RELATIONSHIP BETWEEN FINANCIAL STRUCTURE AND THE FINANCIAL PERFORMANCE OF MANUFACTURING AND ALLIED FIRMS LISTED AT THE NAIROBI SECURITIES

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

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DECLARATION

I hereby declare that this research proposal is my original work and has not been presented for examination at any other University.

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DEDICATION

This research project is dedicated to the Almighty God who is the source of all intellect, knowledge and resources and in whom everything lives and finds its being.

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LIST OF ABBREVIATIONS AND ACRONYMS

GDP   :   Gross Domestic Product

GNP   :   Gross National Product

GOK   :   Government of Kenya

OECD   :   Organization for Economic Cooperation and Development

SPSS   :   Statistical Package for Social Sciences

NACOSTI :   National Commission for Science, Technology and Innovation

ABSTRACT

Corporates operate in an increasingly volatile and dynamic environment where control is limited. Most affected by the volatility in local and international markets are manufacturing firms due to high cost of imported raw materials and foreign exchange shocks.

I t behooves a corporate to control its internal factors to maximize returns and stay afloat. Capital structure is one of those factors that a corporate has considerable control over and its optimal composition can positively influence performance.

The research was an inquiry into the nature and extent of the connection between capital structure and performance Kenyan manufacturing entities listed at the Nairobi Securities Exchange. Secondary data was gathered from the eight entities listed at the exchange as at 31st December 2021

Data collected was analyzed for descriptive and correlational characteristics using a regression model. Inferences drawn were to the effect that capital structure has a substantial impact on financial performance. Share capital, long-term debt and short-term debt affected performance positively while retained earnings affected performance negatively.

The researcher recommends entities to use more leverage to fund operations and increase share capital but should reduce their retained earnings possibly by converting to share capital or increasing dividend payout ratio.

The study recommends efficient working capital management to take advantage of short-term debt which displayed the highest beneficial impact.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Today, a most crucial financial decisions for a corporation or firm is its financial structure. This choice is crucial since the organization needs to increase return to various stakeholders and impacts the value of the organization, usually demonstrated by the financial success of the entity. The firm's financial structure describes how it finances its assets utilizing all of its resources, including all forms of short- and long-term financing. However, determining a company's ideal financial structure is no easy task since it necessitates a review of numerous factors, the most crucial of which are risk and profitability (Castillo, 2019). When the firm's operating environment is highly variable on all fronts—economic, social, technological, and political—the decision becomes far more challenging. The ideal ratio of equity and debt can thereby impact the firm's worth and financial performance (Merozwa, 2015).

Thus, an entity's financial structure consists of a blend of debt and equity as well as reserves and surpluses (Siddik, Sun, Kabiraj, Shanmugan&Yanjuan, 2016). Decisions about a company's financial structure are crucial since they affect the firm's worth. A company may face liquidation, financial difficulties, or eventual bankruptcy as a result of poor business decisions made to finance its operations. Highly leveraged companies have the option of choosing an ideal funding structure to cut down on wasteful expenses. It is crucial to remember that relying too much on equity financing could cause the company to experience liquidity problems and make it more likely that it won't be able to seize any potential growth chances (Amara & Aziz, 2014).

In organizations where managers control the majority of corporate decisions in the companies they oversee, the financial structure selected by a corporation may not always be intended to maximize value but rather to protect the interests of management. The relationship between a company's financial composition and performance is crucial in any firm, and the ideal financial structure is one that has the lowest weighted average cost of capital and, consequently, optimizes the value of the entity. Therefore, wise investors must first learn about the firm's performance before investing their money (Deitiana&Habibuw, 2015). A firm should be able to sustain and increase its performance to keep pace with the fierce competition among the firms. As a result, the company may be able to both grow its market share and cut operating expenses. High performance demonstrates excellent management and efficient resource management, which in turn helps the economy.

The Irrelevance of Capital Structure Hypothesis by Modigliani and Miller (1958) theorized that no relationship exists between firm's value and financing mix in a perfect market environment. Later research has revealed that the quantity of debt in the capital mix options available to companies influences company performance due to the theory's constrained and unrealistic assumptions (Wainaina, 2014). Unsurprisingly, this debate produced competing viewpoints on financial structure and performance, with pecking order and tradeoff theories of leverage being regularly discussed in the literature. Evidence reveals that theory is not as clear-cut or easy in this regard, either, as investigations on the link between financial structure and performance have returned conflicting outcomes.

Particularly, majority of Kenyan enterprises have seen declining performance despite the government's promises to support the manufacturing sector, with management concentrating on restructuring and working capital utilization to enhance performance. The manufacturing sector

grew by 6.9% in 2021, falling short of the estimated 7.5% average GDP growth (KNBS, 2022). Although the government projects that the sector would contribute 30% of GDP by 2030, given its erratic performance, it is unclear whether this will actually happen. This study aims to add to the body of research in light of the significance of manufacturing to our economy and conflicting results regarding the impact of financial composition on financial performance.

1.1.1 Financial Structure

Financial structure of a company is the composition of its financing divided into leverage and equity. It is the combination of debt, equity, reserves and surplus. (Siddik, Sun, Kabiraj, Shanmugan&Yanjuan, 2016). Kerosi, D. O. (2018) defined capital structure as consisting of either internal or external sources of funds and the degree to which a firm employs either source. Internal sources include retained earnings while external sources include debt and equity. According to Githire, C. &Muturi, W. (2015) capital structure is the mix of equity, short-term and long-term debt in financing. Capital structure defines the link between owners' equity and borrowed funds according to Wafula, L. N. (2018). This study measured financial structure as the ration of borrowed funds to equity. Wainaina, J. N. (2014) measured leverage of a firm as the ratio of debt to equity on a balance sheet. Since the focus is the overall capital structure, components considered are long- and short-term debt, equity and retained earnings each as a percentage of the total assets. Using ratios is more reliable as they can be compared from year to year.

1.1.2 Financial Performance.

This measure's a firm's optimal utilization of its assets and all resources available to generate revenues and profits. Financial performance is defined my specific measures including return on assets, profitability, liquidity and solvency as presented in financial statements. Wainaina, J. N.

(2014). Various financial ratios namely return on assets, liquidity and debt to equity ratio give a standard picture of performance and are comparable over different accounting periods. Wafula, L. N. (2018) measured financial performance of a firm as its profitability. This is described as the capacity of a firm to realize benefit from employing its resources in various activities. Using profitability as a measure, financial performance is the funds generated less all the expenses incurred in the course of the accounting period.

As per Wafula, L. N. (2018), the primary goal of any firm is to generate profit from its activities and assets. This profit can be expressed as a ratio of the assets and equity employed. Return on Equity and Return on Assets are the explained variables. Being ratios, comparison for different entities and time periods is possible.

1.1.3 Financial Structure and Financial Performance

A company with a high weighted average cost of capital makes less profits that that with a low one because its financing expense is higher. Too much leverage can cause financial inefficiencies even leading to corporate failure. Having no leverage can mean a firm is unable to invest and compete favourably in the market. It then follows that a firm has to ensure an optimal capital structure to achieve financial success and avoid failure.

In their pioneering research on the topic in the 1950s, Modgliani and Miller asserted that capital structure bears zero consequence to value of a firm. Their theory however was constrained to perfect market forces without the effect of forces such as taxes and cost of capital.

The contingency theory advanced by Edward Fiedler (1978) suggested that there was no particular way to organise a firm but each firm's structure is based on the prevailing internal and external factors. It then follows that a firms internal capital structure will be contingent on the

circumstances it operates in. Capital structure has relevance to a firm's financial performance because it must be designed to take full advantage of the environment a firm operates in.

Hussain, T. (2015) concluded that capital structure influences profitability with an adverse relationship between debt ratio and profitability. Locally, Kerosi, D. O. (2018) observed a substantial and beneficial relationship of internal equity to profitability. Wainaina, J. N. (2014) found that capital structure explained over 60% of all changes in financial performance of SMEs in Kenya in a given year.

According to Githire, C. &Muturi, W. (2015) equity and long-term debt impact financial performance positively and materially while short term debt has a material adverse effect. Given the conflicting observations, this study aims to add new insight to the connection of capital structure and company performance by examining entities listed at Nairobi Securities Exchange in the Manufacturing and Allied Sector in the period 2017-2021. It is expected that there is a relationship between the two which will depends on prevailing internal and external elements such interest rates capping from September 2016 to November 2019 and whose effects were felt afterwards.

1.1.4 Manufacturing Firms Listed at the NSE

The NSE is Kenya's primary market for company listing. The market is divided into thirteen distinct (13) segments that represent the various industries in which the companies operate. These industries include, among others, real estate investment trusts, exchange traded funds, investment services telecommunication and technology, manufacturing and allied, commercial and services, insurance, energy and petroleum, construction and allied, automobiles and accessories, banking, and agriculture" (NSE, 2022). The manufacturing and allied sector consists of eight firms namely; British American Tobacco Kenya, B.O.C gases Kenya, Carbacid, East African Breweries Limited, Flame Tree Group, Eveready Kenya Limited, Kenya Orchards, and Unga group. In selecting this group, this study aims to control some aspects of the firms selected in that they operate under a similar environment and face similar external challenges such as high energy cost and high cost of raw materials. The listed firms publish their financial results which will be the source of secondary data.

Were, A. (2016) surmised that this sector is wary of alternative forms of financing apart from debt. A study on the effects of such preferences might inform better decision making and choices

Of the six main areas within the economic pillar, the one with the highest potential for achieving Kenya Vision 2030 is the manufacturing sector (Were, 2016). In contrast to regional and global productivity levels, Kenya's industrial sector has relatively poor capital productivity. Due to poor performance, some manufacturing companies in Kenya have had to close their doors since 2015, while others have been forced to move their production facilities to neighbouring nations. Additionally, several businesses have reduced their manufacturing capacity. As a result, manufacturing companies' financial performance is significantly affected (Gitau &Gathiaga, 2017).

1.2 Problem Statement

The very reason a corporation exists is to maximize shareholder value in order to ensure not only profitability but also long term viability and sustainability (Sun et al. 2020). By lowering their overall cost of capital and raising share prices, businesses maximize shareholder value (Hassan et al. 2022). Financing the firm's activity through the best possible composition of debt and equity capital is one strategy to reduce the cost of capital (Khan et al. 2022). Equity and internal resources are most times insufficient in enabling a company to operate competitively. Therefore, businesses will utilize borrowing to grow their earnings. Despite the fact that theoretical frameworks like Modigliani and Miller's Irrelevancy of Capital Structure (1958),in practice firms achieve growth in value by borrowing at affordable rates.

The Kenyan government and private businesses have worked very hard to forge a conducive business environment, especially for listed enterprises (GoK, 2020). However, though in the past ten years some companies registered on the NSE have witnessed greater performance, most have seen their fortunes decline and some have even been delisted from the NSE. The majority of publicly traded companies have encountered losses in their financial performance over the years, for example, ARM registered a loss of Ksh 6.3 billion in 2016 and Ksh 6.9 billion in 2017(Kenya Association of Manufacturers Priority Report, 2018). Particularly, manufacturers in Kenya constantly deal with significant financial risks. Eveready East Africa Limited closed its production facility in Nakuru, Kenya, in 2015 as a result of rising finance costs and security concerns, according to Okoth (2015). The Kenya shilling's decline in value versus other currencies, particularly the US dollar, had increased financing costs and exposed the corporation to exchange rate risk. Additionally, Kang'aru (2019) describes how Pan African Paper Mills Limited was forced to close regarding to Ksh9 billion in unpaid invoices.

There are literature strands that promote capital relevance while others tend toward capital irrelevance, but empirical investigations on the ideal capital structure remain unclear. While studies by Mwangi (2014) and Adda et al(2019) provide favorable impacts of capital structure on performance, studies by Kerosi et al. (2018), Githire and Muturi (2015), and Addaeet al. (2019) demonstrate negative impacts. Hussain (2015) discovered that short-term debt has a substantial association to ROA upon studying the impact capital structure usually has on profitability of entities on Kazakhstan's KSE 100 Index. Leverage, according to Kodongo et al. (2014), considerably and adversely influences the profitability of listed enterprises in Kenya. Additionally, they provided evidence demonstrating leverage not impacting market value. Financial leverage was also suggested to have a statistically significant impact on performance by Mwangi, Makau, and Kosimbei (2014).

According to Allen (2018), firms consistently favored internal equity to external equity over the course of the time. But Makori, (2022) discovered no significant correlation between cost of preference and financial success of NSE-listed companies. Opoku-Asante, et al. (2022), on the other hand, hypothesized a considerable inverse linking of capital structure to financial performance. Further, Gallegos Mardones and Ruiz Cuneo (2020) discovered that among Latin American enterprises, a sporadic correlation of financial performance to components of capital structure exists. For other nations and businesses, they also discovered inconsistent results.

The available literature is still inconclusive on which financial structures materially affect the performance of firms. Studies also tend to concentrate on financial structures singly without investigation of any association that exists between them. Additionally, there is a limited number of studies conducted locally in Kenya on the manufacturing industry. Further insight is critical in enhancing the performance of the manufacturing companies which play a pivotal part in the

economically developing the country (Muchemi, 2017). The current study aims to add to available research and will answer the research question; what is the effect of financial structure on financial performance of manufacturing firms listed at the Nairobi Securities Exchange?

1.3 Objective of the Study

To ascertain the effect financial structure has on financial performance of NSE listed manufacturing firms in Kenya.

1.4 Value of the Study

Deductions derived are significant in formulating government policies that spur new industries and grow existing ones. This particular study aims to generate crucial insight which may be applied by the government to serve citizens. It is the responsibility of the government to control the economy and make it favorable to its people

The study will serve to underscore the challenges encountered in the industry that would be useful to the key players in the manufacturing sector. Managers control the daily operations of the institutions by making financial decisions and set the long-term and short-term goals. As a result, the management will develop policies that will facilitate growth. Other financial institutions with characteristics comparable to manufacturing firms can benefit from the findings by reproducing the outcomes in their own scenarios to improve performance.

<center>**CHAPTER TWO**</center>

<center>**LITERATURE REVIEW**</center>

2.1 Introduction

This is an overview of theoretical and empirical body of research already done pertaining to the research topic in order to identify gaps that the present study will address. The chapter also formulates a conceptual framework underpinned by the explored literature to show the link between the study's primary themes.

2.2 Theoretical Review

Over time, researchers on the subject matter have developed theories to map and explain the connections between variables. The research is hypothesized from the theories reviewed. This study explores the contingency theory, the agency theory and trade off theory.

2.2.1 Contingency Theory

Edward Fiedler, (1978) established and advanced Contingency Theory. According to this theory, both an organization's internal and external environments have an impact on its operations. Only when the organizational settings and contextual factors are in harmony can positively effects on organizational performance be achieved. According to contingency theory, the conditions of a certain event define the best practices (Allen, 2018). The theory presupposes that the organization renders judgments that are reasonable in view of the information at hand. Based on this perspective, a company's potential for success is dependent on how well it can identify and evaluate specific contextual factors.

The theory makes the assumption that organizational performance will only improve when the organizational settings and contextual elements are in balance (Fiedler, 1978). If the institution

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wants to successfully manage the financial management systems and ensure that the workforce is capable of achieving the firm's goals, the notion that one size fits all is false. The proposition of the theory to the study is that there is no one best way to do things and it is vital to combine several financial structures in order to enhance organizational performance. Any financial structure must be effective both internally and externally. The theory is essential to the study because it supports that financial structures have a wealth of untapped potential that may be utilized to strengthen the performance of manufacturing firms (Nagery, 2019).

2.2.2 Trade-off theory

Developed in the early 1970s, it remains the most prevalent capital structure hypothesis. The Modigliani and Miller hypothesis (MM) served as its foundation (1958). Trade-off theory is viewed as a development of the MM theory since it considers the taxes and bankruptcy costs whereas the MM theory assumes the absence of taxes. In an effort to advance MM theory in addition to trade-off theory, other concepts like pecking order theory and marketing timing hypothesis were developed. In order to maximize the value of equity to investors, Myers (1984) advises enterprises to adopt an optimum debt level where the cost and tax benefits of debt cancel each other out.

The theory aims to explain how businesses choose the appropriate amount of debt financing by considering both its advantages and disadvantages (Al-Tamimi & Hassan, 2010). Tax benefits are a perk of debt financing, but the downside is that it puts you at risk of bankruptcy if you have too much debt. Kraus and Lintzenberger (1973) contend that companies should maximize the advantages of debt tax-shields while minimizing the possibility of bankruptcy. The appropriate debt-to-equity ratio is achieved through weighing financial stress costs against the benefits of interest tax protection.

The theory presupposes that using leverage has advantages of tax benefits and disadvantages of finance costs. However, data asymmetry was not taken into account by trade off theory. This hypothesis, which highlighted the conflict between insiders and outsiders as a result of data asymmetry, later addressed the issue. According to the trade-off principle, a business will consider taking on debt if the tax advantages outweigh the cost of financing it.

With an aim to explain why capital structures rely on debt financing it suggests that businesses will choose debt over equity up until the risk of financial hardship and the importance of bankruptcy costs were significant. The trade-off model also explains how businesses choose their cash holding level through weighing advantages and disadvantages of doing so. A corporation that has taken on debt will experience financial difficulties when it is unable to satisfy the demands of its loan holders. A leveraged company that consistently defaults on its debt holders' demands may file for bankruptcy.

2.2.3 Agency Theory

Barley and Myers (1932) originally put forth the agency theory, which has a tendency to describe how capital decisions are made in businesses. This point of view contends that agency problems are more likely to occur when there is a division of ownership and managers are operating the business on behalf of shareholders. When management invests in failing enterprises, for example, they neglect the shareholders' interests in maximizing profits. At this stage, it becomes important to consider the agent's self-interest, propensity for opportunistic behavior, and lack of convergence of the interests of both agents and principals.

According to this reasoning, management and agents eventually behave in their own best interests. This contradiction may be beyond the control of shareholders as a result of poor management decisions and disclosures. An agency issue results from the principal's and agent's competing

interests. The agency cost is the cost associated with the agency issue. The theory is important because it explains how ownership, management, and performance are related. A positivist approach entails directing agents according to guidelines established by the principals with the goal of maximizing shareholder profit (Jensen, 2011).

Thus, increased leverage binds management to invest in successful ventures and pay out the excess free cash flows as interest payments to service the debt. Even when internal finances are available in such a situation, leverage may be advantageous. It controls managers' behavior through punishment and prevents the expropriation of private benefits (Jensen, 1986). The potential conflict of interest between bondholders and stockholders is another result of the theory (Jensen and Meckling, 1976). Priority on claims usually goes to debt holders over equity holders.

The agency theory is useful in explaining the current financial difficulty faced by financial institutions. The activities of management include their misappropriation of funds from financial institutions and their decision to underutilize resources, both financially and otherwise. These actions ultimately lead to bad financial performance for businesses (Baltensperger, 2017). The theory will be applied to show how unfavorable levels of leverage, caused by poor management skills, weak asset management controls, and weak liquidity management controls are all outcomes of the self-serving actions of managers and directors (agents), which harm the welfare of shareholders (principals) and result in lower returns.

2.3 Determinants of Financial Performance

Various factors such as firm size, capital structure, managerial decisions and external macro-economic factors have a bearing on a firm's financial performance. This study will focus on the capital structure and the effect its composition has on manufacturing firms.

There are two main determinants of financial performance in the capital structure namely equity and debt.

2.3.1 Equity

Equity consists of retained earnings and share capital. This study will consider each separately as a ratio of total assets. Equity is the portion of company assets owed to shareholders.

A study by Githire, C. &Muturi, W. (2015) concluded that equity positively and materially impacted financial performance. Another study on all the firms listed at the NSE also found that internal equity correlated positively with the profitability of firms (Githire, C. &Muturi, W. 2015)

On the contrary, a similar study by Mutua, L (2020) concluded that equity and retained earnings correlated adversely with financial performance of the studied firms.

2.3.2 Debt

Debt is those funds that a firm employs by borrowing from external sources. It can be short term maturing within a year or long-term with maturity exceeding 12 months.

Debt impacts how a firm performs significantly. (Deitiana, T., & Habibuw, L. G. 2015)

Mutua, L (2020) found long term debt correlated positively with financial performance. On the contrary Nazir, A., Azam, M. and Khalid, M.U. (2021) found that long term debt had a negative effect on a firms financial performance.

Muigai, R.G. (2016) concluded that long-term borrowing positively influenced on financial performance with short term borrowing being detrimental.

Githire, C. &Muturi, W. (2015) had similar findings on short term debt being a hindrance to good performance.

2.4 Empirical Review

This is detailed analysis of global, regional and local research carried out around the topic of this study. It aims to give an evidence-based analysis of the pertinent topic under study and an impartial opinion.

2.4.1 Global Studies

Odalo et al. (2016) looked at how business size impacts financial performance of listed financial firms for the years 2003 to 2013. They connected the benefits of efficient cost and production volume management using the theory of economies of scale. Utilizing a pooled OLS, the acquired secondary data was processed. Financial leverage was assessed using ROE, ROA, and EPS, while the size of the business was determined using logs of assets. Per the results from the study the size of an agricultural enterprise has a positive influence on its performance. The importance of size and its favourable correlation with ROE, ROA, and EPS were also demonstrated. Therefore, even when it came to gaining leverage, huge agricultural organizations had an advantage over small businesses.

Xue and Shuai (2018) observed capital structure as having an inverse relationship with profitability in a study they carried out in Sweden. This study, which covered both the period preceding and after the global financial crisis, found that the debt-to-equity ratio was significantly greater before the crisis and progressively returned to normal after the crisis (after three years). The study adopted Ordinary Least Squares to analyze panel data at company level (OLS). The approach, according to the study, was unable to identify any correlation between the explanatory elements that were considered in the estimations. Our work will fill this gap by taking the multicollinearity issue into account.

Mwanzano (2019) explored how borrowings influence financial results of listed companies. Financial statements and reports from the selected companies' secondary financial data were used. Multiple linear regression, descriptive statistical methods, and correlation analysis were adopted to assess data. Results showed a marginally significant adverse relationship between debt financings. Observations revealed a positive albeit small correlation between firm liquidity and firm profitability. Company size has a tenuous, negligible relationship. Results show corporate liquidity favourably and materially impacts financial performance.

A study on the connection between listed firms' leverage levels and their performance at the Pakistan Stock Exchange (PSX) was undertaken by Nazir, Azam, Khalid, and Khalid, (2021). Between 2013 and 2017, a sample of 30 businesses in the sugar, cement, and automobile industries were examined with fixed- and random-effects models in addition to pooled ordinary least squares regression. The results documented both long-term and short-term debt having a considerable and detrimental impact on an organization's profitability.

Using 425 samples of businesses in Ghana and Nigeria from 2014 to 2019, Opoku-Asante, et al. (2022) sought to investigate how capital structure and financial performance are connected using a sectorial analysis and take into account the impact of debt maturity on the relationship. Empirical research demonstrates the existence of a material inverse connection of capital structure to financial performance. The link remained unchanged as maturity varied but is influenced by the industry. Additionally, loan maturity affects this relationship in particular industries but not the market. By include sector-specific information and data on the debt maturity of enterprises in Ghana and Nigeria, this study builds on previous research on the connection capital structure has to financial performance.

2.4.2 Regional Studies

The connection of capital structure to corporate profit was empirically looked into by Angahar and Ivarave (2016) using data from Nigerian cement manufacturing companies. The research concentrated on listed cement manufacturing companies in Nigeria starting 2004 to 2013. The study's primary goals were to investigate the influence shareholders' funds, long-term borrowings, and short-term borrowings had on the profitability of Nigerian cement manufacturing companies. For the study, the four cement businesses with the largest overall asset values were chosen. For this investigation, secondary sources of data were used. The information was taken from the sampled companies' ten-year period of audited annual financial reports. Multi regression analysis was adopted. According to the research, shareholder funds, long-term leverage, and short-term debt all showed a favourable and material impact on profitability of cement manufacturers in Nigeria.

In South Africa, Mohoho (2016) investigated a similar relationship and discovered a link between corporate profitability and firm asset value. However, this analysis primarily focused on businesses that traded on the stock market and looked at data from (2002-2011), a period of ten years. Using the OLS method, this analysis could not find any statistically significant correlation between business profitability, leverage, and firm valuation. The research estimated the firm's value using tangible assets like cash and fixed assets. If the value of intangible assets like patents had been taken into consideration, the results might have been different. Furthermore, the analysis gave a lot more weight to business value than to profit. The motivation for the current study is inquiring into the connection between firm earnings and the source of financing.

To examine how capital structure influences earnings of microfinance enterprises, Coleman (2017) carried out research in Ghana. Using fixed and random effect regression analysis, 10 years of data

(1995–2004) from 52 microfinance institutions were examined. Researchers found that high leverage manufacturing companies listed on the NSE may be able to contact more clients, benefit from economies of scale, and perform better as a result.

In their study, Bwawa, Asamoah, and Kissi (2018) set out to examine how debt costs connect with company financial performance among Ghanaian manufacturing enterprises. The bankruptcy prediction model with Z score was applied. Through the use of survey-style questionnaires, the study collected qualitative and quantitative data (modified single case design). Secondary data was obtained through financial statements. The results showed how useful the Z score is for forecasting bankruptcy. It also supported the hypothesis that poor corporate governance contributes to business failure. However, the study focused on ratios and corporate governance while disregarding macroeconomic factors, which have an indirect impact on business characteristics and result in financial expenses for a corporation.

Mukembo (2018) looked into the connection between financial performance and capital choices in SMEs engaged in manufacturing in Uganda. The study's foundation was a crosssectional structure with a quantitative graphic design. The findings showed a substantial inverse link between inclination cost and microfinance institution financial performance. The results also showed that SMEs were frequently utilized to supplement resources with temporary debt, suggesting that SMEs in manufacturing depend on client stores, term stores, and temporary advances to fund their projects. The study advised microfinance businesses to take use of the equity and long-term support markets present in Uganda.

2.4.3 Local Studies

Kinyua and Muriu (2017) investigated the variables that affect the capital structure for Kenyan firms with an agricultural focus Panel regression model was applied to simulate capital structure

and run long- and short-term debt models with ROE, company age, firm size, and liquidity as the explanatory variables. The analysis found a positive correlation between company age and long-term leverage but adverse results from return equity and long-term debt. Only a few controls for capital structure drivers were the focus of the study.

Wafula (2018) examined how a company's financial structure affects its profitability by focusing on SMEs in the Nairobi County government. A correlation survey approach was adopted to look into how capital structure might influence profitability for SMEs in Kenya. Secondary data from the 2013 World Bank Enterprise Survey was used. 179 SMEs in total were sampled. The study carried out both descriptive and regression analysis using ordinary least square techniques. The results demonstrate capital structure positively influencing firm profitability. The assets, revenue growth, and firm size all contributed favourably to the company's profitability.

After adjusting for moderating factors such sales growth, business size, and asset tangibility, Allen (2018) looked at the link between capital composition and profits of 37 chosen enterprises listed on the NSE. The analysis excludes financial services companies listed between 2009 and 2013 as well as suspended counters. The pecking order hypothesis of capital structure, according to which businesses use a particular hierarchy to finance their operations, was used by the researcher. Adopting longitudinal research using secondary data taken from enterprises' yearly audited reports and material from NSE handbooks, descriptive statistics showed that enterprises did about as well as the industry as a whole, as determined by ROCE. considering how unfavourable Kenya's political and economic situation at the time was. The findings revealed that Kenyan businesses utilized short-term debt more frequently long-term borrowing. Deductions showed enterprises consistently favoured internal equity to external equity over the course of the period. The period's

stagnant economic situation was the cause of the relative slow growth. The findings showed that businesses likewise kept the majority of their assets in fixed form.

Gathara, Kilika, and Maingi (2019) investigated how equity impacts on financial performance of a subset of NSE-listed companies applying an explanatory design that utilized quantitative data. Using multivariate tests and a panel data model, it was determined how the independent variable affected the company's financial performance. 30 businesses provided data for the period 2007 to 2015. Findings demonstrated equity substantially enhanced performance of the entities surveyed.

A study conducted by Makori, (2022) examined the connection of cost of capital components to the financial results of entities listed at Nairobi Securities Exchange (NSE). Results showed a moderately favourable significant association between debt service expenses and financial success of manufacturing entities on the NSE. Additionally, the cost of capital reserves was shown to positively correlate with performance. No significant connection was observed between the preference share costs and monetary success.

2.5 Summary of Literature Review

Financial theories have endavoured to underpin and even predict how financial components variables behave in relation to one another (Mungai, 2016). Although the results of the studies conducted have not been entirely conclusive, the theoretical framework under study aims to provide a foundation for comprehending the underlying the relevancy of proper financial structures. However, there is scarcity of studies undertaken locally more so among the listed manufacturing firms. There is no uniformity on the nature of direction of various financial structure practices and performance. Because of this, the goal of this study is to present local empirical data on how financial performance changes relative to on financial structure of NSE listed manufacturers.

2.6Conceptual Framework

The conceptualized relationship between the research variables is shown through figure 2.1 below.

Independent Variables   *Dependent Variable*

```
┌──────────────────────────────┐
│     Long Term Debt           │
│   • Long term Debt /Assets   │
│                              │
│                              │────────────────►
└──────────────────────────────┘

┌──────────────────────────────┐
│     Short Term Debt          │
│   • Short Term Debt/Total    │
│     Assets                   │──────────────►          ┌──────────────────────────────┐
│                              │                         │  Financial Performance       │
└──────────────────────────────┘                         │                              │
                                              ──────────►│   • ROA                      │
┌──────────────────────────────┐                         │   • ROE                      │
│     Retained earnings        │                         │                              │
│   • Retained Earnings/Assets │                         └──────────────────────────────┘
│                              │──────────────►
└──────────────────────────────┘

┌──────────────────────────────┐
│     Share capital            │
│   Share Capita/Assets        │──────────────►
│                              │
│                              │
└──────────────────────────────┘
```
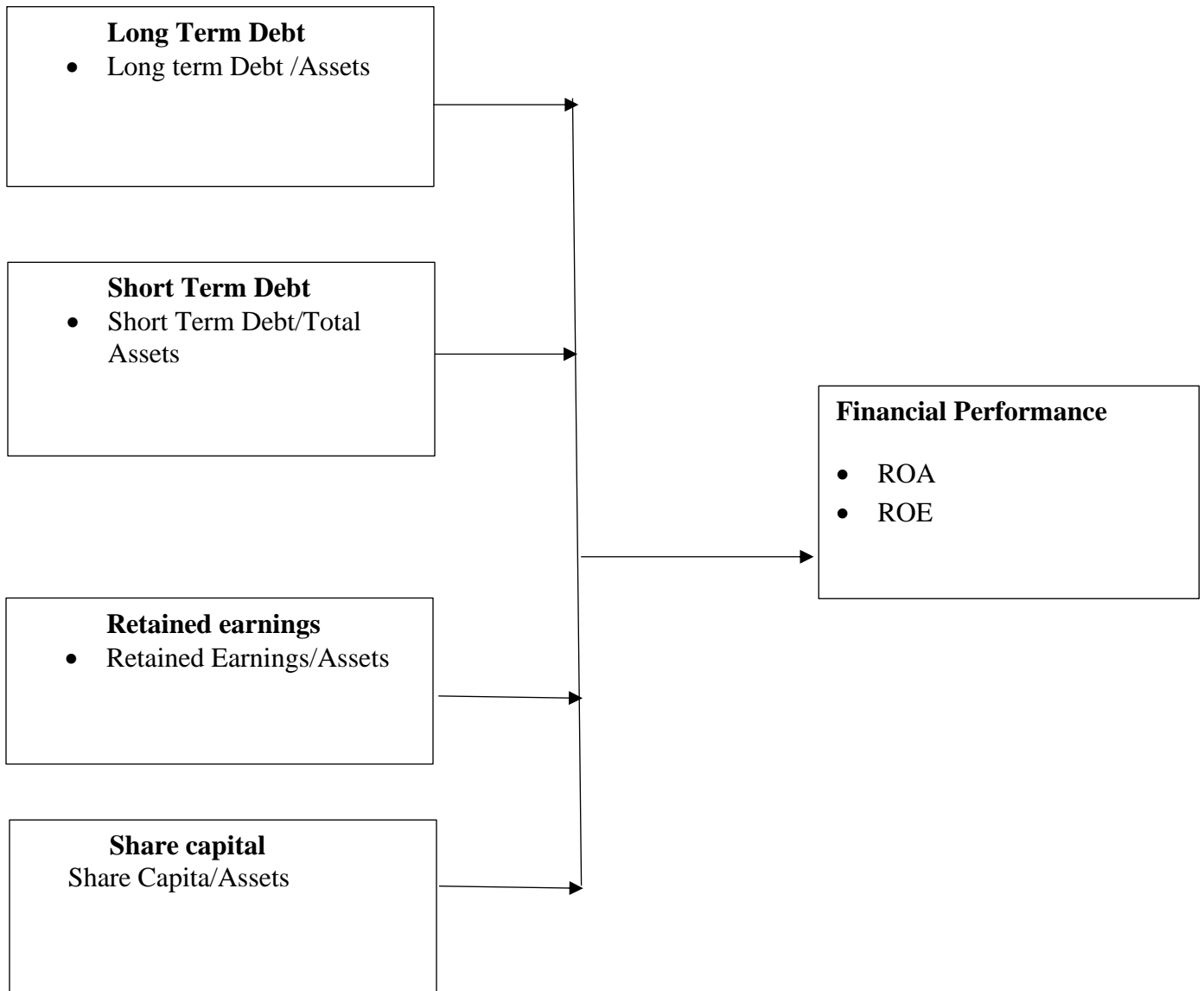
Figure 2. 1 Conceptual Framework

Source: Researcher 2022

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Detailed in this segment is the strategy to be adopted for research. Explored are the research design, sampling methodology, collection of data, and analysis

3.2 Research design

The research will follow a descriptive and correlational design with the aim of disclosing the phenomena under examination exactly as it is without any modifications. It entails explaining a population in relation to significant study components, with the primary focus of observing how the variabes relate (Cresswell & Cresswell, 2017). A descriptive research strategy can be used to gather quantitative or qualitative data. The descriptive research approach enables the gathering of data on the population or topic being studied using both quantitative and qualitative data. Additionally, this research methodology guarantees that data are gathered methodically and that the study's integrity is maintained, demonstrating its applicability to the topic and hence its relevance.

3.3 Population of the Study

Per Cooper and Schindler (2018) population are objects and people who form the central focus of a study. As of 1st January 2022, there are eight manufacturing firms listed on the NSE and this will form the target population for the study as per Appendix I. Manufacturing companies are specifically chosen as despite it being one of the four economic pillars in the Big Four Agenda and Vision 2030 of the Kenyan government, it continues to experience financial challenges. Owing to

the small population, a census of all eight NSE listed manufacturing firms will be taken. A census study enumerates all the objects in a population (Kothari, 2014).

3.4 Data Collection

The study will use secondary data, a review of existing information that is usually quantitative in nature. In order to collect secondary data, the researcher will look at published accounts in the NSE listed manufacturing firms reports and also form their websites. The secondary data will be on data on performance of NSE listed manufacturing firms and capital structure. Other sources include relevant journals, reports, newspapers and magazines. Data covering a period of five years (2017-2021) is to be assembled using data collection sheets.

3.5 Data Analysis

Kothari (2014) defines data analysis to be procedure of deriving inferences from the data assembled. Analysis may be for several reasons including to describe and summarize the data collected, to compare and contrast variables being studied and to forecast outcomes of the study being undertaken The study will adopt quantitative analysis techniques on the study variables. SPSS version 24 will be employed because of its preciseness, clarity, ease of understanding and interpretation. Frequency distributions, trend analyses and percentages will be employed to present the study results.

3.5.1 Analytical Model

The multiple regression model shown below will be employed to establish whether a relationship pattern exists between the variables;

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

Where:

Y= Performance of NSE listed manufacturing firms measured by Return on Assets

β_0 = Regression constant (y-intercept)

X_1= Long term debt

X_2 = Short term debt

X_3 = Retained earnings

X_4 = Share capital

ε = Error term

3.5.2 Test of Significance

Test of significance will be done by conducting Analysis of Variance (ANOVA). ANOVA compares group means by comparing variance estimates to determine if variables are related.

This will be used to determine whether the regression model is sufficient as constituted.

3.6 Operationalization and Measurement of Study Variables

The operationalization and measurement are as shown in Table 3.1

Table 3.1 Operationalization and Measurement of Study Variables

Variable	Type	Measurement	Analysis Method
Financial Performance	Dependent	• ROA	• Regression and Correlation analysis

Long term Debt	Independent	• Long term Debt /Asset ratio	• Regression and Correlation analysis
Short Term Debt	Independent	• Short Term Debt /Asset Ratio	• Regression and Correlation analysis
Retained earnings	Independent	• Retained earnings Prior Period+ Net income (profit/ loss)-Dividend	• Regression and Correlation analysis
Share capital	Independent	• Issue Price per Share x Number of Outstanding Shares	• Regression and Correlation analysis

3.7 Diagnostic Tests on assumptions of regression model

The assumptions underlying the regression model will be confirmed by a number of diagnostic tests, including those for normality, multicollinearity, and heteroscedasticity.

3.7.1 Normality Test

The regression a model to be used assumes the data set is normally distributed. Since the dataset has less than 2000 elements, the Shapiro-Wilk test is appropriate. If the p-value is larger than 0.05, the dataset's distribution is normal. Should the data fail this test, it can be fixed by transforming it using a function such as a square root or raising to a power until a normally distributed data set is achieved. (Ghasemi & Zahediasl, 2012)

3.7.2 Multicollinearity

Multicollinearity arises when two or more independent display a linear connection such that one can predict another. Variance inflation factor (VIF) will be employed to detect correlation among the predictor variables. A value of 1 denotes no correlation, between one and 5 indicates moderate correlation and more than 5 suggests critical correlation.

Should the VIF be more than 5, the variables will be standardized by subtracting the mean from each variable. (Daoud,2017)

3.7.3 Heteroscedasticity

Multiple linear regression assumes that the error values in a dependent variable are homogenous for all values of the independent variable. When this is not the case, heteroscedasticity occurs. This study will apply the Glejser test for heteroscedasticity. Should the significant value is exceedi 0.05, there exists no heteroscedasticity. If the value is less than 0.05, heteroscedasticity is present and can be fixed by using different versions of the variable such as log or raw figures instead of ratios as intended. (Klein, Gerhard, Büchner, Diestel& Schermelleh-Engel 2016)

3.7.4 Hausman Model Specification Test

The Hausman test measures whether one or more independent variables is endogenous. Endogenous variables show correlation with the unique errors in the linear regression model.

A P value exceeding 0.05 denotes no endogeneity and that of less than 0.05 means there is endogeneity and the linear regression model is not specified correctly. It can be corrected by investigating and adding other predictor variables that are relevant. (Chmelarova, 2007)

<center>**CHAPTER FOUR**</center>

<center>**DATA COLLECTION, ANALYSIS AND COCLUSIONS.**</center>

4.1 Introduction

This segment details data collection,analysis as well as conclusions drawn. A descriptive research was done on the data and regression analysis applied to draw inferences.

4.2 Data Collection

The research covered a period of five years starting 2017 through 2021. Existing secondary data was compiled using audited financial reports of the eight manufacturing companies from their various websites and the NSE results handbooks. Multiple linear regression was applied with descriptive statistics as shown below.

4.3 Descriptive Statistics

	N	Min	Max	Mean	Std. Dev
Share Capital	40	0.038	0.7983	0.178774	0.2341756
Longterm Debt	40	0.00355	0.78499	0.2986604	0.30098031
Shortterm debt	40	0.0008	0.8822	0.456120	0.2555454
Retained Earnings	40	0.914	0.8842	0.248877	0.2495432
ROA		0.0031	0.4958	0.144351	0.1368868
ROE		0.0059	0.8831	0.275493	0.2268931

Figure 4. 2 Descriptive Statistics

Source: Researcher 2022

Figure 4.1 above shows that retained earnings had the largest mean of 0.45612 amongst the predictor variables followed by long-term loans at 0.29866, then short-term loans with 0.248877 then finally share capital with the least mean of 0.178774. All predictor variables had standard deviations ranging from 0.2341 to 0.3009. This shows that the variations in the variables from the mean are moderate.

Return on Assets denoted as ROA returned a 0.1443 mean with standard deviation at 0.13688. The firms had an average return on assets at 14 % with ROA being measured as net profit dived by total assets.

Return on Equity denoted ROE returned a mean at 0.2754 with standard deviation as 0.2268 which was a significant variation. This means on average; the firms had a ROE of 27% being measured as the net profit divided by total shareholders' funds.

4.4 Regression Analysis

4.4.1 Significance Test

Analysis of variance on the regression model was as shown below;

Model	Sum of sq	Df	Mean sq	F	Sig
Regression	1.186	4	0.296	8.537	<0.01
Residual	2.292	66	0.035		
Total	3.478	70			

Figure 4. 2 ANOVA with ROA as the dependent Variable
Source: Researcher 2022

Model	Sum of sq	df	Mean sq	F	Sig.
Regression	0.208	4	0.52	3.473	0.17
Residual	0.523	35	0.15		
Total	0.731	39			

Figure 4. 3 ANOVA with ROE as the dependent Variable
Source: Researcher 2022

The regression model with Return on assets as the predicted variable had a significance of less than 0.01 which is within the recommended range on less than 0.05 as shown in figure 4.2. This means the regression model was sufficient and the predictor variables of retained earnings, share capital, long term debt and short term are significantly correlated to return on assets.

Figure 4.3 shows the regression equation using Return on Equity as the predicted variable with a significance value of 0.17 which is higher than 0.05 and is therefore not suitable.

4.4.2 Regression Model

R	R square	Adjusted R Square	Std error	R square Change	F change	DF1	DF2	Sig.F change
0.584	0.341	0.301	0.1863	0.341	8.537	4	66	<0.001

 Figure 4. 4 Regression Model Summary
Source: Researcher 2022

Figure 4.4 displays the summary of the model. Coefficient of correlation R was 0.584 denoting a strong correlation between the predictor and predicted variables. R squared value of 0.341 means 34.1 % of changes in the explained variable are determined by the elements of capital structure measured here.

MODEL	B	Std Error	Standardized Beta	T	sig	Tolerance	VIF
CONSTANT	0.196	0.066		2.991	0.004		
SHARE CAPITAL	0.139	0.118	0.147	1.181	0.242	0.643	1.555
LONGTERM DEBT	0.228	0.093	0.296	2.455	0.017	0.685	1.460
SHORTTERM DEBT	0.348	0.096	0.380	3.639	<0.001	0.915	1.092
RETAINED EARNINGS	-0.208	0.096	-0.219	-2.167	0.034	0.973	1.028

Figure 4. 5 Coefficients of Regression Model
Source: Researcher 2022

Figure 4.4 shows firms have a constant performance of 0.196 with predictor variables at zero. This represents the constant value in the model

The coefficients for the predictor variables are share capital 0.139, long term debt 0.228 short term debt 0.348 and retained earnings at – 0.208. Each value denotes how financial performance changes with one unit change in each of the predictor variables.

The multiple regression model is shown

$Y=0.196+ 0.228X_1+ 0.348X_2-0.208X_3 +0.139X_4 +0.183$

Where:

Y= Performance of NSE listed manufacturing firms measured by Return on Assets

β_0 = Regression constant (y-intercept)

X_1= Long term debt

X_2 = Short term debt

X_3 = Retained earnings

X_4 = Share capital

0.183 is the error term of the model and represents 18.3%which are the changes in financial performance which cannot be predicted by capital structure but are predicted by other variables.

4.4.3 Interpretation of Findings

Share capital affects financial performance positively and significantly though to a lesser degree. This concurs with the findings of Githire, C. &Muturi, W. (2015). Long term debt affects financial performance positively and significantly with a coefficient or 0.228. This is in agreement with Muigai, R.G. (2016) and differs with Nazir, A., Azam, M. and Khalid, M.U. (2021)

Short term debt has the largest positive correlation with financial performance at 0.348. This contrasts with Muigai, R.G. (2016) and Githire, C. &Muturi, W. (2015) whose findings reported such being detrimental to performance.

Retained earnings showed a significant negative correlation to performance at 0.208 or 20.8 %. These findings are similar to those of Mutua, L (2020) who found equity and retained earnings to have a negative correlation to performance.

The Shapiro Wilk Test was adopted as a measure for normality. The test returned a P value of lwer than 0.001 signifying the data set was normally distributed (Ghasemi & Zahediasl, 2012)

Collinearity was measured using Variance inflation factor where value of 1 indicates no correlation, between one and 5 indicates moderate correlation and more than 5 suggests critical

correlation. Figure 4.5 shows the variables all having VIF of more than 1 but less than 5 which

shows the multicollinearity is not significant to affect the outcome of the model (Daoud,2017).

The Glejser test for heteroscedasticity was applied. The Sig values all exceed 0.005 which means

there was no heteroscedasticity (Klein, Gerhard, Büchner, Diestel& Schermelleh-Engel 2016)

Hausman model test was done by comparing means which returned a significance figure 0f 0.12

meaning there were other predictor variables for the predicted variable not included.

CHAPTER FIVE

FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

An abridged description of results from research conducted is to be found in this segment together with inferences drawn and suggestions contingent on findings

5.2 Summary

The research set out with an aim of measuring and ascertaining the nature of the relationship that exists between capital structure and financial performance. Under consideration were firms listed under manufacturing and allied at the NSE. Eight firms currently being traded were selected and data collection rate was 100%.

Data collection was done via excel sheets with Statistical Package for Social Science (SPSS) being applied for analysis. Descriptive statistics a mean of 0.14 with standard deviation at 0.13 for ROA and 0.27 and 0.22 for ROE respectively. The means for the predictor variables share capital, retained earnings, long-term debt and short-term debt were 0.17,0.45,0.29 and 0.24 respectively.

The regression model had an R squared value of 0.341 with a significance at 0.001 denoting that the predictor variables significantly impact the level of Return on Assets. 34.1% of all variations in Return on Assets are determined by the measured predictor variables.

ANOVA with Return on Assets was 0.001 with that of Return on Equity as the explained variable at 0.017 which rendered the model insignificant as a predictor of performance.

Share capital, long-term debt and short-term debt correlated positively with ROA at 0.139,0.228 and 0.348 respectively. This shows that they affect performance significantly and positively.

Retained earnings had a coefficient of -0.208 which shows that they affect performance significantly and negatively.

5.3 Conclusions

This research deduced the existence of a substantial connection between capital structure and performance of NSE listed manufacturing firms. Capital structure is responsible for 34.1% of all variations in performance measured by Return on Assets.

The examination also deduced that share capital, long-term debt and short-term borrowing affect performance positively while retained earnings affect performance negatively. The ANOVA for the regression model was less than 0.01 and this study concludes that the regression equation derived was sufficient in studying the study variables. The findings on share capital and long-term debt concur with thse of Githire, C. &Muturi, W. (2015) but differ on the impact of short-term borrowing.

Short-term debt has the highest effect as a predictor while share capital has the least effect.

5.4 Recommendation

The research encourages a government policy that enables manufacturing firms to access affordable debt which influenced performance positively regardless of maturity. An example could be formation of an industrialization bank that funds the manufacturing sector.

The conclusions on share capital having positive effects should give government policy impetus to encourage more firms to list at the NSE to fund their capital structure especially large unlisted manufacturing firms.

Since share capital influences performance positively, listed firms are encouraged to make use of it and increase it through bonus and rights issues. Since retained earnings were found to affect

performance negatively, firms should also consider increasing dividend payout ratios or converting retained earnings to share capital.

Since short-term debt was concluded to have the largest positive effect, the study recommends management to explore avenues of accessing such to fund working capital.

5.5 Limitations of the Research

There were only eight entities forming the population of the research. Delisting of some entities and suspension of trading has impacted the capital markets negatively reducing the options. Listed firms have different capital structures from unlisted firms and were therefore not a good representative of the whole manufacturing sector.

Data collected spanned the period of five years starting 2017 to 2021. Results are relevant based on the prevailing circumstances per the contingency theory. The study results do not form a basis for drawing insight on different time periods. Being based on Kenyan firms meant applicability is only relevant to the Kenya context.

The study relied on Return on Assets as the only indicator of performance. There are other indicators of firm performance that were not considered.

5.6 Suggestions for Additional Research

Inferences drawn signify that capital structure accounts for 34.1% of all the changes displayed in performance. Barring the error term, other factors are responsible for financial performance. The researcher recommends a study into these other factors to establish a more complete body of knowledge.

The study covered a five-year period during which different circumstances were prevailing. The recommends research covering a much longer period to measure the enduring variables that determine performance over time.

The research also recommends a study using other indicative measures of performance such as net profit margin, earnings per share and economic measures such as Economic value added (EVA)

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APPENDICES

Appendix I: NSE Listed Manufacturing Firms 2017-2021

1. B.O.C Kenya Ltd Ord 5.00
2. British American Tobacco Kenya Ltd Ord 10.00
3. Carbacid Investments Ltd Ord 5.00
4. East African Breweries Ltd Ord 2.00
5. Unga Group Ltd Ord 5.00
6. Eveready East Africa Ltd Ord.1.00
7. Kenya Orchards Ltd Ord 5.00
8. Flame Tree Group Holdings Ltd Ord 0.825

Source: NSE, (2022) accessed from https://www.nse.co.ke/listed-companies/