EFFECT OF FINANCIAL LEVERAGE ON FINANCIAL PERFORMANCE OF MANUFACTURING AND ALLIED FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I declare this research project is my original work and has not been submitted to any other college, institution or university.

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This research project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

This study is dedicated to my beloved Mother Halima Ahmed and My late Father Hussein mohamed for their unconditional love.

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CTOR   -   Capital Turnover Ratio

EBIT   -   Earnings Before Interest and Taxes

EPS   -   Earnings Per Share

EVA   -   Economic Value Added

GDP   -   Gross Domestic Product

NPV   -   Net Present Value

NSE   -   Nairobi Securities Exchange

PCI   -   Physical Capital Intensity

ROA   -   Return on Assets

SACCOs   -   Savings and Credit Co-operative Societies

VAR   -   Vector Autoregressive Model

ABSTRACT

Financing choice is vital to every firm as the optimal capital structure between debt and equity impacts on the value of the firm as well as its stock prices in the securities market. However, the optimal capital structure has attracted attention over the past due to its role in economic growth of a company. This study sought to determine the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange. To accomplish this objective the study used a descriptive research design. The population of the study was made up of the 10 manufacturing and allied firms listed at the Nairobi Securities Exchanges as at 31st December 2016. The study obtained data from the 10-listed manufacturing and allied firms. This study used secondary data for a period of 5 years from 2012 to 2016. The secondary data collected from the annual report of the manufacturing and allied firms was be analyzed using descriptive statistics, correlation analysis and using the multiple regression method. The study established there was an insignificant positive relationship between financial leverage and ROA of the manufacturing and allied firms listed at the NSE. The findings revealed that the relationship between firm size and ROA was negative and significant while the relationship between assets structure and ROA is positive and significant. Further, the research found that the relationship between capital intensity, sales growth and ROA was negative and insignificant. The study concluded that financial leverage does not significantly affect the financial performance of manufacturing and allied firms listed at the NSE.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financing choice is vital to every firm as the optimal capital structure between debt and equity impacts on the value of the firm as well as the its stock prices in the securities market (Raza, 2013). There are various stakeholders involved in making decisions concerning financing either through debt or equity. It also has various macroeconomic effects as it impacts on the rates of interest, economic growth, securities market development as well as the pricing levels. The microeconomic factors are influenced by the internal factors of the firm pertains to the management of the firm (Nawazish, Rahat & Reddy, 2016). The above statements reveal the significance of the financing options which can determine the going concern of a firm as it can lead to collapse of a firm as well as determining the firms valuation in the securities market (Swain & Patnaik, 2013). Leverage is a term commonly used to refer to the ability of a firm to use available resources to make maximum profits for the stakeholders (Ojo, 2012).

The optimal capital structure has attracted attention over the past due to its role in economic growth of a company. The pecking order theory for example asserts that large firms with huge turnover should leverage their firms such that the firm's equity portion is higher than its debts as they can finance most of their projected investments (Rayan, 2010).Trade-off theory, on the other hand asserts that for companies with many assets should finance their projects using debt to avoid the issue of illiquidity, which can have dire impact on day to day running of the firm (Rayan, 2010). The agency theory on the other hand supports that a higher level of debt increases shareholders' value because of its

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disciplinary effect on manager behavior. The agency theory further argues that explains firm shouldemploy their capital financial with the aimed directed towards reducing the agency costs (Mwangi, Makau & Kosimbei, 2014).

The manufacturing and allied sector over the past years has been crucial in supporting economic growth and development in Kenya (Maina &Omwenga, 2017). The manufacturing sector in Kenya is a major contributor to the country's GDP as it ranks fourth.The sector is the biggest in the industrial sector in the Eastern Africa contributing about three quarter of the total contribution in the sector.It has recently attracted the much attention it deserves due to its role in economic growth and development (Orege, 2016).The manufacturing sector in Kenya grew at 3.5% in 2015 and 3.2% in 2014, contributing 10.3% to gross domestic product On average, however, manufacturing has been growing at a slower rate than the economy, which expanded by 5.6% in 2015. However, although the manufacturing sector in Kenya is the largest, in terms of growth trends other countries in East Africa are growing much faster (Were, 2016).

1.1.1 Financial Leverage

This refers to the percentage of debt financing used by a firm as opposed to equity financing (Rayan, 2010). The firms employing these ways of capital financing do so with their attentions on maximizing the benefits it comes with it and minimizing costs associated with it as well. Financial leverage has a direct correlation to debt financing (Enekwe, Agu & Eziedo, 2014). The investors who invest their funs using debt financing expect to gain interest on the amount (Moghadam & Jafari, 2015). Financial leverage

reveals the extent to which the firm can use external financing without diminishing its value (Vasilescu & Giurescu, 2006).

Financial leverage improves the profitability of the firm but dilutes the share value impacting the shareholders negatively as debt financing is costly (Shahid, Akmal & Mehmood, 2016). They are used in many areas where the financing is not through the common shares.It's simply defined as the degree to which a firm uses debt over equity in financing their projects. Financial leverage is believed to have an inverse correlation to the debt financing (Rehman, 2013).

Financial leverage is a term synonymous with the way a firm tries to balance between equity financing and at the same time factor in the interest of the shareholders as high levels of financing through debt dilutes the value of a firm (Al-Otaibi, 2015). A firm can know the proportion of the debt ratio it's using through dividing the total amount of debt over the assets employed (Shahid, Akmal & Mehmood, 2016). When the firms' debt is high, it's an indication of high-risk faced by the firm and its impact on the shareholders as it dilutes their share value (Ani , Rajh & Teodorovi , 2009).

1.1.2 Financial Performance

The term refers to how effectively a firm utilizes its limited resources to produce resources which yield maximum revenues. The proxies used in determining the firm's profitability are ratios such as Return on assets (ROA) and return on equity (ROE) (Nwaolisa & Chijindu, 2016). It also reveals the extent to which the firm has realized its set mission vision as well as the core values. These functions which are non-financial are expressed in monetary terms which is easily understood by the stakeholders with ease

(Swain & Patnaik, 2013). This is a major determining factor in the investors' decision on where to invest their finances to yield maximum returns (Swain & Patnaik, 2013).

Financial performance of a firm is significant as it reveals the sustainability of the enterprise (Swain & Patnaik, 2013). It's an indication of whether a firm is a going concern or not. This is a major factor in the investors' decision of whether to invest in a firm or not. This sector its critical not only to the few selected individuals or firms but to the whole sector as well as it's an indicator of how the economy is performing (Ayano, 2016). The main proxies used in determining financial performance include ROA, which is a proportion of the total assets to the total profit generated by a firm. The other one is ROE which a proportion of the total profit to total equity financing (Itiri, 2014).

1.1.3 Financial Leverage and Financial performance

The theoretical relationship between financial structure and firms' performance of a firm has been ambiguous due to extensive debate (Itiri 2014). For instance, the proponents of Modigilaini and Miller theorem support that the financial structure, asserts when the market conditions are perfect, the value of firm's stocks is not determined by financial structure decisions (Sohail, 2016). The trade-off theory asserts that for companies with many assets should finance their projects using debt to avoid the issue of illiquidity, which can have dire impact on day to day running of the firm.The pecking order theory, asserts that large firms with huge turnover should leverage their firms such that the firm's equity portion is higher than its debts as they can finance most of their projected investments (Mihalca & Antal, 2009).

Firms strive to achieve an optimal financial structure through laying out the best capital financing mix, which maximizes the revenues given the limited resources applied. Various studies have revealed an inverse relation, which exists between the phenomenon of maximizing revenues from limited resources (Sohail, 2016). The modern economy is characterized by high levels of competition, which has put pressure on the firm's revenue as they compete for clients where services offered have to surpass those of your competitors. This has also impacted on the financing methods as the investors demand for high interest for the funds invested due to the risks of financial loss brought about by competition (Swain & Patnaik, 2013). According to Nwaolisa and Chijindu (2016) revealed that firms with high ratio of debt financing are associated with high profitability. This helps the firm to achieve its objective of maximizing the shareholders wealth.

Stulz (2000) carried out a study to determine the impact of financial structure on growth of the GDP. The results revealed a positive relationship linking the two variables. Itiri (2014) also evaluated the impact of financial structure on the performance of quoted firms in Nigeria. The study found that both the long term debt and short-term debt ratio had a negative and significant impact on the performance of Nigerian quoted firms hence the conclusion that exists a positive correlation between the two variables.

1.1.4 Manufacturing and Allied Firms Listed at the Nairobi Securities

The Nairobi Securities Exchange Limited (NSE) is the sole licensed securities exchange in Kenya. Its current core business is facilitating a market for raising capital and secondary trading of equities and bonds as well as selling market data (Mule & Mukras, 2015). The CMA is the body which is given the mandate to regulate and control all

activities of the NSE (Kamwara, Lyria & Mbogo, 2016). The NSE is one of the most relevant securities exchanges in Africa largely due to its relative size in the continent and its unique exposure to the East African region. The Nairobi Securities Exchange's equities platform is comprised of 61 listed counters, across 11 sectors: Agriculture, Automobile**,** Banking, Commercial & Service, Construction & Allied, Energy & Petroleum, Insurance, commerce, Manufacturing & Allied, Telecommunications & Tech and Growth Enterprise Market Segment (NSE, 2016).

The manufacturing and allied sector at the NSE comprises of ten firms among them B.O.C Kenya Ltd, Mumius Sugar Ltd, BAT, Carbacid and the EABL (NSE, 2016).The manufacturing and allied sector average financial performance grew by 3.5 percent in 2015 compared to 3.2 percent as at 2014. The manufacturing sector financial performance was favorable in 2015 due to the good macroeconomic environment except for the cost of borrowing that somewhat curtailed the availability of cheap credit to fund the sector's activities. Manufacturing firms have a more frequent and higher need of raising capital through borrowing this has seen the overall credit to the sector increasing from Kshs 237,422 million in 2014 to Kshs 290,069 million in 2015 (Maina & Omwenga, 2017). A study by Olang' (2017) and Mule and Mukras (2015) examined the effect of financial leverage on the profitability of firms listed in the NSE and found that financial leverage significantly affects the performance of firms listed at the NSE.

1.2 Research Problem

Debt financing comes from investors at a cost as they are expected to attract interest, which is a liability to the firm (Nawazish, Rahat & Reddy, 2016). However, it comes

with its benefits as their interests are exempted from taxation. The disadvantage of debt is that its given the first priority when it comes to repaying it (Chandrapala & Knápková, 2013). Additionally, there has been persistent theoretical debate on capital structure. The Miller and Modigliani theory asserts that when the market conditions are perfect, the value of firm's stocks is not determined by financial structure decisions, the value of the firm was positively related with capital structure. The trade-off theory justified the use of debt that the firm would use debt more as long as its benefits outweigh its costs (Abdu, 2016).

The Kenya's manufacturing sector has been the main conduit for the country's integration into regional and world markets. Due to the capital-intensive nature of the manufacturing sector, firms are required to determine their optimal capital mix in order to realize gains from their investments. Thus, manufacturing firms have a more frequent and higher need of raising capital, this is due to the fact that the overall credit to the manufacturing sector increased from Kshs 237,422 million in 2014 to Kshs 290,069 million in 2015 (Maina & Omwenga, 2017). Nevertheless, the manufacturing sector in Kenya has been registering a steady decline in profitability. The profits realized from manufacturing and allied sector has been declining for several years from 1980 to 2010. Profits in the Kenyan manufacturing and allied sector have been declining over time and this has been due to less capital available for investment (Orege, 2016).

A series of studies have been done to analyze certain issues which are responsible for enhancing the value of the companies. Moghadam and Jafari (2015) examined the role of financial leverage on the performance of listed companies in stock exchange and found a direct correlation linking the two variables.Raza (2013) carried out a study on the effect

of financial leverage on firm performance of the textile industry in Pakistan and found that there is a negative relation between performance and financial leverage. Most studies however on the association between financial leverage and financial performance provide conflict results and industry based despite the fact that different sectors have different leverage requirements.

In Kenya, studies have been carried out to determine the correlation between leverage and financial performance of manufacturing and allied firms listed at the NSE are scanty. Some of the studies include Chesang and Ayuma (2016) carried out a study on the impact of capital structure on profitability of agricultural firms listed at the NSE, which revealed the existence of positive correlation between the two variables. Oguna (2014) carried out a study on the impact of financing projects using debt on real estate firms quoted atNSE and concluded the existence of a positive correlation between the two variables. The study by Chesang and Ayuma (2016) focused on agricultural firms while Oguna (2014) focused on capital structure. Additionally, other available studies on the listed manufacturing and allied firms focus other financial concept, which has led to a gap in literature. Therefore, this research intends to provide an answer to the question; What is the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange?

1.3 Research Objective

To determine the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange

1.4 Value of the Study

The study will also benefit lending institutions in guiding them on financial leverage management practices and developing risk management policies while still conforming with CBK regulations enhancing profitability. The study will also be useful in enhancing shareholder's confidence in the financial leverage management strategies employed by management.

The study findings will be of significance to various policy makers, including the government of Kenya, the CBKand KAM who are involved in proposing policies used in Kenya. This will assist the stakeholders to draft laws which encourage economic growth or make amendments to the ones that the country has been using in the manufacturing firms for better policy requirements and prudential guidelines.

Academicians will also benefit from the research findings, which they will add to the existing literature onthe effect of financial leverage on financial performance of manufacturing and allied companies at the NSE**.** This study will be of value to academicians as they find useful gaps that will stimulate interest in further studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section outlines the theoretical literature review, the determinants of financial performance and the empirical literature review. The chapter also depicts the conceptual framework and a summary of the literature review.

2.2 Theoretical Literature Review

2.2.1 Pecking Order Theory

This theory originated from Myers and Majluf (1984) where it indicated imperfect information as the managers have insider information pertaining to the future performance of the firm and work towards maximizing the shareholders wealth (Rayan, 2010).The firm has a choice to choose a portfolio which maximizes the return for shareholders. The theory advices firms to be biased when financing their projects and use more internal financing which is retained earnings. It further reveals that large firms have higher propensity for external financing due to the ease with which it can be accessed (Al-Tally, 2014).

Pecking order theory assets that each firm has a preferential way of financing their projects and it's in descending order. The order follows with using retained earnings before embarking on debts or equity method of financing. This is because internal financing is the safest way of financing as it attracts no interest nor will it dilute the valuations of ordinary shares. The only reason as to why a firm can use debt financing is whereby; the benefits outweigh the costs (Nwaolisa & Chijindu, 2016). The utilization of

external financing sources are signals to information that a firm is not profitable, which can decrease stock prices. When external financing sources are obligatory, firms choose debts to equity because of lower information costs relate with debt (Chesang & Ayuma, 2016).

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 (Abdu, 2016). 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'sprojects (Gweyi & Karanja, 2014). In relation to this study manufacturing firms can use the pecking order theory such that they use internal sources of funds, once they are exhausted the firms can use financial leverage obtained through borrowing and finally if they exhaust the borrowing they can raise equity financing.

2.2.2 Trade off Theory

The tradeoff theory is credited to the works of Kraus and Litzenberger (1973) who factored in the inefficiency created when theirs is no balance between debt financing and equity financing. The theory asserts that for companies with many assets should finance their projects using debt to avoid the issue of illiquidity which can have dire impact on day to day running of the firm (Rayan, 2010).It further reveals that before financing projects using debt the firm needs to carryout cost benefit analysis. Debts are associated with high rates which can hamper the going concern of the firm as well as the repercussions which they have to the firm when they are not repaid on time. The benefit

they have is that of the taxation as they do not attract taxation (Al-Tally, 2014). All these factors have to be considered before deciding on using debt financing.

The term tradeoff comes from the opportunity cost decision that has to be made between financing through debts which has so many negative effects to the firm against the benefits associated with it which include the ease with which it can be accessed (Nwaolisa & Chijindu, 2016). The theory insists on the costs which the firm has to consider before embarking on using debt. Many scholars have asserted that it's impossible for a firm to achieve the phenomenon of optimal financing but it's theory asserts that it's very likely to be achieved (Al-Tally, 2014).

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 (Abdu, 2016). 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 (Chesang & Ayuma, 2016). As per trade-off theory, manufacturing and allied firms can increase their debt levels to the point where additional debt is offset by the marginal value of tax shield on interest so that they can improve their financial performance.

2.2.3 Agency Cost Theory

This theory is credited to the works of Jensen and Meckling (1976)**.** The theory asserts that there exists a relation linking the business owner (Principal) and those given the

mandate to manage the businesses to maximize profits for the owners (Agents). The problem exists where the agents do not act in a way to maximize the owner's profits (Al-Tally, 2014). The problem exists since the manager's salaries remain constant no matter the profits they make for the firm but bear the full force for the losses suffered by the firm (Rayan, 2010).

The theory asserts that the firm must manage the relation between the principals and agents. The two have differing inducementhence imposed agency costs on the firm (Abdu, 2016). Therefore, company shareholders, being aware of the possible selfish motives of the firm managers, come up with restricting measures and decisions aimed at safeguarding and increasing their wealth. Such measures include increasing leverage, rather than external equity sources, that works to ensure company ownership is maintained as well as keep managers focused on profitable investments in order to fulfill the payment obligations (Nwaolisa & Chijindu, 2016).

The theory applies in the capital financing in that the intentions of the firm's managers is to achieve maximum returns before considering the interest of the shareholders (Rayan, 2010). Conflict of interest is a major challenge that exists between the principal and agents. This occurs as shareholders expect the managers to act in a way that intends to maximize returns for the shareholders (Nwaolisa & Chijindu, 2016). In relation to this study, manufacturing and allied firms obtain more financial leverage since according to the agency cost theory debt acts a discipline mechanism for managers and prevents mangers from investing in projects with negative net present values

2.3 Determinants of Financial Performance

2.3.1 Firm Size

Large firms are associated with high profits as they enjoy economies of scale due to their mass production which gives them a competitive advantage over small firms (Rayan, 2010).They also have higher market share than their counterparts due to their penetration giving them a competitive advantage (Ani , Rajh & Teodorovi , 2009). From the above statements, it's clear that the size affects profitability in form of the preference of capital structure mix. As big companies have advantageous position in raising external funds easily from the capital markets, also there is less reliance on internal funds (Al-Tally, 2014).Firm size could be seen from many perspectives- market structure, level of turnover and profitability, assets structure, or number of employees in an organization (Chandrapala & Knápková, 2013).

2.3.2 Capital Intensity

Capital intensity is often considered a representative of a firm's operating leverage and levels of capital intensity vary among different industries. Capital intensity indicates how much money is invested to produce one shilling of sales revenue. Some industries are associated with high levels of capital especially the tech companies' hence high demand for capital (Gamlath & Rathiranee, 2013).Intangible assets can be considered as a variable likely to influence financial performance(Chandrapala & Knápková, 2013).Intangible assets can be considered as a variable likely to influence financial performance.

2.3.3 Sales Growth

This is common especially among the large firms which command high market share constituting high sales which translate to high returns (Chandrapala & Knápková, 2013). A company's reported earnings are heavily influenced by changes in sales revenue and the level of sales is a measure of managers' performance. Sales growth is a proxy as an indicator for the firm's ability to overcome the fierce competition which is the common factor in today's market (Moghadam & Jafari, 2015). Sales growth is often regarded as a performance indicator of companies itself. Sales growth shows the performance of a firm with respect to previous year performance.

2.2.4 Assets Structure

Assets play a very important role in firm characteristics. The asset structure of a firm determines the capability of the firm in securing loan to finance its activity. A firm that was large in size stands a better chance of accessing funds because it was likely to have an asset structure that was large, while a firm with a small asset structure size would find difficulty in sourcing external financing(Abdu, 2016). Asset structure is a term used to refer to the assets which are directly involved in production process (Al Shahrani & Zhengge, 2016).

2.4 Empirical Literature Review

Javed et al (2015) investigated on the impact of leverage on operating effectiveness among the firms in Asian continent. The data used in the study involved 150manufacturing firms, which ran for a period of 10 years from 2004-2014.The study revealed an existence of inverse correlation linking leverage to firm effectiveness. The

study concluded that as the firm increases its borrowing, its efficiency decreases and vice versa. The study however focused on operating effectiveness and leverage and not leverage and financial performance.

Akbarian (2013) investigated the correlation that exists between debt financing risk and ROA of firms quoted at Tehran stock exchange. The researchused a sample of 95 firms listed in Tehran Stock Exchange for the period between 2005to 2011. The study adopted a panel data and multiple regressions to test the research hypothesis. The findings of this study established the inverse correlation that exists between the study variables. The study also found a direct correlation between market risk and ROE. The focus of the study was however on risk associated with debt financing.

Singh and Bansal (2016) investigated the impact of financial leverage on firm's financial performance and also on the firm's valuation. The study sampled 60 Fast Moving Consumer Goods companies listed on National Stock Exchange and Bombay Stock Exchange for a period of 10 years from 2007 to 2016. The technique of panel data regression was adopted and the results revealed that leverage had a significant negative impact on firm's performance indicator economic value added (EVA) andROA and firm's valuation indicator Tobin's Q. the context of the study was fast moving good firms and not manufacturing firms.

Muchiri, Muturiand Ngumi (2016) examined the strength as well as the correlation that exists between financing structure and return on assets of firms listed at securities exchange in Eastern African. Researcher used a descriptive design to describe the characteristics of the three countries that is; Kenya, Uganda and Tanzania as at 31st

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December 2015 and the study covered a three-year period from 2013-2015. Secondary data was collected from the CBK and Association of Microfinance institutions of Kenya (AMFI). The study findings established that capital structure has a positively impact on the Deposit taking microfinance institutions. The context of the study was microfinance institutions

Banafa, Muturi and Ngugi (2015) examined effects of leverage on return on assets of MFIsin Kenya. It targeted 8 MFIs listed running through 2010 and 2014. Using the regression model, the results of study revealed that financial leverage had a negative and significant effect on effect corporate financial performance. The context of the study was microfinance institutions

Mwangi, Makau and Kosimbei (2014) carried out an analysis of financial structure return on assets of companies quoted at securities exchange. The data covered a 10 year period from 2004 to 2014. The results revealed that firms, which finance their projects using long-term loans, experience higher performance as opposed to those financing through short-term liability. It was further revealed that other factors like good corporate governance have high influence on the performance of corporate institutions. This study however covered all the listed firms at the NSE and combined the manufacturing sector with the other sectors.

Enekwe, Agu and Eziedo (2014) researched on financial leverage on the ROE in Nigeria pharmaceutical firms from2001 to 2012. The study used an ex-post facto research design and secondary data, which was accessed through financial statement the pharmaceutical companies quoted on the Nigerian Stock Exchange. The results indicated an inverse

correlation between the two variables on the firms quoted in securities exchange in the country. The context of this study however was listed pharmaceutical firms

Shibanda and Damianus (2015) evaluated the relationship linking capital structure and ROA of companies quoted at NSE**.** The study carried out a census of the 61 firms listed on the NSE but 42 firms formed the sample. The study used secondary data for 6-year study period from 2007 to 2012. Using regression analysis to evaluate the correlation, the study found that Return on Assetshad significant relationship with long-term debt. This study however focused on all listed firms in Kenya.

Another study by Gweyi and Karanja (2014)investigated the impact of using leverage on profitability of SACCOsin Kenya. Questionnaires were used to collect data from 37 members, 11 accountants, 7 managers, 10 chairpersons and 4 cooperative officers. The findings established that, SACCOs in Kenya use debt in large proportion than equity to finance their activities and as a result, cost of capital is very high compared to the profit generated. The findings further established that the management of SACCOs (whether it is Debt/Equity financed or Equity only financed) determines the performance of SACCOs especially in decision-making. The study however was carried out in SACCOS and not manufacturing firms.

Ojo (2012) investigated the relationship linking capital structure and profitability of companies quoted at the Nigerian securities exchange. The researcher collected data for 10 years running from 2002 – 2012. The findings of the study established an inverse correlation that exists between the variable under study as capital structure has an inverse

correlation to the performance of firms listed at Nigerian securities exchange. The study focused more on capital structure and not on financial leverage.

2.5 Conceptual Framework

The aim of this study is to investigate the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange. Financial leverage will be the independent variable while financial performance will be the dependent variable. The study will also incorporate firm size, capital intensity, sales growth and asset structure as independent variables. The conceptual framework is as follows

Figure 2.1 Conceptual framework
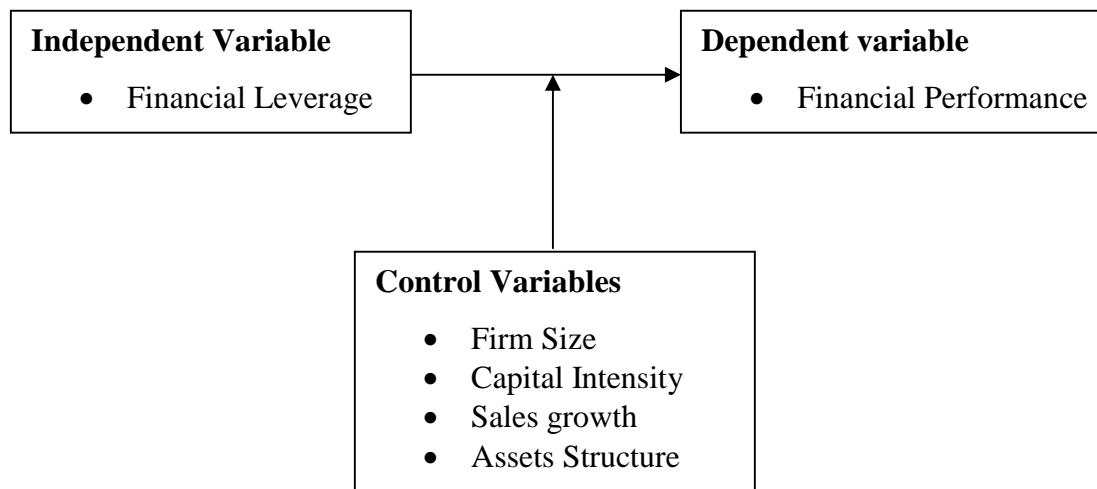
2.6 Summary of literature Review

The chapter explored a series of empirical studies on financial leverage and financial performance as advanced by various authors. The studies however have not explored the relationship between financial leverage and financial performance of manufacturing firms despite the importance of leverage towards financing working capital requirement of the

firms due the capital-intensive nature. For example, Javed et al (2015) examined the effect of financial leverage on efficiency of firms in textile firms but context of the study was textile firms. Singh and Bansal (2016) investigated the impact of financial leverage on firm's financial performance on Fast Moving Consumer Goods companies but the study focused on different types of firms considering the fact that different firms have unique financing requirements.

Muchiri, Muturi and Ngumi (2016) in Kenya investigated the relationship between financial structure and financial performance but focused on firms listed at the East Africa Securities Exchanges where different firms have different rates of interest on debt financing. Banafa, Muturi and Ngugi (2015) examined effects of leverage on financial performance of listed non-financial firms in Kenya but the study combined manufacturing firms with other firms despite the fact that different financing requirements. This gaplead to a contextual gap which necessities a study on the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section outlines the research design, the population of the study, the data collection and analysis procedure.

3.2 Research design

This study sought to the establish the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange. To accomplish this objective the study used a descriptive research design. Descriptive studies are concerned with the how, where and what of a phenomenon thus placed to build a profile on that phenomenon. A descriptive design also helps in finding out and measuring the relationships among variables.

3.3 Population of the Study

The population of the study was made up of the 10 manufacturing and allied firms listed at the Nairobi Securities Exchanges as at 31st December 2016. The study obtained data from the 10-listedmanufacturing and allied firms.

3.4 Data Collection

This study used secondary data to obtain the required data to undertake the research. Secondary data was gathered from the published annual reports of the listed manufacturing and allied firms. The study obtained data on financial performance which entailed the return on assets, financial leverage which entailed the debt ratio,firm growth

which entailed data on sales and turnover of the firms, capital and assets structure which covered the turnover and fixed assets for a period of 5 years from 2012 to 2016.

3.5 Data Analysis

The secondary data collected from the annual report of the manufacturing and allied firms was be analyzed using descriptive statistics, correlation analysis and using the multiple regression method. Descriptive statistics was used to summarize the data while correlation was used to determine the association among the research variables whereas regression analysis was used to determine the relationship between the dependent and independent variables. The analysis was carried out using the Statistical Package for Social Sciences version 24

3.5.1 Analytical Model

The study used the multiple linear regression as the analytical model. Regression provides numerical estimates for the influence of each explanatory variable, and forecasts the relationship between variables and estimates the line of best fit of the observed data. The model was as follows

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where

Y = Financial performance measured using return on assets (ROA)

X_1 = Financial leverage measured using the debt ratio

X_2 = Firm size measured through the natural log of total assets

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X_3 =Capital intensity measured using the capital turnover ratio which is the ratio of net fixed assets to sales

X_4 = Sales growth measured using current year to previous year sales

X_5 = Assets structure measures using the ratio of fixed assets to total assets

B_O = Constant of the regression equation

B_1, B_2, B_3, B_4, B_5 = Regression equation coefficients

ε = Probable error

3.5.2 Tests of Significance

The t-test statisticswas used to determine the statistical significance of the independent variables while the F - test statistics and (Analysis of Variance) ANOVA was used to determine the statistical significance of the regression equation.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter highlights the findings of the analyzed study data and the interpretations of the results. The chapter therefore comprises of the response rate, descriptive, correlation, regression analysis and the interpretations of the findings.

4.2 Response Rate

The research targeted the ten manufacturing and allied firms listed at the Nairobi Securities Exchanges as at 31st December 2016. The study obtained complete data from 8 firms which resulted to a response rate of 80% which provided adequate data points to run the regression model.

4.3 Descriptive Statistics

Table 4.1 shows the descriptive analysis results

Table 4.1 Descriptive analysis

	N	Minimum	Maximum	Mean	Std. Dev	Skewness	Kurtosis
ROA	40	-.503	.385	.07193	.166700	-1.116	1.745
Financial leverage	40	.000	.79963	.22151	.24103	.97986	.010732
Firm size	40	13.743	18.304	16.110	1.48957	-.081	-1.425
Capital intensity	40	.110	3.994	.95175	.860568	1.671	1.320
Sales growth	40	-.577	.600	.04243	.219296	.042	1.031
Assets structure	40	.179	.929	.55588	.175904	-.163	-.187

Source: Research findings

Table 4.1 shows that the mean ROA of the manufacturing and allied firms was 0.07193 with minimum and maximum values of -0.503 and 0.385 respectively. This means that the average performance in financial terms for the manufacturing and allied firms was 7.19%. The results also indicate that the average debt for the firms was 0.2215with the minimum and maximum values being 0.00 and 0.79963 respectively whereas the average size of the firms in term of the natural log was 16.110 with minimum and maximum values of 13.743 and 18.304 respectively. The findings also found that the average value of capital intensity was 0.95175 with the minimum value being 0.110 and the maximum value being 3.994 whereas the average sales growth was 0.04243 while the average value of the firms assets structure was 0.55588 respectively. The kurtosis values were 1.745, 0.010732, -1.425, 1.320, 1.031 and -0.187 while the skewness values were -1.116, 0.97986, -0.081, 1.671, 0.042 and -0.163 respectively. The kurtosis and skewness values are less than -2 and +2 which indicates that the data is normally distributed.

4.4 Correlation Analysis

Table 4.2 Correlations

	ROA	Financial leverage	Firm size	Capital intensity	Sales growth	Assets structure
ROA	1					
Financial leverage	-.102	1				
Firm size	.012	.231	1			
Capital intensity	-.050	-.277	.070	1		
Sales growth	-.264	.046	.257	.392*	1	
Assets structure	.542**	-.088	.411**	.042	-.107	1

**. Correlation is significant at the 0.01 level (2tailed).
*. Correlation is significant at the 0.05 level (2tailed).
Source: Research findings

The correlations findings indicate that there is a weak positive correlation between financial leverage, capital intensity, sales growth and the returns on assets as indicated by correlation coefficients of -0.102, -0.050 and -0.264 respectively. The results also show that the correlation between firm size and return on assets was positive and week while the correlation between assets structure and ROA was strong and positive.

4.5 Regression Analysis

This comprises of the model summary, the analysis of variance (ANOVA) and the regression coefficients

4.5.1 Model Summary

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.815ª	.665	.615	.533850	1.632

a. Predictors: (Constant), Assets structure, Capital intensity, Financial leverage, Sales growth, Firm size

b. Dependent Variable: ROA

Source: Research findings

The model summary results show that 66.5% of the variation in the dependent variable (Financial performance) is explained and accounted for by the independent variable (financial leverage) and the control variables which include capital intensity, sales growth

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and assets structure respectively. The Durbin Watson statistics value is 1.632 and lies between 1.5 and 2.5 thus an indication that there is no autocorrelation.

4.5.2 Analysis of Variance

Table 4.4 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.193	5	3.839	13.469	.000[b]
	Residual	9.690	34	.285		
	Total	28.883	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), Assets structure, Capital intensity, Financialleverage, Sales growth, Firm size

Source: Research findings

Table 4.4 shows that the p value is 0.000<0.05 and the F value is 13.469 which indicates that the regression model is significant and a good predictor of the relationship between the variables of the study.

4.5.3 Regression Coefficients

Table 4.5 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.715	.995		1.723	.094		
Financial leverage	.109	.224	.053	.486	.630	.818	1.223
Firm size	-.197	.070	-.340	-2.809	.008	.673	1.487
1 Capital intensity	-.090	.590	-.017	-.153	.879	.755	1.324
Sales growth	-.305	.455	-.078	-.671	.507	.733	1.364
Assets structure	4.301	.564	.879	7.632	.000	.744	1.345

a. Dependent Variable: ROA

Source: Research findings

The coefficients result on table 4.5 indicate that there is an insignificant positive relationship between financial leverage and ROA of the manufacturing and allied firms listed at the NSE. The results also show that the relationship between firm size and ROA is negative and significant while the relationship between assets structure and ROA is positive and significant. The results further indicate that the relationship between capital intensity, sales growth and ROA is also negative and insignificant. The tolerance values are more than 0.2 while the VIF values are less than 10 which signals that there is no multicollinearity between the dependent variable and the independent variables.

4.6 Interpretation of the findings

The findings established that financial leverage has an insignificant negative relation with return on assets. This is an indication that financial leverage does not affect the financial performance of firms listed under the manufacturingand allied segment at the NSE. This finding supports the Modigilaini and Miller theorem, whichsupport that the value of firm's stocks is not determined by financial structure decisions. However, a study byItiri (2014) found that both the long-term debt and short-term debt ratio had a negative and significant impact on the performance of Nigerian quoted firms. Nwaolisa and Chijindu (2016) revealed that firms with high ratio of debt financing are associated with high profitability.

The study also established that the listed manufacturing and allied firm's financial performance was significantly and negatively influence by the firm's size. This is an indication that the relationship between size and financial performance of manufacturing firms is negative and significant. Abdu (2016) supports that a firm that are large in size stands a better chance of accessing funds because it was likely to have an asset structure that was large, while a firm with a small asset structure size would find difficulty in sourcing external financing.

The findings also revealed that capital intensity had an insignificant negative relationship with financial performance. This is an indication that capital intensity had no significant effect on the listed manufacturing and allied firm's financial performance. Chandrapala and Knápková (2013) however established that intangible assets can be considered as a variable likely to influence financial performance.

The research findings further established revealed that sales growth had an insignificant negative relationship with financial performance. This is an indication that sales growth had no significant effect on the listed manufacturing and allied firm's financial performance. Moghadam and Jafari (2015) however found that sales growth is often regarded as a performance indicator of companies itself.

Finally, the findings established that financial performance of the listed manufacturing firms was positively and significantly affected by the firm's asset structure. This in an indication that assets structure has a direct and significant effect on listed manufacturing firm's financial performance. According to Al-Tally (2014) big companies have advantageous position in raising external funds easily from the capital markets, also there is less reliance on internal funds.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section provides a summary of the research findings, the research conclusions and recommendations. The chapter identifies the limitations of the research and the areas, which are open for more research.

5.2 Summary

This study sought to answer the research question of what is the effect of financial leverage on financial performance of manufacturing and allied firms listed at the Nairobi Securities Exchange. To address the question the research employed a descriptive research design and collected data from the 10 manufacturing and allied firms at the NSE for the period between 2012 and 2016. The study obtained complete data from eight firms, which resulted to a response rate of 80% which provided adequate data points to run the regression model.

The results of descriptive statistics established that the average ROA of the manufacturing and allied firms was 0.07193 and the average performance in financial terms for the manufacturing and allied firms was 7.19%. The findings revealed that the average debt for the firms was 0.2215 whereas the average size of the firms in term of the natural log was 16.110 respectively. Additionally, the findings revealed that the average value of capital intensity was 0.95175 whereas the average sales growth was 0.04243 while the average value of the firm's assets structure was 0.55588 respectively. The

correlations results established a weak positive correlation between financial leverage, capital intensity, sales growth and the returns on assets. The correlation between firm size and return on assets was found to be positive and week while the correlation between assets structure and ROA was strong and positive.

The regression analysis results established that 66.5% of the variation in the dependent variable was explained by the independent variable and the control variables. ANOVA results found that the regression model was significant and a good predictor of the relationship between the research variables. The study established there was an insignificant positive relationship between financial leverage and ROA of the manufacturing and allied firms listed at the NSE. The findings revealed that the relationship between firm size and ROA was negative and significant while the relationship between assets structure and ROA is positive and significant. Further, the research found that the relationship between capital intensity, sales growth and ROA was negative and insignificant.

5.3 Conclusions

The findings of the research found that financial leverage had an insignificant negative effect on thereturn on assets therefore the study concludes that financial leverage does not affect the financial performance of firms listed under the manufacturing and allied segment at the NSE. The results also revealed that capital intensity had an insignificant negative relationship with financial performance. As per this finding the study concluded that capital intensity had no significant effect on the listed manufacturing and allied firm's financial performance. The findings also revealed that sales growth had an

insignificant negative relationship with financial performance therefore the study concluded that that sales growth had no significant effect on the listed manufacturing and allied firm's financial performance.

The researchfurther established that the listed manufacturing and allied firm's financial performance was significantly and negatively influence by the firm's size. The study therefore concluded that the relationship between size and financial performance of manufacturing firms is negative and significant. Finally, the findings revealed that financial performance of the listed manufacturing firms was positively and significantly affected by the firm's asset structure therefore the study concluded that assets structure have a direct and significant effect on listed manufacturing firm's financial performance.

5.4 Recommendations

The result of the research led to the conclusion thatfinancial leverage does not affect the financial performance of firms listed under the manufacturing and allied segment at the NSE. The study nonetheless recommends that the management of manufacturing and allied firms should hold optimum debt levels in their financial structure to avoidbankruptcy and debt related effects

The finding of the research led to the conclusion that capital intensity and sales growth had no significant effect on the listed manufacturing and allied firm's financial performance. Nonetheless the study recommends that manufacturing and allied firms managers should ensure that they apply adequate capital levels and also enhance their sales revenue as this would enhance the firm's revenue.

The result of the research led to the conclusion that the relationship between size and financial performance of manufacturing firms is negative and significant. The study therefore recommend that the management of manufacturing and allied firms should work towards increasing the assets of their firms since assets are vital in the determination of their firm's financial performance.

The findings of the research led to the conclusion that assets structure has a direct and significant effect on listed manufacturing firm's financial performance. The study recommends that manufacturing and allied firms managers should increase their investments in fixed assets since they help in the generation of revenue which in turn affects the financial performance of their firms.

5.5 Limitations of the Study

The context of this study was listed manufacturing firms whose shares are trading at the NSE and whose financial statements and reports are publicly available. The findings therefore are limited to the targeted firms and may not be applicable to private manufacturing since they are owned and controlled by few individuals and information on their debt application is not in the public domain.

The study was carried over a period of five years from 2012 to 2016 and used annual data available on the sampled firm's financials. The study also used ratios, which were calculated, based on the data on the audited statements. However, ratio analysis is historical in nature, financial statements are prepared based on specified accounting standards, and managers may manipulate them.

5.6 Suggestion for Further Research

This study only focused on listed manufacturing firms at the NSE hence the study recommends an additional study on the effects of financial leverage on non-financial firms listed at the Kenyan securities exchange. The study also recommends an additional study using different measures of financial performance and financial leverage to determine the existing relationship.

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APPENDICES

Appendix I: List of Manufacturing and Allied firms at the NSE

1. A.Baumann Co. Ltd

2. B.O.C Kenya Ltd

3. British American Tobacco Kenya Ltd

4. Carbacid Investments Ltd

5. East 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

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