	2014	-58%	3.26	1.33	930,057	-	0.15
	2015	115%	0.81	0.98	1,511,665	-	0.07
Kenya Orchards Ltd	2010	-57%	0.10	1.29	74,491		0.03
	2011	-179%	1.02	1.54	70,372		0.16
	2012	937%	0.57	1.73	68,936		0.10
	2013	186%	0.03	1.93	70,597		0.59
	2014	248%	0.00	1.77	50,202		0.23
	2015	-344%	0.01	2.08	61,053		0.05
	Flame Tree Group Holdings Ltd	2014	53%	1.27	1.55	1,054,455	
2015		42%	1.02	1.64	1,372,230		0.29