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Moderating Role of Firm Size on the Relationship between Cost of Capital and Financial Performance of Selected Firms in NSE, Kenya

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Abstract*— The manufacturing sector has experienced losses in its financial performance over the years. For example in 2016 Mumias Sugar record Ksh 6.3 billion in pretax losses which led to its closure for nearly three months , in 2017 the company still recorded a loss of 6.8 billion, in 2018 the company further recorded a loss of Ksh15.1 billion. One of the factors that were attributed to this low financial performance was poor financing mode. Eveready in 2006 with a listing price Ksh 9.50 was the most speculative share price however it only did well for about a month and then its price fell way below the IPO issue price. ARM cement had huge debts in its capital structure and it reported huge losses hence finding itself in serious debt crises owing creditors more than its net worth therefore the study sought to assess the moderating role of firm size on the relationship between cost of capital and financial performance of selected firms in NSE, Kenya. The study was guided by Trade-off Theory. The study adopted descriptive research design. The unit of observation was manufacturing companies Listed in NSE (NSE). According to NSE there are 8 manufacturing firms that are listed at NSE. The researcher collected secondary data from the audited annual financial reports of 8 manufacturing firms listed in NSE. The study used data collection sheet to assist in data collection. Descriptive and inferential analysis was used in data analysis. From the findings the study concluded that firm size as the moderating variable have a small statistical significant effect on the relationship between cost of capital and financial performance of manufacturing firms listed in NSE. From the conclusion the study recommended that it is important for the management of these firms to consider ways to expand the size of their firms, such as by merging small branches to form larger firms that will positively affect financial performance.

***Index Terms*— Cost of Capital, Listed Manufacturing Firms, Financial Performance, Firm Size.**

I. INTRODUCTION

Firm size refers to the scale or volume of operation turned out by a single firm (Abiodun, 2017). Firms of various sizes exist within an industry. Firms of varied sizes are distinguished by a variety of discernible and undetectable metrics (Gedajlovic& Shapiro 2019). As a result, there are a variety of ways for determining a firm's size class. In this way there are a wide range of methods for characterizing a firm's size class. Firms with less than 10 workers are small-scale firms and those with more than 250 are extensive firms which may shift by nation (OECD, 2018).

The firms differ in terms of size as measured by total assets, period in existence, leverage liquidity, and tangible assets, all of which have a different impact on their financial outcomes within a given financial period (Kithuka, 2013). Firms in each segment have been in operation for varying lengths of time and with varying levels of leverage, so their experience varies. At the same time, the firms have been operating in their respective industries for varying lengths of time and thus have varying experience with the industry's dynamics (Kimondo, 2014).

In Nigeria, firm size is defined by total assets and total sales. Firm size has a positive effect on non-financial company performance in Nigeria. In the Nigerian construction industry, firm size is important in determining output per labor, which is the total sales, as well as the age of the firm since incorporation, which has a positive effect on output per labor and total number of employees (Olawale, 2016).

In Kenya, firm size has been regarded as an important indicator of a firm's financial performance. Larger firms are more profitable, whereas smaller firms cannot compete with larger firms. Larger businesses have a better chance of obtaining credit from financial foundations. They may be able to obtain a loan at a lower interest rate because they have a better credit rating and a lower risk of bankruptcy. The relationship between the organization's size and profitability is positive. The size of the company has no bearing on its financial performance (Chi, 2014).

The cost of capital is the rate of return required to persuade an investor to make a particular investment (Ramakrishnan 2015). The cost of capital is an important consideration in corporate finance and investment decisions. Environmental and social risks are increasingly being considered by global companies and investors when making investment and financing decisions, pricing financial assets, and allocating investment portfolios.The cost of capital in China refers to the relationship between various long-term sources of financing such as debentures, preferred share capital, and equity capital, including reserves and surplus. Financing a firm's assets is a critical issue in every business, and as a general rule, a proper mix of debt and equity capital should be used to finance them (Mohanraj, 2018). A firm's capital structure is determined by a variety of internal (micro) and external (macro) factors. The major external factors influencing a firm's cost of capital in China are macroeconomic variables such as government tax policy,

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inflation rate, and capital market condition.

Financial performance is the ability to work profitably, competently, and successfully, to withstand environmental threats while capitalizing on current opportunities, and to develop. Financial performance measures, profitability, and liquidity, as well as providing partners with a significant tool to assess a firm's recorded and current financial position (Siro, 2013). The financial performance of publicly traded companies has received a great deal of attention, comments, and interest from financial experts, researchers, the general public, and corporate management. However, identifying the most successful firms has always proven to be a difficult task for many because a firm may have a high level of profitability while also being in a very bad liquidity situation. A company's financial performance can be measured using metrics such as profitability, dividend growth, sales turnover, asset base, and capital employed, among others. Financial performance assesses the effectiveness and profitability of businesses, the security of borrowers claims against resources, and the likelihood that derivative instruments will protect financial investors from a variety of market risks (Seethiah, 2014). After some time, the financial performance of organizations changes as benefits vary from one year to the next and from one organization to the next. Profits increase in some organizations while declines and even losses occur in others.

B.Statement of the Problem

The manufacturing sector has experienced losses in its financial performance over the years.For example in 2016 Mumias Sugar record Ksh 6.3 billion in pretax losses which led to itsclosure for nearly three months , in 2017 the company still recorded a loss of 6.8 billion, in2018 the company further recorded a loss of Ksh15.1 billion. One of the factors that were attributed to this low financial performance was poor financing mode. Eveready in 2006 witha listing price Ksh 9.50 was the most speculative share price however it only did well forabout a month and then its price fell way below the IPO issue price. ARM cement had huge debts in its capital structure and it reported huge losseshence finding itself in serious debt crises owing creditors more than its net worth (Juma,2016). In 2016 ARM recorded a loss of Ksh 6.3 billion while in 2017 the company recorded aloss of ksh 6.9 billion, (Kenya Association of Manufacturers Priority Report, 2018) therefore the study sought to assess the moderating role of firm size on the relationship between cost of capital and financial performance of selected firms in NSE, Kenya.

C. Research Hypothesis

Firm size has no statistically significant role in the relationship between cost of capital and financial performance of selected firms in NSE

II. LITERATURE REVIEW

A. Theoretical Review

The study was guided by Trade-off Theory. The theory was pioneered by Myersin 1984. The theory makes an assumption that there exists importances and drawbacks to using leverage, with the benefits being tax benefits associated with leverage and the drawbacks being the cost of financing, for example, the costs of cash related inconvenience fusing liquidation costs associated with the obligation and non-liquidation costs. Nonetheless, trade off theory did not consider data asymmetry. The problem was later addressed by this theory, that discussed the conflict between insiders and outsiders as a result of data asymmetry.

Based on trade-off theory, a company will consider debt if the tax benefits outweigh the costs to finance the debt. This might or may not be the case. Despite this, researchers studying trade-off theory come to conflicting conclusions. French (2012) confirms that organizations with higher productivity tend to obtain less leverage, which contradicts the trade-off suggestion that greater performing companies must obtain more leverage in reducing tax obligations. Graham (2013) observed, while surveying the pros and cons of debt, that extensively large corporations with insignificant financial strain anticipation advocate moderate leverage.

Fama and French (2002) cites that theory states, the capital structure is ascertained by an organization depending on costs of debt and the benefits and their leverage ratio is increased till benefits of debt and the marginal costs are at bar. The logic behind trade-off theory also allows for the following predictions. Bigger organizations have a higher borrowing capacity and try to take advantage of it because size can be perceived as an inverse proxy for bankruptcy risk. Furthermore, due to higher agency costs, smaller businesses can borrow less (Dang, 2013). The theory further proposes a positive association between tangibility and debt deployment because in gaining tax benefits at a lower pay using their properties as collateral.

For a variety of reasons, the theory has been criticized. The first trade-off theory provided no explanation for why profitable firms used less leverage and issued more debt than equity. In short, trade-off theory was unable to account for the costs of information asymmetry related to the utilizing of equity and debt. This information asymmetry exists due to the knowledge gap between outsiders (Investors) and insiders (Managers). Furthermore, the Trade-off Theory does not account for information asymmetry (Shahar et al, 2015). The theory also fails to explain the negative connection between profitability and leverage as the conservative nature of many businesses use of debt.

The theory applies to this study as it contends that for a firm to consider trade-off concepts, it must first establish the ratio of target debt-to-value and then work continuously toward that goal. The objective is met by striking a balance in tax gain from debt and the dead weight insolvency costs. When a company that has taken on debt is unable to meet the requirements of its debt holders, it will face financial difficulties. When a leveraged firm repeatedly fails to meet the debt holders' obligations, the firm may go bankrupt.

B. Empirical Literature Review on Firm Size

Firm size refers to a company's production and turnover capacities. The size of the company has a variety of effects on its financial performance. Large firms can take advantage of economies of scale and scope, making them more efficient than small firms. In competitive fields, large firms have more competitive power than small firms. Large corporations can

profit more because they have a larger market share. Furthermore, because they have more resources, large firms can seize the opportunity to work in fields that require high capital rates, and this situation allows them to work in more profitable fields with little competition (Bayyurt&Duzu, 2018).

Hossain, Mohammad, and Abu. (2019) sought to investigate the impact of firm size on the financial performance of Bangladeshi listed banking companies. The findings of empirical studies revealed that firm size (total assets, number of employees, and number of branches) has a positive effect on profitability. Aside from firm size, other firm-specific factors such as age and the presence of an independent director on the board have a negative impact on the profitability of firms operating in the Bangladesh banking industry.

Isik, Unal, and Unal (2017) investigated the effect of firm size on profitability in their study. To estimate the effect of different firm size indicators on firm profitability, a dynamic panel data approach was used. After controlling for financial risk, liquidity level, growth opportunities, unsystematic risk, firm age, and other factors, the results revealed that indicators of firm size measured by assets, sales, and number of employees tend to have a positive influence on firm profitability measured by operating return on assets.

In Nigeria, Oyelade (2019) conducted a study on the impact of firm size on firm performance. Panel analysis was used in the research project. Based on the financial measurement of performance using both return on assets (ROA) and return on equity (ROE), two of the four variables used as indicators of size, total sales and age of firm since incorporation, were statistically significant in determining return on assets. Total sales has a positive effect on return on assets, while age of firm since incorporation has a negative effect. Furthermore, it was discovered that only significant leverage determined return on equity. Based on productivity measurement of performance of the selected firms in the Nigerian building industry using both output per labor and output per capital, two out of the four variables used as size indicators were statistically significant in determining output per labor, which are total sales and age of firm since incorporation, and both have a positive effect on output per labor and total sales. Furthermore, only the age of the firm since incorporation as a measure of size was significant in determining output per capital out of the four measures of size, and the liquidity ratio has a positive significant effect on output per capital.

Olawale, Ilo, and Lawal (2017) studied the impact of firm size on firm performance in Nigeria. This study investigates the effect of firm size on firm performance in Nigeria. The investigation made use of a board informational index of 12 non-financial firms operating in Nigeria between 2005 and 2013. Returns on equity are used as an intermediary for act, which serves as the dependent variable. The findings of the study show that firm size has a negative impact on performance in terms of absolute resources, but a positive impact on performance in terms of total deals for Nigerian non-financial organizations. A positive relationship between influence and working capital was discovered for the control factors. As a result, the study concluded that firms' focus should be on increasing their size by increasing turnover and opening up new markets for existing and new products.

Muhindi (2018) investigated the impact of firm size on financial performance of banks in his study, using commercial banks in Kenya as an example. The investigation used a unique study to achieve the goal. The following factors are involved: the number of branches, the capital base, the number of client stores, and the advance and advances. The study's population divided all 42 enlisted commercial banks in Kenya into three categories: large, medium, and small. There were 42 commercial banks and 1 contract finance organization at the end of the fiscal year on June 30, 2016. The information was assembled from the bank's financial reports and national bank supervision reports for a long time period from 2012-2016.

Kioko (2017) investigated the relationship between firm size and financial performance of Kenyan commercial banks. This investigation was conducted using a correlational strategy, with the target population of this investigation being all 43 commercial banks in Kenya as of December 31, 2012. The data to be used was gathered between 1998 and 2012. This examination made use of auxiliary data obtained from the Central Bank of Kenya and the banks themselves. The firm's size was calculated using net resources, all out credits, all out stores (estimated in Kenya shillings), and the number of employees. Return on Assets was used to estimate financial performance (ROA). The information gathered was examined using connection and regressed measurements. Tables were used to display scrutinized information. The findings of the study show that there is a moderate relationship between three of the considered elements of bank size, which include total deposits, total loans, and total assets. The relationship between three autonomous factors, specifically all out credits, complete stores, and absolute resources, and the reliant variable (financial performance ROA) of commercial banks, was found to be statistically significant. There was no noteworthy connection between number of representatives and financial performance for commercial banks in Kenya.

Ali (2017) investigated the impact of firm size on the relationship between strategic planning dimensions and manufacturing firm performance in Kenya. The study used multidimensional constructs to investigate strategic planning dimensions and performance linkage. The study employed a cross-sectional survey design, with stratified simple random sampling used to obtain a sample of 191 manufacturing firms in twelve subsectors in Nairobi and its environs. A structured questionnaire was used to collect data from key managers involved in strategy formulation and implementation. Out of the 191 questionnaires distributed, 111 were returned and found to be usable, representing 58 percent, which is sufficient for this line of research. To analyze the data, SPSS Software was used. Correlation analysis was used to perform inferential data analysis. Multiple regression analysis was used to fit regression models, and standard F and T tests were used to test hypotheses. The study found a moderate relationship between strategic planning dimensions and firm performance in Kenyan manufacturing firms.

Eyigege (2018) investigated the impact of firm size on deposit money bank financial performance on the Nigerian stock exchange. To represent the whole banking industry in Nigeria, five deposit money banks were sampled using the Taro Yemeni sampling technique. The explanatory variable is firm size as measured by log of total assets, whereas the dependent variable is financial performance as evaluated by profitability proxy by return on asset. The panel regression analysis was carried out using pooled OLS regression and fixed effect/random effect regression with the help of STATA. Descriptive statistics and correlation analyses were also performed. As a result of diseconomies of scale, the study's findings suggest that firm size has a minor negative impact on financial performance.

In Nairobi Securities Exchange, Kenya, Wayongah (2019) did a study on firm size and financial performance: panel evidence from nonfinancial firms. The goal of this research was to look at the size and financial performance of non-financial enterprises listed on the Nairobi Stock Exchange (NSE). Economic, trade-off, and signaling theories were used to support the research. Purposive sampling was employed to choose all forty non-financial enterprises that were listed on the NSE. The research was conducted using a correlational research approach. Secondary data was gathered from financial reports from 2010 to 2016 utilizing a data collecting sheet. The data was examined using panel correlation and fixed effects multiple regression analysis, with 196 data points obtained by pooling the data of 28 firms over a seven-year period. The data demonstrated that the size of the company had no bearing on the variance.

C. Empirical Literature Review on Financial Performance

Moki (2018) conducted research on the factors that influence the financial performance of agricultural firms listed on the Nairobi Securities Exchange (NSE). The study's objectives were to determine the target capital structure of agricultural companies listed on the NSE, to determine the effect of turnover on the financial performance of agricultural companies listed on the NSE, and to evaluate the effect of Board Size on the financial performance of agricultural companies listed on the NSE. The study used a longitudinal research design, with the six agricultural companies listed on the NSE serving as the study's target population. Secondary data was gathered from publicly available financial statements for the years 2010-2014. The data was gathered using a desk research instrument. A census was conducted on the six NSE-listed companies. To establish the relationship between the variables for study, empirical data on factors influencing financial performance was analyzed using the Statistical Package for Social Sciences (SPSS). Pearson's Correlation Coefficient was calculated, and Multivariate Regression Analysis was used to identify the factors influencing the financial performance of agricultural companies listed on the Nairobi Stock Exchange (NSE). The study's findings revealed that an increase in debt ratio led to a decrease in financial performance, and the decrease in financial performance following an increase in debt ratio would be significant enough to guarantee a significant change in the companies' after-tax profits.

Anitha (2018) sought to investigate the factors influencing the financial performance of manufacturing firms listed on Kenya's Nairobi Securities Exchange. The study used a longitudinal design. The study's target population consisted of ten Kenyan listed manufacturing firms. The research relied heavily on secondary data. The information came from audited financial reports. Descriptive, correlation, and regression analyses were used to analyze the data. The study also found that leverage had a significant impact on the financial performance of firms listed on the NSE. Correlation analysis also revealed that increasing leverage improved the financial performance of NSE-listed manufacturing firms.

Wamiori (2019) sought to conduct research on the financial performance determinants of Kenyan manufacturing firms. The study's target population was 741 manufacturing firms in Keya, with a sample of 252 firms chosen to be representative of all manufacturing firms in Kenya. In order to collect data, the study used a descriptive survey design. A structured questionnaire was distributed to Kenyan manufacturing companies. The findings revealed a moderately significant linear relationship between capital structure and the performance of manufacturing firms. There was a significant positive relationship between the cost of capital and the financial performance of manufacturing firms. Fiscal tax breaks had a significant positive relationship with the financial performance of manufacturing firms. There was also a significant positive relationship between investment practice and the financial performance of manufacturing firms.

Mureithi, Mukhongo, and Datche (2019) conducted research on macroeconomic factors influencing the performance of Nairobi Securities Exchange-listed firms. The study focused on firms listed on the NSE. The research was founded on the flow oriented model, Mckinnon and Shaw theory, and Keynesian economic theory. A descriptive survey research design was used for the study. This study's population consisted of the 20 companies listed on the Nairobi Securities Exchange and included in the Nairobi Securities Exchange 20 Share Index. Using descriptive measures, the data was summarized and tabulated. The data was analyzed using descriptive statistics and inferential statistics, as well as multiple regression analysis and correlation analysis. To generate quantitative reports, SPSS version 23 was used. According to the study's findings, the supply of money in the market has an inverse relationship with firm performance. The study concluded that the government had implemented measures to slow the depreciation of the Kenyan shilling. The study concluded that depreciation of the currency can cause a decline in stock returns and that a stable currency instills confidence in investors. Finally, the study concluded that interest rate causes efficient utilization of resources in the promotion of economic growth and development.

Anitha (2018) conducted a study to investigate the determinants of financial performance in manufacturing firms listed on the Nairobi Stock Exchange. The study used a longitudinal design to examine the determinants of financial performance in manufacturing firms listed on the Nairobi Stock Exchange. The study's target population consisted of

ten Kenyan listed manufacturing firms. The sample size for this study was ten publicly traded manufacturing companies. The research relied heavily on secondary data. The information came from audited financial reports. Descriptive, correlation, and regression analyses were used to analyze the data. As a data analysis tool, the Statistical Package for Social Sciences was used. Tables, graphs, and pie charts were used to present data. The study found that firm size had a significant impact on the financial performance of manufacturing firms listed on the NSE. According to the correlation analysis, an increase in firm size led to an increase in financial performance of manufacturing firms listed on the NSE Kenya. Correlation analysis also revealed that a unit increase in firm size increased the financial performance of publicly traded manufacturing firms by thirty-seven percent.

D. Conceptual Framework

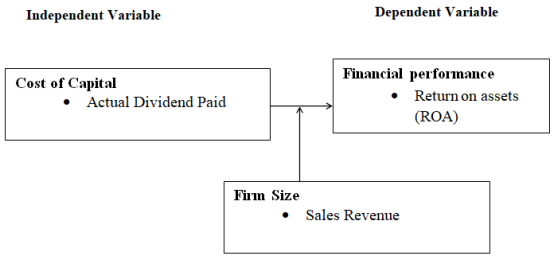

Figure 1: Conceptual Framework

III. RESEARCH METHODOLOGY

A. Research Philosophy

A research philosophy is a conviction about the manner by which information about a marvel The study was guided by the positivist paradigm where scientific processes was followed in hypothesizing fundamental laws and then deducing the observations so as to determine the truth or falsify of the said hypotheses. Positivism is a quantitative method which follows scientific approach to research. This study was quantitative and sought to verify the propositions through empirical tests by operationalizing variables in the conceptual framework to allow for measurement and subsequently generalizing the results.

B. Research Design

The study adopted cross-sectional research design. Cross-sectional studies provide a clear 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time. Cross-sectional design entails collecting data and concerning one point in time. Cross-sectional research is focused on finding relationships between variables at one moment in time.

C. Study Area

The study was conducted in Kenya, specifically in the 8 manufacturing firms recorded in Nairobi Security Exchange. The targeted listed companies are located within the larger Nairobi Metropolitan.

D. Target Population

The unit of observation was companies Listed in Nairobi Securities Exchange (NSE). The choice of listed firms is the fact that they are required by law to publish their annual financial statement and hence it is easier to access them. They also have a well delineated capital structure. The targeted firms have different sizes in terms of total assets, market value and sales value and hence appropriate in establishing the role of firm size in determining the relationship between cost of capital and financial performance of manufacturing firms. According to NSE there are 64 listed companies which are categorized into 13 groups.

E.Sampling Procedure and Sample Size

The study purposively selected manufacturing firms that are listed at NSE. According to NSE there are 8 manufacturing firms that are listed. Manufacturing firms were purposively given that it is among the four economic pillars in the Big four Agenda of the government of Kenya and vision 2030 selected since it is one of the industries that have experienced financial challenges in the recent past. Purposive sampling is a form of non-probability sampling in which researchers rely on their own judgment when choosing members of the population to participate in the study. Purposive sampling is useful in this instance because it provides a wide range of non-probability sampling techniques for the researcher to draw on.

Table 1: Sampling Frame

Manufacturing
B.O.C Kenya Ltd Ord 5.00
British American Tobacco Kenya Ltd Ord 10.00
Carbacid Investments Ltd Ord 5.00
East African Breweries Ltd Ord 2.00
Unga Group Ltd Ord 5.00
Eveready East Africa Ltd Ord.1.00
Kenya Orchards Ltd Ord 5.00
Flame Tree Group Holdings Ltd Ord 0.825

Source: Kenya Association of Manufacturers Priority Report, 2019

F. Data Collection

The study used secondary data. Secondary data included information gathered from already existing sources that is, the distributed yearly reports (Annual Audited Reports, 2012-2018) of the 8 manufacturing firms listed in Nairobi Securities Exchange. The study was carried out in a period of 7 years beginning 2012 to the year 2018.

G. Data Collection Procedure

The researcher sought a permit from the National Council of Science and Technology and Innovation (NACOSTI) through Kisii University. The analyst formally contacted Capital Market Authority and clarified the motivation behind the investigation so as to be allowed access to the financial records required in the examination. After the essential approval the researcher gathered information from both the NSE and individual organizations.

H. Data Analysis and presentation

Data analysis involves reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. The study used both descriptive and inerential analysis. Descriptive statistics involved the use of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Frequency tables

were used to present the data for easy comparison (Kilgarriff, 2015). Correlation regression analysis was used in the study to identify the relationship between cost of Equity and financial performance of manufacturing firms listed in Nairobi Security Exchange, Kenya. Data analysis was done with the aid SPSS Version 25 was used. The study was presented in form of tables and graphs.

IV. RESULT

A. Response Rate

The 8 manufacturing firms examined by the study included; Flame Tree group, Unga Ltd , Kenya Orchards, BAT Kenya, EABL, Carbacid Investments, Everedy and BOC Kenya

- **B. Firm Size**

The study sought to determine the mean of firm size of each the 8 manufacturing firms listed in NSE for the 7 years the findings are indicated in table 2

Table 2: Firm Size

	N	Minimum	Maximum	Mean	Std. Deviation
Flame Tree	7	-	2,544,629,000.00	1,872,526,571.43	903,392,072.74
Unga Ltd	7	15,759,078,000.00	19,982,070,000.00	17,988,598,857.14	1,722,265,185.53
Orchard	7	29,684,000.00	73,691,000.00	58,046,714.29	15,394,627.74
BAT	7	21,032,333,000.00	36,676,249,000.00	30,478,349,714.29	6,447,472,747.88
EABL	7	55,522,166,000.00	644,420,458,000.00	146,825,643,285.71	219,508,043,727.71
Carbacid	7	753,164,000.00	952,836,000.00	836,092,000.00	76,267,627.29
Everready	7	251,720,000.00	1,428,278,000.00	899,463,571.43	502,248,684.96
BOC Kenya	7	966,543,000.00	1,296,679,000.00	1,147,305,571.43	144,075,796.26
Average				25,013,253,285	

The study findings in table 4.9 shows that EABL (Mean=146,825,643,285.71; SD, =219,508,043,727.71), BAT (Mean=30,478,349,714.29; SD= 6,447,472,747.88). and UNGA GROUP (Mean = 17,988,598,857.14; SD= 1,722,265,185.53). Controlled huge sales from 2012 to 2018 hence able to generate more profits as compared to Carbacid (Mean=836,092,000.00; SD= 76,267,627.29), Flame Tree (Mean=1,872,526,571.43; SD= 903,392,072.74) and BOC (Mean=1,147,305,571.43; SD= 144,075,796.26), that had less sales in the same period. Everready (Mean=899,463,571.43; SD= 502,248,684.96), Orchard Kenya (Mean=58,046,714.29; SD= 15,394,627.74), had much less sales implying there was little influence in terms of profit making. The study findings are in line with Vijayakumar and Tamizhselvan (2010) which indicated that there was a positive relationship between firm size and firm performance. However, the findings of the study does not agree with Pervan and Višić (2012) which showed that firm size has a weak positive impact on firm profitability

The study further sought to determine the trend of the firm size of all the 8 manufacturing firms listed in NSE for the 7 years the findings are indicated in figure 2

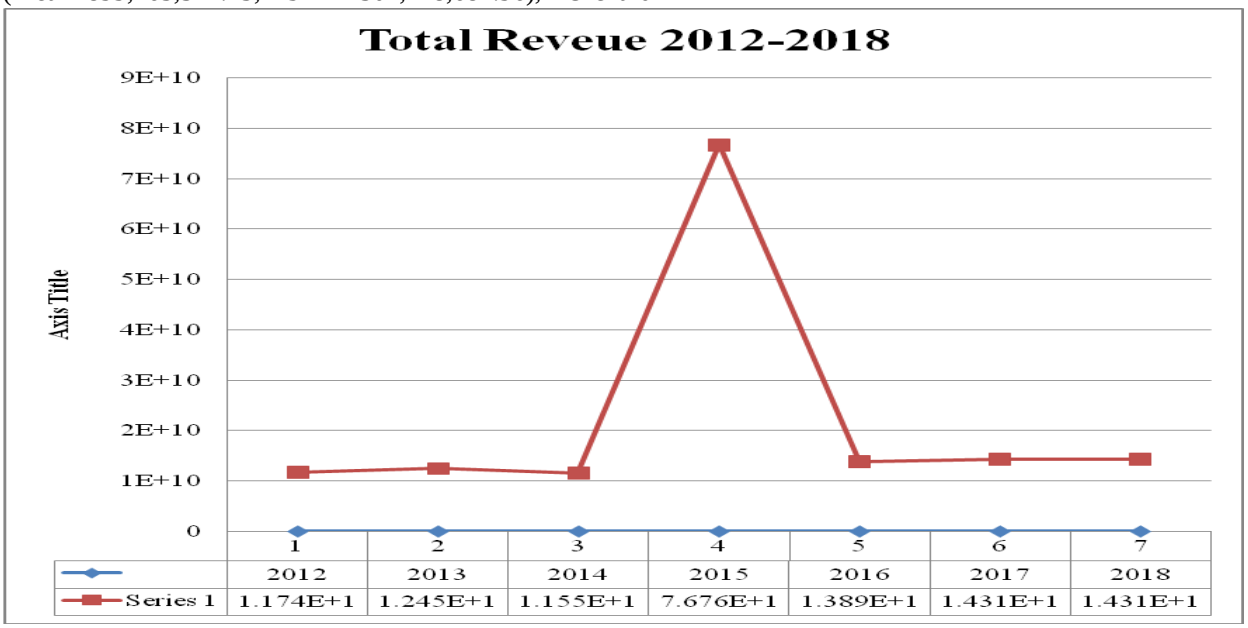

Figure 1: Firm Size From 2012-2018

From the findings the mean for the firm size of the 8 listed manufacturing firms companies listed in NSE was 25,013,253,285.72. The minimum value for the firm size was 0 while the maximum value for the firm size was 73,456,832. The finding also revealed that the firm size have a standard deviations of 0.324 this means that the variable have a relatively smaller deviations. In addition the datasets for the firm size was fairly symmetrical given that the skewness value was 0.276. Furthermore the findings revealed that firm size have a kurtosis of 0.853 which represents lighter tails than normal distribution. The findings also revealed that in 2015 the 8 listed manufacturing companies had the highest revenue with a mean of 77,378,294,222.22 while in 2014 the 8 companies had the lowest revenue with a mean of 13,002,440,333.33

C.Return on Assets From 2012-2018

The study sought to determine the mean of ROA of each the 8 manufacturing firms listed in NSE for the 7 years the findings are indicated in table 3

Table 3: Return on Assets

	N	Minimum	Maximum	Mean	Std
Flame Tree	7	.00	0.17	0.09	0.07
Unga Ltd	7	.00	0.07	0.05	0.02
Orchard	7	.00	0.67	0.18	0.25
BAT	7	.00	0.41	0.32	0.08
EABL	7	.00	0.33	0.21	0.07
Carbacid	7	.00	0.22	0.15	0.04
Everready	7	.00	0.49	0.09	0.31
BOC Kenya	7	.00	0.10	0.05	0.03
Average Mean				**0.14**	

Source: Field data, 2020

Table 4.11 shows the descriptive statistics of the sampled manufacturing firms financial performance index for a period between 2012 to 2018 based on, ROA. The statistics indicates that BAT had the highest (Mean= 0.32; SD= 0.08), followed by EABL (Mean= 0.21; SD= 0.07), Orchards (Mean= 0.18; SD= 0.25), Carbacid (Mean=0.15; SD= 0.04),Flame Tree had (Mean=0.09; SD= 0.07),while Everready indicated a (Mean=0.09; SD= 0.31), BOC Kenya had (Mean=0.05; SD=0.03), UNGA LIMITED (Mean= 0.05; SD= 0.02).The findings further revealed that Mumias Sugar recorded a negative return on assets (Mean= -0.228; SD= 0.35).With an average mean score of 10.6, the study findings indicated that BAT, EABL,ORCHAD and CARBACID performed better financially between 2012 to 2018 with Flame Tree and BOC KENYA recording good returns. The findings agree with Bayaraa (2017) which showed that growth in sales, earnings per share and costs to revenue ratio influence positively the financial performance of an organization by ROA. The study further sought to determine the mean ROA of all the 8 manufacturing firms listed in NSE for the 7 years.

The study further sought to determine the trend of ROA of all the 8 manufacturing firms listed in NSE for the 7 years the findings are indicated in figure 3

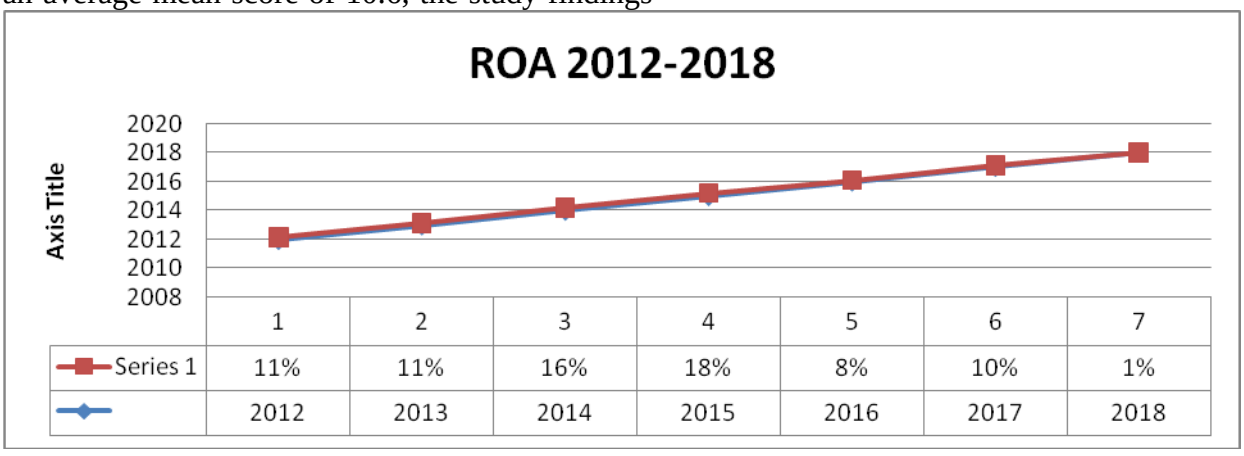

Figure 2: ROA From 2012-2018

From the findings the mean of ROA for the 8 listed manufacturing firms companies listed in NSE was 0.10. The minimum value of ROA was 0 while the miximum value of ROA was 41.19%. The finding also revealed that ROA have a standard deviations of 0.67this means that the variable have a relatively smaller deviations. In addition the datasets of ROA was moderately skewed since the skewness value was 0.753. Furthermore the findings revealed ROA had a kurtosis of 0.943. The findings also revealed that in 2015 the 8 listed manufacturing companies had the highest level of ROA with a mean of 0.17533156 while in 2018 the 8 companies had the lowest level of ROA with a mean of 0.00866789

1) D.Model SummaryWithout the Moderating Effect of Firm Size

Table 4: Model SummaryWithoutthe Moderating Effect of Firm Size

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.509[a]	.259	.201	.14749499

d. Predictors: (Constant), Cost of Capital

The results show that cost of capital without the moderating variable of firm size contributed 20.1% to financial performance of the manufacturing firms listed in the NSE while 74.1% can be attributed to other factors which were not covered in this study.

a) E. ANOVAWithout the Moderating Effect of Firm Size

ANOVA was deployed in ascertaining the fitness of the model. The findings is shown in Table 5

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.388	4	.097	4.454	.004[b]
	Residual	1.109	51			
	Total	1.497	55			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Cost of Capital

The findings show the F Value = 4.454 and the Sig Vaue was .0.004 < .05 hence it was concluded that the model was fit for predicting the relationship between cost of capital without the moderating variable of firm size and financial performance of firms listed in NSE.

Table 6: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.085	.026			
	Cost of Capital	1.758	.000			

a. Dependent Variable: Financial Performance

The findings show that a unit change in cost of capital would without the moderating role of firm size lead to a 1.758 change in financial performance of manufacturing firms listed on the NSE with firm size as the moderating variable, Based on the above results the study derived the following linear regression model as shown below.

$$Y = .085 + 1.758X_1 + \varepsilon$$

1) G. Model Summary with the Moderating Variable of firm size

Table 7: Model Summary with the Moderating Variable

Model	R	R Square	Adjusted
1	.509[a]	.259	.1

a. Dependent Variable: (Constant), Financial Performance

d. Predictors: (Constant), Cost of Capital

The findings illustrate that cost of capital with the moderating effect of firm size contributed 25.9% to financial performance of the manufacturing firms listed in the NSE. This means that the presence of firm size increases the value of Return on Assets by a margin of 2.3%.

1) 4.5.2 ANOVA with the Moderating Variable

ANOVA was deployed to ascertain whether the model is fit in predicting the role of firm size in the relationship between cost of capital and financial performance of manufacturing firm listed in Nairobi Stock Exchange. The findings is shown in Table 8

Table 8: ANOVA with the Moderating Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.388	5	.078	3.499	.009[b]
	Residual	1.109	50	.022		
	Total	1.497	55			

a. Dependent Variable: Financial Performances

b. Predictors: (Constant), Cost of Capital

The findings shows the F value = 3.499 and the Sig Vaue was .0.009 < .05 hence a conclusion was made that the model was appropriate for the prediction of the connection between cost of capital and financial performance with moderating role of firm size

2) 4.5.3 Regression Coefficient

The study conducted a regression coefficient to establish whether firm size has moderation role in the relationship between cost of capital and financial performance of manufacturing firms listed in N.S.E. The finding is shown in the table 9

Table 9: Regression Coefficient with the Moderating Variable

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.085	.026		3.254	.002
	Cost of Capital	4.674	.000	.025	.146	.885

a. Dependent Variable: Financial Performance

The findings show that a unit change in cost of capital would lead to a 4.674 change in financial performance of manufacturing firms listed on the NSE with firm size as the moderating variable, Based on the above results the study derived the following linear regression model as shown below.

$Y = .085 + 4.674X_1M_1 + \varepsilon$

V. CONCLUSIONS AND RECOMMENDATIONS

From the findings the study concluded that firm size as the moderating variable have a small statistical significant effect on the relationship between cost of capital and financial performance of manufacturing firms listed in NSE

The findings indicated that firm size has a marginally significant moderating effect on the relationship between cost of capital and financial performance of manufacturing firms listed on the NSE. It is important for the management of these firms to consider ways to expand the size of their firms, such as by merging small branches to form larger firms that will positively affect financial performance.

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