EFFECT OF FINANCIAL LEVERAGE ON PROFITABILITY OF LISTED MANUFACTURING FIRMS IN KENYA

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EGERTON UNIVERSITY

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DECLARATION AND RECOMMENDATION

Declaration

I the undersigned, declare that this is my original work and has not been submitted to any other university, collage or institution of higher learning other than Egerton university for academic credit.

Signature _____ Date_____

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Recommendation

This project has been submitted for examination with my recommendation as the University Supervisor.

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DEDICATION

I dedicate this project to my lovely parents Chester Everia and Japheth Kakiya who encouraged and supported me morally and spiritually during this research project development, may God bless you abundantly.

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ABSTRACT

Business employ a number of strategies to improve financial profitability, including streamlining processes, outsourcing and integrating new technologies. The study sought to determine the effects of financial leverage on profitability of listed manufacturing firms in Kenya. More specifically the study examined the effect of short term debt, long term debt and debt equity, on profitability of listed manufacturing firms in Kenya. Theories that guided the study include; Market Power Theory, Pecking Order Theory, and The Market Timing Theory. The target population of the study was ten manufacturing firms quoted in Nairobi Stock Exchange. Secondary data for all the ten (10) listed Manufacturing firms was collected using a data collection sheet for a period of six years between 2012-2016. The data was analyzed using both descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences. Descriptive analysis involved means, standard deviations, trend analysis, maximum and minimum across all variables. Inferential statistics included; Pearson correlation and multiple regression analyses. Pearson correlation coefficient was used to show the effects of variables while multiple regression analyses was used to test the magnitude of the relationship and also test formulated hypotheses. The study revealed a negative effect of short term debt (-0.362) and debt to equity ratio (-0.062) on profitability of listed manufacturing firms. On the other hand long term debt (0.349) positively and significantly affected listed manufacturing firms. The research findings is significant to the management of listed manufacturing firms in Kenya in coming up financing policies that will ensure sustainability of the financial performance of the firms. The study findings assists the capital market regulator that is Capital Market Authority (CMA) and other policy makers in formulating appropriate mechanisms necessary to continuously monitor and evaluate the financing aspect of corporations. The study further contributes to the existing body of literature, and form a reference point for future scholars researching in this area The study recommend that debt to equity should be reduced by the manufacturing firms since it largely affects the earning before tax and manufacturing firms should consider where possible, using their internally generated funds to finance their projects and only go for debt financing when they have fully exhausted their internal funds.

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ABBREVIATIONS AND ACRONYMS

AIMS	Alternative Investment Market Segment
CBK	Central Bank of Kenya
CBR	Central Bank Rate
CMA	Capital Markets Authority
DER	Debt-Equity Ratio
DR	Debt Ratio
EPS	Earning Per Share
FIMS	Fixed Income Market Segment
GDP	Gross Domestic Product
GEMS	Growth and Enterprise Market Segment
ICR	Interest Coverage Ratio
MIMS	Main Investment Market Segment
NACOSTI	National Commission for Science, Technology and Innovation
NAPS	Net Assets Per Share
NPM	Net Profit Margin
NSE	Nairobi Stock Exchange
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
RONA	Rate of Return on Net Asset
SACCOS	Savings and Credit Cooperative Societies
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial leverage of a firm refers to how a firm finances its assets with all its available resources (Vakilifard & Mortazavi, 2016). In general, firms finance only a part of their assets with equity (ordinary, preference and retained earnings) capital , while the other part is financed by other resources such as long term financial debt or liabilities (like bonds, bank loans and other loans) and other short term liabilities for example trade payables (Innocent, Ikechukwu, & Nnagbogu, 2014). Capital structure on the other hand refers to how a firm finances its assets with permanent short term debt, long term debt, preferred stock and common equity. The two terms have been used interchangeably by scholars as inferred from their application, a concept that the researcher wishes to borrow (Vakilifard & Mortazavi, 2016)

According to Haque, (2014), financial leverage is the debt used in business finance. A firm can use both debt and equity to finance its activities. The proportionate relationship between debt and equity in corporate firms' finances is referred to as capital structure. This is in line with the definition Zamri, Abdul, Saatila, and Isa, (2013) as a mixture of debt and equity financing of a firm. An optimal capital structure is the best debt/equity ratio of a firm, which minimizes the cost of financing and maximizes the value of the firm. The vision of firms for future expansion requires greater capital commitment on the funds generated internally by the firms, forcing them to take on debt financing.

Debt financing is the main element of external financing for corporations raising extra funds after creation (Ogiriki, Werigbelegha, & Avery, 2018). Debt financing has both an advantage and a disadvantage on the growth of corporations and for its strategic investments. According to Fama and French, (2002) the benefits of debt financing include the tax deductibility of interest and the reduction of free cash flow problems, while the costs of debt financing include potential bankruptcy costs and agency conflicts between stockholders and debt holders. The primary motive of a firm in using financial leverage is to enhance the shareholders' return under favourable economic conditions (Butsili & Miroga, 2018).

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The role of financial leverage in enhancing the return of the shareholders' is based on the assumptions that the fixed-charges funds can be obtained at a cost lower than the firm's rate of return on net assets. Kimani, (2015) states that leverage ratios contribute in measuring the risk of using equity costs. They add that there are various measures known for the capital structure among which the most important are book value based measures, market value based measures and semi- market value based measures (adjusted market value).

1.1.1 Profitability

Ratios are used as a benchmark for evaluating financial performance of a firm and help to summarize large quantities of financial data and to make qualitative judgments about the firm's performance. Measures of financial performance of a firm are return on equity and return on assets (Tharmila & Arulvel, 2013). However, the performance measure, ROA is widely regarded as the most useful measure to test firm's performance (Abdel, 2003).

Maheshwari (2001) explains that profitability is the final measure of economic success achieved by a company in relation to the capital invested. This economic success is determined by the magnitude of the net profit. To achieve an appropriate return over the amount of risk accepted by the shareholders is the main objective of companies operating in capitalist economies. After all, profit is the propulsive element of any investments in different projects. The assessment of profitability is usually done through the Return on Assets (ROA) which equals to Net Income divided by Total Assets and ROE (Return on Equity) that is equal to Net Income divided by Equity, which is the ultimate measure of economic success. Researches on commercial banks shows that firm with higher levels of capital post better financial results than their counterparts who have less capital at their disposal.

In practice firms set profits goals and in most instances managers are paid for achieving them, however profit is only a part of a firm's overall strategy. A firm's return to its investors or financial performance is mainly measured through financial ratio analysis specifically through profitability ratios. The measures of profitability are very vital to the management and shareholders of the firm. This is due to the fact that they indicate the financial performance and overall efficacy of the firm. According to Dey, Hossain, & Rahman, (2018) there are two types of ratios this include margin ratios and return ratios. Margin ratios indicate a firm's ability to convert turnover into profits. Essentially the overall efficiency of a

firm in generating returns to its owners is measured through profitability ratios. The profitability of a firm is measured through margin ratios.

1.1.2 Financial Leverage

Leverage refers to the debt used by firm financing its assets. Kanini, (2016) states that one of the cheapest ways to finance a firm is through debt but firms tend to run into financial distress, induced by payment of interest regardless of the cash flow of the business. If the firms hit a rough patch in its business activities it may have trouble paying its bondholders, bankers and other creditors their entitlement. Firms that hit a rough patch in business fail to meet creditors' entitlement.

Debt is highly emphasized as the main cause of financial distress yet with this information it's still inevitable. It is clear that leverage is an important management decision as it greatly influences the owner's equity returns, the owner's risks as well as the market value of the shares. In other word, how a firm is financed is very important not just go to the managers of the firm but also to fund providers (Kanini, 2016). This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be seriously affected. However, firms financing decision involve a wide range of policy issue which may be outside the direct control of the firm's management. Firm determines an appropriate leverage level which will ensure that business continues as a going concern (Kanini, 2016).

Financial leverage affects profit after tax or earnings per share. The combined effect of two leverages can be quite significant for the earnings available to ordinary shareholders (Fabozzi & Peterson, 2003). It has been argued that profitable firms were less likely to depend on debt in their capital structure than less profitable ones, and that firms with high growth rates have high debt to equity ratios. Although many theories and empirical studies about debt financing have been developed, it still does not exist as a unified theory (Aziidah, 2017). Additionally, past research in the area of debt financing has been focusing on investigating firms in developed countries. The analysis of firms in the developing countries is not as common; thereby the study aims at examining the effects of financial leverage and firms' financial performance among manufacturing firms listed by the Nairobi Securities Exchange.

1.1.3 Manufacturing Firms

Manufacturing sector contributes to mostly to the country's Gross Domestic serving both the local market and exports to the Eastern Africa Region (KIPPRA, 2013). The sector is also poised for improved growth with the Government implementing a number of strategies like increasing the capacity in power supply, opening up of the East Africa Customs Union, treaties with the Common Market for East and Southern Africa, exemption from duty on manufacturing machinery, manufacturing under bonds and removal of restrictions on foreign capital repatriations especially for subsidiaries of multinationals. Hence its healthy existence and progressive growth is key for the achievement of the government's ambitious development blueprint Vision 2030 (Wagana & Karanja, 2015)

According to the Economic Recovery Strategy for Employment and Wealth Creation Report, the manufacturing sector in Kenya is a major source of growth, still with high potential for growth and investment (World Bank, 2014). The role of the manufacturing sector in Vision 2030 is to create employment and wealth. Kenya needs to increase the competitiveness of the manufacturing sector so that it can grow, export, and create much-needed jobs. As a share of GDP, Kenya's manufacturing sector has been stagnant in recent years, and it has lost international market share (KIPPRA, 2013). The major key drivers of manufacturing firms in Kenya are infrastructure, competitive workforce, sourcing of products locally and capacity for innovation. All of these factors points to financing and therefore an optimal balance of financing should be adopted to allow for sustainable growth and well balanced liquidity management. Therefore the study seeks to explore the effect of financial leverage on profitability of manufacturing firms listed at the NSE, Kenya.

1.1.2 Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) is a market that deals with exchange of securities issued by public quoted companies and the government. The Nairobi Securities Exchange is licensed and regulated by the Capital Markets Authority (CMA). It has the mandate of providing a trading platform for listed securities and overseeing its Member Firms. According to (Exchange, 2014) there are 64 firms licensed under the NSE. The stock exchange market helps in the transfer of savings to investment in productive ventures rather than keeping the savings idle. This helps to cultivate a culture of saving to local and foreign

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investors who are interested in investing. A lot of reforms have been instituted to promote growth and improve performance of the stock market to encourage wider participation by both private sector and individual investors. Among the reforms initiated include the establishment of a regulatory authority. Capital Markets Authority (CMA) to regulate the functions of the stock market and removal of tax differences between debt and equity to achieve diversity in stock market (Ombaba, 2016)

In 1997 CMA issued guidelines to govern the issuance of corporate bonds and commercial papers and also issued guidelines outlining significant changes to listed firms corporate governance systems intended to build investors' confidence in the securities market (Ombaba, 2016). The NSE has grown to be the largest market in East and Central Africa, with its market capitalization soaring to approximately KES.1.176 trillion as at 19th October 2012 from KES.112.05 Billion in December 2002, likewise within the same period the NSE Stock index has increased by over 260% to 4034.07 points (NSE website www.nse.co.ke). Currently the NSE has 67 trading firms within the four trading segments, Main Investment Market Segment (MIMS); Alternative Investment Market Segment (AIMS); Fixed Income Market Segment (FIMS/FISMS) and the Growth and Enterprise Market Segment (GEMS).The AIMS is an alternative method of investment in capital by small, medium sized and young companies that find it difficult to meet the more stringent listing requirements of the MIMS. It is geared towards responding to the changing needs of issuers and facilitates the liquidity of companies with a large shareholder base through 'introduction' that is, listing of existing shares for marketability and not for raising capital. It also offers investment opportunities to institutional investors and individuals who want to diversify their portfolios (Exchange, 2014).

The concept used to study the effect of various mix of debt and equity on the shareholders return and the risk in the capital structure of a firm is known as leverage (Nyamita, 2014). Leverage is an investment strategy of using borrowed money to generate outsized investment returns. Leverage as a business term refers to debt or to the borrowing of funds to finance the purchase of firm's assets. Business owner can use either debt or equity to finance or buy the firm's assets. In finance the leverage is the most debatable topic and continues to keep researchers pondering.

A firm can be described as profitable if it is able to make a profit from its activities. In other words its revenues exceed its expenses. Profitability shows to what extent the management is able to make efficient use of resources availed to it. According to Xu & Banchuenvijit, (2012) an investments ability to provide a return from its usage is known as profitability. Profit maximization is said to be the main objective of all firms. To increase its profitability a firm must determine which part of its financial strategy works and also determining the parts of its strategy that need to be improved. The firm's management is charged with a responsibility of making the right decisions that would maximize the returns of an organization.

The most important goal in operating a firm is to earn net income for its owners. Return on common stockholders' equity measures a firm's success in reaching this goal. A business that is not profitable cannot survive. Conversely, a business that is highly profitable has the ability to reward its owners with a large return on their investment. Increasing profitability is one of the most important tasks of the business managers. Managers constantly look for ways to change the business to improve profitability. Measuring firm profitability using accounting ratios is common in the corporate governance literature. Return on capital employed, return on assets, and return on equity. Similarly, economic value added can be as an alternative to purely accounting-based methods to determine shareholder value by evaluating the profitability of a firm after the total cost of capital, both debt and equity are taken into account (Berger & Bonaccorsi, 2002).

1.2 Statement of the Problem

The manufacturing sector immensely contributes to employment and economic growth and development in Kenya although the sector remains with potential which has not exhaustively been tapped. Seventy percent of the industrial sector contribution to Gross Domestic Product in Kenya is constituted by the manufacturing sector, with mining, construction, quarrying and building cumulatively contributing to thirty percent (KIPPRA, 2013). For Kenya to become globally competitive there is great need to create a competitive manufacturing and industrial sector in a bid to spur the country's position as an upper middle income and enhance its competitive advantage (GOK, 2014). Thus to enhance capacity of the manufacturing sector so that the sector can remain competitive locally and regionally, there is need for the firms to have enough leverage which could be a mix of debt and equity. The choice of the

manufacturing firm is because it has been earmarked as a key pillar to the achievement of Kenya Vision 2030 and makes a significant contribution to the Gross Domestic Product (GDP). In 1990, East Africa Portland Cement took debt and invested in acquiring of new machine that resulted to increase in the turnover. Several studies have been done to analyze certain issues which are responsible for enhancing the value of the companies. Oguna, (2014) examined in their study, impact of capital leverage and profitability of agricultural firms listed at the NSE which revealed existence of a positive relationship between leverage and financial performance. Gweyi & Karanja, (2014) found that there is a strong positive relationship between financial leverage and profitability of Sacco's in Kenya. Amenyi J, (2015) examined effect of leverage on profitability in financial perspective under manufacturing, construction and allied sector at NSE from the year 2010 to the year 2013, from a sample of 14 firms. The findings indicated that there was a positive relation between capital structure and firms' performance in financial perspective. Sang, Shisia, Gesimba, & Kilonzo, (2015) examined on capital structure and financial performance of listed firms at NSE for period of 2008-2013. The study conclusion was that firm performance is negatively affected by increase in leverage. The study by Amenyi J, (2015) and Sang et al., (2015) focused on quoted agricultural firms as opposed to quoted manufacturing firms while Gweyi & Karanja, (2014) study was on Sacco's. Studies by Oguna, (2014) and Amenyi, (2015) give conflicting results on the topic under study. This poses a major question, what is the effect of financial leverage on firms' profitability. The empirical studies carried out on financial leverage and profitability of firms is scanty. Therefore this study examined the effects of financial leverage on profitability of listed manufacturing firms in Kenya in an attempt to resolve the contradictory results and come up with ways to ensure the manufacturing sector has been fully taped hence increased employment and wealth.

1.3 Objectives of the Study

The study was guided by general and specific objectives

1.3.1 General objective

To examine the effect of financial leverage on profitability of listed manufacturing firms in Kenya.

1.3.2 Specific Objectives

To achieve the general objective the study was guided by the following specific objectives:

i. To examine the effects of Short Term Debt ratio on profitability of listed manufacturing firms in Kenya.

ii. To establish the effects of Long Term Debt ratio on profitability of listed manufacturing firms in Kenya.

iii. To examine the effects of Debt to Equity ratio on profitability of listed manufacturing firms in Kenya

iv. To determine combined effect of financial leverage and profitability of listed manufacturing firms in Kenya.

1.4 Research Hypotheses

The following hypotheses were tested:

H_{01}: Short Term Debt ratio has no effect on profitability of listed manufacturing firms in Kenya.

H_{02}: Long Term Debt ratio has no effect on profitability of listed manufacturing firms in Kenya.

H_{03}: Debt to Equity ratio has no effect on profitability of listed manufacturing firms in Kenya.

H$_{04}$: Combined effect of financial leverage has no effect on profitability of listed manufacturing firms in Kenya.

1.5 Significance of the Study

The research findings are significant to the management of listed manufacturing firms in Kenya in coming up financing policies that ensures sustainability of the financial performance of the firms. Since the financial performance of the firm relies heavily on capital outlay in driving the firms operations, through the research findings the management was in a position to determine a balanced leverage that would not expose the firms into a financial risk. The research findings further bring awareness to the management of manufacturing firms of agency conflict that may arise between them and debt holders as they try to figure out solutions to the conflict issues. The study findings is also of assistance to the capital market regulator (CMA) and other policy makers in formulating appropriate mechanisms necessary to continuously monitor and evaluate the financing aspect of corporations.

The research findings is beneficial to commercial banks and investors who are willing to buy corporate bonds of manufacturing firms. With the aid of the findings investors, commercial banks are in a position to know which entities' financial report are important for them, all in a bid to determine the capability of firms in repaying debts using the financial leverage findings.

Academicians who engage in financial research finds this study useful as one of the working documents. They are able to answer the question whether or not financial leverage have a positive or negative effect on the profitability of manufacturing firms in Kenya. Researchers particularly those pursuing undergraduate and postgraduate studies in finance finds this study useful in their quest to understand the financial leverage on profitability of manufacturing firms.

1.6 Scope on the Study

This study was limited to ten listed manufacturing firms in Kenya as at December 2016 (NSE, 2016). The study sought to establish the effects of financial leverage on financial performance of listed manufacturing firms. Financial leverage examined included;, short term debt, long term debt, debt-equity ratio being regressed against profitability which was

measured by return on asset. The study only focused on 10 listed manufacturing firms since they were active in contribution to the growth of economy. The choice of the 10 manufacturing firm was because they are earmarked as a key pillar to the achievement of Kenya Vision 2030 and makes a significant contribution to the Gross Domestic Product (GDP). Since the number of manufacturing firms listed in NSE was small, the researcher focused on all of them and census research design was used for the period between the years of 2012-2017. Secondary data (audited financial statements for 2012-2017) was used in the study to determine financial leverage as well as profitability. The period of study was recent enough to ensure data was readily available and reliable for the study. A six-year period allowed the researcher not only to look for consistency in performance, but also trends in the firm's operations.

1.7 Assumptions of the study

The assumption of this study was that all the listed manufacturing firms have published their annual reports online and they are free from errors. The study further assumed that the reports were detailed and were easily accessed by the researcher.

1.8 Limitations and Delimitations of the Study

The study was limited to the manufacturing firms listed in NSE thus excluding other companies not listed in NSE and also those that are not in manufacturing sector. However, the researcher hoped that the findings of this study applies to all the companies whether listed or not listed in NSE and also those that are not in manufacturing. The use of secondary data in this study was also another limitation as the information may be prone to errors. To overcome this, the researcher sought for data spanning across several years to check on consistency of the data.

1.9 Operational Definition of Terms

Debt: it is loan borrowed from a financial institution to employ the funds in a more useful manner in investment so that, the earnings from that investment exceeds the cost of interest charged on the funds borrowed

Debt-to-equity: the ratio is obtained by dividing total debt by total equity. We use this measure to check the impact of debt ratio in a firm's capital on its performance.

Equity: it refers to finance provided by the shareholders of the business and it is risky bearing finance.

Financial Leverage: it is a measure of how much firm uses debt to finance its assets.

Long term Debt: it is any loan whose repayment period is more than one year.

Long-term debt to total assets: the ratio is calculated as long-term debt divided by total assets. We use this measure to check the impact of asset financing done through long-term debt on the performance of firm.

Profitability: it is ability of the listed manufacturing firms to maintain its profit year after year and was measured by return on asset.

Return on Equity (ROE): it is the ratio is used to measure profitability of the firm in terms of its equity investments. It is calculated as net income divided by common equity.

Short term debt: it is a loan undertaken by a firm whose repayment period is up to a maximum of one year.

Short-term debt to total assets: the ratio is calculated as short-term debt divided by total assets. We use this measure to check the impact of asset financing done through short-term debt on the performance of firm.

Total Assets: it is everything a firm owns which can be converted into liquid cash.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section draws related material from different studies carried out in the past and in different areas. It comprises of the introduction, theoretical literature, and empirical literature on the effect of financial leverage on financial performance of listed non-financial firms. The areas which was covered under theoretical review will be in the order of market power theory, Pecking order theory and Market Timing theory. Empirical literature focused on empirical studies undertaken on financial leverage and financial performance. A conceptual framework of the study was then provided and finally the research gaps.

2.2 Theories Underlying the Study

In trying to explain financial leverage on profitability, market power theory, pecking order theory and market timing theory was used to link the effects of financial leverage on profitability.

2.2.1 Market Power Theory

Market power theory emanated from Bain (1951). This theory stresses that an increase in market power results to increase in market prices (Athanasoglou, Brissimis & Delis, 2005). The theory is based on the premise that concentration of the market is a best measure for market power since more concentrated markets exhibit superior market imperfections facilitating various entities to set prices for their products and services at levels which is less favourable to their clients or customers. The theory also affirms that companies with a large market power and sound differentiated products and services can easily earn monopolistic profits and succeed or win against their competitors (Tangut, 2017). The market power theory assumes that extra profits results from a higher market concentration which firms to collude and earn supernormal profits which arise due to the firms portfolio of differentiated products that also increases the market share and market power in determining prices for products (Fama, 2007). The market-power theory also affirms that market power is the major variables which make profitability to change and concentrated markets frequently involve

market imperfections which arise from collusion, made possible by market concentration, and by various legislative barriers to entry or exit (Kuroda, 2017). According to Ayad Shaker, (2015) this theory assumes that firm's profitability is a function of external market factors which include leverage.

Market power theory was applied in manufacturing industry, it explained firm's profitability and how it affected its market prices. Since most of the manufacturing assets that can help to reduce the cost of production are costly, manufacturing firms can acquire them through leverage as long as the cost of debt is less than the rate of return. This will lead to increased market power since the profit margins will increase and be able to reach the point where marginal cost equals marginal revenue.

2.2.2 Pecking Order Theory

The Pecking Order Theory originated by Myers and Majluf, (1984) is the nearest pertinent theory explaining the firm's optimal financial structure. According Myers and Majluf, (1984) Pecking Order Theory is based on the assertion that managers have information about their firms than investors. It deals with the role of asymmetric information in determining the amount of debt and equity a firm will issue. Firms should finance investments first with internal funds, then with safe debt, followed by risky debt and finally with equity to reduce the adverse signals that may be emitted. The implication of the Pecking Order Theory is that firms do not have a target debt-equity ratio as they choose their leverage ratio based on their financing needs. This theory also implies that firms do not have target cash balances but cash is actually used as a buffer between retained earnings and investment needs (Chen & Management, 2010). This also means that when a firm increases its internal funds, its leverage falls.

As a firm continues to maintain a surplus of internal funds for the purpose of reducing adverse selection costs, it will accumulate excess cash which it will use to pay off its debt when due. As for a firm which does not have a constrained investment policy, it simply uses cash flow to increase cash. Working capital is a readily available internal source of financing which can thus act as an alternate source of financing to external capital, especially for the purpose of fixed-investment smoothing in order to maintain a stable fixed investment path. External funds can be very costly due to floatation costs and the problem of asymmetric

information, especially for financially constrained firms. Firms would prefer use of their own cash flow to enhance their performance without leverage. The ability to avoid financial leverage in any given firm indicates excellent financial performance and sustainability. However where this is not possible, firms would result into leverage sparingly to avoid losing control of the firm. Therefore, decisions made by firms manager's regarding financing of firms determines the level to which a firm is leveraged and the level the firm is self-financing (Shahdila, Shahar, Shahzlinda, Shahar, & Bahari, 2015)

The theory asserts that internal financing through the retained earnings is the most preferred way of financing as it attracts no additional costs as it's in the case of debt financing which attracts high interest which can even lead to firm bankruptcy. The only case where the firm is required to use external financing is when the retained earnings are not enough to fully finance the firm's projects. This theory is relevant to this study since manufacturing firms operate in a financial environment that fits the pecking order. If the firms must use outside financing, preference capital is to be used in the subsequent command of funding sources such as convertible securities, debt and preferred stock. An appropriate debt to equity ratio needs to be maintained.

2.2.3 The Market Timing Theory

These theory by Meckling, (1976) argue that capital structure evolves as the cumulative outcome of past attempts to time the equity market by issuing new stock when the stock price is perceived to be overvalued and buying back own shares when there is undervaluation. There are two versions of equity market timing that lead to similar capital structure dynamics. The first is a dynamic form of (Myers, 1984) with rational managers and investors and adverse selection costs that vary across firms or across time. Companies are assumed to issue equity directly after a positive information release which reduces the asymmetry problem between the firm s management and shareholders. The decrease in information asymmetry coincides with an increase in share price. In response, firms create their own timing opportunities. Tangible assets are less subject to information asymmetries and usually have a greater value than intangible assets in the event of bankruptcy. This therefore means that tangibility of assets should be a factor to consider in the choice of capital structure. The second version involves irrational investors and time varying mispricing (Shahdila et al., 2015)

Fama and French, (2002) document that equity issues have been increasingly frequent and firms issue equity even when they could have used internally generated funds or issued debt. They interpret this as evidence against the pecking order theory. They suggest that new external equity financing tools, such as stock-financed acquisitions and employee stock option plans, involve less severe information asymmetry, leading to the increased use of external equity financing over time. Managers issue equity when they believe its cost is irrationally low and repurchase equity when they believe its cost is irrationally high. This version does not require markets to be inefficient nor does it ask managers to successfully predict stock returns. This assumption is simply that managers believe they can time the market.

The theory asserts that a firm should borrow funds upon a point where additional debt will impact on the shareholders of the firm through share dilution. The benefits associated with debt apply up to a point where they outweigh the costs. The reason why the theory prefers financing through equity is because its interest is exempted from taxation. Also, the theory further asserts that high ratio of debt financing is shy's ways the potential investors as they consider them risky investments and when they invest they demand high interest rates as an incentive for those risks. This theory is relevant to this study in that managers of listed manufacturing firms are bound by shareholders to act responsibly by making correct decisions on the level of debt ratio and profitability. They are answerable to the shareholders or board of directors and thus need to ensure that the firm has low level of debt to increase shareholders value.

2.3 Financial Leverage and Profitability

Financial institutions in Kenya have been on record posting billion of shillings in profit and this financial position has been on the rise in each subsequent year. However, non-financial companies which are listed in Nairobi Stock Exchange have not been performing well and some actually record huge losses. Business success depends heavily on the ability of financial managers to effectively manage the components of financial structure. Based on the above discussion one can assert that the momentous efforts to revive the ailing and liquidating companies have focused on financial restructuring. However managers and practitioners still lack adequate guidance for attaining optimal financing decisions (Ayako, Kungu, & Githui, 2015) yet many of the problems experienced by the companies put under statutory

management were largely attributed to financing. This situation has led to loss of investors' wealth and confidence in the stock market. The relationship between debt and profitability of firms has been a centre of attention for many researchers over decades, however, there is difference of opinion between different researchers about the role of debt, some researchers found negative (Tailab, 2014). Some found positive Jan Habib, Khan, & Muhammad, (2016) while some found mixed results of debt on profitability (Kimani, 2015). This difference of opinion is due to many reasons including different types of variables, sample size (countries, industries/sectors, firms and periods), and methodologies.

Mwangi, (2016) did a study on capital structure and profitability found that debt and equity ratio is negatively correlated with profitability. On the other hand debt to assets ratio and interest coverage ratio is significantly associated with the profitability of companies. Oyelade, (2019) did a study to analyse factors affecting profitability of non-financial firms in US firms. The study established that leverage, inventory, growth and age had a negative significant effect on ROA while liquidity and size in term of sale has a significant positive effect on profitability of US firms. Studies show that the higher the debt ratio, the greater the risk, and thus higher the interest rate will be. At the same time, rising interest rates overwhelm the tax advantages of debt. If the firm falls on hard times and if it's operating income is insufficient to cover interest charges, then stockholders will have to make up for the short fall, and if they can't, the firm may be forced into bankruptcy. Good times may be just around the corner. But too much debt can keep the firm shareholders wiped out in the process (Oyelade, 2019)

A study by Shah and Ur, (2013) in Kenya determined the relationship between financial leverage and return on equity for industrial and allied sectors in the Nairobi Securities Exchange during the period 2004 to 2008 and found a negative relationship between debt equity ratio and ROE. The study focused on only one sector of the companies listed in Nairobi Securities Exchange and paid attention to only one aspect of financing decisions. Mwangi, (2014) investigated the effect of debt-equity ratio performance of firms listed at the Nairobi Securities exchange and found a significant negative relationship between financial leverage and all measures of performance. In this study financial leverage will be the independent variable to predict the financial performance of listed manufacturing companies. Mwangi, (2014) studies focused on the debt-total assets ratio as an acceptable measure of financial leverage. The studies applied three measures of financial leverage: short-term debt

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to total assets, long-term debt to total assets and total debt to total assets. This study will use four debt ratios, the ratios of total liabilities, long-term liabilities and short-term liabilities to total assets and the debt-equity ratio to measure financial leverage.

2.3.1 Short Term debt Ratio and Profitability

Short-term debt in an environment of incomplete contracts grants the lender a control right as the firm's ability to roll over the debt may be conditioned on financial ratios and adequate performance. As this mechanism limits managerial discretion it may contribute to the relaxation of financial constraints. This increased availability of external finance should stimulate better performance. Maturity matching between debt and the life of assets plays an important role in deciding the length of the debt maturity. Short-term debt is positively correlated with firm's growth opportunities. Short-term debt is the best financing tool because it is perceived to be cheaper. Thus, both entrepreneur and bank prefer short-term debt. Existence of a positive effect of leverage on firm profitability and growth in earnings is robust to also including short-term bank loans in the definition of leverage (Wanjugu, Kisaka, Kibet, & Lawrence, 2015).

García-Teruel and Solano, (2008) analysed the Spanish SMEs Corporate cash holdings and find that firms with a higher amount of short-term debt will hold higher levels of cash, because it might lower the risks of the non-renewal the short-term debt. Debt financing suggest that aggressive liquidity policy combine the higher levels of normally lower cost short-term debt and less long-term capital. Although capital costs are reduced, this increases the risk of a short-term liquidity problem. They established that total and short-term debt is positively related to firm's profitability, which might be the most important factor in accessing outside financing in countries with weak collateral laws. From their studies they also found out that a negative relation between tangibility and short-term debt and a positive relationship between tangibility and long-term debt. These results are consistent with most theories on capital structure that suggest that firms without fixed-assets to use for collateral are unable to access long-term financing.

According to García-Teruel and Solano, (2008) Short-term debt is positively correlated with firm's growth opportunities. Short-term debt is the best financing tool because it is perceived to be cheaper. Advantages of short term debt, first they suggest that short term debt adapts

more easily to a firm's financial need. Secondly it facilitates bank relations between the firm and the lender due to frequent renewals and hence firms might obtain credit condition benefits. Short term debt can mitigate agency conflicts between shareholders and debt holders. Empirical evidence confirms that firms can use short term debt loans to solve the problem of underinvestment because management is more frequently monitored due to periodic credit renewal. Maturity matching between debt and the life of assets plays an important role in deciding the length of the debt maturity (Balcaen & Ooghe, 2006). According to Balcaen & Ooghe, (2006) short-term debt is positively correlated with firm's growth opportunities. Short-term debt is the best financing tool because it is perceived to be cheaper. Thus, both entrepreneur and bank prefer short-term debt. Short term debt financing have a maturity period of one year or less, they must be repaid quickly within 90 -120 days. Term loans with short maturities help to meet immediate need for financing without long term commitment (Mauwa, 2016). The cost of servicing short term debt is less taxing on the firm. Short term loans usually offer lower interest charges, and most lenders do not charge interest until all credit allowance period is breached.

The study by Muturi, (2015) sought to establish the relationship between debt level and financial performance of companies listed on the Nairobi stock exchange. The study found out that there was a negative impact of short term debt on return on assets. García-Teruel & Solano, (2008) analyzed the Spanish SMEs Corporate cash holdings and found that firms with a higher amount of short-term debt will hold higher levels of cash, because it might lower the risks of the non -renewal the short -term debt. Debt financing suggest that aggressive liquidity policy combine the higher levels of normally lower cost short-term debt and less long -term capital. Although capital costs are reduced, this increases the risk of a short -term liquidity. They established that total and short -term debt is positively related to firm's profitability, which might be the most important factor in accessing outside financing in countries with weak collateral laws. From their studies they also found out that a negative relation between tangibility and short-term debt and a positive relationship between tangibility and long-term debt exists. These results are consistent with most theories on capital structure that suggest that firms without fixed-assets to use for collateral are unable to access long-term financing. Furthermore, financially strong firms can use more of short-term debt as they are better equipped to face refinancing risk and the interest risk of short-term debt (García-Teruel & Solano, 2008).

Kabare, (2015) find empirical support for the above argument and report that financially sound firms use more short-term nonconvertible debt as compared to firms that have low credit ratings and indicated that firm performance, which was measured by (ROE and ROA), was significantly and positively associated with long-term debt and total debt at 1% and 5% respectively, while on the other hand, short-term debt showed a negative and significant relationship at 5% in the two models. The negative relation between short-term debt and the profitability of tea processing factories meant that supplying the finance through short-term debts does not lead to profitability. Pradhan & Khadka, (2017) examined the effect of debt financing on firm profitability of Nepalese commercial banks. The study showed a significant positive relationship between short term debt financing and profitability since short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and hence performance.

2.3.2 Long Term Debt Ratio and Profitability

Long-term debt limits managerial discretion by making access to new funds and over investment less likely: a feature that would enhance profitability. Jaramillo & Schiantarelli, (2002) argue that shorter-term loans are not conducive to greater productivity while long-term loans may lead to improvements in productivity. It is higher in stronger and more flexible firms, when there are big differences between short term and long term interest rates and when firms have more growth opportunities. An econometric study by Koe & Gine, (2010) suggests that the important variables in determining firms long-term debt include the length of the banking relationship and the number of banks involved. Long term debt is a component in the capital structure of a firm, yet it has to be applied with a lot of caution. Prior studies on long term debt have offered varied results on the effects of Long term debt on financial performance.

El-Sayed Ebaid, (2011) in his study on the emerging market economy of Egypt found that long term debt has a negative effect on return on asset. El-Sayed Ebaid, (2011) found that a long term debt has a negative effect on profitability as measured by the return on assets. Some researchers found that long term debt has a positive effect on financial performance while others found that long term debt has a negative effect on financial performance such as (El-Sayed Ebaid, 2011). Long term debt is a resource that is owed to lenders for a period of more than one year from the date of the current balance sheet. Long-term debt converts to

short-term debt when the period left until the debt must be repaid becomes less than one year with the passage of time. Long-term debt is used to finance business investments that have longer payback periods. Long term debt financing is advantageous as it is usually less prone to short term shocks as it is secured by formally established contractual terms. Hence, they are relatively more stable than short-term debt. Long term debt financing is directly linked to the growth of the firm's operating capacity, the purchase of capital assets such as machinery.

Long-term debt financing is normally well structured and defined. Thus fewer resources have to be channelled to monitor and maintain long-term debt financing accounts compared to short term debt financing such as supplier credit which, changes overtime and need to be monitored on a regular basis. Long term debt financing options such as leases offer a certain degree of flexibility, compared to having to purchase the asset (Abubakar, 2015). Long term debt is money that is owed to lenders for a period of more than one year from the date of current balance sheet. The study by El-Sayed Ebaid, (2011) found that there was no significant relationship between long term debt and return on assets. Long term debts are most preferable sources of debt financing among well-established corporate institution mostly by virtue of their asset base and collateral is a requirement many deposit taking financial institutions. Report by European Commission (2008) indicates that large financial banks have considerably reduced lending to SMEs thus inhibiting their potential for growth and financial performance. García-Teruel & Solano, (2008) argued that long term debts provided small firms with more competitive advantages when compared with large firms. According to the results it was found out that there is a direct positive and significant relationship between long term loans and financial performance of the small businesses. He reported that long term debt was positively related to the growth/share, /sales effectiveness, and gross profit in small and medium size manufacturing firms.

Jaramillo and Schiantarelli, (2002) conducted a study on access to long term debt and effects on firm performance in Ecuador. They found evidence that suggests that a shorter maturity is not conducive to greater productivity. Long-term debt may actually lead to productivity improvements. Omesa, (2013) examined the relationship between a firm's capital structure and financial performance among a sample of 30 companies listed at the NSE whose data for 5 years period 2007 - 2011. The findings indicate that there was a significant correlation between total assets of a firm and long term debt. Long term debt had a positive correlation with ROE which is insignificant and weak. Many authors have suggested a positive

relationship between a firm leverage and its size. Mohamed, (2017) stressed out, that when the value of the firm increases; the ratio of direct bankruptcy costs to the firm value would decrease. The effect of these expected bankruptcy costs might be little on large firms' borrowing decisions, which empower them to take on more leverage. On the other side, smaller firms face a different reality in raising the long term debt.

2.3.3 Debt to equity Ratio and Profitability

There are various alternatives of debt-equity, these includes; 100% equity: 0% debt, 0% equity: 100% debt and X% equity: Y% debt. From these three alternatives, option one is that of the unlevered firm, that is, the firm that shuns the advantage of leverage (if any). Option two is that of a firm that has no equity capital. This option may not actually be realistic or possible in the real life economic situation, because no provider of funds will invest his money in a firm without equity capital. This partially explains the term "trading on equity", that is, it is the equity element that is present in the firm's capital structure that encourages the debt providers to give their scarce resources to the business. Option three is the most realistic one in that, it combines both a certain percentage of debt and equity in the capital structure and thus, the advantages of leverage (if any) is exploited. This mix of debt and equity has long been the subject of debate concerning its determination, evaluation and accounting. It has been argued that profitable firms were less likely to depend on debt in their capital structure than less profitable ones, and that firms with high growth rates have high debt to equity ratios (Wanjugu et al., 2015). A firm can finance its investments by debt and equity, and a firm may also use preference shares. The ratio of the fixed- charge sources of funds, such as debt and preference shares to owners' equity in the capital structure is described as financial leverage or gearing (Chinaemerem, 2012).

The other alternative term 'trading on equity' is derived from the fact that it is the owners' equity that is used as a basis to raise debt. Haque, (2014)concluded that more efficient firms were more likely to earn a higher return from a given capital structure, and that higher returns can act as a cushion against portfolio risk so that more efficient firms are in a better position to substitute equity for debt in their capital structure. Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. While debt holders exert lower control, they earn a fixed rate of return and are

protected by contractual obligations with respect to their investment. Equity holders are the residual claimants, bearing most of the risk, and, correspondingly, have greater control over decisions.

Banafa, (2016) posit that the use of debt rather than equity finance grows as the corporate tax rates rises. Therefore, high corporate tax rates may lead to greater corporate indebtedness owing to firm's need to enjoy debt tax shield benefit. Although financial liberalization results in the development of capital market and overall financial system, however, corporate investment depends mostly on output and profits than macroeconomic and other policy variables (Ayad Shaker, 2015). Thus, firm's performance in most cases reflect its' corporate decisions in developed and most emerging financial system. Stock market development leads to substitution of equity for debt, the effect would be a decline in the debt-equity ratio.

2.4 Profitability of manufacturing firms

Profitability of firm is measured using a number of common indicators (profitability ratios), among them Net Interest Margin (NIM), Return on Assets (ROA) and Return on Equity (ROE). Given that net income gives us an idea of how well a firm is doing. The basic measure of firm profitability takes into consideration the size of the firm is the return on assets (ROA), which is computed by dividing the net income of the firm by its total assets. ROA is useful in measuring how well a firm is performing as it indicates how well a firm's assets are being used to generate profits after tax (Yoon & Jang, 2005). Another commonly watched measure of firm profitability is net interest margin (NIM), which is computed as the difference between interest income and interest expenses as a percentage of total assets. If the interest cost of its liabilities rises relative to the interest earned on its assets, the net interest margin would fall, and firm profitability would suffer (Yoon & Jang, 2005).Shareholders of firm are more concerned with how much the firm is earning on their equity investment, an amount that is measured by the return on equity (ROE), and computed by dividing the net income against capital. ROA and ROE, are widely used to assess the profitability of manufacturing firms. After all, profit is the propulsive element of any investments in different projects. The assessment of profitability is usually done through the Return on Assets (ROA) which equals to Net Income divided by Total Assets and ROE (Return on Equity) that is equal to Net Income divided by Equity, which is the ultimate measure of economic success (Yoon & Jang, 2005). Based on the foregoing discussion, the study will use financial ratios in

determination of the profitability of the firm. Hence, return on asset will be used to measure the financial performance of the manufacturing firms listed in Nairobi securities exchange.

According to Kuroda, (2017), ROI and ROE are ratios commonly used to measure financial performance. ROI is a measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed a percentage or a ratio. ROI analysis compares the magnitude and timing of investment gains directly with the magnitude and timing of investment costs. A high ROI means that investments gains compare favourably to investment costs. ROE measures a corporation's profitability by revealing how much profit a firm generates with the money the shareholders have invested. It tells the rate that shareholders are earning on their shares favourably to investment costs.

ROE is a ratio that measures how efficiently a firm uses its assets to produce earnings. A high ROE means that net income compare favourably to shareholders' investment. Chandra (2005) noted that ratio analysis gives objective picture of a firm's financial performance because ratios eliminate the size effect. Mohamed, (2016) proposed in his study that ROA is the most efficient measure of profitability for manufacturing firms listed in the Nairobi securities exchange especially in the case of the usage of financial leverage since the amount borrowed needs to be effectively used to generate good returns to repay back the amount the firm had borrowed. This study also used return on asset as the only profit proxy.

2.5 Government Policy

In the case of government support policies, it is assumed that since government is in the lead for entrepreneurial development, it should provide the much needed resources within its capability. Such resources include provision of environment conducive to business that will highly promote entrepreneurship. Government policy in this context is any course of action which aims at regulating and improving the conditions of SMEs in terms of supportive, implementation and funding policies by the government. Based on this definition, government policy as it relates to entrepreneurial practice is targeted at encouraging entrepreneurship by making a favourable environment for the entrepreneurs. This, it does through enactment of guidelines that will regulate entrepreneurial activity generally for the reason that entrepreneurship is the bedrock of a nation's path to industrialization.

Furthermore, government needs to enact policies that would be user friendly to the entrepreneurs. Waweru, (2009) argued that there is a need for government policies as they relate to entrepreneurship to be successfully implemented irrespective of which administration is in power in order to achieve the goals of the guideline which often times is always lacking.

Studies have found that debt and leverage policies of larger, more credit-worthy firms are more sensitive to variation in government debt than are the policies of smaller, less creditworthy firms whose debt is a more distant substitute for Treasuries. Consistent with government debt influencing corporate policy, these findings are also more difficult to reconcile with the alternative of mis-measured investment opportunities because larger, more creditworthy firms exhibit financial and investment policies that are less pro-cyclical. If periods of high government indebtedness were proxies for bad economic times and poor investment opportunities, we would expect credit spreads to widen, not contract (Lilian, 2016).

2.6 Empirical Literature Review

Gweyi & Karanja, (2014) investigated the effect of financial leverage on firm performance of deposit taking savings and credit co-operative in Kenya. The study utilized secondary data sourced from financial statements of 40 savings and credit co-operative societies (SACCOS) sampled for the study from 2000 to 2012. Descriptive and analytical designs were both adopted. The result show perfect positive correlation between financial leverage surrogated by debt-equity ratio with ROE and profit after tax at 99% confidence interval, and a weak positive correlation between debt-equity ratio with ROA and income growth.

Yazar Soyadı, Olweny, & Maina, (2019) in an attempt to validate Modigliani and Miller (1963) theory in Kenya examined the effects of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002- 2011. The study found that firms listed at Nairobi Securities Exchange rely more on short term debt. The result also revealed that significant negative relationship exists between debt-equity ratio and all measures of performance. The result also provides support for Modigliani and Miller theory that capital structure is relevant in determining the performance of a firm.

Yoon & Jang, (2005) studied the relationship between profitability, financial leverage and size of the firm in restaurant industry in Virginia USA. The researcher took data for the period between 1998 and 2003 by using ordinary least square method. The aim of the study was to analyze the association between financial leverage and restaurants firm profitability. In this study the researcher applied return on equity as a measure of profitability and financial leverage as a ratio of long term debt to total assets and total assets as firm size. Results of the study suggested that the restaurant firms having large assets were more profitable than small firms and the sign of financial leverage variable was negative which indicated that firms with higher debt rates were less profitable.

Perinpanathan, (2016) did a study to examine the impact of financial leverage on financial performance in Sri-Lanka. Panel data for the period between 2006 and 2012 was used. The study used regression analysis to test the hypothesis on the effect of financial leverage on financial performance of firms. Correlation analysis was used to show the relationship between financial leverage and financial performance. The findings indicated that there is a negative relationship between financial leverage and financial performance of firms in Sri Lanka. The study also showed that financial leverage had a significant impact on financial performance of firms in Sri Lanka.

Ahmad, Salman, & Shamsi, (2015) sought to establish the impact of leverage on profitability of the firm by investigating the relationship between leverage and the earning per share in Bombay stock exchange. Leverage was analysed in three ways which were: financial leverage, operating leverage and combine leverage. Seven public limited companies listed on the Bombay stock exchange were used in the study. The study used panel data for a seven years period. Analysis of Variance (ANOVA) was used as the analysis tool in the study. The findings of the study indicated the existence of a significant negative relationship between financial leverage and earnings per share. The leverage effect is positive when the earnings of the firm are higher than the fixed charges to be paid for the lenders. The study concluded that the wealth of the shareholders can be maximized when the firm is able to employ more debt.

Banafa (2016), examined the impact of leverage on financial performance of listed Non-financial firms in Kenya. The objective of the study was to assess the extent to which leverage affects the financial performance of listed Non-financial firms in Kenya. They used the causal research design where by secondary data was collected from the 42 listed Non-

financial firms at the Nairobi Securities Exchange under the different categories. Data was analyzed using the regression model. The researcher's conclusion was that most firms are highly geared and they use long-term debt as the source of finance. The study further concluded that financial leverage has a negative and insignificant effect on corporate performance.

A study by Abubakar, (2015) sought to investigate the relationship between financial leverage and financial performance of deposit money banks in Nigeria. The study had a special focus on the effect of debt-equity ratio and debt ratio on return on equity of deposit money banks in Nigeria. The study established that there was a significant relationship between debt equity ratio and return on equity. On the other hand, the study found that there was no significant relationship between debt ratio and return on equity. The study further established that about 84% of the total assets of the deposit money banks in Nigeria were financed by debts thus confirming that banks are highly levered financial institutions.

Akhtar, Javed, Maryam, & Sadia, (2012) examined the relationship between financial leverage and financial performance using the Fuel and Energy Sector of Pakistan. The findings showed a positive relationship between financial leverage and financial performance of the companies thus confirming that the firms having higher profitability may improve their performance by having high levels of financial leverage. In addition, the study provides evidence that the players of the fuel and energy sector in Pakistan can improve their financial performance by employing the financial leverage and can arrive at a sustainable future growth by making vital decisions about the choice of their optimal leverage. The gearing ratio takes into account the effect of capital with return numerator which not only accommodates the debt but also the outstanding shares of preferred stock. The result added that gearing ratio may differ from that of debt to equity ratio while debt equity ratio taking into account the long term.

Mwai, (2015) undertook a study to establish the effect of debt financing on the financial performance of companies listed at the Nairobi securities exchange. Quantitative research design was used utilizing linear regression models for analysis. The study established that short term debt was negatively correlated to return on assets. However this relationship was not statistically significant. On the other hand, long term loans had weak insignificant relationship with return on assets. Mwai, (2015) argued that long term debts provided small

firms with more competitive advantages when compared with large firms. According to the results it was found out that there is a direct positive and significant relationship between long term loans and financial performance of the small businesses. The researcher reported that long term debt was positively related to the growth/share /sales effectiveness, and gross profit in small and medium size manufacturing firms.

Innocent et al., (2014) conduct a study on the effect of financial leverage on financial performance: evidence from quoted pharmaceutical companies in Nigeria for the period 2001- 2012. Financial leverage surrogated by debt ratio (DR), debt-equity ratio (DER), and interest coverage ratio (ICR) was used as independent variable while financial performance proxy by ROA was used as dependent variable. The study utilized secondary data sourced from financial statements of 3 pharmaceutical companies quoted on the Nigerian Stock Exchange. Descriptive statistics, Pearson correlation and multiple regressions were employed in order to determine the relationship between financial leverage variables and performance measure variable identified in the study. The results showed that debt ratio and debt-equity ratio have negative relationship with ROA, while interest coverage ratio has a positive relationship with ROA in Nigerian pharmaceutical industry. The study also revealed that on aggregate financial leverage variables has no significant effect on financial performance of sampled companies.

Shah & Ur, (2013) studies the relationship between financial leverage and financial performance in listed sugar companies of Pakistan. The results shows positive relationship of debt equity ratio with return on asset and sales growth, and negative relationship of debt equity ratio with earning per share, net profit margin and return on equity. This negative relationship between debt equity ratio and earnings per share (EPS) support the fact that as debt increases, the interest payment will also rises, so EPS will decrease.

(Ojo, 2012) in his paper "empirically examines the effect of financial leverage on selected indicators of corporate performance in Nigeria". Leverage therefore significantly affects corporate performance in Nigeria. Other detailed objectives were to examine the impact of leverage on the earnings per share and net assets per share of corporate firms in Nigeria. The econometric findings presented in this study evidence that debt- equity ratio have significant effect on corporate performance especially when the net assets per share (NAPS) is used as an indicator of corporate performance in Nigeria over the period covered by the study.

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2.7 Summary of Literature Review and Research Gap

Many studies have been carried out on financial leverage and firms' performance; however, these studies have failed to reach an agreement that is applicable to firms in all circumstance. Shah & Ur, (2013) argued that that there is no complete theory of the debt-equity choice and no reason to expect one. Additionally, Shah & Ur, (2013) identified financial leverage as one of the ten unresolved problems in corporate finance. Surveys of empirical studies revealed that consensus have not been reached on the relationship between financial leverage and financial performance. Many researchers found a significant negative relationship between leverage and firms' performance (Yoon & Jang, 2005; Perinpanathan, 2016 & Banafa, 2016). Despite the negative relationship revealed by the above empirical studies, many researchers also found a significant positive relationship between financial leverage and financial performance (Gweyi & Karanja, 2014; Ojo, 2012; Innocent et al., 2014; & Ahmad et al., 2015). Thus there are no conclusive findings on the effect of financial leverage on the financial performance. Banafa, (2016), in his study on impact of financial leverage on financial performance of listed non-financial firms in Kenya used one independent variable that affect financial performance and also used ordinary linear regression analysis to analyse the data and this may lead to misleading results if regression assumptions have not been met. Therefore this study sought to fill this gap by finding out the effect of financial leverage on profitability of manufacturing firms quoted in Nairobi stock exchange.

2.8 Conceptual Framework

A conceptual framework is a model that employs the use of drawings/diagrams to explain the interrelationships between variables Orodho, (2009). The study conceptualizes a framework consisting of both independent and dependent variables. The study conceptualized that the independent variables influence the dependent variable where the independent variables could either lead to a good or poor profitability. The conceptual framework was as shown in the figure 2.1 on the next page

Independent variables

Financial leverage

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┌─────────────────────────────┐
│ Short term Debt Ratio        │
│                              │
│  • Short term Debt to Total  │
│    Assets ratio              │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Long term Debt Ratio         │
│                              │
│  • Long term Debt to Total   │
│    Assets                    │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Debt-Equity Ratio            │
│                              │
│ • total liabilities divided  │
│   by total Stockholders'     │
│   Equity                     │
└─────────────────────────────┘
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Intervening Variable

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┌─────────────────────────┐
│ Government Policy         │
└─────────────────────────┘
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Dependent

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┌─────────────────────────┐
│ Profitability             │
│                          │
│  • Return on Assets       │
└─────────────────────────┘
```
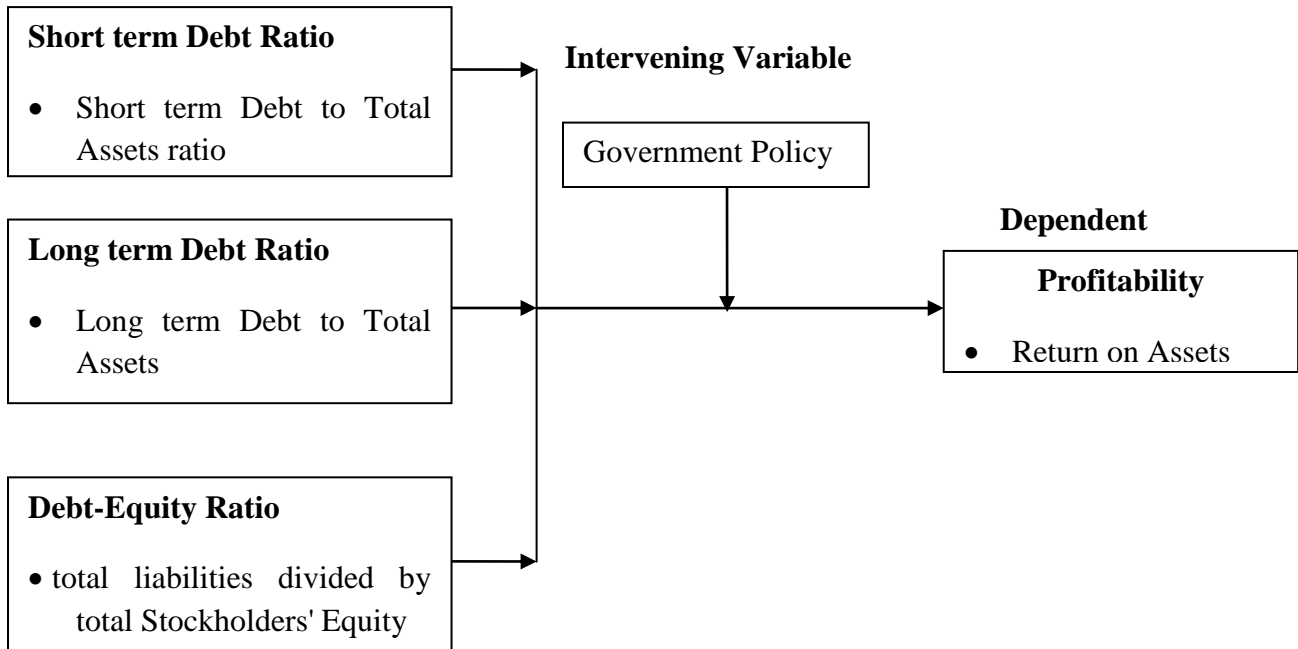
Figure 2. 1: Effects of Financial Leverage on profitability

To measure financial leverage this study used three measures previously used by (El-Sayed Ebaid, 2011) which include; short term debt ratio, long term debt ratio and Debt to equity ratio has been included as the three measures of financial leverage in this study. To measure profitability this study used return on assets as used by (Anthony, 2015). The relationship between the independent variables and the dependent variables could be affected by government policies as the intervening variable. The dependent variable in this study was profitability which is proxy of Return on Assets while the independent variables are, Short term Debt, Long Term Debt, Debt-Equity and the joined combination of the three above variables. The study tried to establish the effects of the independent variables on dependent variable.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the procedures that were followed in conducting the study. This include research design, target population, sample and sampling technique, data collection instrument, pilot testing, as well as the methods that were employed to analyse data.

3.2 Research Design

This study adopted descriptive research design since the data was quantitative and was observed over a period of six years to see how financial leverage relates with profitability. A descriptive research design is a non-experimental design used to describe the relationship between or among variables. According to Akhtar, (2012), descriptive research design seeks to determine the pre-existing association between two or more variables that are beyond the control of the researcher based on a causative relationship. In this study, a descriptive research is preferred because it help in describing how financial leverage is related to profitability. Banafa, (2016) used similar design to study the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi securities exchange. The use of descriptive survey was appropriate since the study was able to collect data from a sample of the population without manipulating the variables.

3.3 Target Population

The target population is the population to which the study findings would be generalized (Coopers and Schindler, 2003). The study targeted the manufacturing listed companies. This choice of listed firms is due to their huge capital raising potential and is also more accountable not only to their shareholders but also to the public by way of information provision, since they are required by law to be audited, and therefore the data is bound to be available and reliable. In addition, being in the same market, the firms have almost the same reporting pattern, design and the bare minimum disclosures as required by the regulator. As noted by Kothari R.C, (2014), a population of study must have common characteristics conforming to a given specification. This study was limited to 10 manufacturing firms quoted in Nairobi Securities Exchange in Kenya as at December 2016 (NSE, 2016). 10

manufacturing firms provided adequate information since the data was collected for a period of 6 years and also they are the only manufacturing allied firms listed in NSE between the periods of 2012-2017.

3.4 Sample size

No sampling was done hence a Census survey was the appropriate data collection design for a small heterogeneous population. Since the target population is small and heterogeneous, census survey adopted where the 10 listed manufacturing firms in NSE was studied. According to Kothari, (2004) the larger the sample size for a small population, the more accurate the results are likely to be and hence the choice of the census technique in the proposed study.

3.5 Instrumentation

Cooper and Schindler, (2003) observed that the quality of any research findings depends on the choice and the design of data collection instruments used. This study basically used data collection sheet to collect secondary data for the purpose of analysis. Use of secondary data arises from the need to collect actual and accurate data from audited financial statements on financial leverage and profitability of listed manufacturing firms. The secondary data was collected from the Capital Market Authority library or respective listed manufacturing website. All quoted firms are required by law to publish their periodic financial statements which are complete and thoroughly audited. Secondary data was collected from audited financial statements for the period (2012-2017). The period of study was recent enough to ensure data was readily available and reliable for the study.

3.6 Data Collection Procedure

Prior to data collection, the researcher sought the letter of consent from the Egerton University. The researcher further sought authorization from National Commission for Science, Technology and Innovation (NACOSTI). In addition the researcher did a pre-visit of the CMA to seek clearance to obtain data from them. Specifically, total assets, total liabilities, current liabilities, retained earnings, other shareholders' funds and profit after tax was obtained through the data collection sheet. This was done by visiting CMA library and individual firm's websites. The collected data was used for the purpose of sorting the effect of

financial leverage on profitability of listed manufacturing firms in NSE, hence the study ensured compliance with the ethical guidelines of Egerton University.

3.7 Validity and Reliability of the Instruments

Mugenda and Mugenda, (2003) asserted that, the accuracy of data to be collected largely depended on the data collection instruments in terms of validity and reliability. According to Kothari R.C, (2014), validity is the critical criteria that indicate the degree to which an instrument measures what is supposed to measure. Reliability refers to how consistent a research instrument is (Sakaran, 2006). To ascertain validity and reliability, the 2012-2017 audited financial statements have been prepared according to the international financial reporting standards (IFRS) and the generally acceptable accounting principles (GAAPs) as required by the CMA regulations for any listed firm at the NSE.

3.8 Data and Analysis and Presentation

The collected data was analyzed by both descriptive and inferential statistics with the aid of the SPSS Version 20. Descriptive statistics were generated to explain various attributes of the variables under study, while inferential statistics were used to establish the relationships among the study variables. Descriptive statistics generated were, means, standard deviations, maximum, minimum trend analysis and presented in the form of tables, Inferential statistical techniques were used to test the study hypotheses at 5% significance level. This study employed Pearson product moment correlation to establish the strengths of relationship between the variables (Eđed Rebekić, Lončarić, Petrovic, & Marić, 2015).The findings of the study were presented in form of statistical tables. Multiple regression analysis was employed to test the hypotheses and to analyze the relationship between a single dependent variable and several independent variables. The following multiple regression model was adopted.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Where:

Y   represents the Dependent Parameters (ROA)

B_0 represents Constant

β_1, β_2 and β_3 represent Regression coefficients of

Independent variables are;

X_1 represents short term debt

X_2 represents long term debt

X_3 represents Debt-Equity

ϵ represents Error Term

3.8.1 Operationalization of Study Variables

The study variables were operationalised based on research objectives. The variables under the study included financial leverage as independent variable, firm's profitability as the dependent variable and government policy as the intervening variable. Financial leverage in this study were operationalized based on (Kimani, 2015 and El-Sayed, 2011). Financial leverage was measured by; short term debt, long term debt and Debt to equity. The specific measures of debt to equity is total liability to total shareholders' equity. The measure of short term debt is short term debt to total asset ratio while long term debt was measured by long term debt to total asset ratio.

This study used financial indicators to examine the profitability of listed manufacturing firms. The profitability of listed manufacturing firms (Y) in the regression model was measured using Return on Asset (ROA). Profitability of listed manufacturing firms was the mean of ROA for a period of six years (2012-2017) from the respective listed manufacturing firm's financial statements. ROA is used to measure the ability of a firms management to generate income by utilizing firm assets at their disposal. ROA= Net profit/Total Assets. It Shows the effectiveness of manufacturing firms in generating profits by exploiting its assets (Heikal, Khaddafi, & Ummah, 2014). This ratio indicates how much net income is generated per Kshs of assets. The higher the ROA, the more profitable the firm is. Table 3.1 below provides summary of operationalization of the study variables.

Table 3.1 Operationalization of Study Variables

Variable	Definition	Ratios
Short Term Debt Ratio	It is the measurement of the percentage of a firm's total asset that is financed by short term debt	Total Short Term Debt ÷ Total Asset×100
Long Term Debt Ratio	It is the measurement of a firm's total asset financed by long term loans	Total Long Term Debt ÷ Total Asset×100
Debt to Equity Ratio	It is the measurement of the amount of debt capital a firm uses compared to the amount of equity capital it uses.	Total liabilities ÷ Shareholders Equity ×100
Profitability Ratio	is the process of measuring the results of a firm's policies and operations in monetary terms	Net Profit ÷Total Assets×100

3.9 Diagnostic Test

The study conducted the diagnostic test by determining the multicollinearity, normality and the linearity of the study variables.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, presentation and interpretation of the research findings. While the overall objective of the study was to determine the effect of financial leverage on profitability of listed manufacturing firms in Kenya, it was necessary to investigate the manifestations of the variables. The collected data from secondary sources was analysed and interpreted in line with the general objective of the study. The target population was the 10 listed manufacturing firms as at the end of 2017. Data collected was obtained from the specific individual firms, CMA, websites among others for the period 2012-2017.

4.2 Descriptive Statistics

The descriptive statistics used are mean, standard deviation, minimum and maximum. Below is a summary of the dependent and independent variables with their specific means, standard deviation, maximum and minimum values and trend analysis. The mean was establishing the average value of the data and standard deviation gave a picture of how data has been dispersed above and below the mean. Trend analysis was also used to show the pattern of change in variables among the 10 manufacturing firms through the study period of 2012-2017.

4.2.1 Profitability

Profitability is the process of measuring the results of a firm's policies and operations in monetary terms. It identifies the financial strengths and weakness of a firm by establishing effect of the items of the financial position and income statements. The profitability of the manufacturing firms was proxied by doing the mean of return on assets. In order to get the profitability of manufacturing firms listed in the securities exchange, the mean of ROA for the six year period from 2012-2017 was computed. The mean for the six year period was used as the composite index that reflected ROA.

4.2.2 Return on Assets

Financial ability of any firm can be traced in the financial statements of the organization by equating the capital expended and revenue generated. In this study the manufacturing firms return on asset between the year 2012 and 2017 was used to identify how efficient management made use of the assets. The mean for the six year period was used as the composite index that reflected ROA as shown in Table 4.1 below.

Table 4.1 Return on Asset

Year	Mean	SD	Max	Min
2012	3.10%	3.35%	8.00%	-4.00%
2013	2.20%	3.49%	8.00%	-4.00%
2014	2.20%	2.90%	6.00%	-2.00%
2015	3.00%	3.02%	8.00%	-1.00%
2016	2.10%	3.90%	9.00%	-3.00%
2017	2.50%	3.14%	8.00%	-2.00%
Average	**2.52%**	**3.30%**	**7.83%**	**-2.67%**

Over the 6 year period, firms registered the an annual average mean on return on asset of 2.52% that means the firms were able to generate average earnings of 2.52% for every shilling of asset between 2012 and 2017. The highest mean was observed in 2012 at 3.10% and the lowest mean at -4.00% in 2012 and 2013. The maximum level of return on asset observed in the firms is 9.00% and was recorded in the year 2016 while the minimax return on asset was -1.00% recorded in the year 2015. The maximin return of assets was 6.00% was observed in 2014. The fluctuations in return on assets are indicated by the average standard deviation of 3.30%. This standard deviation postulates that there is list dispersion between the assets and the profits the commercial banks are registering. The return on asset shows that in 2012 the firms utilized well the assets to generate revenue since it recorded the highest mean return on assets of 3.10% while the banks poorly utilized the assets in generating revenue on 2016 as depicted by the mean average return on assets of 2.10%.

From table 4.2 below that shows the annual return on asset for the manufacturing firms listed in NSE, it could be noted that the return on assets was fluctuating for all the firms.

Table 4.2 Trend Analysis ROA

Firms	2012	2013	2014	2015	2016	2017	Mean	SD
A.Baumann & Co Ltd	3.00%	2.00%	2.00%	1.00%	1.00%	1.00%	1.67%	0.82%
B.O.C Kenya Ltd	5.00%	8.00%	5.00%	3.00%	2.00%	3.00%	4.33%	2.16%
British American Tobacco Kenya Ltd	8.00%	6.00%	6.00%	7.00%	9.00%	8.00%	7.33%	1.21%
Carbacid Investments Ltd	4.00%	2.00%	4.00%	3.00%	2.00%	3.00%	3.00%	0.89%
African Breweries Ltd	7.00%	3.00%	3.00%	8.00%	8.00%	7.00%	6.00%	2.37%
Eveready East Africa Ltd	-4.00%	-4.00%	-1.00%	-1.00%	-3.00%	-1.00%	-2.33%	1.51%
Flame Tree Group Holdings Ltd	3.00%	4.00%	3.00%	3.00%	1.00%	1.00%	2.50%	1.22%
Kenya Orchards Ltd	2.00%	2.00%	-2.00%	5.00%	2.00%	3.00%	2.00%	2.28%
Mumias Sugar Co. Ltd	1.00%	-2.00%	-2.00%	-1.00%	-3.00%	-2.00%	-1.50%	1.38%
Unga Group Ltd	2.00%	1.00%	4.00%	2.00%	2.00%	2.00%	2.17%	0.98%

In 2012 most of the firms recorded a profit as it was indicated by a positive ROA which means the firms effectively and efficiently utilize their resources except the Eveready East Africa Ltd which recorded the loss as depicted by the return on asset of -4.00%. British American Tobacco Kenya Ltd posted the highest ROA of 8.00% followed by African Breweries Ltd (7%) which indicate the firms effectively utilized its assets to generate revenue. Eveready East Africa Ltd recorded the least performance at -4.00% in 2012 which was an indication that the firm was making huge losses since the net income was negative. In 2013 B.O.C had the highest ROA at 8.00% being the highest return on asset observed under the period of study followed Kenya Ltd British American Tobacco Kenya Ltd at 6.00%. This indicated the two firms utilized it assets properly to generate profits, the findings also shows the reduction in profits compared with the ROA in 2012. In the same year Eveready East Africa Ltd recorded the least ROA (-4.00%). The records for 2014 were British American Tobacco Kenya Ltd recorded the best performance of 6.00% while Kenya Orchards Ltd and Mumias Sugar Co. Ltd recorded the least ROA at -2.00%. In 2015 African Breweries Ltd posted the highest ROA of 8.00% while Eveready East Africa Ltd and Mumias Sugar Co. Ltd

recorded the least ROA of -1.00% and this indicate that the firms were making losses. In 2016 British American Tobacco Kenya Ltd made the highest ROA of 9.00% while Eveready East Africa Ltd and Mumias Sugar recorded a loss of -3.00% which was an indicator of the firms making losses. Lastly in 2017 the ROA was highest at 8% for British American Tobacco Kenya Ltd and Eveready East Africa Ltd recorded a low performance of -1%. British American Tobacco Kenya Ltd recorded the best overall performance for the period as it is depicted by return on assets of 7.33% and Eveready East Africa Ltd recorded the least performance as postulated by the return on assets of -2.33%.

4.2.3 Short Term Debt Ratio

The study sought to determine to what percentage of firms asset are financed by short term debt rather than equity. The findings are shown in Table 4.3 below.

Table 4.3 Short Term Debt

Year	Mean	SD	Max	Min
2012	7.07%	1.85%	9.60%	2.94%
2013	10.03%	4.03%	16.65%	4.19%
2014	9.05%	3.21%	13.51%	2.57%
2015	8.51%	4.44%	18.24%	2.50%
2016	7.68%	4.23%	15.77%	2.13%
2017	8.31%	4.43%	14.26%	1.67%
Average	**8.44%**	**3.70%**	**14.67%**	**2.67%**

The average mean value of short term debt to total asset ratio was 8.44% . This means that up to 8.44% of the total assets of manufacturing firms listed in NSE were financed by short term debts. This was lower than that of Ongore and Kusa (2013) whose study found that the average short term debt to total assets were 17.50%. An average maximum and minimum values of 14.67% and 1.67% respectively were observed for the firms under the period of study. The short term to asset ratio had also standard deviations of 3.70% which shows high dispersion of short term debt to total assets ratio from its mean for the firms in Kenya. From the study the researcher can conclude that the short term to asset ratio is one of the cheapest sources of fund firms utilizes to generate income.

In table 4.4 below, the trend analysis of short term to asset ratio was determined.

Table 4.4 Trend Analysis Short Term Debt Ratio

Firms	2012	2013	2014	2015	2016	2017	Mean	SD
A.Baumann & Co Ltd	8.12%	11.43%	7.82%	6.92%	6.88%	14.26%	9.24%	2.97%
B.O.C Kenya Ltd	8.12%	11.43%	7.82%	6.92%	6.88%	6.21%	7.90%	1.87%
British American Tobacco Kenya Ltd	6.00%	7.57%	9.33%	9.26%	7.25%	9.74%	8.19%	1.48%
Carbacid Investments Ltd	5.95%	5.41%	10.72%	6.21%	6.12%	2.70%	6.18%	2.58%
African Breweries Ltd	7.49%	8.48%	6.90%	9.74%	4.93%	9.83%	7.90%	1.87%
Eveready East Africa Ltd	12.94%	16.65%	13.51%	11.70%	12.99%	13.79%	11.93%	4.70%
Flame Tree Group Holdings Ltd	9.60%	9.48%	9.89%	9.83%	10.43%	11.24%	10.08%	0.66%
Kenya Orchards Ltd	7.47%	4.19%	8.51%	3.79%	3.45%	1.67%	4.85%	2.60%
Mumias Sugar Co. Ltd	6.50%	15.87%	13.46%	18.24%	15.77%	9.48%	13.22%	4.43%
Unga Group Ltd	8.46%	9.73%	2.57%	2.50%	2.13%	4.19%	4.93%	3.33%

In table 4.4 above 2012 African Breweries Ltd recorded the highest short term to asset ratio at 20.49%, followed by Flame Tree Group Holdings Ltd at 9.60%. The least short term to asset ratio in the same year was 5.95% which was recorded by Carbacid Investments Ltd. This findings indicated that most firms mostly use short term sources of finance to finance the working capital of the firms. In 2013 Eveready East Africa Ltd recorded the highest rate at 16.65% followed by Mumias Sugar Co. Ltd with 15.87% while Carbacid Investments Ltd recorded the least ratio at 5.41%. Mumias Sugar Co. Ltd recorded a ratio of 18.24% in 2015 while 2.50% was recorded by Unga Group Ltd. Eveready East Africa Ltd recorded highest ratio of 13.79% in 2016 followed by Flame Tree Group Holdings Ltd at 11.24% while British

American Tobacco Kenya Ltd registered the highest ratio of 29.74% while Kenya Orchards Ltd recorded the least ratio of 1.67%. The highest short term debt to asset ratio was recorded by the A.Baumann & Co Ltd on 2017 at 14.26%.

4.2.4 Long Term Debt Ratio

In this section, the study sought to establish to what extend were the firm's assets financed by long term debt between the year 2012 and 2017. Over the six year period, firms registered the following levels of long term debt to total asset ratio.

Table 4.5 Long Term Debt Ratio

Year	Mean	SD	Max	Min
2012	29.38%	13.81%	46.64%	11.69%
2013	30.05%	16.64%	57.92%	11.04%
2014	30.92%	14.58%	54.41%	10.00%
2015	28.31%	11.38%	50.82%	11.42%
2016	30.60%	15.19%	54.05%	10.37%
2017	33.15%	14.23%	59.44%	13.27%
Average	**30.40%**	**14.30%**	**53.88%**	**11.30%**

A mean of 29.38% in 2012, 30.05% in 2013 of long term debt to total asset ratio was recorded while in 2014 the long term debt to total asset ratio was 30.92%. In 2015 the firms recorded 28.31%, 30.60% in 2016 and 33.15% in 2017. The average long term to asset ratio level for the period was 30.40%. The highest average level of long term to asset ratio recorded by firms was 53.88% while the lowest average level of long term debt to total asset ratio was 18.32% in 2016. These findings are consistent with Padrón, Apolinario, Santana, Verona Martel, & Jordán, (2005) who assert that if a firm borrows more money from its creditors, then the firm has to pay more amount of cost of long term debt to the creditor as interest. This leads to less net income for the firm and hence lower profitability. The fluctuations in long term to asset ratio are indicated by the average standard deviation of 14.30 which depicts the highest dispersion between the long term debt and total assets%. The finding are summarized in table 4.5.

Table 4.6 Trend Analysis on Long Term Debt Ratio

Firms	2012	2013	2014	2015	2016	2017	Mean	SD
A.Baumann & Co Ltd	11.69%	11.04%	15.49%	21.02%	15.32%	19.44%	15.67%	4.01%
B.O.C Kenya Ltd	21.69%	21.04%	25.49%	29.02%	18.32%	40.00%	25.93%	7.84%
British American Tobacco Kenya Ltd	16.31%	12.66%	13.28%	16.13%	10.37%	13.27%	13.67%	2.25%
Carbacid Investments Ltd	38.47%	33.58%	39.44%	34.43%	40.31%	45.98%	38.70%	4.49%
African Breweries Ltd	29.74%	15.98%	10.00%	11.42%	19.02%	15.19%	16.89%	7.08%
Eveready East Africa Ltd	46.64%	45.19%	43.27%	36.70%	46.62%	33.43%	41.97%	5.59%
Flame Tree Group Holdings Ltd	23.61%	33.43%	31.22%	24.97%	23.40%	35.49%	28.69%	5.34%
Kenya Orchards Ltd	14.30%	19.48%	35.99%	24.26%	34.50%	33.28%	26.97%	8.97%
Mumias Sugar Co. Ltd	45.94%	57.92%	54.41%	50.82%	54.05%	59.44%	53.76%	4.90%
Unga Group Ltd	45.40%	50.23%	40.57%	34.32%	44.06%	35.99%	41.76%	6.01%

Lastly Eveready East Africa Ltd recorded the highest long term to asset ratio of 46.64% followed by Mumias Sugar Co. Ltd (45.94%) in 2012 and A.Baumann & Co Ltd registered the least ratio at 11.69%, in 2013 Mumias Sugar Co. Ltd recorded the highest ratio(57.92%), A.Baumann & Co Ltd posted the least ratio of 11.04% while African Breweries Ltd recorded the least long term to asset ratio of 10.00%. in 2014 Unga Group Ltd recorded the highest ratio while Mumias Sugar Co. Ltd recorded the highest long term to asset ratio in 2015. Mumias Sugar Co. Ltd recorded the highest ratio at 54.05% followed by Eveready East Africa Ltd at 46.62%. The manufacturing firms under this study also recorded the following long term to asset ratio in 2017, Mumias Sugar Co. Ltd recorded the highest ratio of 59.44% and African Breweries Ltd recorded least ratio at 15.19%. This findings depicts the reduction

of the long term to asset ratio of the firms from 2012 to 2017. This reduction was attributed to the way firms currently finance its operations where most of this manufacturing firms receives the financing firm the government. The findings are summarized in table 4.6 above.

4.2.5 Debt to Equity Ratio

The study sought to determine the extent to which firms use debt to finance its operations against equity as shown in Table 4.7 below.

Table 4.7 Debt to Equity Ratio

Year	Mean	SD	Max	Min
2012	14.10%	4.65%	23.00%	9.00%
2013	13.70%	4.47%	25.00%	10.00%
2014	13.40%	4.38%	22.00%	9.00%
2015	14.00%	4.37%	23.00%	10.00%
2016	14.30%	3.62%	23.00%	11.00%
2017	14.10%	4.31%	24.00%	10.00%
Average	**13.93%**	**4.30%**	**23.33%**	**9.83%**

Over the period of study, an average debt to equity ratio mean of 13.93% was recorded. This average is way above the statutory minimum of 10.00% percent set by regulatory of the firms in Kenya. A firm with a high debt to equity ratio will channel most of its income to debt repayments thereby forgoing investment using internal funds. This means that the firms use more debt compared to equity to finance its activities therefore more risky since most of the resources which the firm is generating is used to finance the debts. The maximum average of 14.30% and minimum average value of 13.40% was recorded in the year 2016 and 2014 respectively while the standard deviations of debt to equity was 4.30% which shows a moderate dispersion of total debt and total equity from the mean for the manufacturing firms listed in NSE in Kenya. Looking at the minimum, mean and maximum values, generally, the statistics indicate a slight variation in the debt to equity as a determinant of profitability of firms in Kenya. As more debt is employed in the capital structure of a firm, the business risk also increases. This finding was in agreement with a study by Gweyi and Karanja, (2014) which established that there a moderate relationship between debt to equity ratio and financial performance of firms in Kenya. This findings are also in contrast with the findings of Nduati (2010) who found out leverage did not contribute to financial performance of firms

scheduled at the Nairobi stock Exchange. The study also sought to determine the trend analysis of the debt to equity ratio and evaluate the performance of each firm as shown in Table 4.8 below.

Table 4.8 Trend Analysis of the Firms in Debt to Equity Ratio

Firms	2012	2013	2014	2015	2016	2017	Mean	SD
A.Baumann & Co Ltd	14.00%	11.00%	10.00%	11.00%	13.00%	14.00%	12.17%	1.72%
B.O.C Kenya Ltd	11.00%	11.00%	12.00%	12.00%	13.00%	11.00%	11.67%	0.82%
British American Tobacco Kenya Ltd	9.00%	10.00%	12.00%	11.00%	12.00%	11.00%	10.83%	1.17%
Carbacid Investments Ltd	13.00%	12.00%	15.00%	16.00%	16.00%	16.00%	14.67%	1.75%
African Breweries Ltd	10.00%	11.00%	11.00%	12.00%	13.00%	12.00%	11.50%	1.05%
Eveready East Africa Ltd	21.00%	17.00%	20.00%	19.00%	17.00%	18.00%	18.67%	1.63%
Flame Tree Group Holdings Ltd	13.00%	14.00%	13.00%	16.00%	14.00%	14.00%	14.00%	1.10%
Kenya Orchards Ltd	16.00%	14.00%	10.00%	10.00%	11.00%	11.00%	12.00%	2.45%
Mumias Sugar Co.	23.00%	25.00%	22.00%	23.00%	23.00%	24.00%	23.33%	1.03%
Unga Group Ltd	11.00%	12.00%	9.00%	10.00%	11.00%	10.00%	10.50%	1.05%

In the year 2012 Mumias Sugar Co. Ltd recorded the highest debt to equity ratio at 23%, followed by Eveready East Africa Ltd at 21%. The least debt to equity ratio in the same year was 9% which was recorded by British American Tobacco Kenya Ltd. This means the firm with least debt to equity use most of the equity compared to debt to finance its day to day

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operations. Mumias Sugar Co. Ltd registered the highest debt to equity ratio of 25% and British American Tobacco Kenya Ltd recorded the least debt to equity ratio at 10%. In 2014 Mumias Sugar Co. Ltd recorded the highest rate at 22% followed by Eveready East Africa Ltd with 20% while Unga Group Ltd had a ratio of 9%. Mumias Sugar Co. Ltd recorded, in 2015 a ratio of 23% was recorded by Mumias Sugar Co. Ltd as the highest debt to equity ratio while 10% was recorded by Kenya Orchards Ltd. Mumias Sugar Co. Ltd recorded highest ratio of 23% in 2016 followed by Eveready East Africa Ltd at 17% while Kenya Orchards Ltd, Unga Group Ltd recorded the least debt to equity ratio of 11%. The findings indicated in average that Mumias Sugar Co had the highest debt to equity ratio at 23.33% which depicts the firm use much if the debt to finance its operations as compared with the equity.

4.3 Inferential Statistics

This is used to make inference about the study population using data drawn from the population itself, usually on the basis of sample analysis and observation. It enables a researcher to arrive at conclusions that extend beyond the immediate data alone; it basically compares, tests and predicts data (Fabozzi and Peterson, 2003). The indices that were used included regression analysis to show the effects of the variables, ANOVA (Analysis of Variance) that tests the significance of the findings of the study, the t-value that showed the statistical significance of the findings obtained with results in form of probabilities, which explains the chances of occurrence of an event. The regression coefficients were used to test the hypotheses of the study and regression assumption was tested to show the significance and viability of the relationship between the independent variables.

4.4. Regression Assumptions

Statistical tests rely upon certain assumptions about the variables used in the analysis. Osborne and waters (2002), argue that when these assumptions are not met the results may not be valid and may lead to type I or type II error or under or over-estimation of significance. It is therefore important to pretest for these assumptions for validity of the results, hence ensuring that the findings are worth using in decision making. Prior to data analysis, the following assumptions for regression were checked that is multicollinearity, normality and linearity.

4.4.1 Test of Multi-Collinearity

This is a phenomenon in which two or more independent variables in a multiple regression model could be highly linearly related or predicted from the other independent variables with a substantial degree of accuracy (Ayako, Githui, & Kungu, 2015). This occurs when there is an approximate linear relationship among two or more independent variables. Coefficients of these variables in a regression model may change significantly in response to any small change on the data or model. Multi-collinearity does not reduce the reliability of the regression model as a whole, but only affects the calculations regarding individual independent variables. The statistical methods used to test multi-collinearity on data is through the use of Variance Inflation Factor (VIF) and Tolerance values, which were used in this study; tolerance values of less than 0.1 depict multi-collinearity among two or more independent variables, whereas VIF values of greater than 10 depict multi-collinearity in these particular variables.

Table 4.9 Results for Multi-Collinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
	short term debt	.491	2.036
1	long term debt	.488	2.049
	Debt-Equity Ratio	.791	1.264

a. Dependent Variable: ROA

If there are two or more variables that have a VIF around or greater than 5, one of these variables must be removed from the regression model. If this happens, the researcher should use one set of the independent variable to make the estimate (Kothari, 2004) . In this current study, all variables had a VIF of between 1.264 and 2.049 as shown in Table 4.9. This was an indicator that there was no multicollinearity among the independent variables.

4.4.2 Test of Normality

Majority of the statistical procedures including correlations, regression, t-tests and analysis of variance are based on the assumptions that the data follows normal distribution. Thus it is assumed that the population from which the samples are taken are normally distributed. Normality is important because if the assumptions do not hold, it is impossible to draw accurate and reliable conclusions. Test of normality is carried out to assess the extent to which the variables of interest assume a normal probability distribution. This study tested for normality results for test of normality using histogram. They were presented in figure 4.1.

Histogram

Mean = .25
Std. Dev. = 4.265
N = 44
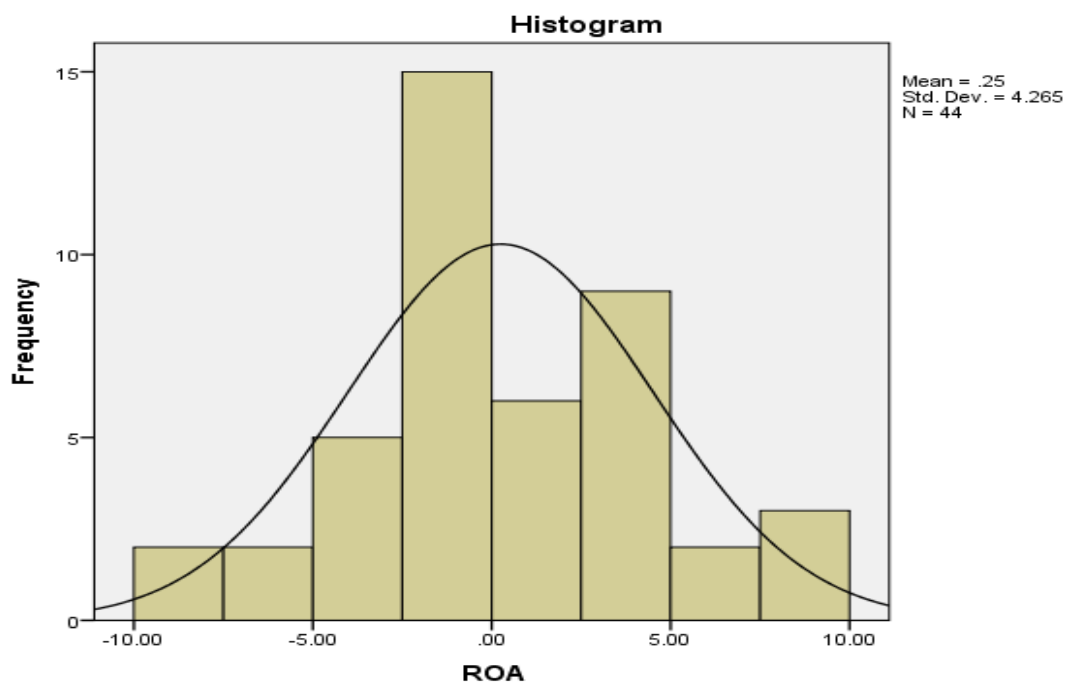
Figure 4.1 2: Test for Normality

Figure 4.1 above, shows a histogram for financial performance of listed manufacturing firms in Kenya which was bell shaped indicating that the data was normally distributed. The standard deviation was 4.265 on all the manufacturing firms listed indicating normal distribution.

4.4.3 Linearity

Multiple regressions can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature (Osborne & Waters, 2002). Absence of a linear relationship between independent variables and the dependent variable

leads to the results of the regression linear analysis to under-estimate the true relationship. Linearity of data means that the values of the outcome variable for each increment of a predictor variable lie along a straight line. Linearity is an important association between the dependent and the independent variables. In this study, linearity was tested using scatter plots as shows in figure 4.2.
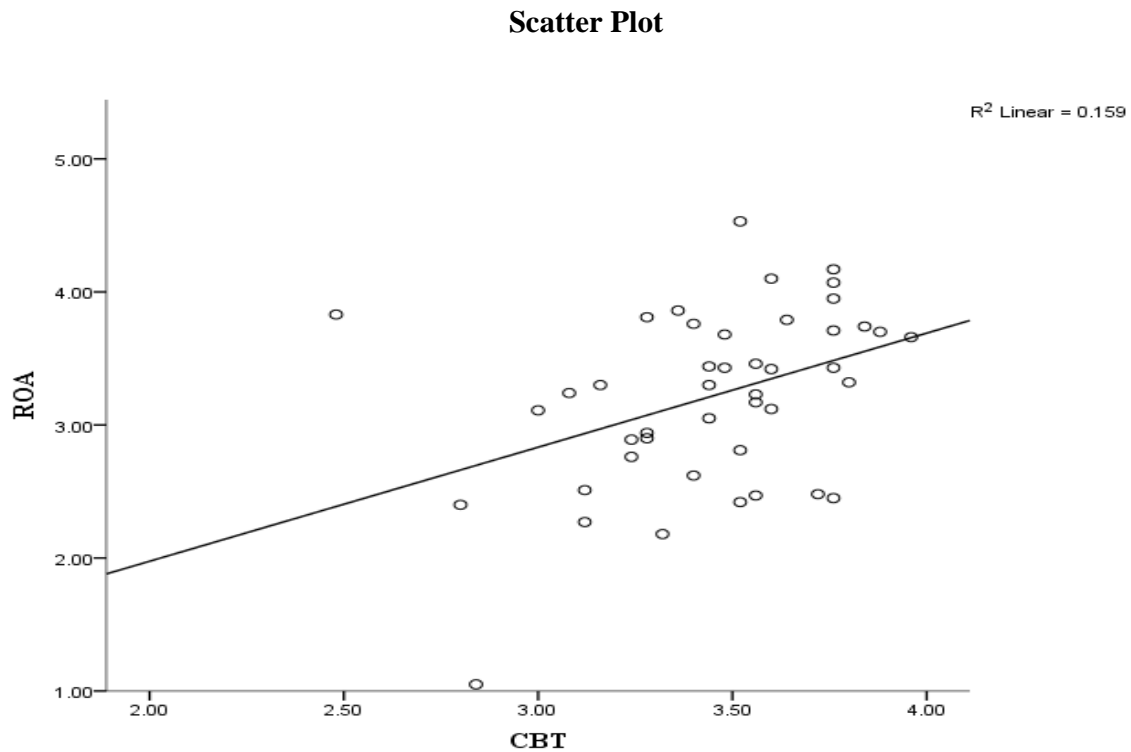
Scatter Plot

Figure 4. 3: Test for linearity

Figure 4.2 above shows there was general linearity of data despite some cases being slightly away from the regression line. The findings also shows that the effect of financial leverage on profitability of manufacturing firms is positive.

4.5 Correlation Matrix Pearson's

Correlation Matrix is used to test the degree of association between two or more variables, in terms of strength and direction, with values ranging from -1 (showing a perfect negative linear relationship) to +1 (showing a perfect positive linear relationship), and zero indicating no relationship between the variables (Saunders and Cornett, 2006). Correlation coefficients vary numerically between -1.0 and 1.0; the closer the correlation is to 1.0, the stronger the

relationship between the two variables. A positive correlation means that as one variable increases, the other increases, whereas a negative correlation means that when one variable increases, the other decreases. A statistically significant correlation is indicated by a probability value of less than 0.05 (Saunders and Cornett, 2006). Correlation only indicates the presence or absence of a relationship, not the nature of the relationship.

Table 4.10 Correlation Coefficient Matrix

		ROA	short term debt	long term debt	Debt-Equity Ratio
ROA	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	60			
short term debt	Pearson Correlation	-.042	1		
	Sig. (2-tailed)	.772			
	N	60	60		
long term debt	Pearson Correlation	.235	.701**	1	
	Sig. (2-tailed)	.096	.000		
	N	60	60	60	
Debt-Equity Ratio	Pearson Correlation	-.257	-.418**	-.425**	1
	Sig. (2-tailed)	.069	.002	.002	
	N	60	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation coefficient results on table 4.10 below shows that short term debt had a negative correlation coefficient r = -0.042, indicating a negative correlation between the short term debt and profitability of the firms and the relationship was weak. Long term debt had a positive and weak correlation coefficient r = 0.235, which means that a weak relationship between the long term debt to total asset ratios and profitability. The correlation between debt to equity ratio is weak and negative as shown by correlation factor of -0.257. When two predictor variable are deemed correlated when this coefficient of correlation are greater than 0.5. In such a case, one variable should be dropped from the model. In the table 4.10 none of the predictor variable had coefficient of correlation between themselves more than 0.5 hence

none of them will have to be dropped. Hence the results below shows that none of the predictor variable is greater than 0.5 thus correlation present.

4.6 Test of Hypothesis

This is utilized in reference of research study to evaluate and analyse the results with the goal being to either accept or reject the null hypothesis. Terms used include test statistic which means that the decision whether to accept or reject the null hypothesis is made based on this value; therefore, if the calculated test statistic value is less than the critical value, we accept the hypothesis, otherwise, we reject the hypothesis (Saunders and Cornett, 2006). Another term is the level of significance, which is the confidence at which a null hypothesis is accepted or rejected, which is sometimes also referred to as test of significance of data. The deciding factor in all the tests was that if the P value observed was less than the set alpha at a confidence level of 0.05, then we reject the null hypothesis and accept the alternative hypothesis, and accept the null hypothesis if the P value observed was greater than the set alpha of 0.05. The study will use the findings in table 4.11 in testing the hypotheses.

Table 4.11 Multiple Regression Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.439[a]	.193	.141	8.66624

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	843.068	3	281.023	3.742	.017[b]
	Residual	3529.875	47	75.104		
	Total	4372.943	50			

Coefficients							
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7.353	9.789		.751	.456		
	short term debt	-.362	.145	-.468	-2.501	.016	.491	2.036
	long term debt	.349	.145	.452	2.412	.020	.488	2.049
	Debt-Equity Ratio	-.062	.035	-.260	-1.766	.084	.791	1.264

a. Dependent Variable: ROA

b. Predictors: (Constant), Debt-Equity Ratio, short term debt , long term

  debt

In H_{01}: Short Term Debt ratio has no significant effect on profitability of listed manufacturing firms in Kenya. The study sought to establish the effects of short term debt on profitability of listed manufacturing firms in Kenya. In order to establish first objective of the study, a corresponding hypothesis Ho1: short term debt has no significant effect on profitability of listed manufacturing firms in Kenya stated and tested. The T-statistics significant value in the regression model was used to test the hypothesis. According to the coefficient results on table 4.11, the study established that the Beta and p-values were negative and significant (Beta = -0.362, p = 0.016); the study therefore fail to accept the null

hypothesis as the p-value of 0.016 is less than 0.05 and the alternative hypothesis was accepted. This indicated that short term debt has an effect on profitability of listed manufacturing firms which was proxied by return on asset.

In H0$_2$: Long Term Debt ratio has no significant effect on profitability of listed manufacturing firms in Kenya. The T-statistics significant value in the regression model was used to test the hypothesis. The coefficient results highlighted on table 4.11 indicate that there exists a positive and statistically significant effect on the profitability of the listed manufacturing firms. The Beta value of 0.349 and p-value of 0.020 was significant as it was less than 0.05. The study therefore failed to accept the null hypothesis and the alternate hypothesis was accepted as the p-value of 0.020 was less than 0.05. This indicated that Long term debt has an effect on profitability of listed manufacturing firms which was proxied by return on asset.

From H$_{03}$: Debt to Equity ratio has no significant effect on profitability of listed manufacturing firms in Kenya. The T-statistics significant value in the regression model was used to test the hypothesis. Coefficient results on table 4.11 established a negative but not statistically significant effect on profitability with a Beta value = -0.062 (p-value = 0.084 which is higher than 0.05). Given that the p-value is higher than 0.05, we accept the null hypothesis. Meaning debt to equity ratio has no effect on profitability of listed manufacturing firms.

H0$_4$: Effect of financial leverage has no significant effect on profitability of listed manufacturing firms in Kenya. Table 4.11 show that the independent variables i.e., short term debt, long term debt and Debt-Equity Ratio used were statistically significant in predicting the profitability of listed manufacturing firms in Kenya at 95% significance level. It also presents the analysis of variance (ANOVA) of the financial leverage that explain the profitability of listed manufacturing firms in Kenya. The findings revealed F value of 3.742, which was statistically significant at 0.017. This further indicates that the independent variables used (short term debt, long term debt and debt to equity ratio) are statistically significant in predicting profitability of listed manufacturing firms at 95% significance level. ANOVA analysis was used to show the significance of the regression model adopted in the study. Hence, the study therefore fail to accept the null hypothesis as the p-value is less than

0.05 and the alternative hypothesis was accepted. This indicated that financial leverage has an effect on profitability of listed manufacturing firms which was proxied by return on asset.

4.6.1 Model Summary and ANOVA Test

The researcher used multiple regression analysis to test the hypothesis as well as to access the magnitude of the effects of the study variables. The coefficients or beta weights for each variable allowed the researcher to compare the relative importance of each independent variable. The beta values indicate the direction of the relationship. A positive sign indicates a positive relationship while a negative sign indicates a negative relationship. In this study the unstandardized coefficients and standardized coefficients are given for the multiple regression equations. However discussions are based on the unstandardized coefficients

Holding low cost of short term debt, long term debt and debt to equity by manufacturing firm constant profitability would be 7.353. Independent variables from the regression equation reveals that a unit short term debt led to a decrease in profitability by 0.362 units. This indicates that short term debt has an inverse relationship with the profitability. In addition, a unit increases in long term debt led to an increase of profitability by 0.349 units and lastly a unit increase in debt to equity ratio leads to a decrease by profitability of listed manufacturing firms by 0.062 units. This depicts an inverse relationship between debt to equity ratio and profitability between the period 2012 and 2017.

4.7 Discussion

The purpose of this study was to establish the effect of financial leverage on profitability of manufacturing firms listed at the NSE. Secondary data was collected from CMA database and annual audited financial statements for the companies that formed the sample. Total assets, net income (NI), short term debt, long term debt, total debt and shareholders' equity are the financial statistics collected and then used to calculate the return on asset and return on equity as the proxy of profitability, debt to equity , short term debt and long term debt for the six year study period. Data collected was keyed into SPSS and analysis undertaken. The descriptive results found that most listed manufacturing firms utilized financial leverage because most listed firms had a stable asset base. However, the findings concluded that financial leverage did not contribute to profitability of listed firms; the financial performance of listed firms was 14% which is a moderate score.

The findings revealed that short term debt negatively influences the profitability of manufacturing firms listed at the Nairobi Securities Exchange. An increase in the use of short term debt would lead to a unit decrease in return on asset and the change is statistically significant. The results suggest that short term debt are no good for the firms because the cost implication of short term debt is spread over a short period of time meaning the firm will be paying high installment amounts and not granting the firm enough time to make returns against the borrowed funds. This also exposes the firm in case of financial shock in the market. The findings concur with Mwangi, (2014) who argued that there is a negative significant relationship between short term debt and return on asset of firms listed at East Africa Securities Exchange.

Secondly, the finding revealed that long term debt positively influences the profitability of manufacturing firms listed at the Nairobi Securities Exchange. This means that long term debt are better off since it has been proved that long term debt affects returns on assets of the a firm policy to maximise the use of long term debt and invest that money in assts that can be able to pay off the principal and interest as well as generate an additional income to the firm which will eventually result to an improvement of profitability. The findings revealed that long term debt is positively correlated o profitability of listed manufacturing firms in Kenya. In support of this study, Mohamed, (2016) concluded that long term debt positively affect financial performance of listed non-financial firms in Kenya. This therefore means that the usage of long term debt will lead to an increase in return on asset of listed manufacturing firms in Kenya. The reason behind this may be due to the repayment of long term debt are spread over a long period of time thereby granting firms enough time to make returns against the borrowed funds and even to absorb short term financial shocks.

Finally, regarding the effect of debt to equity ratio on return on asset of listed manufacturing firms in Kenya, the study found out there exist a negative relationship between debt to equity ratio and return on asset of manufacturing firms. This implies that higher debt to equity ratios were associated with poor profitability levels measured by return on asset. The findings are in agreement with the findings of (Kabare, 2015) who postulated that higher debt to equity ratio was the main cause of continued poor financial performance by sugar manufacturing firms in Kenya. The study concluded that reduction of taxes has long been recognised as the motivating factor which induces firms to inject debt instruments into their capital structure due to the effect of debt on taxation where debt lowers the amount of taxes paid to the government. The additional bankruptcy cost associated with increased debt to equity ratio outweigh the tax advantage associated with increased debt therefore firms need to have lower debt to equity ratio in order to have an increase in their profitability levels.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study sought to examine the effect of financial leverage on profitability of listed manufacturing firms in Kenya. This chapter provides conclusions made from the study findings and recommendations made regarding the various deductions realized.

5.2 Summary of Findings

The objective of the study was to establish the effect of financial leverage on profitability of manufacturing firms listed at the NSE for the period 2012 to 2017. A descriptive research design was adopted for the study, to explore the effects of dependent variable on the independent variables. Profitability measured by ROA was taken as the dependant variable while financial leverage was taken as the independent variable measured by three ratios. The population comprised of 10 companies listed firms at the Nairobi Securities Exchange over the period of study. Secondary data collection method was used and data was collected of 10 firms. The sources of data included NSE database and Annual audited financial statements of sampled companies. Data collected were the financial statistics which enabled the calculations of the variables used. Data was analyzed using SPSS. Multiple regression and correlation analysis were used to determine the nature and strength of the effect of the independent on dependent variables in the study.

The findings of this study were as follows; The study revealed a negative effect of short term debt (-0.362) and debt to equity ratio (-0.062) on profitability of listed manufacturing firms. On the other hand long term debt (0.349) positively and significantly affected listed manufacturing firms.the model fitness results indicated adjusted R- squared value of 0.141 which means that 14.1% of the variation in profitability is explained by financial leverage of the firm at 95% confidence interval. This implies that 85.9% of the variation in profitability is explained by other factors not captured in the model. This means that other than debt management, the firms should also consider management of other factors since they contribute to a big extent of profitability of a firm.

5.2.1 The effect of Short Term Debt ratio on profitability

The first objective was to determine the effect of Short Term Debt on the profitability of manufacturing firms listed at the Nairobi Securities Exchange. The average mean value of short term to asset ratio was 10.80%, this means that up to 10.80% of the total assets of manufacturing firms listed in NSE were financed by short term debts. The short term debt had also standard deviations of 8.36% which shows high dispersion of short term debt from its mean for the firms in Kenya. The study also shows that the regression equation was: profitability(Y) = 7.353(β_0)- 0.362 Short Term Debt($\beta_1 X_1$). The influence of Short Term Debt employed was reported at 0.016 significance value. This value was less than the level of significance at 0.05, therefore significant, and thus this factor is significant on effect to profitability of the firm. We therefore reject the null hypothesis Ho2 that implied that Short Term Debt had no statistical significant effect on the profitability of manufacturing firms listed at the Nairobi Securities Exchange.

5.2.2 The effect of Long Term Debt ratio on profitability

The Second objective of the study was sought to establish the effect of long term debt on the manufacturing firms listed at the Nairobi Securities exchange. It was established that the average long term to asset ratio level for the period was 34.42%. The highest average level of long term debt recorded by firms was 50.23% in 2013 while the lowest level was 18.32% in 2016. The findings depicts that if a firm borrows more money from its creditors, then the firm has to pay more amount of cost of debt to the creditor as interest. This leads to less net income for the firm and hence lower profitability. The study also revealed that the regression equation was: profitability(Y) = 7.353(β_0) + 0.349 long term debt ($\beta_2 X_2$). Which signify that increase in long term debt results to an increase in profitability. The influence of long term debt was reported at beta or r = 0. 349 at 0.020 significance level . This value was less than the level of significance at 0.05, therefore it is significant. We therefore reject the null hypothesis Ho2, that implied that long term debt had no statistical significant effect on the profitability of manufacturing firms listed at the Nairobi securities exchange.

5.2.3 The effect of Debt Equity ratio on profitability

The first third objective of the study was to determine the effect of debt to equity on the profitability of manufacturing firms listed at the Nairobi Securities Exchange. From the study it was found that the maximum average of 27.00% and minimum average value of 9.00% of debt to equity ratio was registered while the standard deviations of capital requirement was 4.04% which shows a moderate low dispersion of total debt and total equity from the mean for the manufacturing firms listed in NSE in Kenya. The regression equation was: Profitability(Y) = 47353(β_0) -0.062($\beta_3 X_3$) Debt to Equity, which implies that an increase in profitability negatively affects the Debt to Equity of the firm. The influence of Debt to Equity was reported at significance value of 0.084. This value was greater than the Sig. p value at 0.05, therefore significant and $p < 0.05$, and thus this factor is not significant. We therefore accept the null hypothesis Ho3 that implied that Debt to equity ratio had no statistical significant effect on the profitability of the firms listed at the Nairobi securities exchange.

5.2.4 The combined effect of financial leverage on profitability

The fourth objective sought to establish the combined effect on the profitability of manufacturing firms listed at the Nairobi Securities Exchange. It was found that based on ANOVA table where the significance value was 0.017 which is less than the level of significance at 0.05, the combined variables significantly affects the profitability of firms. We therefore reject the null hypothesis Ho4, that implied that combined effect of debt to equity, short term debt and long term debt had no statistical significant effect on the profitability of manufacturing firms listed at the Nairobi Securities Exchange. According to the model, the coefficient of correlation (R) is 0.439 which portrays a weak effect on the variables. The coefficient of determination (R-Square) is 0.193 (19.3%).The Adjusted R-Square is 0.141 (14.1%), The above independent variables that were studied, explain only 14.1% of the effect of financial leverage on profitability as represented by the adjusted R^2. This therefore means that other factors not accounted in this study contribute 85.9% to the profitability of listed manufacturing firms in Kenya.

5.3 Conclusion

The study concludes that short term debt negatively and significantly affects ROA. These findings hence results to the summary conclusion that increase in the level of short term debt would have significant negative effects on the profitability of the firm as measured by ROA. The study hence does not accept the null hypothesis that there is no effect of short term debt on profitability of manufacturing firms listed at Nairobi Stock Exchange (NSE). The study hence accepts the alternate hypothesis that there is effect of short term debt on profitability of manufacturing firms listed in the NSE.

Secondly, the study concludes that long term debt have a significant positive effect on return on assets. This therefore points to there being a advantage of having a high proportion of long term debt in relation to equity. This is expected to affect positive effect on the profitability of the firm as measured through ROA. The study therefore does not accept the null hypothesis that long term debt has no effect on profitability of manufacturing firms listed at the NSE.

Thirdly, The concluded that debt to equity had a no significant effect on the profitability of manufacturing firms listed at the Nairobi Securities Exchange. In most of the manufacturing firms, debt to equity had no statistical significant effect on the profitability of manufacturing firms listed at the Nairobi securities exchange. The study therefore accepts the null hypothesis Ho3 that implied that Debt to equity had no statistical significant effect on the profitability of the firms listed at the Nairobi securities exchange

The study concludes that combined effect of financial leverage (namely debt equity ratio, short term debt, long term debt) positively significantly affects ROA. Therefore the study fails to accept the null hypothesis that combined effect of financial leverage (namely debt equity ratio, short term debt to total assets, long term debt to total assets) has no effect on profitability of manufacturing firms listed at NSE.

5.4 Recommendations of the Study

The aim of the study was to establish the effect of financial leverage on profitability of listed manufacturing firms in Kenya. Government policies was hypothesized as the intervening variable. Based on the results, findings and conclusions, the following recommendations have been deciphered.

5.4.1 Policy Recommendations

From the conclusions, it is recommended that firms should use shareholders' funds as much as possible before the firm results to borrowing so as to reduce the risk associated with debt financing. This risks include high interest rate on the borrowed fund which reduces profitability levels of a firm and also the restrictive debt covenants which at times may lead a firm to financial distress and it might eventually collapse. Managers must therefore be encouraged to raise equity by listing at the securities exchange. The capital market regulators on the other hand should create the necessary infrastructure and regulatory framework that entice the firms to list. Also, the regulators in collaboration with professional bodies like the ICPAK, should develop training programs and manuals to educate and sensitize the firms, managers and the shareholders on the benefits of listing.

The researcher also recommends that if firms have to borrow, they should borrow in the long term first before borrowing on a short term since it was noted that much of firms assets are financed by long term debts since repayments will be spread over time thereby granting firms enough time to make returns against the borrowed funds and even to absorb short term financial shocks hence the regulators are encouraged to create more long term financial instruments to offer many alternatives that may even help to reduce borrowing cost due to competition. The government together with the financial market regulators need to come up with mechanisms that will attempt to reduce the cost of short term debt to enhance its uptake by firms. If this was to happen, the appetite for short term borrowing would improve.

Manufacturing firms should consider investing in research to find out the best mix of financial leverage that does not negatively affect profitability. Managers of firms should hence establish the optimum level of debt to equity ratio that their firms should have. Firms can also focus on findings cheaper sources of finance as well as alternatives of debt finance and where possible, using their internally generated funds to finance their projects and only go for debt financing when they have fully exhausted their internal funds.

5.4.2 Recommendation for further studies

In this section, suggestions for further research in area related to this study are given. In future, it is recommended that research be done to address the limitations of this study. This study considered only listed manufacturing firms in Kenya, future researchers could consider carrying out a similar study in a different sector or sectors to assess any variations in responses. It would be interesting to explore how the results obtained when the models applied in this study are applied in other contexts for example in other countries at higher or lower stages of development. It would be worthwhile establishing the extent to which the findings of this study are generalizable to other industries, sectors or settings.

The study recommends that future researchers interested in this field of research might consider investigating all the firms and increase the period of study to ten years. The study was based on a period of six years, 2012 to 2017, which may not have been conclusive for a firm that started making low profits over the last five years. A similar study needs to be carried out using different analytical tools to enable it find out whether the findings of this study will still hold or shed more light for the firms on the effects that exist of leverage on profitability

Financial leverage (short term debt to total asset ratio, long term debt to total assets ratio and debt to equity ratio) could explain 14.1% of the profitability of listed manufacturing firms in Kenya. The remaining 85.9% can only be explained by other factors not considered in this study. Therefore, there is need to establish the other factors. This will help to better explain the effect of financial leverage on profitability of listed manufacturing firms in Kenya.

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APPENDICES

APPENDIX I: DATA COLLECTION SHEET

	Variables	**2012** Kshs.	**2013** Kshs.	**2014** Kshs.	**2015** Kshs.	**2016** Kshs.	**2017** Kshs.
1	Stockholder's Equity						
2	Total Assets						
3	Short Term Debt						
4	Long Term Debt						
5	Total Debt						
6	Net profits						
7	Total Equity						
8	Profits Before Interest and Tax						
9	Total sales						

APPENDIX II: LIST OF LISTED MANUFACTURING COMPANIES IN NSE

MANUFACTURING & ALLIED

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

Source: (NSE, 2016)

APPENDIX III: HISTOGRAM OF TREND ANALYSIS
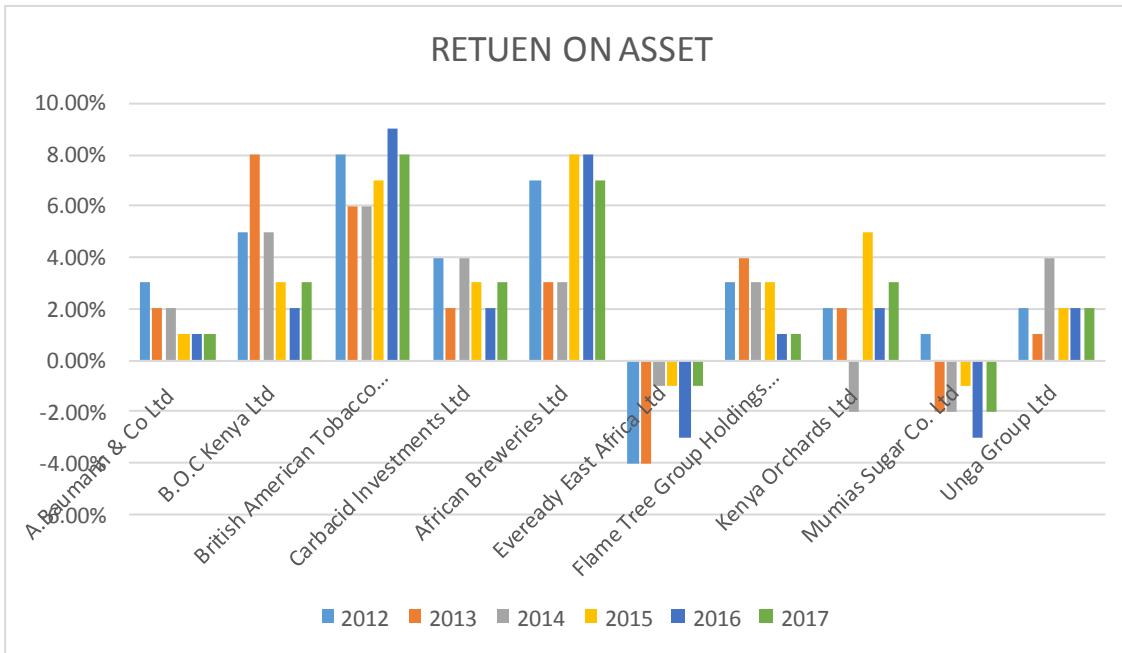
Trend Analysis ROA
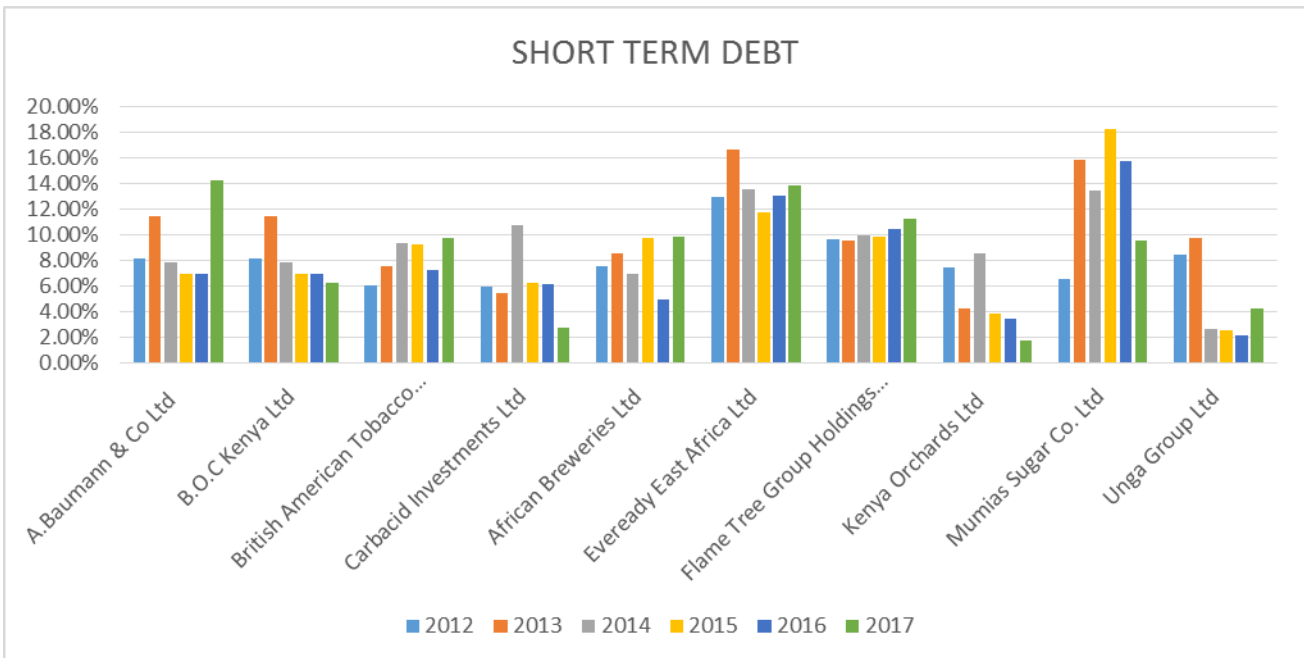
Trend Analysis Short Term Debt
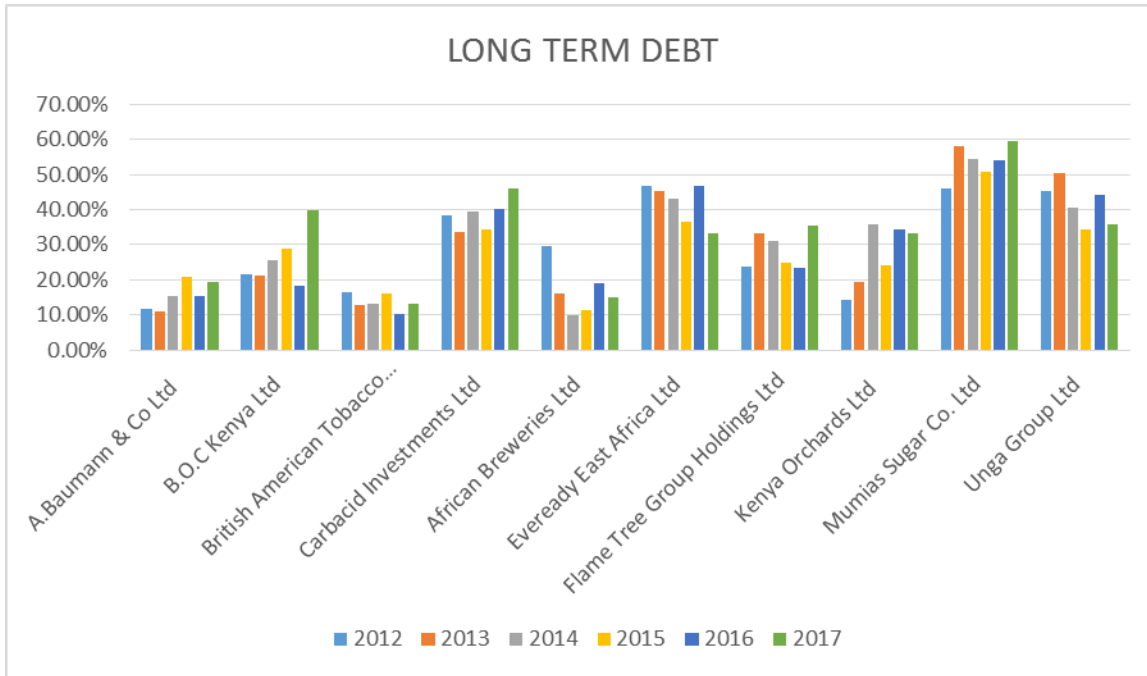
Trend Analysis on Long Term Debt
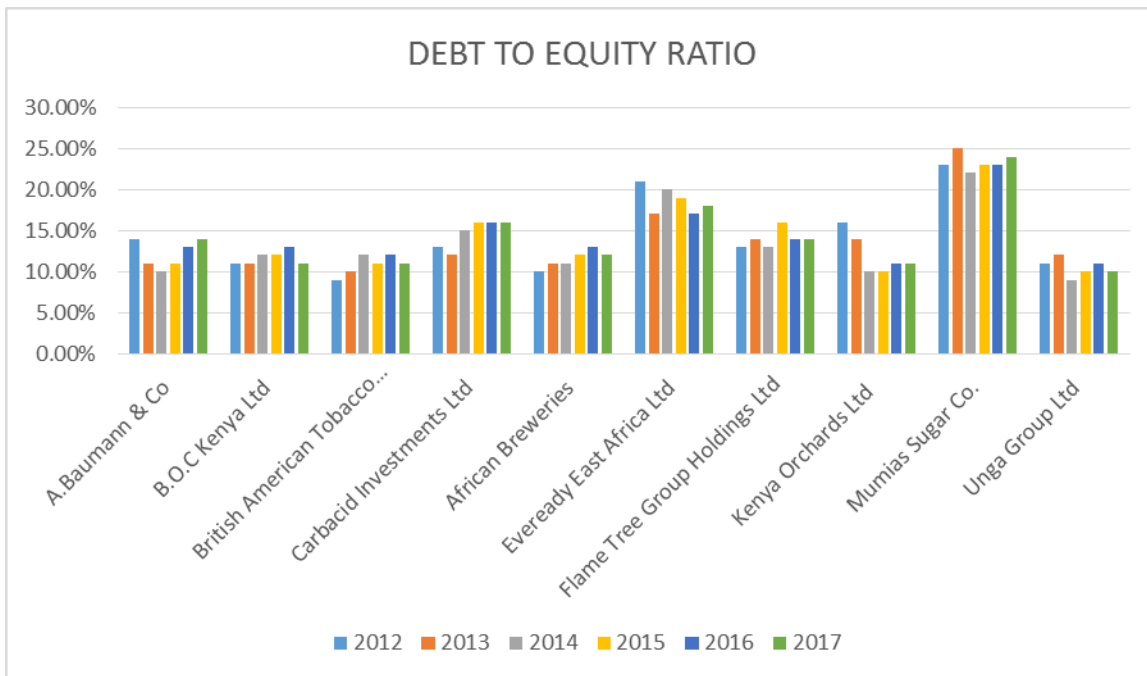
Trend Analysis of the Firms in Debt to Equity Ratio

APPENDIX III: NACOSTI APPROVAL