FACTORS AFFECTING FINANCIAL PERFORMANCE OF MANUFACTURING FIRMS LISTED IN NAIROBI SECURITIES EXCHANGE KENYA

BY

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UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

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A Research Project submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

SUMMER 2018
STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: ________________________ Date: _____________________

Anitha Audax (ID 649893)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ________________________ Date: _____________________

Dr. Elizabeth Kalunda

Signed: ________________________ Date: _____________________

Dean, Chandaria School of Business
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ABSTRACT

The purpose of this study was to examine the determinants of financial performance in manufacturing firms listed in NSE Kenya. The study sought to answer the following research questions: What is the influence of firm size on financial performance among manufacturing firms listed in NSE Kenya? What is the influence of leverage on financial performance among manufacturing firms listed in NSE Kenya? What is the influence of liquidity on financial performance among manufacturing firms listed in NSE Kenya?

The study employed longitudinal design to analyze the determinants of financial performance in manufacturing firms listed in NSE Kenya. The target population of the study was ten listed manufacturing firms in Kenya. The sample size in this study was ten listed manufacturing firms. The study relied mainly on secondary data. Data were obtained from audited financial reports. Data were analyzed using both descriptive, correlation and regression analyses. Statistical Package for Social Sciences was used as tool for data analysis. Data was presented in the form of tables, graphs and pie charts.

The study established that there was a significant influence of firm size on the financial performance of manufacturing firms listed in NSE. The correlation analysis showed that an increase in firm size led to a rise in financial performance of manufacturing firms listed in NSE Kenya. Correlation analysis also revealed that a unit increase in firm size increased financial performance of listed manufacturing firms by thirty-seven percent.

The study also revealed that there was a significant influence of leverage on the financial performance of firms listed in NSE. Correlation analysis also revealed that an increase in leverage increased financial performance of manufacturing firms listed in NSE. Regression analysis further revealed that a unit increase in leverage led to a rise in financial performance of listed manufacturing firms by forty percent.

Findings further showed that there was a significant influence of liquidity on the financial performance of manufacturing firms listed in NSE Kenya. Correlation analysis also revealed that an increase in liquidity increases financial performance of manufacturing firms listed in NSE. Regression analysis further revealed that a unit increase in liquidity leads to a rise in financial performance of listed manufacturing firms by thirty-eight percent.
The study concludes that leverage had the greatest influence on financial performance of manufacturing firms listed in NSE followed by firm size while liquidity had the least impact on financial performance of the manufacturing firms listed in NSE Kenya.

The study recommends that manufacturing firms in Kenya should delve more of leverage so as to improve their financial performance. The study further recommends that another study should be carried out on determinants of financial performance in other sectors of the economy.
ACKNOWLEDGEMENT

First and foremost, I would like to the Lord God almighty through whose grace and mercy I have found strength and the desire to pursue this degree and for granting me health and wealth to accomplish this task. I wish to sincerely thank my supervisor Dr. Elizabeth Kalunda for her continuous guidance and support. Her thoughtful insights, constructive criticism and timely feedback navigated me professionally towards the successful completion of this project. Special acknowledgement and my heartfelt gratitude to all my family members, friends and colleagues who have contributed immensely towards my academic excellence.
DEDICATION

I dedicate this research project to my beloved family. Thank you for the support during this challenging time.
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<th>Description</th>
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<tbody>
<tr>
<td>CSE</td>
<td>Colombo Stock Exchange</td>
</tr>
<tr>
<td>ETF</td>
<td>Exchange Traded Funds</td>
</tr>
<tr>
<td>NSE</td>
<td>Nairobi Securities Exchange</td>
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<tr>
<td>IBM</td>
<td>International Business Machine</td>
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<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<td>ROE</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Good financial performance of any firm not only plays a role in increasing the market value of that specific firm but also leads towards the growth of the whole industry which ultimately leads towards the overall prosperity of the economy (Banafa, Muturi & Ngugi, 2015). Assessing the determinants of performance of manufacturing firms have gained the importance in corporate finance literature because as intermediaries, these companies not only provide the mechanism of risk transfer but also helps to channelize the funds appropriated to support the business activities in the economy.

Financial performance is a subjective measure of the responsibility of a substance for the consequences of its approaches, operations, and exercises evaluated for a recognized period in budgetary terms (Maaka, 2013). Measures of budgetary execution incorporate measures of liquidity, dissolvability, gainfulness, and money related proficiency (Maaka, 2013). Methods for measuring money related execution incorporate; benefit, income, deal development, and market book value (Bassey, Edu, Bassey & Enang, 2016). Evaluating the budgetary execution of business permits chiefs to judge the consequences of business methodologies and exercises in goal money-related terms. Development is by, and large observed as an indication of achievement if it brings about changes in budgetary execution (Agbeja, Adelalaiu & Olufeni, 2015). Three benefit measures that are all around acknowledged for their esteem to administration are profit for resources, return on value and working overall revenue (Njoroge, 2015). Profitability is one of the indicators of financial performance.

Profitability of the firm is defined as the state or condition of yielding a financial profit or gain (Alshatti, 2015). Profitability is measured by Return on Assets (ROA), Return on Equity (ROE) amongst others. ROA measures gainfulness for all supporters of capital; it is the capacity of an association's administration to produce salary by using organization resources available to them (Omesa, 2015). The ROE measures the rate of profit for the proprietor's value utilized in the business. It shows the rate of giving back that the administration has earned on the capital gave by shareholders in the wake of bookkeeping
in installments to all other capital providers (Ehiedu, 2015). It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications for organization's health and ultimately its survival. High performance reflects management effectiveness, and efficiency in making use of company's resources and this, in turn, contributes to the country's economy at large. Performance is a difficult concept, regarding both definition and measurement. It has been defined as the result of activity, and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated, and the objectives to be achieved through that evaluation.

The listing provides an opportunity to the corporates/entrepreneurs to raise capital to fund new projects/undertake expansions/diversifications and for acquisitions. The listing also provides an exit route to private equity investors as well as liquidity to the employees. Listing brings in liquidity and ready marketability of securities on a continuous basis adding prestige and importance to listed companies. The transactions in listed securities are required to be carried uniformly as per the rules and bye-laws of the exchange. All transactions in securities are monitored by the regulatory mechanisms of the stock exchange, preventing unfair trade practices. It improves the confidence of small investors and protects them (Ayodele, 2014).

Manufacturing industries play a critical role in economic growth and development. Manufacturing provides a significant source of demand for goods and services in other sectors of the economy, and these sales to other industries are not captured in measures of manufacturing sector GDP but are counted in the broader measure of its gross output. Based on the recent statistics, manufacturing contributes £ 6.7 trillion to the global economy (Suleiman, 2016). The manufacturing sector employed 12.4 million workers in 2015 or about 8.8 percent of total U.S. employment (Suleiman, 2016). Manufacturing industries generated $2.1 trillion in GDP (12.5 percent of total U.S. gross domestic product) in 2013. In the United Kingdom, manufacturing makes up 10% of GVA and 45% of UK exports and directly employs 2.7 million people (Merozwa, 2015).

Although the best performing firms in most African countries are productive even by international standards, and firms in some sectors are as productive as those in East Asia (Banerjee & Majundar, 2014), the average manufacturing firm in Sub-Saharan Africa is
less productive than the average firm in the best performing East Asian countries. The average firm in Sub-Saharan Africa produces about US$3,300 of output per worker in 2015 dollars (Ajibike & Arema, 2015). In comparison, the average firm in the successful East Asian exporting economies (China, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam) produces about US$6,500 of output per worker. The results are also consistent with this: they find that firms in China are more productive than firms in Vietnam and that the latter, in turn, are more productive than firms in the three African countries they study (Fafchamps & Quinn, 2016). The relationship between financial performance and listed manufacturing firms is important though it has not been researched conclusively.

Few enterprises in most countries in Sub-Saharan Africa export. Fewer than one in five exports anything in most countries (Edem, 2017). This suggests that poor export performance does reflect the small size of the manufacturing. Similar results are found in their sample of firms (Fafchamps & Quinn, 2016). Moreover, even in successful countries such as Kenya, manufacturing firms that export do so mostly to neighboring countries rather than to Europe or other high-income economies.

The manufacturing sector in Kenya is mainly agro-based and characterized by relatively low-value addition, employment, and capacity utilization and export volumes partly due to weak linkages to other sectors (Kenya Association of Manufacturers, 2016). Besides, 95% of Kenya's manufactured goods are basic products such as beverages, food, building materials and basic materials. Only 5% of the manufactured goods are things like pharmaceuticals which are in skill-intensive activities. The growth pattern for the manufacturing industry in Kenya has not been stable. Data from the Kenya National Bureau of Statistics show the manufacturing sector grew 3.6 percent in the first quarter of 2016, down from 4.1 percent growth in the first quarter of 2015. In the third quarter of last year, the sector's growth rate was 1.9 percent compared with 3.3 percent in the same quarter in 2015 (Kenya National Bureau of Statistics, 2016).

Manufacturing sector consists of firms engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. Manufacturing firms in Kenya are represented by Kenya Association of Manufacturers (KAM). KAM is Kenya's leading representative organization for an industry that unites industrialists, serves as a common voice for Kenya's manufacturing sector, and provides an essential link for
cooperation, dialogue, and understanding with the Government. The manufacturing sector was identified as one of the six key sectors under the economic pillar as having the greatest potential in the realization of Kenya vision 2030 (Were, 2016). The vision for the manufacturing sector is the development of robust, diversified and competitive manufacturing processes. The overall goal for the sector is to increase its contribution to GDP by at least 10% per annum. The sector is also expected to raise market share in regional markets from 7% to 15% and attract at least ten large strategic investors in key agro-processing industries, targeting local and international markets.

In Kenya, manufacturing firms are currently undergoing difficult times posing a great challenge to their profitability. High input costs result in expensive and often low-quality raw materials, rising labor costs, unreliable and expensive energy (Njoroge, 2015). Capital productivity in the Kenyan manufacturing sector is particularly low, compared to regional and global productivity levels. Since 2015 some manufacturing firms in Kenya closed their business due to poor performance while others have been forced to relocate their manufacturing plants to other countries. Some companies have also scaled down their manufacturing capacity. Consequently, impacting negatively on the financial performance of manufacturing firms (Gitau & Gathiaga, 2017). This challenge when not monitored closely create major problems in the Kenyan manufacturing industry, hence the need for the current study.

Nairobi Securities Exchange (NSE) is the principal bourse in Kenya, offering an automated platform for the listing and trading of multiple securities. Over the last six decades, the NSE has consistently offered a well regulated, robust and world class platform for the trading of equities and bonds. Going forward, the Exchange will avail new products including; Exchange Traded Funds (ETFs), Financial and Commodity Derivatives and Carbon Credits. NSE is the market of choice for local and international investors looking to gain exposure to the East Africa capital markets. The NSE is publicly traded and is the second self-listed exchange in Africa (NSE, 2017). The firms under the manufacturing category of interest to this study will be pharmaceutical, food (Unga Group)and beverages,(East Africa Breweries), chemical (BOC).
1.2 Statement of the Problem

The manufacturing sector has a great potential for promoting economic growth and competitiveness in the country like Kenya. It is the third leading sectors contributing to GDP in Kenya. It contributed 11% of the GDP in 2016 (Kenya Association of Manufacturers, 2016). However, the sector has experienced the fluctuations over the years under different financial conditions. The Kenya Vision 2030 identifies the manufacturing sector as one of the key drivers in the economic pillar for realizing a sustained annual GDP growth of 10 percent geared to make Kenya a middle-income country by the year 2030. Despite the government efforts in improving macroeconomic conditions as well as market de-regulation, the performance of the manufacturing sector according to the Kenya Economic report 2013 regarding contribution to GDP has remained below the medium-term plan and Vision 2030 targets (Njoroge, 2015).

To understand well the financial performance of this important sector of the economy an understanding of how different factors affect the firm performance is important. A number of studies have been carried out to determine how leverage, firm size, and liquidity influence financial performance of listed firms; which have given conflicting findings. For example, Banafa, Muturi, and Ngugi (2015) examined impacts of leverage on the financial performance of listed Kenyan non-financial firms. The study revealed that leverage had a negative and significant impact on corporate financial performance. The effect of leverage and the size of a company on its profitability was analysed using 100 qualified manufacturing companies listed on the Indonesia Stock Exchange in the period 2009-2014 (Kartikasari & Merianti, 2016). This finding revealed that the debt ratio has a significant positive effect on profitability while total assets have a significant negative impact. Total sales, however, does not have a statistically significant effect on the profitability of the companies.

Study findings on firm size also vary based on the method of analysis used, for example, a study the relationship between size and profitability in the Indian automobile industry from 1998 to 2014. The study yielded mixed results; time-series analysis showed a positive relationship, but cross-section analysis indicated that there is no relationship between firm size and profitability (Kumar & Kaur, 2016).
Liquidity also gives mixed results with regards to financial performance, for example, it was found a relationship between liquidity and Return on Assets (ROA) is positive and significant and positive and significant with Return on Equity (ROE) but positive and insignificant with EPS in the Kenyan service sector (Kanga & Achoki, 2016). Another study found out that leverage has a negative association with performance of firms in the textile industry in Pakistan (Hussein, Sahid & Akmal, 2016). Financial leverage is negatively associated with the return on assets and equity, which shows that firms borrow less, while market-to-book ratio shows positive, profitable association with firms.

Studies such as Kanga and Achoki (2016), Kumar and Kaur (2016) have been carried out on firm size, liquidity and leverage in relation to financial performance. As shown herein, some studies have only focused on a single factor while some have been done in different geographical localities which may make the findings un-applicable to particular cases. These findings show that the influence of factors on financial performance varies markedly from country to country, from one industry to another and from one-time period to another within the same economy. The current study extended the debate on the factors influencing financial performance of manufacturing firms listed in NSE Kenya.

1.3 General Objective

The general objective of the study was to examine the factors influencing financial performance of manufacturing firms listed in NSE Kenya.

1.4 Specific Objectives

The specific objective included:

1.4.1. To determine the influence of firm size on financial performance of manufacturing firms listed in NSE Kenya.

1.4.2. To determine the effect of leverage on financial performance of manufacturing firms listed in NSE Kenya.

1.4.3. To determine how liquidity affects financial performance of manufacturing firms listed in NSE Kenya.
1.5 Significance of the Study

Examining the factors affecting financial performance in the NSE listed manufacturing firms is of particular interest to all its stakeholders considering their stake and interest position as discussed herein:

1.5.1 Managers

The outcome of this study might help listed manufacturing firms’ financial managers in Kenya in understanding the factors that affect their financial performance, as such make better decision on these factors as well as concentrate on them in order to improve financial performance in the industry and the sector at large.

1.5.2 Policy Makers

Policymakers might also be guided on the formulation of rules and regulations proposed to help this industry perform better and even the sector in general. They might be able to formulate policies that give manufacturing firms in Kenya a conducive atmosphere for enabling them to craft strategies that might boost their firm financial performance.

1.5.3 Shareholders

The findings of this study contributes to the understanding of corporate performance mechanisms among listed manufacturing firms and recommends ways by which listed manufacturing firms in Nigeria can improve performance to align with shareholders’ and stakeholders’ interest.

1.5.4 Lenders

The results of this study might be beneficial to investors and lenders as it may provide insight into the effect of certain operational style of firms’ management in covering the interest of the managers and the shareholders, since the capital market set securities’ prices based on reported firm performance. Similarly, creditors and other providers of finance would be able to draw a line as to the recovery of their fund or otherwise through firms’ performance indicators. Thus, both investors and creditors can rely on the information
drawn from this research to access and make informed decision on their investment position.

1.5.5 Researchers

Although, literature exist in Kenya on the determinants of financial performance, however, not with the inclusion of some of these selected variables; firm size, leverage, and liquidity. The study is significant in the field of research as it adds to existing literatures. However, more research would be ignited and ventured into by academicians to test the variable mix of the study in other industries. More so, other likely factors not used in this study could be considered in conducting several studies. Further research could also be motivated to help us understand if these performance factors cut across other industries of the manufacturing sector.

1.6 Scope of the Study

The study covered listed manufacturing firms in Kenya due to the availability of data and strict adherence to the manufacturing standards since NSE exercises control on them. The choice of the manufacturing sector was due to the fact that there was limited empirical evidence on factors affecting financial performance particularly among listed manufacturing firms in Kenya. The period of study was ten years (2011 - 2016), while the choice for the period was meant to capture recent years of operations of the listed manufacturing firms in Kenya, when compared to other foreign works conducted within these years. Data on ROE, firm size, leverage, and liquidity were collected in order to examine the factors affecting financial performance among NSE listed manufacturing firms in Kenya.

1.7 Definitions of Terms

1.7.1 Leverage

This is the ratio of the company’s loan (debt) to the value of its common stock (equity). It involves borrowing of funds to finance the purchase of the company’s assets (Peavler, 2016). Leverage is measured by debt ratio, equity ratio, and debt to equity ratio. This study used debt to equity ratio as a measure of leverage.
1.7.2 Liquidity

This is a ratio between total current assets of the firm and the total current liabilities obligation within one year or normal operating cycle of the firm whichever is greater. To survive, firms must be able to meet their short-term obligations by paying their creditors and also be able to repay their short-term debts. Some degree of liquidity is good for the firm, but a very high liquidity ratio might suggest that the firm is sitting around with a lot of cash because it lacks the managerial acumen to put those resources to work. Liquidity is measured by the following: current ratio, quick ratio, cash ratio, and cash conversion cycle (Panigrahi, 2014). For this purpose of this study current ratio was used as a measure of liquidity.

1.7.3 Firm size

This is the size of a company in a given industry at a given time which results in the lowest production costs per unit of output. Firm size commonly measured by either natural logarithm of assets, or sales volume or employees. Larger firms are associated with having more diversification capabilities, ability to exploit economies of scale and scope and also being highly formalized concerning procedures (McWilliams & Siegel, 2010). In this study, firm size was determined by total assets.

1.7.4 Financial Performance

This refers to the measurement of the results of a firm's strategies, policies, and operations in monetary terms. These results are reflected in the firm's return on assets and return on investments. Financial performance provides a subjective measure of how well a life insurance company can use assets from its primary mode of business and generate revenues. Financial performance is measured by profitability, financial efficiency, and repayment capacity among other (McWilliams & Siegel, 2010). In determining financial performance, the study will use profitability, and in particular, ROE was used.

1.7.5 Manufacturing Firm

This is any business that uses components, parts or raw materials to make a finished good. These finished goods can be sold directly to consumers or to
other manufacturing businesses that use them for making a different product (Maulid, 2015).

1.8 Chapter Summary

This chapter provided background information about the research problem, states the problem statement and lists the research questions. It also covered the significance and scope of the study and the definition of terms. Chapter two reviewed existing literature on the factors influencing financial performance. Chapter three covered the research methodology used in the study. It detailed the research design, population and sample design, data collection methods, research procedures and the methods used for data analysis. Chapter four covered the results and findings of the study. Chapter five covered the conclusion, discussion and recommendation for improvement and for further study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature on factors influencing financial performance, theories on identified factors and how they influence financial performance. This chapter analyses literature thematically based on the research objectives.

2.2 Firm Size and Financial Performance

The size of a firm is the amount and variety of production capacity and ability a firm possesses or the amount and variety of services a firm can provide concurrently to its customers (McWilliams & Siegel, 2010). The size of a firm is a primary factor in determining the profitability of a firm due to the concept is known as economies of scale which can be found in the traditional neoclassical view of the firm. It reveals that contradictory to smaller firms, items can be produced at much lower costs by bigger firms. By this concept, a positive relationship between firm size and profitability is expected (Merozwa, 2015). Contrary to this, alternative theories of the firms advise that larger firms come under the control of managers pursuing self-interested goals and therefore managerial utility maximization function may substitute profit maximization of the firms’ objective function.

2.3.1 Insignificant Effect of Firm Size on Financial Performance

The influence of firm size on financial performance also show mixed findings. For example, Niresh and Velnampy (2014) carried out a study in Sri Lanka entitled: Firm size and profitability: A study of listed manufacturing firms in Sri Lanka. The study explored the effects of firm size on the profitability of quoted manufacturing firms in Sri Lanka. In this study, data of 15 companies which were active in Colombo Stock Exchange (CSE). As indicators of firm profitability, Return on Assets and Net Profit have been used whereas Total Assets, and Total Sales have been utilized as indicators of firm size. Correlation and regression methods have been used in the empirical analysis. There is no indicative relationship between firm size and profitability of listed manufacturing firms, the findings
reveal. Also, the results showed that firm size has no profound impact on the profitability of the listed manufacturing firms in Sri Lanka.

Ali (2017) conducted a study in Kenya entitled: Effect of firm size on the relationship between strategic planning dimensions and performance of manufacturing firms in Kenya. This study aimed to determine the relationship between strategic planning dimensions and firm performance in the manufacturing sector in Kenya and to establish, the moderating effect of firm size on the relationship between strategic planning and firm performance in the manufacturing firms in Kenya. The study was informed by not only the low performance of the manufacturing sector over the past two decades, but also, by the mixed results and contentious debate on the effect of strategic planning dimensions of management participation, functional integration, strategic orientation and strategic control on performance.

The study has adopted the use of multidimensional constructs to study strategic planning dimensions and performance linkage. The study utilized a cross-sectional survey design, while stratified simple random sampling was used to obtain the sample comprising 191 firms in twelve subsectors among manufacturing firms in Nairobi and its surroundings. Data was collected through a structured questionnaire for key managers involved in the strategy formulation and implementation. Out of the 191 questionnaires administered, 111 were returned and found usable questionnaires, representing 58% which is adequate for this stream of research. SPSS Software was utilized to analyze data. Inferential data analysis was carried out by use of correlation analysis. Regression models were fitted using multiple regression analysis, and hypothesis testing was done using standard F and T-tests.

The study revealed that strategic planning analyzed through the dimensions of management participation, functional integration, strategic orientation and strategic control were significant and positively related to firm performance. However, firm size was not found to moderate the relationship between strategic planning dimensions and firm performance in the manufacturing firms in Kenya. Thus, emphasis on specific strategic planning dimensions contributes positively to both large firms and small firms despite their difference in resources and development levels. The study contributes to the strategic planning performance discourse in the context of developing countries and furthers the discussion on the factors moderating in the relationship between strategic planning
dimensions and firm performance. The study confirms that, firm size is neither a prerequisite nor a factor for successful application of strategic planning dimensions in both small and medium and large firms in the manufacturing sector in Kenya.

2.3.2 Positive Effect of Firm Size on Financial Performance

Babalola (2013) did a study in Nigeria entitled: The effect of firm size on firms’ profitability in Nigeria. Firm size has been considered as an important determinant of firm profitability. The used two variables namely total assets and total sales. In this study, the effect of firm size on the profitability of manufacturing companies listed in the Nigerian Stock Exchange was analyzed by using a panel data set over the period 2000-2009. Profitability was measured by using Return on Assets, while both total assets and total sales were used as the proxies of firm size. According to the results of the study, firm size, both regarding total assets and regarding total sales, has a positive impact on the profitability of manufacturing companies in Nigeria.

Abdukadir (2016) carried out a study in Kenya entitled: "Effect of Leverage, Liquidity and firm Size on the financial performance of listed non-financial firms in Kenya." This research sought to investigate the effect of Leverage, Liquidity and Firm Size of non-financial firms listed at Nairobi Stock Exchange during the period 2009-2013. The variables that were used included; debt, the risks associated with indebtedness, interest rates and debt-equity combination and the management of accounts receivables and accounts payables. The study used panel data over a five year period (2009 to 2013) to examine the effect of Leverage, Liquidity, Firm size, Day's accounts receivables and accounts payables on Returns on Equity and Assets on financial performance of listed non-financial firms. Regression coefficients were interpreted using the E-views software output.

The study established that Liquidity and firm size Influence the financial performance of listed non-financial firms at Nairobi Securities Exchange positively. The overall implication is that access to credit lines was crucial in allowing firms to invest, while effective management of liquidity in the firms is critical since the financial manager can invest in the available financial opportunities and hence increasing its assets base making it easy for the firm to access further credit in case of the need. Expansion of firms’ growth has a high potential for improving financial performance and hence better returns to the
shareholders. Therefore, managers should expand their business and invest more through the opening of new branches to widen their market share and hence boost the financial performance. Further, the results on leverage have confirmed that leverage does not affect the financial performance of the firms. Hence financial managers should take advantage of available credit and tax shield advantage to enhance the firms’ performance.

Stella, Aggrey, and Eseza (2014) carried out a study in Uganda entitled: Firm size and rate of growth of Ugandan Manufacturing Firms. The study used to size and age of the firms as variables. This paper aimed at investigating whether small and medium manufacturing firms grow faster than large firms. The dynamics of firm growth is an interesting and important study topic because the growth of firms is the main ingredient in economic growth and has an impact on the consequences of industrial concentration. The descriptive results showed that medium firms grow faster than the small and large firms.

The regression results also confirmed that medium firms significantly grow faster than the small firms and large firms, contradicting the Porters "stuck in the middle" hypothesis. Regression results also showed no significant difference between the growth of small and large firms, a finding that is consistent with Gibrats law. To promote the growth of firms in Uganda, there is need to formulate policies that promote the growth of small firms such as tax holidays that are currently being enjoyed only by medium and large firms.

2.3 Leverage and Financial Performance

Financial leverage indicated the use equity and debt to finance the assets of a firm. The two main alternatives for a company to finance its investments are debt and equity. The company, however, may finance its investments using preference capital. The rate of interest on the debt is fixed regardless of the company's rate of ROA. The leverage adopted by a company should earn more on the fixed charges funds beyond their costs. An increase in debt increases financial leverage. The main goal of using leverage is to enhance the ROE under favorable economic conditions. Financial leverage magnification of ROE is underpinned on the fact that the fixed charges funds can be obtained at a cost lower than a company’s rate of ROA. Damouri (2013) opines that leverage ratios determines the risk of equity costs. He further states that other measures for the capital structure include market value-based measures, semi-market value based measures, and book value based measures.
Financial leverage influences after tax profits as well as the earnings per share. The combined effect of the two have significant effect on the ordinary shareholders’ earnings (Pandey, 2010).

2.3.1 Positive Effect of Firm Level on Financial Performance

Zahoor, Huma, Bader, and Muhammad (2015) did a study in Pakistan entitled: "Effect of Financial Leverage on Performance of the Firms: Empirical Evidence from Pakistan." This research aimed at finding the effect of financial leverage on the efficiency of firms in Pakistan. The ordinary least squares technique is used to detect efficiency of financial leverage of 154 textile firms in Pakistan over the period 2006-2011. The regression results indicate that leverage has a negative association with the efficiency of firms. Financial leverage is negatively associated with the return on assets and equity, which shows that firms borrow less, while market-to-book ratio shows positive and profitable association with firms. Consequently, firms tend to borrow more and pay their contractual payments in time.

Rehman (2013) carried out a study in Pakistan entitled: "Effect of financial leverage and financial performance in listed sugar companies of Pakistan." The study sought to examine the association between leverage and financial performance of listed companies in the sugar industry in Pakistan. The findings reveal that there was a positive relationship between debt-equity ratio with ROA and sales growth. The study further found that there was a negative relationship of debt-equity ratio with net profit margin, ROE, and earning per share. An increase in debt increases the interest payment hence decrease in earnings per share.

Hassan (2014) carried out a study in Saudi Arabia entitled: "An investigation of the effect of financial leverage on firm financial performance in Saudi Arabia's public listed companies." This study aimed at analysing the impact of the debt and equity mix, on financial performance. It concentrated on the Saudi Arabian capital market. The main goal of this study was to expand the literature on the influence of financial leverage in a not for profit financial system, and its impact on the financial performance. This study analyzed fifty-seven firms listed in the Saudi Arabian stock (2002-2010). This study expands the literature on the link between financial performance and zakat (Islamic tax), financial
structure, and the ages and sizes of not for profit firms in Saudi Arabian financial sector. This study was motivated by the collapse of Saudi Arabia stock market in 2006 couple with the 2008 global financial crisis that reduced the firms' trust in bank loans as a source of funds. The results showed that lower leverage levels increase profit margins, ROE and ROA. The study gives evidence to recommend that, Saudi Arabian firms need to balance their zakat liabilities with their leverage borrowing levels. This study also recommends that other studies should be carried out to examine zakat calculation standards and its effect on capital structure. The current zakat calculation in firms’ financial statements is vague. Thus, a study should conducted to analyse the effect of zakat on capital structure and financial performance.

Akbarian (2013) conducted a study entitled: "Effect of financial leverage and environment risk on performance firms of listed companies in Tehran Stock Exchange." The study analysed the effect of leverage and environment risk on performance of Tehran Stock Exchange listed companies. The findings revealed a negative relationship between financial financial leverage and cash flow per share. While economic risk with free cash flow per share had a positive significant relationship. The findings further showed that there is a positive relationship between market risk, leverage, and economic risk with ROE.

Maghanga and Kalio (2012) did a study in Kenya entitled: "Effects of Leverage on the Financial Performance of Parastatals: A Case Study of Kenya Power." They researched with the aim of examining the effects of leverage on financial performance. The target population for the study constituted the management staff in the finance division of Kenya Power. The population size was 120 staff from which a sample of 55 respondents was drawn. Data were collected from primary and secondary sources. Primary data was collected by use of structured questionnaires while secondary data was obtained from Kenya Power's annual audited financial reports, and periodic publications. A pilot test involving ten respondents who were exempted from the main study was carried out before the main study. The study applied survey research design and data was analyzed by use of descriptive and inferential statistics. The study revealed that leverage has a significant effect on financial performance. The study, therefore, concluded that optimal debt financing is essential for the organization to realize better financial performance. It was recommended that organizations should manage their costs by considering cheaper sources of funding to improve financial performance. From the above review, it’s evident that the
influence of leverage on financial performance is inconclusive; the current study thus seeks to determine the influence of leverage on the financial performance of listed manufacturing firms in Kenya.

2.3.2 Negative Effect of Leverage on Financial Performance


Enekwe, Agu, and Eziedo (2014) carried out a study in Nigeria entitled: "The Effect of Financial Leverage on Financial Performance: Evidence of Quoted Pharmaceutical Companies in Nigeria." The main objective of this study is to determine the effect of financial leverage on the financial performance of the Nigeria pharmaceutical companies over a period of twelve (12) years (2001 – 2012) for the three (3) selected companies. The study use three indicators of leverage namely the debt-equity ratio (DER), debt ratio (DR), and interest coverage ratio (ICR) to investigate their effect on financial performance with ROA as the measure of financial performance. The study employed ex-post facto research design. The study also relied on secondary data which was obtained from the audited financial statement of the Nigerian Stock Exchange listed pharmaceutical companies. The data obtained was analysed using descriptive statistics, correlation, and regression analysis. The findings indicated that DR and DER have a negative relationship with ROA while ICR has a positive relationship with ROA in the pharmaceutical industry in Nigeria. The findings further indicated that all the combined effect of all the independent variables have insignificant effect on ROA of the sampled companies. The study also found out that 16.4% of the variations on the ROA can be explained by financial leverage in the model implying that 83.6% of the variations in financial performance are caused by other factors outside our model.
2.4 Liquidity and Financial Performance

Decisions regarding the management of assets should not conflict with the primary objective of the firm: to maximize shareholder wealth. An essential part of this asset management is the determination of an optimal level of liquidity; referring to the ability of a firm to meet its short-term obligations, liquidity plays a central role in its successful functioning as a profitable firm. Thus, indicators of liquidity and profitability have major importance to both shareholders and potential investors (Eljelly, 2004).

In theory, liquidity and profitability goals are assumed to be contradictory to each other. The goal of liquidity management should be to enable a firm to maximize profits of its operations while meeting both short-term debt and upcoming operational expenses that is to preserve liquidity (Panigrahi, 2014). This can be achieved through minimizing the risk of inability to settle the short-term obligations as well as avoiding unnecessary current assets investments (Eljelly, 2004). Excessive investments in liquidity may lead managers to make investments towards maximizing their utility, thus to the detriment of profitability. In such circumstances, another pitfall is managers' tendency to invest in projects with negative net present values.

Numerous studies have been done on the influence of liquidity on firm performance and the findings have been inconclusive. Some studies mainly focused on more than one construct of liquidity management while other studies concentrated only the cash conversion cycle. Some of the study findings show that liquidity management affect market performance of the firm Thus, liquidity management bears both negative and positive effects on the performance of the company, although, few of such studies have reviewed in the current study. Liquidity management is important for every entity be it large, medium, or small, and it known as the management of current assets and liabilities.

Liquidity management plays a critical role in the firm’s successful management through ensuring future company growth. Given the present financial uncertainties and the destabilized world's economy, financial management is receiving serious scholarly and industry attention the world over. Currently, business owners and managers, globally, are mainly preoccupied with developing strategies of dealing with their daily operations with
the aim of meeting their obligations as and when they fall due. They also endeavor to increase their firm profitability as well as shareholders’ wealth.

2.4.1 Positive Effect of Liquidity on Financial Performance

Demirgüneş (2016) carried out a study in Turkey entitled: "The Effect of Liquidity on Financial Performance: Evidence from Turkish Retail Industry." The aim of this study is to analyze the effect of liquidity on financial performance (concerning profitability) by using a time-series data of Turkish retail industry (consisting of Borsa Istanbul (BIST) listed retail merchandising firms) in the period of 1998.Q1-2015.Q3. Finally, causal relationships between the series are tested by bootstrap causality test. The study found a positive relationship between liquidity and financial performance among the firms in the retail industry in Turkey.

Ferrouhi (2014) carried out a study entitled: "Bank liquidity and financial performance: evidence from Moroccan banking industry." This paper aims to analyze the relationship between liquidity risk and financial performance of Moroccan banks and to define the determinants of bank's performance in Morocco during the period 2001–2012. The study first evaluated Moroccan banks' liquidity positions through different liquidity and performance ratios then the study applied a panel date regression to identify determinants of Moroccan banks performance. We use four bank's performance ratios, six liquidity ratios and we analyze five specific determinants and five macroeconomic determinants of bank performance.

Results show that Moroccan bank's performance is mainly determined by 7 determinants: liquidity ratio, size of banks, logarithm of the total assets squared, external funding to total liabilities, share of own bank's capital of the bank's total assets, foreign direct investments, unemployment rate and the realization of the financial crisis variable. Banks' performance depends positively on size of banks, on foreign direct investments and on the realization of the financial crisis and negatively on external funding to total liabilities, on share of own bank's capital of the bank's total assets and on unemployment rate while the dependence between bank performance and liquidity ratios and bank performance and logarithm of the total assets squared depend on the model used.
Mwangi (2014) carried out a study in Kenya entitled: "Effect of liquidity on financial performance of deposit-taking microfinance institutions in Kenya." This study analyzed the liquidity and financial performance of Deposit-taking microfinance institutions in Kenya for the period 2009 to 2013. For this study, the data was extracted from the published institution's annual audit reports, Association of Micro Finance Institutions Reports (AMFI) and CBK's bank's supervision annual reports for the five years under examination. This study used inferential statistics to explain the main features of a collection of data in quantitative terms while correlation and linear regression analysis are used for analyzing the data. Financial performance was measured using return on assets while liquidity was measured by cash and cash equivalents divided by total average assets. The results revealed that there is a positive relationship between liquidity and financial performance as the coefficient of determination was found to be 0.910 explaining that the liquidity explains 91% of the variance in the financial performance. The correlation revealed a significant association of 0.941 at 5% level of significance.

Devraj (2014) conducted a study entitled: "Effect of liquidity on the financial performance of non-financial companies listed at the NSE." The objective of the study was to establish the effect of liquidity on the financial performance of non-financial companies listed at the NSE. Secondary data was collected from NSE and multiple regression analysis used in the data analysis. The study revealed that liquidity positively affects the financial performance of non-financial companies listed at the NSE. The study established that current ratio positively affects the financial performance of non-financial companies listed at the NSE. The study also revealed that an increase in operating cash flow ratio positively affects the financial performance of non-financial companies listed at the NSE. The study found that an increase in debt to equity positively affects the financial performance of non-financial companies listed at the NSE. The study recommends that there is a need for non-financial companies listed at the NSE to increase their current assets to increase their liquidity as it was found that an increase in current ratio positively affects the financial performance. The study further recommends that there is a need for non-financial companies listed at the NSE to increase their operating cash flow, through reduction of their credit repayment period to positively influence their financial performance.
2.4.2 Negative effect of Liquidity on Financial Performance

Egbide, Olubukunola, and Uwuigbe (2014) did a study entitled: "Liquidity Management and Profitability of Manufacturing Companies in Nigeria." The primary aim of the investigation was to analyse the relationship between liquidity and profitability. The analysis is based on a sample of 30 manufacturing companies listed on the Nigeria Stock Exchange for the period 2006-2010. The result suggests that current ratio and liquid ratio are positively associated with profitability while cash conversion period is negatively related to the profitability of manufacturing companies in Nigeria. The association in all the cases was, however, statistically insignificant, indicating a low degree of influence of liquidity on the profitability of manufacturing companies. Hence, the overall state of liquidity should be improved by establishing more realistic credit policy which would engender shorter cash conversion period, hence have a favorable impact on the profitability of the company.

From the above review, it’s evident that the influence of liquidity on financial performance is inconclusive. Some studies have found a positive relationship between liquidity and financial performance while others have found a negative relationship between liquidity and financial performance. It is based on this inconclusive nature of the empirical evidence that the current study sought to extend this debate. Thus the current study sought to determine the influence of liquidity on the financial performance of listed manufacturing firms in Kenya.

2.5 Chapter Summary

Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater: if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid. This constitutes financial risk; the degree of this financial risk is related to the firm's financial structure. The total combination of common equity, preferred stock and short and long term liabilities is referred to as the financial structure. The goal of liquidity management should be to enable a firm to maximize profits of its operations while meeting both short-term debt and upcoming operational expenses that is to preserve liquidity. To achieve this goal, the firm should eliminate the risk of inability to meet its short-term obligations on the one hand,
while avoiding excessive investments in current assets on the other hand. Excessive investments in liquidity may lead managers to make investments towards maximizing their utility, thus to the detriment of profitability. The next chapter discusses research methodology.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodological approach for the study, and it comprises of the following: research design, target population, data collection procedure, research procedure, data analysis, chapter summary.

3.2 Research Design

This study was quantitative. The study adopted descriptive design. The study employed longitudinal design to determine the factors influencing financial performance of manufacturing firms listed in NSE, Kenya. The design was suitable for this study as it allows the analysis of the relationship between the independent (firm characteristics) and the dependent variable (financial performance) over six year period (Saunder et al., 2007). The design was also justified because it was used to sort out the existence and magnitude of causal effects of one or more independent variables (firm size, leverage, and liquidity) upon a dependent variable of interest (that is financial performance) at a given point in time. The design analysis based on frequencies and percentages of the study variables in the defined population.

3.3 Population and Sample Design

3.3.1 Population

The target population in this study was NSE listed manufacturing firms in Kenya. Currently, there are ten manufacturing companies that are listed in the Nairobi Securities Exchange (NSE) namely Baumann Company Limited; B.O.C Kenya Ltd; British American Tobacco Kenya; Carbacid Investment Ltd; East Africa Breweries Limited; Eveready East Africa Limited; Kenya Orchards Limited; Mumias Sugar Company; Marshalls (E.A.) Ltd; and Unga Group Limited (NSE, 2017). NSE listed manufacturing firms were selected mainly because NSE exercises heavy control over them hence they adhere to the standards of manufacturing operations, further data from these firms were easily available.
3.3.2 Sampling Design

3.3.2.1 Sampling Frame

A sampling frame refers to the collection of source material where the sample is drawn. It also gives a way of selecting particular parts of the population from whom data collected is done (Bryman & Bell, 2003). The sample frame in this study was all the manufacturing firms listed in the NSE.

3.3.2.2 Sampling Technique

Due to the small size of the population, all the NSE listed manufacturing firms in Kenya took part in the study as Bryman and Bell (2003) opine that when the target population is small, all the elements in the population take part in the study. Thus all the ten firms took part in the study. In this regard, the study used census sampling technique where all members of the population take part in the study.

3.3.2.2.3 Sample size

Data was collected from all the 10 manufacturing firms listed in NSE Kenya. All the 10 manufacturing firms took part in this study due to the small number of the target population since there were only 10 listed manufacturing firms in Kenya.

3.4 Data Collection Methods

This study relied on secondary data that was obtained from the annual audited financial statements. The data were obtained from the income statement, balance sheets and statements of cash flow of the listed firms, which included; total assets of the firm, cash flow balances, total revenues, net profit and tax paid. The annual published financial reports were obtained from the Nairobi Securities and used data of the most recent years for six years between 2011 and 2016. In line with the research design, the study employed a data collection checklist (Appendix 2). The data collection checklist was used in guiding the collection of data from the annual audited financial statements of listed manufacturing firms in Kenya.

Firm size was measured by total assets. Assets were determined by a summation of liabilities and shareholders' equity. Other studies have used total assets in determining the firm size for example; Pervan and Visic (2012) used total assets as a measure of firm size in determining the influence of firm size on business success. Mungai and Murithi (2017) also used total assets as a measure of firm size in determining the moderating effect of firm size on the relationship between capital structure and financial distress of listed non-financial firms in Kenya.

Leverage was measured by debt to equity ratio. Debt to equity ratio was determined by dividing total liabilities by total equity. Rajkumar (2014) used debt to equity ratio as a measure of leverage in determining the impact of financial leverage on financial performance: special reference to John Keells Holdings plc in Sri Lanka. Enekwe, Ikechukwu and Nnagbogu (2014) also used debt to equity ratio as a measure of leverage in determining the effect of financial leverage on financial performance in Pharmaceutical companies in Nigeria.

Current ratio measured liquidity. The current ratio was determined by current assets divided by the current liabilities. Kang and Achoki (2016) used current ratio as a measure of liquidity in examining liquidity and financial performance in Agricultural firms listed in the NSE in Kenya. Ngira, Oluoch, and Kalui (2014) also used current ratio as a measure of liquidity in determining the effects of liquidity management on the security market performance of companies listed at the NSE.

3.5 Research Procedure

The research procedure included obtaining financial statements and annual reports form the company websites of the 10 manufacturing firms listed in NSE. This was followed by the
extraction of information from the annual financial statements and reports of the selected firms. The researcher used annual financial statement information from 2011 to 2016.

3.5 Data Analysis Methods

The collected data was then entered into Microsoft Excel and analyzed for descriptive statistics on ROE, firms’ size, liquidity and financial leverage. The descriptive statistical analysis was used to analyze data based on frequencies and percentages. Simple regression analysis was used to analyze the determinants of financial performance, firm size, leverage and liquidity. The study used correlation analysis to determine effect of firm size, leverage and liquidity on the financial performance. The study also used Pearson’s correlation to establish the effect of financial leverage on the financial performance of the select firms. The data was presented in tables, pie chart and graphs. The relationship between firm characteristics and financial performance was expected to follow a regression model of nature at 95% significance level.

Equation 1: Regression Equation

\[ Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \varepsilon \]

Where:

\( Y = \) ROE

\( \alpha = \) Intercept term

\( X_1 = \) Firm Size

\( X_2 = \) Leverage

\( X_3 = \) Liquidity

\( \varepsilon = \) Error term
3.6 Chapter Summary

This study sought to determine the factors influencing financial performance among manufacturing listed firms in Kenya. This chapter has discussed the research design, population and sample, target population and sampling design, data collection procedure, research procedure and data analysis methods. The next chapter which is chapter four presents the results and findings.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents analysis, results, and findings of the study as set out in the research methodology. The data were analyzed using IBM SPSS (Statistical Package for Social Sciences) version 20 software, and the findings were presented in tables as follows: descriptive statistics, correlation analysis, and regression analysis. The data was collected from audited financial reports relating to variables namely ROE; firm Size, liquidity, and leverage.

4.2 Descriptive Analysis

To analyze the determinants of financial performance among listed manufacturing firms in Kenya, a descriptive analysis was conducted. Six out of the ten listed manufacturing companies at the NSE whose data were readily accessible were analyzed from the year 2011 to 2016. This gave a response rate of 60% as presented in Figure 4.1

![Figure 4.1: Response Rate](image)

Firm with complete data
Firm with incomplete data

Figure 4.1: Response Rate
4.2.1 Descriptive Analysis of Financial Performance

The financial performance among listed manufacturing firms in Kenya was determined using ROE. The study sought to determine the ROE of the listed manufacturing firms over the period of 6 years that is from 2011-2016. The findings show that highest ROE (43.1%) was attained in 2016 followed by 2011 that had ROE of 42.5%. The listed manufacturing firms achieved 42.1% ROE in 2012. In 2015, the average ROE of the manufacturing firms listed in NSE was 40.2%. An average ROE of 34.7% was attained in 2014 while 22.9% ROE was realized in 2013. The findings are summarized in Figure 4.2

![Figure 4.2: Annual Average ROE](image)

4.2.2 Descriptive Analysis of Firm Size

The study sought to determine the firm size of the listed manufacturing firms in Kenya. Firm size was determined as the natural log of total assets. The findings show that 2016 had the highest log of the total assets (10.98) followed by 2015 that had 9.55 while in 2014 the log was 9.01. In 2013 the natural log for the total asset was 8.94 while in 2012 the log total asset was 8.54. In 2011, the log total asset was 7.45. The findings are summarized in Figure 4.3
4.2.3 Descriptive Analysis of Leverage

The study sought to establish leverage among the listed manufacturing firms in Kenya. The findings indicate that listed manufacturing firms had an average 0.1515 in 2011 which implies that on average 15.15% debt was used in financing the total assets. In 2012, the average leverage was 0.145 which implies that on average 14.5% debt was used in financing the total assets in 2015. In 2013, the average leverage was 0.102 which shows that on average 10.2% debt was used in financing its total assets. In 2014, the average leverage was 0.17 which depicts that on average 17% debt was used in financing the total assets. In 2015, the average leverage was 0.186 which implies that on average 18.6% debt was used in financing the total assets. In 2016, the average leverage was 0.199 which implies that on average 19.9% debt was used in financing the total assets. The findings are summarized in Figure 4.4

Figure 4.3: Annual Average Firm Size
4.2.4 Liquidity

The study sought to determine the liquidity of listed manufacturing firms in Kenya from 2011 to 2016. The findings show that liquidity of in 2016, the average liquidity of the listed manufacturing firms was 2.85 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is 2.85 shilling of current assets to settle it as and when it falls due. In 2011, the average liquidity of the listed manufacturing firms was 1.948 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is 1.95 shilling of current assets to settle it as and when they fall due. In 2012, the average liquidity of the listed manufacturing firms was 2.984 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is 2.98 shilling of current assets to settle it as and when they fall due.

In 2013, the average liquidity of the listed manufacturing firms was 2.992 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is 2.99 shilling of current assets to settle it as and when they fall due. In 2015, the average liquidity of the listed manufacturing firms was 3.921 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is 3.92 shilling of current assets to settle it as and when they fall due. In 2014, the average liquidity of the listed manufacturing firms was 4.992 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is
4.99 shilling of current assets to settle it as and when they fall due. The findings are summarized in Figure 4.5.

![Figure 4.5: Annual Average Liquidity](chart)

**Figure 4.5: Annual Average Liquidity**

### 4.2.5 Summary of the Descriptive Analysis

The results of the six listed manufacturing companies combine shows that overall N was 36 meaning that the number of observation is 36 from 6 listed manufacturing companies for six-year period of data from 2011 to 2016. The findings show that the average net income earned on total assets for the 36 observation made from the six companies from the year 2011 to 2016 is 13.10% with a high standard deviation of 10.46%; the data includes an observation from a firm making a loss on its total assets employed of 7.11% whereas maximum ROE of 47.28% implying that an observation from firm whose performance is remarkable earning 47.28% profits as a percentage of total assets.

The Table 1 also shows that the average firm size as measured by the natural logarithm of assets for the 36 observation made from the six companies from the year 2011 to 2016 is 21.2859 as a power of natural logarithm of its total assets with a low standard deviation of 1.4 power of natural logarithm of total assets varying from an observation from a firm which had a lowest power of natural logarithm of its total assets of 17.87 to a maximum observation from a firm having of 22.97 power natural logarithm of its total assets.
The average leverage for the observations is 0.044 as ratio of debt levels to total assets implying that on average 4.4% debt was used in financing total assets with a standard deviation of 0.068 in debt levels to total assets varying from a range of lowest observation from a firm a having 0 debt levels in financing the total assets to one of the highest observation showing that 27.5% of debt was used in financing total assets. Liquidity of these listed manufacturing companies on average is 9.0556 as a proportion of total current assets to total current liabilities implying that for every shilling of current liability there is 9.06 shilling of current assets to settle it as and when it falls due with a standard deviation of 3.46 as a proportion of total current assets to total current liabilities varying from a low observation from a firm having Ksh.0.79 of current assets to settle every shilling of current liability to a maximum observation from a firm having Kshs.18.29 worth of current assets to settle every shilling of current liability as shown in Table 4.1.

Table 4.1: Summary of the Descriptive Analysis

<table>
<thead>
<tr>
<th>Determinant</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>36</td>
<td>-.0711</td>
<td>.4728</td>
<td>0.1310</td>
<td>.1046213</td>
</tr>
<tr>
<td>Firm size</td>
<td>36</td>
<td>17.8659</td>
<td>22.9706</td>
<td>21.2859</td>
<td>1.4009049</td>
</tr>
<tr>
<td>Leverage</td>
<td>36</td>
<td>.0000</td>
<td>.2750</td>
<td>0.0441</td>
<td>.0683805</td>
</tr>
<tr>
<td>Liquidity</td>
<td>36</td>
<td>.7845</td>
<td>18.2869</td>
<td>9.0556</td>
<td>3.4590972</td>
</tr>
</tbody>
</table>

4.3 Correlation Analysis

Having done the descriptive analysis, the study conducted a correlation analysis to determine the strength and significance of the relationship between the study variables. The Pearson correlation matrix is useful for analyzing data that is non-categorical and uses interval measurement scale (Field, 2009). However, Pearson correlation matrix may pose
a problem if two variables are analyzed but the effect of the third confounding variable(s) is/are not controlled by (Field, 2009). From the Table 4.2, it can clearly be seen that there is a moderate positive relationship between firm size and financial performance of listed manufacturing firms in Kenya with an R (Pearson correlation coefficient ) = 0.425, P significance value of < 0.05; a weak positive relationship between leverage and financial performance with an R = 0.080. Liquidity significantly exhibited as the moderate positive relationship with financial performance as measured by ROE having an R of 0.518, P < 0.05 meaning that the probability of us getting this R of 0.518 in a sample of 36 observations if there was no relationship between ROE and liquidity is very low (close to zero in fact).

Table 4.2: Pearson Correlation

<table>
<thead>
<tr>
<th></th>
<th>ROE</th>
<th>Firm size</th>
<th>Leverage</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>(Pearson correlation) 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sign.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Firm size</td>
<td>(Pearson correlation) .425* 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sign.</td>
<td>.010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>(Pearson correlation) .021 .013 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sign.</td>
<td>.017 .010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Liquidity</td>
<td>(Pearson correlation) .518* -.485* -.308 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sign.</td>
<td>.010 .018 .010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level.
4.4 Regression Analysis

To fit the data into the conceptualized model in the conceptual framework, regression analysis was employed. In this section the coefficient of determination (R square) was used as a measure of the explanatory power, to show how the independent variables explain the dependent variable. The F statistics (ANOVA) was used as a measure of the model goodness of fit. The regression coefficient summary was used to explain the nature of the relationship between the dependent and independent variables.

The model summary shows that R2 (coefficient of determination) of 0.383% implies that 38.3% of the financial performance in manufacturing firms listed in NSE Kenya can be explained by leverage, liquidity, and firm size. The adjusted R-square of 0.28 shows that liquidity, leverage and firm size in exclusion of the constant variable explained the change in financial performance of NSE listed manufacturing firms in Kenya by 28%, the remaining percentage can be explained by other factors excluded from the model. R of 0.619 shows that there is positive correlation between liquidity, leverage and firm size and financial performance of manufacturing firms listed in NSE Kenya.

Table 4.3: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Standard error of estimate</th>
<th>R² change</th>
<th>F</th>
<th>df</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.619</td>
<td>.383</td>
<td>.280</td>
<td>.0887464</td>
<td>0.113</td>
<td>4.132</td>
<td>35</td>
<td>0.02</td>
</tr>
</tbody>
</table>

The finding on the ANOVA for regression coefficient (see Table 4.4 shows that (F=3.728, p value = 0.010). Because p-value is less than 0.05 it depicts that there is a significant

Table 4.4: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.147</td>
<td>35</td>
<td>.029</td>
<td>3.728</td>
<td>.010b</td>
</tr>
<tr>
<td>Residual</td>
<td>.236</td>
<td>1</td>
<td>.008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.383</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

b. Predictors: (Constant), Leverage, Liquidity, Firm Size

The study sought to determine whether there was a significant influence of firm size, liquidity, and leverage on the financial performance of listed manufacturing firms in Kenya. The various coefficients are shown on the first column with an intercept of -0.391 which shows that if all the three predictors (firm size, leverage, liquidity,) were to be equated to zero, then ROE will be -0.391. The firm size beta coefficient is 0.379 which implies that if the size of the firm was to be increased by 1 unit of the natural logarithm of assets, then a corresponding increase of ROE by 37.9% will also increase. Likewise, an increase in one unit of leverage will translate to 39.1% increases to ROE. Similarly, if one unit increase of liquidity were to be realized then ROE would be increased to 36.7%.
Table 4.5: Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.391</td>
<td>.524</td>
<td>-.746</td>
</tr>
<tr>
<td></td>
<td>Firm size</td>
<td>.028</td>
<td>.029</td>
<td>.379</td>
</tr>
<tr>
<td></td>
<td>Leverage</td>
<td>.167</td>
<td>.289</td>
<td>.409</td>
</tr>
<tr>
<td></td>
<td>Liquidity</td>
<td>.011</td>
<td>.005</td>
<td>.387</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

The resulting multivariate linear regression model is as follows:

Financial performance = -0.391 + 0.379Firm Size + 0.409Leverage + 0.0387Liquidity

The results indicate that leverage had the greatest influence on financial performance among listed manufacturing firms in Kenya. The findings also depict that firm size had the second greatest impact on financial performance in the listed manufacturing firms in Kenya. Liquidity had the least effect on the financial performance of listed manufacturing firms in Kenya.

4.5 Chapter Summary

This chapter presented the finding from the study, which were guided by the research questions in chapter two. The next chapter covered discussion, conclusion and recommendations.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This section sought to analyze the findings and was done by comparing and contrasting previous literature on factors affecting firm performance. It was organized based on the specific research questions which sought to establish the influence of firm size, leverage, and liquidity on the financial performance of listed manufacturing firms in Kenya. The study chapter is organized into sections namely summary of the findings, discussion, conclusions, and recommendations.

5.2 Summary

The purpose of this study was to examine the determinants of financial performance in manufacturing firms listed in NSE Kenya. The study sought to answer the following research questions: What is the influence of firm size on financial performance among manufacturing firms listed in NSE Kenya? What is the influence of leverage on financial performance among manufacturing firms listed in NSE Kenya? What is the influence of liquidity on financial performance among manufacturing firms listed in NSE Kenya?

The study employed longitudinal design to analyze the determinants of financial performance in manufacturing firms listed in NSE Kenya. The target population of the study was ten listed manufacturing firms in Kenya. The sample size in this study was ten listed manufacturing firms. The study relied mainly on secondary data. Data were obtained from audited financial reports. Data were analyzed using both descriptive and inferential analyses. IBM SPSS was used as the tool for data analysis. Data were presented in the form of charts, graphs, and tables.

The study established that there was a significant influence of firm size on the financial performance of manufacturing firms listed in NSE. The correlation analysis showed that an increase in firm size led to a rise in financial performance of manufacturing firms listed in NSE Kenya. Correlation analysis also revealed that a unit increase in firm size increased financial performance of listed manufacturing firms by thirty-seven percent.
The study also revealed that there was a significant influence of leverage on the financial performance of firms listed in NSE. Correlation analysis also revealed that an increase in leverage increased financial performance of manufacturing firms listed in NSE. Regression analysis further revealed that a unit increase in leverage led to a rise in financial performance of listed manufacturing firms by forty percent.

Findings further show that there was a significant influence of liquidity on the financial performance of manufacturing firms listed in NSE Kenya. Correlation analysis also revealed that an increase in liquidity increased financial performance of manufacturing firms listed in NSE. Regression analysis further revealed that a unit increase in liquidity led to a rise in financial performance of listed manufacturing firms by thirty-eight percent.

5.3 Discussion

5.3.1 Influence of Firm Size on Financial Performance

From the correlation analysis, the study found a moderate positive relationship between firm size and financial performance of listed manufacturing firms in Kenya. The results of this study contradicts that of Niresh and Velnampy (2014) who carried out a study in Sri Lanka entitled: Firm size and profitability: A study of listed manufacturing firms in Sri Lanka. In addition, the results showed that firm size has no profound impact on profitability of the listed manufacturing firms in Sri Lanka. Stella, Aggrey, and Eseza (2014) carried out a study in Uganda entitled: Firm size and rate of growth of Ugandan Manufacturing Firms. The regression results also confirmed that medium firms significantly grow faster than the small firms and large firms, contradicting the Porters "stuck in the middle" hypothesis. To promote the growth of firms Ugandan, there is need to formulate policies that promote the growth of small firms such as tax holidays that are currently being enjoyed only by medium and large firms. Regression results also showed a significant influence of firm size and financial performance, a finding that is consistent with Gibrat's law.

The findings of this study concur with that of Babalola (2013) who carried out a study in Nigeria entitled: The effect of firm size on firms' profitability in Nigeria. He found that firm size, both concerning total assets and regarding total sales, has a positive impact on the profitability of manufacturing companies in Nigeria. Abdukadir (2016) also carried out a study in Kenya entitled: "Effect of Leverage, Liquidity and firm size on the financial

Babalola (2013) did a study in Nigeria entitled: The effect of firm size on firms’ profitability in Nigeria. Firm size has been considered as an important determinant of firm profitability. The used two variables namely total assets and total sales. In this study, the effect of firm size on the profitability of manufacturing companies listed in the Nigerian Stock Exchange was analyzed by using a panel data set over the period 2000-2009. Profitability was measured by using Return on Assets, while both total assets and total sales were used as the proxies of firm size. According to the results of the study, firm size, both regarding total assets and regarding total sales, has a positive impact on the profitability of manufacturing companies in Nigeria.

Abdukadir (2016) carried out a study in Kenya entitled: "Effect of Leverage, Liquidity and firm Size on the financial performance of listed non-financial firms in Kenya." This research sought to investigate the effect of Leverage, Liquidity and Firm Size of non-financial firms listed at Nairobi Stock Exchange during the period 2009-2013. The variables that were used included; debt, the risks associated with indebtedness, interest rates and debt-equity combination and the management of accounts receivables and accounts payables. The study used panel data over a five year period (2009 to 2013) to examine the effect of Leverage, Liquidity, Firm size, Day's accounts receivables and accounts payables on Returns on Equity and Assets on financial performance of listed non-financial firms. Regression coefficients were interpreted using the E-views software output.

Stella, Aggrey, and Eseza (2014) carried out a study in Uganda entitled: Firm size and rate of growth of Ugandan Manufacturing Firms. The study used to size and age of the firms as variables. This paper aimed at investigating whether small and medium manufacturing firms grow faster than large firms. The dynamics of firm growth is an interesting and important study topic because the growth of firms is the main ingredient in economic growth and has an impact on the consequences of industrial concentration. The descriptive results showed that medium firms grow faster than the small and large firms.
5.3.2 Influence of Leverage on Financial Performance

From the correlation analysis, the study found a weak positive relationship between leverage and financial performance. The regression analysis indicated that increase of leverage would translate to increases in ROE. The findings of the study contradict that of Zahoor, Huma, Bader, and Muhammad (2015) who did a study in Pakistan entitled: "Effect of Financial Leverage on Performance of the Firms: Empirical Evidence from Pakistan." Financial leverage is negatively associated with the return on assets and equity, which shows that firms borrow less, while market-to-book ratio shows positive, profitable association with firms. Consequently, firms tend to borrow more and pay their contractual payments in time. Perinpanathan (2014) also carried out a study in Sri Lanka entitled: "Impact of Financial Leverage on Financial Performance: Special Reference to John Keells Holdings plc in Sri Lanka." The findings of the study show a negative relationship between the financial leverage and the financial performance of the John Keells Holdings Plc. But the financial leverage has a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka.

The findings concur with that of Rehman (2013) who conducted a study in Pakistan entitled: "Effect of financial leverage and financial performance in listed sugar companies of Pakistan." The research intended to analyze the relationship between leverage and financial performance of listed sugar companies in Pakistan. The study revealed a positive relationship of debt-equity ratio with ROA and sales growth. The findings further indicated that there was a negative relationship of debt-equity ratio with net profit margin, ROE, and earning per share.

Zahoor, Huma, Bader, and Muhammad (2015) did a study in Pakistan entitled: "Effect of Financial Leverage on Performance of the Firms: Empirical Evidence from Pakistan." This research aimed at finding the effect of financial leverage on the efficiency of firms in Pakistan. The ordinary least squares technique is used to detect efficiency of financial leverage of 154 textile firms in Pakistan over the period 2006-2011. The regression results indicate that leverage has a negative association with the efficiency of firms. Financial leverage is negatively associated with the return on assets and equity, which shows that firms borrow less, while market-to-book ratio shows positive and profitable association.
with firms. Consequently, firms tend to borrow more and pay their contractual payments in time.

Rehman (2013) carried out a study in Pakistan entitled: "Effect of financial leverage and financial performance in listed sugar companies of Pakistan." The study sought to examine the association between leverage and financial performance of listed companies in the sugar industry in Pakistan. The findings reveal that there was a positive relationship between debt-equity ratio with ROA and sales growth. The study further found that there was a negative relationship of debt-equity ratio with net profit margin, ROE, and earning per share. An increase in debt increases the interest payment hence decrease in earnings per share. A study on the impact of financial leverage on the performance of Saudi firms. The study aimed to investigate the impact of financial leverage on the performance of Saudi firms, due to the highly importance of financial leverage in achieving the sufficient returns or losses. The study used statistical methods that include regression analysis, while having a sample that was gathered from the Saudi stock exchange for two years, having debt ratio as an independent variable representing financial leverage, ROA, and ROE as dependent variables representing the performance. The study results indicated that there is a statistically significant relationship between the independent variable and ROE. However, there is no significant relationship between the independent variable and ROA. Finally, the study concluded that there is a positive relationship between the debt ratio and ROE, meaning that the financial leverage negatively affects one of the measures of performance.

5.3.3 Influence of Liquidity on Financial Performance

The correlation analysis showed that liquidity significantly exhibited as moderate positive relationship with financial performance as measured by ROE. The regression analysis indicated that if a one-unit increase of liquidity were to be realized then ROE would be increased. The findings partly agree and partly contradict that of Egbide, Olubukunola and Uwuwigbe (2014) who did a study entitled: "Liquidity Management and Profitability of Manufacturing Companies in Nigeria." The result suggests that current ratio and liquid ratio are positively associated with profitability while cash conversion period is negatively related to the profitability of manufacturing companies in Nigeria. The association in all the cases was, however, statistically insignificant, indicating a low degree of influence of liquidity on the profitability of manufacturing companies.
The findings of this study concur with that of Mwangi (2014) carried out a study in Kenya entitled: "Liquidity and financial performance of Deposit-taking microfinance institutions in Kenya." Mwangis’ (2014) findings revealed that there is a positive relationship between liquidity and financial performance as the coefficient of determination was found to be 0.910 explaining that the liquidity explains 91% of the variance in the financial performance. The correlation revealed a significant association of 0.941.

Ferrouhi (2014) carried out a study entitled: "Bank liquidity and financial performance: evidence from Moroccan banking industry." This paper aims to analyze the relationship between liquidity risk and financial performance of Moroccan banks and to define the determinants of bank's performance in Morocco during the period 2001–2012. The study first evaluated Moroccan banks’ liquidity positions through different liquidity and performance ratios then the study applied a panel date regression to identify determinants of Moroccan banks performance.

The study used four bank's performance ratios, six liquidity ratios and we analyze five specific determinants and five macroeconomic determinants of bank performance. Results show that Moroccan bank's performance is mainly determined by 7 determinants: liquidity ratio, size of banks, logarithm of the total assets squared, external funding to total liabilities, share of own bank's capital of the bank's total assets, foreign direct investments, unemployment rate and the realization of the financial crisis variable.

Banks' performance depends positively on size of banks, on foreign direct investments and on the realization of the financial crisis and negatively on external funding to total liabilities, on share of own bank's capital of the bank's total assets and on unemployment rate while the dependence between bank performance and liquidity ratios and bank performance and logarithm of the total assets squared depend on the model used.

5.4 Conclusions

5.4.1 Influence of Leverage on Financial Performance

Based on the findings it can be concluded that leverage had the greatest influence on financial performance. The regression analysis showed that increase in one unit of leverage
translates to 40.9% increases to the financial performance of manufacturing firms listed in NSE Kenya.

5.4.2 Influence of Firm Size on Financial Performance

The study further established that firm size had the least influence on financial performance. Firm size had a beta coefficient of 0.379 which implies that if the size of the firm was to be increased by 1 unit of the natural logarithm of assets, then a corresponding increase of ROE by 37.9% will increase as well.

5.4.3 Influence of Liquidity on Financial Performance

The study further concludes that liquidity had the second greatest influence on financial performance among listed manufacturing firms in Kenya. A unit increase of liquidity was to be realized then financial performance would be increased by 38.7%.

5.5 Recommendations

5.5.1 Recommendation for Improvement

5.5.1.1 Influence of Leverage on Financial Performance

The study recommends that manufacturing firms should enhance their financial leverage practices to ensure that they become more profitable hence survive in the market. Particularly, the managers of the manufacturing firms listed at the NSE should employ minimal debt level or use an optimal debt level which will not affect the firm’s performance due to the inverse relationship between financial leverage and financial performance.

5.5.1.2 Influence of Firm Size on Financial Performance

Manufacturing in Kenya should invest more of their resources towards increasing their asset base so to ensure that attain desired asset base that would maximize their profitability. Specifically, the managers of the listed manufacturing firms should focus on growing their firms to ensure that they enjoy the economies of scale associated with large firms, also to attract good management thus to improve their financial performance.
5.5.1.3 Influence of Liquidity on Financial Performance

Finally, the study recommends that manufacturing should also innovate new ways of managing their liquidity with the aim of enhancing its influence on financial performance. In particular, the manager of the listed manufacturing firms in Kenya should ensure that their firms have adequate liquidity levels to ensure that they can meet any contingencies and to improve their firms’ financial performance.

5.5.2 Recommendations for Further Studies

This study looked at the factors affecting financial performance among manufacturing firms listed in NSE, Kenya. The focused on three determinants of financial performance namely firm size, leverage, and liquidity. Thus other studies should focus on other determinants of financial performance such as asset structure, firm age, among others. The recommends that other studies should focus on other industries since the current study mainly focused on the listed manufacturing firms.


APPENDICES

Appendix 1: Data collection checklist

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Measurements</th>
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<td>ROE</td>
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<td>Net income</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Shareholders’ Equity</td>
</tr>
<tr>
<td>Total Assets</td>
<td></td>
<td>Liabilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shareholder’s Equity</td>
</tr>
<tr>
<td>Debt to Equity Ratio</td>
<td></td>
<td>Total Liabilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Equity</td>
</tr>
<tr>
<td>Current Ratio</td>
<td></td>
<td>Current Assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Current Liabilities</td>
</tr>
</tbody>
</table>
Appendix 2: List of NSE Listed Manufacturing Firms

1. Baumann Company Limited

2. B.O.C Kenya Ltd

3. British American Tobacco Kenya

4. Carbacid Investment Ltd

5. East Africa Breweries Limited

6. Eveready East Africa Limited

7. Kenya Orchards Limited

8. Mumias Sugar Company

9. Marshalls (E.A.) Ltd

10. Unga Group Limited