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

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DECLARATION

I, the undersigned, certify that this is my original work and that it has not been submitted for examination to any other institution or university other than the University of Nairobi.

Signed:  Date: 26/10/2021

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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 endeavor is dedicated to my complete family for their unwavering spiritual love and support all across the process.

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LIST OF ABBREVIATIONS

ARDL	Autoregressive Distributed Lag
BSE	Bombay Stock Exchange
CSE	Colombo Stock Exchange
DEP	Depreciation
EPS	Earnings Per Share
LEV	Leverage Correlation
NSE	Nairobi Security Exchange
PPE	Property, Plant and Equipment
REV	Revenue
ROA	Return on Asset
ROE	Return on Equity
TOT	Total Assets
USA	United State of America

ABSTRACT

The most crucial part of financial management is capital structure decisions. As a result, financial managers must always ensure that the cost of capital is as low as possible in order to maximize shareholder wealth. When it comes to capital structure considerations, one important factor to examine is the firm's capital intensity, which plays a critical role in limiting the firm's operating leverage. The general responsibility of firm managers in such situations is to properly handle firm financing in order to keep the firm's capital intensity under control. The financial performance of several NSE-listed companies has been worsening dramatically over the previous few years. The failure of these companies to keep their capital intensity under control has been blamed for their poor financial performance. Financial managers have been focused more on financial restructuring and working capital management without paying attention to their firm's degree of capital intensity, which has resulted in poor performance for listed corporations on the NSE. The main aim of this research was to examine the impact of capital intensity on the financial performance of NSE-listed companies in the manufacturing and allied sector. The study utilized a non–experimental explanatory research design. The study's target demographics were all NSE-listed companies between 2015 and 2019. The study used a census to include all firms listed on the NSE between 2015 and 2020. This analysis relied on secondary data obtained from the NSE. SPSS was used to code the data (V.20). To analyze quantitative data, descriptive statistics and frequency distribution tables were used. To determine if there is a link between capital intensity and financial performance of firms listed on the NSE in the manufacturing and allied sector, Pearson Correlation and ANOVA tests was used. The data was found to be regularly distributed using a normality test. Multicollinearity was not detected in the investigation since three VIF values were less than ten. The results show that p-values for the Chi-square statistic are less than 0.05, indicating that the empirical model's residuals are not auto correlated. All of the variables employed in this study exhibited a positive significant link with ROA, according to the findings. The study also discovered that increasing the variables employed in this study by one unit results in improved financial performance. The parameters examined contributed 73.8 percent to the manufacturing NSE-listed firms' financial performance. According to the study, the financial performance of manufacturing enterprises listed on NSE was significantly and positively influenced by profitability, leverage, company size, and capital structure. This suggests that finance managers should prudently balance their equity and debt positions in order to positively impact the financial performance of manufacturing companies listed on the NSE. Additionally, the report proposes that senior management aim to strengthen their leverage and capital structure in order to have a beneficial impact on financial performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the subject of financial management, capital structure decisions are the most essential decisions to be taken. This is due to the fact that the overall impact of capital structure has a substantial impact on the long-term financing of a company's fixed assets (GRM & Yogendrarajah, 2013). For this reason, financial managers are always required to ensure the lower cost of capital in order to be able to maximize shareholders' wealth. However, one key determinant to take into consideration when faced with capital structure decisions is the firm's capital intensity as it plays a very crucial role in controlling the firm's operating leverage. In such instances, the overall role of firm managers is to effectively control the firm financing so as to keep the firm's capital intensity under control (Oeta, Kiai & Muchiri, 2019). Highly capital intensive firms minimize risk and, as a result, the cost of equity capital. Accordingly, the overall financial performance of such firms are elevated.

The theoretical framework for the current study will be anchored on Resource-Based View, Tax Planning Theory and Political Power Theory. The Resource-Based View asserts that organizations possess resources that enable them to gain a competitive edge as well as resources that drive them to attain superior long-term performance, according to the theory (Kull, Mena & Korschun, 2016). Tax Planning Theory holds that tax planning saves money for organizations by diverting funds that would otherwise be directed to the IRS. In contrast, Political Influence Theory asserts that large corporations have greater political and economic power than smaller corporations, which

they can use to minimize their tax obligation through active tax avoidance while simultaneously increasing after-tax returns.

Capital intensity may be directly or indirectly related to a business dimension, depending on the parameter which may result in greater risk and value for the corporation in some circumstances. In light of the fact that organizations or enterprises with high levels of capital investment are more likely to experience significant fluctuations in profitability, it is possible that becoming more capital-intensive will increase the amount of business risk that the firm is exposed to (Oeta, Kiai & Muchiri, 2019). Some businesses with more fixed assets may experience an increase in risk as a result of the high amount of fixed expenses that must be incurred in order for the business to achieve profitability. Consequently, earnings see greater fluctuations as a result of the enormous volume of fixed costs that does not move with the amount of sales.

1.1.1 Capital Intensity

Capital intensity refers to the extent at which a firm has invested its financial resources in tangible assets such as property, plants and equipment (Oeta, Kiai & Muchiri, 2019). Capital intensity is defined by Cette, Lopez, and Mairesse (2016) as the quantity of fixed or real capital present in a firm in relation to other components of production, particularly labor within a firm, according to their definition. Furthermore, according to Irianto, Sudibyo, and Wafirli (2017), infusion of high amounts of capital into a firm or industrial process is defined as capital intensity. For this reason, capital intensity is the amount of money a company invests in order to produce at least one dollar worth of output from the fixed and physical assets that the company owns or controls. As Cette, Lopez, and Mairesse (2016) point out, a firm with a higher capital intensity tends to have a higher proportion of non-current assets in its portfolio.

GRM and Yogendrarajah, (2013) suggests that different economic sectors normally have different capital intensity requirements. As a result of this, some sectors are considered to be more capital intensive than others. In such sectors which are highly capital intensive, increasing the capital intensity results in improved financial performance due to quality of production and on time production. However, while making judgments about raising the capital intensity of enterprises, organizational managers must ensure that they have evaluated the most appropriate financing alternative in order to enhance their market share while also boosting the market value of the company (Irianto, Sudibyo & Wafirli, 2017). Though firms normally consider increasing their capital intensity in order to improve quality and subsequent financial performance, settling at the right financing mode to finance such an increase is very crucial.

When the economic cycle shifts, capital intensive enterprises typically react in a different way than labor intensive firms, according to the literature (Nangih & Onuora, 2020). However, while changes in the economic climate may have a detrimental impact on capital-intensive businesses, they may have little or no influence on labor-intensive businesses. Therefore, several capital intensity indicators such as depreciation as a proportion of revenue (DEP: REV), property, plant, and equipment to total assets (PPE: TOT), property, plant, and equipment to revenue (PPE: REV), and total assets to revenue (TOT: REV) have been established (Hove, 2017). The fact that different measurements of capital intensity are focused on distinct areas of a company is, however, extremely important to keep in mind. Consequently, it is possible that a particular metric will provide a more accurate estimate of a firm's degree of capital intensity than other measures in specific circumstances.

1.1.2 Financial Performance

The ability to generate revenue from its principal mode of business is one of the measures of a company's financial performance and thus its overall financial health over time (Gartenberg, Prat & Serafeim, 2019). Market performance, profitability, and shareholder returns are typically considered to be the three essential elements of corporate success when it comes to financial performance (Shin & Konrad, 2017).A company's financial performance can also be measured in terms of how effectively and efficiently it accomplishes its financial and operational objectives, such as maximizing profit to its shareholders and providing value to its customers. A company's ability to measure its progress toward predetermined goals, identify areas of strength and weakness, and plan future activities aimed at improving performance is based on its financial performance.

Numerous critical variables affect a business's financial performance. An organization's resources and information; its management structure; the specialization of its employees; and its working environment are all examples of variables that can be used to determine an organization's success (Gartenberg, Prat & Serafeim, 2019). To put it another way, businesses that aren't worried about their overall performance generally fail because of disgruntled customers and high employee turnover, both of which have been found to negatively affect their overall performance in previous study (Shin & Konrad, 2017).

Historically, a company's financial success has been determined primarily by its profitability, market potential, and growth objectives. However, numerous accounting ratios are now utilized to paint a clear picture of a corporation's financial performance in order to make sound business decisions (Irianto, Sudibyo & Wafirli, 2017). Profit margin, return on assets (ROA), return on equity (ROE), earnings per share (EPS), and net asset value per share are only a few of the

accounting ratios that are frequently used to determine a company's financial success. Profit margin is a widely used accounting statistic for assessing a business's financial success. Although not explicitly stated in this investigation, the financial performance of firms listed on the NSE will be evaluated using the return on equity (ROE) and return on assets (ROA) ratios, as both indicate how well a corporation uses its assets to generate profits.

1.1.3 Capital Intensity and Financial Performance

The capital intensity of a corporation is a crucial differentiator among competitors (Nangih & Onuora, 2020). Thus, a firm's capital intensity generally affects its overall financial performance. However, the relationship between capital intensity and firm success has long been a source of debate among financial scholars and business managers. Because the firm is capital intensive if it invests heavily in non-current assets, which has a negative impact on its performance (Lannelongue, Gonzalez-Benito & Quiroz, 2017). To provide more relevant and credible financial reporting, accounting regulatory organizations around the world have made it mandatory for corporations to include non-current assets and other organizational resources in financial statements.

Globally, capital intensity and financial success have been studied. According to Chukwu and Egbuhuzor (2017), the return on assets and the availability of plant and machinery in Nigerian manufacturing enterprises are statistically significant. Zhang (2017) examines the relationship between intangible assets and profit margins in China's economy from 2014 to 2016. The study found a link between financial success and intangible asset ratios. On the Bombay Stock Exchange, Ansari and Gowda (2013) examine the tangibility of assets, the capital structure, and their impact

on financial performance (BSE). The study found a statistically significant link between capital structure and financial success.

A company's financial success is influenced by its capital intensity, which has a direct impact on liquidity and profitability, two performance metrics. It is consequently critical for business managers to manage their capital intensity, as liquidity management efficiency is determined by how efficiently current assets and current liabilities are planned and controlled.

1.1.4 Firms Listed at the Nairobi Securities Exchange

The Nairobi Security Exchange (NSE) is the principal stock listing market in Kenya. Since it commenced trading back in 1954, NSE has been a renowned stock market throughout Africa and attracts large number of both local and foreign investors (NSE, 2019). NSE is a member of African Securities Exchange Association. Across the continent, NSE is credited as being the fourth largest stock market in terms of trading volumes and market capitalization. As such, there are many companies that have been listed at NSE from every sector of the economy and whose shares are doing quite well (Buigut & Soi, 2020).

There are currently 62 firms that are publicly traded on the NSE, which are divided into thirteen major categories by industry. The following are some of the categories to consider: agriculture, automobiles and accessories, banking and commercial services, construction and allied industries, energy and petroleum, insurance, investment, investment services, manufacturing & allied industries, telecommunications & technology, real estate investment trusts, and exchange traded funds (NSE, 2019). Several diverse variables, each of which has a distinctive impact on the financial success of the firms, are highlighted by the companies. The firms in each of the thirteen categories have been in operation for varied lengths of time and with varying degrees of leverage,

and therefore have diverse experiences in their respective industries. In addition, the firms have been in business in their various industries for a varied periods and thus have different perspectives on the dynamics of the industry.

The financial performance of several companies listed on the National Stock Exchange (NSE) has deteriorated dramatically during the previous few years. The inability of these companies to keep their capital intensity under control has been attributed to a substantial part of their poor financial performance. Having uncontrolled capital intensity has caused some of the firms listed at the NSE to be prone to various operational risks that have caused significant fluctuations in their operational profitability.

1.2 Research Problem

Financial frictions arising from ineffective financing decisions are among the main deterrents to firm better financial performance (Andreasen, Bauducco & Dardati, 2019). Therefore, the introduction of capital intensity as a control factor is very essential as it requires financial managers to assess the most effective financing option that makes it possible for a firm to achieve financial success. Traditionally, the degree of a firm's capital intensity had not been considered to be an important indicator of the enterprise's expected future financial performance (Fan, Pan, Liu & Zhou, 2017). However, in contemporary world, capital intensity has become an important control factor in determining the financial performance among firms. This is based on the fact that the assets that are held by a firm significantly determines the long-term performance of such firms (Fan, Pan, Liu & Zhou, 2017).

In Kenya, firms listed at NSE have been posting mixed financial performance over the last one decade. Even though some listed firms at NSE have been posting impressive financial results, there

are still a dozens of them which have been posting a declining financial performance (Irungu, 2019). It has been suggested that underperformance of listed companies on the Nairobi Stock Exchange has been caused by financial managers concentrating more on financial restructuring and working capital management rather than on their firm's degree of capital intensity, according to Oeta, Kiai, and Muchiri (2019). As per NSE Report (2019), fifteen listed firms traded at a loss in 2018 while 25 had a decline in their profits (Martin & Shalev, 2017). A number of listed firms which performed very well financially in past such as Uchumi Supermarket, Mumias Sugar, Kenya Airways among others are currently reporting huge losses that has thrown their operations into deep crisis (Bongoye, Banafa & Kingi, 2016). Despite the fact that the government expects listed companies on the NSE to contribute at least 22 percent of the country's GDP by 2022, this is still the case. Concerns have been raised over whether or not this will be realized, given the erratic performance of some of the NSE's listed companies.

Prior study has focused on the interconnectedness between capital intensity and financial performance of firms, and there has been a great deal of past work in this area. Nangih and Onuora (2020) conducted a global study on the influence of capital intensity on the profitability of publicly traded oil and gas businesses in Nigeria, which was published in the Journal of Petroleum Economics and Management. A strong positive effect on profit margins was found for determinants of capital intensity in publicly traded oil and gas businesses in Nigeria, with the exception of intangible non-current assets, which did not have a meaningful impact. It was discovered by Yogendrarajah and Gamlath (2013) that the profitability, firm size, and capital intensity of firms in the Sri Lankan plantation industry all have an impact on the proportion of debt financing in the capital structure. The findings of this study were published in the journal Economic Insights and found that the profitability, size, and capital intensity of firms in the plantation

industry all have an impact on the proportion of debt financing in the capital structure. A further study, Lee (2014) explored the relationship between capital intensity and firm performance in the United States restaurant business and found that capital intensity had a substantial impact on the financial performance of restaurants in the United States (Lee 2014).

In their investigation into the relationship between capital intensity and financial performance of manufacturing firms that are listed on the Nairobi Stock Exchange, Oeta, Kiai, and Muchiri (2019) discovered that capital intensity has a positive but insignificant relationship with financial performance of manufacturing firms. According to Kamande (2017), who researched the influence of bank-specific features on the financial performance of commercial banks in Kenya, the relationship between bank liquidity and financial performance of commercial banks was statistically significant. As far as we know, no research has been done in Kenya to investigate the relationship between capital intensity and the financial performance of companies that are listed on the Nairobi Security Exchange. The current study, as a result, seeks to add to the already existing literature on the effect of capital intensity on the financial performance of manufacturing and allied firms listed on the Nairobi Stock Exchan ge (NSE) by specifically addressing the question: what is the effect of capital intensity on the financial performance of manufacturing an allied firms listed at NSE.

1.3 Objective of the Study

The objective of this study was to examine the effect of capital intensity on financial performance of manufacturing and allied firms listed at the NSE.

1.4 Value of the Study

Various concerned parties will greatly benefit from the findings established from this study.

First, the study's findings will help management of NSE-listed companies make informed investment, finance, and budgetary decisions in order to maximize shareholder wealth by enhancing firm financial performance. To achieve this, financial managers and policymakers must understand the overall impact of investment in physical assets on the operations of the company. This will thus inform their decisions in developing procedures to establish, expand, monitor, control and maintain their optimal levels of operations. The study's findings will also help business managers understand how capital intensity affects their firms' success.

The conclusions reached as a consequence of the empirical data will also serve as a platform for researchers, students, and academicians who may utilize the findings as a guide to establish research subjects and as a source of knowledge in answering issues pertaining to the subject matter. Aside from that, future research on the subject in the finance field will be founded on the additional pool of knowledge generated from this research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review is a summary of prior research studies done on a particular topic. Theoretical and empirical literatures are expounded in this chapter in the following format. The theoretical literature is introduced in Section 2.2, Section 2.3 explores the determinants of dividend policy, empirical literature is reviewed in Section 2.4, the conceptual framework is covered in Section 2.5, while the last section a summarizes the whole literature review.

2.2 Theoretical Literature

A theory is an introspective reasoning that generalizes the interconnectedness of variables. A theoretical framework is a set of concepts or prepositions based on theories. Due to the fact that no single theory can fully explain all notions, the following theories have been chosen to help the study. This study's theories include tax planning, political power, and trade-off theory. Thus, the given theories provide a detailed understanding of the generalized explanations in respect to the study aims.

2.2.1 Tax Planning Theory

The study is guided by Hoffman's Tax Planning Theory of 1961. The theory states that tax planning saves money for organizations that would otherwise go to the taxman. However, desirable tax avoidance practices should not jeopardize accounting income. Rather than accounting income, it is based on the concept that tax liabilities are computed on taxable income rather than accounting income. For Hoffman, tax planning and financial success are linked when

companies work to reduce taxable revenue without affecting their accounting profit and focus their resources on tax planning tactics that legitimately accomplishes this.

In the pursuit of tax planning, organizations should always ensure that the tax costs do not exceed the tax benefits (Hoffman, 1961). This theory is relevant in the sense that capital intensity is one of the tax planning strategies that an entity can use to increase after-tax returns. Capital allowances provide organizations with tax breaks, which improves their financial performance.

2.2.2 Political Power Theory

Salamon and Siegfried proposed the theory in 1977, arguing that larger firms have more political and economic power than smaller firms, which they can use to reduce their tax liability through aggressive tax avoidance to improve after-tax returns. Tax burden is linked to company size in the political context of tax planning. Because of their economic impact, large corporations wield considerable political power and influence, and they may be better positioned to negotiate their tax burden, particularly through trade associations, which may result in a lower effective tax rate (Siegfried, 1972). Without a doubt, listed companies are large corporations with adequate financial resources. According to the political power theory, large firms are mature and have adequate resources to engage professionals tasked with corporate policy formulation, of which tax reduction strategies are unavoidable. This implies that tax planning strategies based on capital intensity can be professionally implemented by these listed manufacturing firms (large firms) to improve their after-tax returns and, as a result, should be positively associated with financial performance.

On the contrary, political large and prosperous firms are subject to increased scrutiny and regulatory action by the government (Richardson & Lanis, 2007). The more visible a company is, the more political costs it has to pay, like taxes. These costs are part of the total political costs that

corporations have to pay. It is said by Richardson and Lanis (2007) that large corporations pay more in taxes than small businesses do. The size of a company can be measured using a variety of parameters, including the number of employees, sales turnover, and total assets. The total assets of the company will determine its capital intensity; a more capital intensive company will have a higher ratio of non-current assets to current assets. This contributes to the theory's applicability in the study.

2.2.3 Trade-Off Theory

Myers was the one who came up with this concept (1984). If the costs and benefits of equity are carefully weighed, the optimal capital structure for any firm can be identified and implemented. In order to determine the appropriate proportions of loan capital and equity capital in a company's capital structure, the costs and benefits of each are first weighed against one another. The failure to appropriately manage the capital structure's excessive debt could lead to bankruptcy and agency fees. While debt capital has advantages such as tax savings, it must be managed properly. It is necessary to charge agency fees as a result of the misalignment of interests among the numerous corporate stakeholders, in addition to information asymmetry (Jensen & Meckling, 1976).

Trading off the benefits of debt (tax advantages) against the costs of excessive borrowing (financial hardship) and the resultant equity and debt agency expenditures, among other factors, can help a firm establish its ideal financial structure. Capital structure debt increases according to theory, and the marginal cost of debt rises while marginal profits fall until an optimal position is reached till debt is no longer a viable option. At some point, the marginal costs of debt outweigh the marginal advantages, causing the company's value to plummet. There should be a focus on maximizing both overall performance and profitability for the organization in this area.

Organizations with more tangible assets, according to Myers (1984), should have greater debt ratios, but enterprises with more intangible assets, according to the same author, should rely more on equity capital because their value will be destroyed in the event of a liquidation. According to this theory, businesses should investigate the various costs and benefits connected with each debt level and create an ideal debt structure that strikes a balance between the additional costs and benefits associated with each debt level (debt tax shields against bankruptcy costs). This explains why firms' capital structures are partially supported by stock and partially funded by debt.

2.3 Determinants of Capital Intensity

This section examines the factors that influence capital intensity, such as the size of the company, its profitability, its capital structure, and its level of financial leverage. Among a company's distinguishing characteristics, the amount of its capital intensity is a major one that helps to distinguish it from its competitors. When it comes to operating leverage, capital intensity is usually used as a proxy, and levels of capital intensity differ between industries. In most circumstances, a company's capital intensity has a substantial impact on its long-term financial viability. An open approach is taken in light of the literature's inconsistent findings and therefore the current study doesn't provide a directional hypothesis.

2.3.1 Firm Size

Garicano, Lelarge, and Van Reenen (2017) found from their research on business size and its relationship to capital intensity and value, that, when it comes to generating value, huge organizations may perform differently than small businesses. Banz (1981) discovered that smaller firms generate better expected common stock returns than larger firms, whereas Ball (1978) discovered that smaller firms are riskier than larger firms, resulting in smaller firms being

undervalued in comparison to larger firms. Due to the fact that it is one of the factors of capital structure in today's world, the size of a business is critical. The amount of net assets employed will be used to determine the size of the business.

Smaller companies are more profitable, according to Saliha and Abdessatar (2011), but larger ones have a greater impact on the economy. Larger firms have higher expenses since their economies of scale and scope don't match their larger size and scope, which causes them to lose money. This is the view of Banchuenvijit (2012). According to a study in the mobile industry, business size has no statistically significant impact on financial success, according to Bwisa and Kihoro (2012). However, Shahean and Malik (2012) found a link between capital intensity and business size and value that was statistically significant in only one respect: they found a positive correlation between capital intensity and firm value.

2.3.2 Profitability

With the resources that a corporation has at its disposal, profitability refers to how much money the company can make (Input vs. Output). The ultimate goal and reward for all of a company's management's hard work and planning is increased profitability, and the company's management is continuously seeking for methods to improve it (Oladele et al., 2012). Businesses that are profitable can extend their operations by developing their own internal sources of financing. They attract market investors and, as a result of their improved market visibility, are better able to negotiate the terms of fresh financing and close stronger deals.

Their market standing and share price are both affected by the choice and cost of financing, thus they must proceed with caution in making these decisions. They face greater risk as a result of their reliance on debt financing, and the future becomes more unpredictable, which has a

negative impact on their stock prices and market status as investors get disenchanted. Return on assets (ROA) is one of the metrics used to measure profitability (Oladele et al., 2012), return on equity (Saona, 2011), and net interest margin (Flamini et al., 2009).

2.3.3 Capital Structure

Additionally, the capital structure has been described as a hybrid of stock and debt finance because it is linked to the company's ability to meet the needs of all of its stakeholders, including employees, the community, and shareholders, among other things, in addition to being widely recognized as one of the most important financial variables (Jensen, 1986). If a company's capital structure is appropriately and successfully employed, it can have a substantial impact on its financial success. Company capital structure can be assessed using debt ratios. Debt-to-asset ratios are used to determine the relationship between a corporation's total debt and its total assets. In general, the lower the company's debt-to-equity ratio, the less dependent it is on debt financing, whereas the higher the debt-to-equity ratio, the more dependent it is on loan financing.

Banafa, Muturi, and Ngugi (2015) discovered that capital structure has a negative effect on the financial performance of non-financial enterprises listed on Nairobi's Stock Exchange (NSE). In Pakistan, Hussein, Sahid, and Akmal (2016) collaborated with the University of Karachi to study the financial performance of textile firms. According to the study, the use of leverage has a detrimental impact on both asset and equity returns. A study by Eldomiaty and Azim (2008) indicated that a firm's financial success is favorably correlated with its capital structure.

2.3.4 Financial Leverage

Using fixed financial charges to boost earnings before interest and taxes on an individual share basis is referred to as "financial leverage" in the financial industry. A company's earnings before

interest and taxes will fluctuate if it does not use fixed-cost bearing instruments, resulting in a change in earnings per share. If a corporation does not have any set financial charges, such as preferential dividends and interest, this is a sign that the company is utilizing financial leverage (Pandey, 2019). A firm can use financial leverage to triple its profitability before interest and taxes, resulting in higher earnings per share for shareholders (Saleem, Rahman & Sultana, 2014).

As a measure of financial risk, financial leverage, refers to long-term borrowing with fixed finance charges based on a company's assets rather than short-term financing. Increased financial risk and high capital costs are both associated with increased financial leverage. Debt and equity are used in a company's capital structure to fund its operations. According to Firer, Ross, Westerfield, and Jordan (2004) when calculating leverage, a variety of ratios are utilized. Within a company's capital structure, the ratios indicate the firm's position in satisfying the interests of its various stakeholders as well as to quantify its debt.

2.4 Empirical Literature

This section examines the empirical literature on capital intensity from a global to a local perspective, beginning with the global perspective and progressing to the local perspective. Studies conducted on the subject have been examined, and their findings have also been presented, in order to make a comparison between their conclusions and the current study's findings. In accordance with the existing literature, capital intensity may have a negative or positive association with the financial performance of a company. As a result, the available literature yields a mixed result, with the majority of the research being undertaken in other countries, where the conclusions produced may not be applicable to the Kenyan setting, as is the case in this study. As a result, the current

study seeks to determine whether there is a relationship between the factors selected for this study, in which case the previous results of studies done are reviewed from a global to a local perspective.

2.4.1 Global Studies

Judzik and Sala (2015) analysed the determinants influencing capital intensity in Japan and the United States. They analysed time series data obtained between 1970 and 2011 using the autoregressive distributed lag (ARDL) method. Independent factors include the relative costs of the production function, the rate of involvement of production components, the openness of trade to international competitors, and direct taxation of household and trade taxes. According to the findings, demand-side factors such as the participation rate of available capacity have a bigger impact on capital intensity in the United States than supply-side factors. The findings also show that the propensity for capital factor is greater in the US, whereas the tendency for labor factor is greater in Japan.

A research on how capital intensity and tangibility affects a company's financial success was conducted by GRM and Yogendrarajah (2013) on Sri Lankan banking and insurance firms that are publicly traded on the Colombo stock exchange. Data from Colombo Stock Exchange-listed banking and insurance companies from 2007 to 2011 was used to select the sample (CSE). There are two ways to measure the amount of money invested in the company: the capital intensity and tangibility ratios that are calculated by dividing total assets by total revenues, respectively. Capital Intensity, Tangibility, and Financial Performance are statistically linked, according to this study's findings. If the firm's capital intensity and tangibleness are increased, the firm's financial performance will be improved.

Hasan and colleagues (2013) study the factors that determine capital intensity effectiveness in India. They employed the Cobb-Douglas production function from 1980 to 2004. The findings show that labor market rules increase the cost of engaging labor. When enterprises attempt to enhance capital intensity, labor demand falls, reducing the trade benefit from comparative advantages. India's capital intensity is higher than that of other comparable countries in terms of resources and development. Lee (2010) investigates the relationship between capital intensity and performance in the US restaurant industry. He analyzed panel data from 524 businesses collected between 2000 and 2008. According to the findings, capital intensity has a negative impact on a corporation's success.

Lee (2010) explored the relationship between capital intensity and performance using data from the restaurant business in the United States of America. A collected regression analysis was used to examine the effect of capital intensity on the value of the firms in this study, using the Tobin-Q-dependent variable as the dependent variable. The investigations used two sources of information: the COMPUSTAT database, which contained financial data required of sampled restaurant businesses, such as total assets, sales, and inventory prices, and the annual unemployment rate reported by the United States Bureau of Labor Statistics (US Bureau of Labor Statistics). Except for the unemployment rate ($r = 0.02$; see Table 1), the association between Tobin's Q and any variable was statistically significant in every case. Tobin Q, on the other hand, has a positive link with capital intensity ($r = 0.13$), a positive association with company size ($r = 0.48$), and a favorable relationship with PROFIT ($r = .71$), but a negative relationship with leverage ($r = -0.11$).

Nangih and Onuora (2020) did study in Africa on the effect of capital intensity on the profitability of publicly listed oil and gas businesses in Nigeria, which was published in Africa. This study's

research design was ex-post facto (after the event). Nine (9) publicly traded oil and gas firms acquired information that was carefully chosen for inclusion in this report. The data has been collected. Five years of research (2014 to 2018). Following the Hausman test, other statistical models, including the random effect regression model, were used to analyze correlations between research variables. With the exception of non-current immaterial assets, the results indicated that all of the criteria had a significant positive effect on the profit margin. Organizations with a greater capital efficiency were anticipated to outperform those with a lower capital efficiency in the future.

2.4.2 Local Studies

Oeta, Kiai, and Muchiri (2019) investigated the relationship between capital intensity and financial performance in industrial firms listed on the Nairobi Stock Exchange. The positivist and explanatory research methodologies were employed to guide the research process in this study. All nine manufacturing companies that were publicly traded on the NSE were included in the analysis. The descriptive and inferential statistics were computed using panel data, and the data were analyzed using the SPSS version 23 program. Capital intensity, the study found, has a favorable but small link with financial performance. As a result, the financial performance of manufacturing enterprises listed on the Nairobi Securities Exchange has no bearing on their capital intensity. The study's findings suggest that businesses should increase their spending on non-current assets in order to maximize the benefits of capital allowances and improve their financial performance.

Mwangi (2020) investigated the relationship between corporate social responsibility and financial success of Kenya's largest industrial firms. The dependent variable in this study was return on assets (ROA), while the independent variables were corporate social responsibility (CSR),

efficiency, and capital intensity. The participants were large industrial enterprises in Kenya and thus descriptive and cross-sectional research design was adopted in the study. The research team's results were based on secondary data. The statistical approaches of choice were descriptive statistics and inferential statistics. The results show that capital intensity has a statistically insignificant negative relationship with return on assets (ROA) (financial performance).

Kanda, Mungai, and Omagwa (2019) researched the capital structure and profitability of insurance businesses listed on Using data from the Nairobi Securities Exchange. Short- and long-term debt as well as internal and external equity capital were examined in order to determine whether they had an impact on the profitability of insurance companies listed on Kenya's Nairobi Securities Exchange, and whether capital intensity played a role in improving profitability for insurance businesses listed on Kenya's Nairobi Securities Exchange by adjusting their capital structure. For this examination, it was determined to use a positivist research philosophy as well as a causal research technique. Between 2011 and 2018, the target population includes all six insurance companies registered on the Kenyan Securities Exchange. A document review guide was used to acquire secondary data for the study. An agreement on the use of statistical methods such as descriptive and correlational statistics, as well as multiple regression statistics, was established. A statistically significant effect of long-term debt on profitability (p=0.05) was seen, whereas a statistically significant effect of short-term debt was observed (p=0.05). A statistically significant effect of internal equity on profitability (p0.05) was seen, as was an effect of external equity on profitability (p0.05). Capital intensity had no effect on the link between the two variables.

Heshmati and Rashidghalam (2018) provided an examination of the impact of worker productivity in Kenya's industrial and service industries in their publication. An examination of data from the World Bank's Enterprise Survey for 2013 was carried out for this study. According to the study's

findings, capital intensity and remuneration have a significant and beneficial impact on worker productivity. An increased proportion of women in the workforce has a negative impact on labor productivity.

2.5 Conceptual Framework

A conceptual framework diagrammatically links independent and dependent study variables. The conceptual framework is crucial in research because it allows researchers to clearly establish the existing link between diverse research variables.

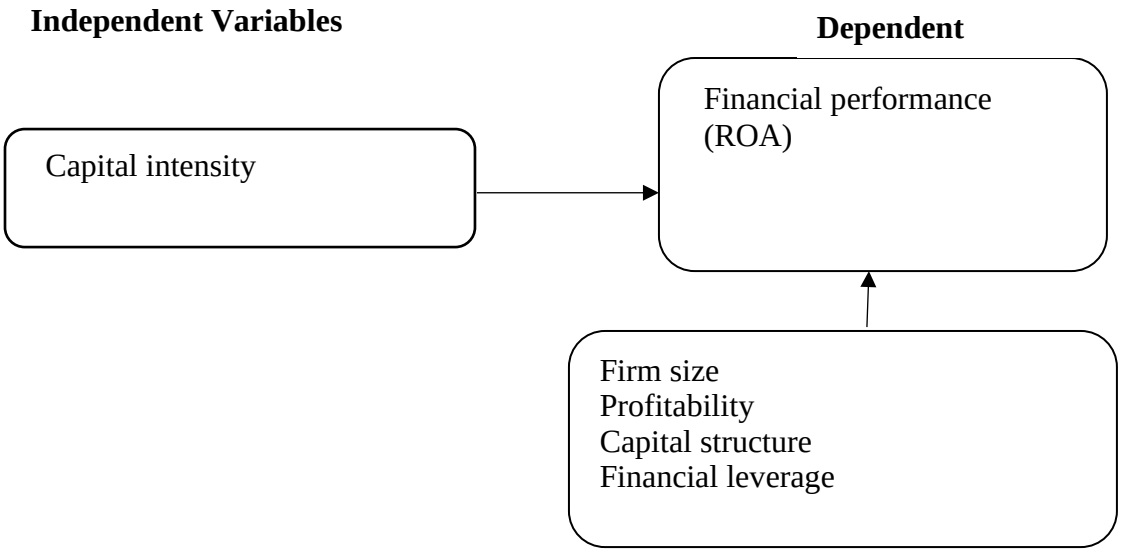

Figure 2.1 Conceptual Framework

Source: Author (2021)

2.6 Summary of Literature Review

Author of study	Focus of Study	Methodology	Findings	Knowledge Gaps	Focus of current study
Judzik and Sala (2015)	Determinants of capital intensity for Japan and the USA	The study adopted autoregressive distributed lag (ARDL) method for time series	Results also show that in the USA, there is a higher tendency for capital factor and in Japan there are more tendencies for labour.	The study was carried out in developed countries. The study only concentrated on two factors that is demand side and production cost	The current study will be carried out in the banking sector and will specifically outline the capital intensity parameter that will be adopted in the study
GRM and Yogendrarajah (2013)	Impact of capital intensity and tangibility on firms' financial performance	Study done over a period of three years. Secondary data was sourced from Colombo Stock Exchange	The study found that there is a strong connection between the amount of capital used and how tangible it is and how well a business does financially.	The study covered a period 3 years which may not be adequate to give a generalized finding.	The study will be carried out in Kenyan context and will cover a period of 10 years
Nangih and Onuora (2020)	The impact of capital intensity on the profitability of publicly traded oil and gas businesses in Nigeria was investigated.	Ex-facto research design was used.	Concluded that there is positive impact on the profit margin for all of the factors, except for non-current immaterial assets that did not have any effect	The study was carried out in energy sector which may not applicable in other sectors	The current study will adopt descriptive. This study will be conducted in manufacturing firms listed in NSE.
Oeta, Kiai and Muchiri (2019)	Effect of capital intensity and financial performance with focus to manufacturing	Positivism and explanatory research design.	Concluded that the intensity of capital has a good but insignificant relationship to financial performance	The study did not focus on the factors that affects to capital intensity in any sector where this	The current study will adopt descriptive research design. A period of 10 years will be covered

	companies listed in NSE			study will discuss those determinants	
Mwangi (2020)	The impact of corporate social responsibility on the financial performance of significant manufacturing enterprises in Kenya has been studied extensively.	Adopted descriptive research design Secondary data was used in the study	Concluded that capital intensity had an insignificant negative relationship with ROA	Capital intensity was used as independent variable	The current study indicates the relationship between capital intensity and firms performance
Kanda, Mungai and Omagwa (2019)	The capital structure and profitability of insurance companies that are publicly traded on the Nairobi Securities Exchange in Kenya.	The positivist research philosophy and causal research design were used in the study	The study found that capital intensity had no moderating effect on the relationship between capital structure and profitability of insurance firms	The study adopted capital intensity as moderating factor	In this study, capital intensity is discussed as the independent variable

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter examines the methods that were employed in order to complete this research. Without a method, it was envisaged to be difficult to go about doing the study. This section discusses research design, data collecting, diagnostic tests, and data interpretation.

3.2 Research Design

Research design is a technique used when conducting research in order to establish an accepted standard that has been successfully validated and executed for a long length of time and is regarded significant by many researchers in the field (Khaldi, 2017). Descriptive research design was used in this study, in which all variables were described in terms of their characteristics.

3.3 Population and Sample

Cooper & Schindler, 2016 describe population as the entire number of individuals or things to which researchers want to apply their findings on. A sample is the specific set of events, people, services, items, houses, or other objects that a researcher want to examine. The study's population is made up of manufacturing firms registered on the NSE between 2015 and 2020. According to NSE (2021), there are 8 businesses listed on the NSE in Kenya under the manufacturing and associated industry. Secondary data was gathered and analyzed during a ten-year period, from 2015 to 2020.

3.4 Sample Technique and Sample Size

This section details the various sampling strategies and the steps used to identify the research population's final sample. It also describes the procedures that were followed in order to obtain, process, and analyze the data obtained in the following sections.

3.4.1 Sampling Technique

Sample methodology, according to Taherdoost (2016), is a practice that entails selecting a sample of objects to represent all of the instances that are being considered as part of the inquiry. A surveyor's general target population from which to select a sample to research is outlined in this document. In this investigation, a technique known as census sampling was used.

3.4.2 Sample Size

It is the process which is necessary to decide how many observations or repetitions should be included in a statistical sample before it can be calculated how large the sample size should be (Boddy, 2016). Taking sample size into consideration is essential for any empirical study that seeks to draw conclusions about an entire population from a subset of that group. Since the number of targeted institution in this study was small and manageable, all the 8 firms listed in NSE under allied manufacturing firms were targeted in this study (Appendix I).

3.5 Data Collection

The annual audited financial statements and reports for individual firms listed in NSE under manufacturing and allied sector were analyzed and secondary data extracted from these reports. The financial statements sourced from the NSE provided data regarding the assets, debt, equity of a company at a given date and summary of revenues, over the period of time.

3.6 Diagnostic Tests

In order to determine the residuals' normalcy, the following diagnostic procedures were performed: the normality test. The null hypothesis is accepted if $p>0.05$ indicates that the residuals are regularly distributed. For the error variance to be tested, homoscedasticity was applied. Using a linearity test, you may determine the relationship between two variables. It will be used to determine if the variance of the data series is constant throughout time and the covariance computed between two periods of time does not rely on the actual time.

3.6.1 Normality Test

A normal distribution was expected for regression models. The study used the Shapiro and Wilk (1965) test to assess for the existence of normality. This test is chosen due to its good characteristics. Value 'W' lied between 0 and 1 where a value of one signified normality while values closer to zero indicated rejection of normality.

3.6.2 Homoscedasticity Test

The presence of homoscedasticity indicates that the error terms have a constant variance for each observation (Berenson, Levine & Krehbiel, 2009). The Breush-Pagan/Cook-Wesberg was used to check for homoscedasticity. At 95% Confidence level, where the null hypothesis has a constant variance, then values of $p>0.05$ caused the null hypothesis not to be rejected.

3.6.3 Linearity Test

This test shows the relationship between independent and dependent variables through the mathematical function $y= bx+c$, in which c is a constant number. ANOVA test of linearity that calculated both non-linear and linear constituents of a pair of variables was performed. For the non-linear constituent, where the F significance value was below 0.05, non-linearity was significant (Zhang, Maloney, Juslin, Winman & Olsson, 2011).

3.6.4 Test of Stationarity

Stationarity occurs when the mean and variance of a data series are constant over time and the covariance computed between two periods of time does not rely on the actual time whereupon the covariance is calculated, but depends solely on lag or distance across two periods of time (Gujarati, 2003). The Augmented Dicker Fuller (ADF) test was applied to find out the presence of stationarity in the variables. The null hypothesis was tested.

3.6.5 Auto correlation Test

It occurs where for successive time periods, there is a correlation of error terms of the regression variables. The Durbin and Watson (1951) test was employed to check for autocorrelation in the data, where the Watson statistic $1.5<d<2.5$, suggested that the error terms were independent (Garson, 2012).

3.7 Data Analysis

Data was collected, sorted and arranged in a tabular form for easy analysis. Descriptive and inferential statistics were employed to analyse the data. Descriptive statistics on variables and regression and correlation studies of variables were analysed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics, such as the mean, median, and standard deviation, were calculated as part of the investigation. For the purpose of discovering connections between the various variables, such as the liquidity variable and the dividend policy variable, regression analysis based on inferential statistics was used.

3.7.1 Analytical Model

The algebraic expression of the study as illustrated below, composed of the constant term, the coefficients and the error term.

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

Dividend Payout = α_{it} + β_1 Firm Size + β_2 Profitability + β_3 Capital structure + β_4 Financial leverage ε_{it}

Where;

Y= Financial performance (ROA)

X_1= Firm size

X_2= Profitability

X_3= Financial leverage

X_4= Capital structure

α = Constant

β_1, β_2, β_3 = represent the regression coefficients

ε = Error term which describes the model's unexplained variations

3.7.2 Tests of Significance

The researcher utilized parametric tests to assess the data statistical significance and the relevance of a specific parameter. Variance Analysis (ANOVA) was performed to establish the overall model's significance, while the t-test was employed to determine the significance of individual variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter outlines the findings of the data analysis in four sections. In Section 4.2 and 4.3, information on descriptive statistics and diagnostic tests respectively, are given whereas Section 4.4 and 4.5 presents the findings on inferential analysis.

4.2 Descriptive Statistics

The study used mean and standard deviation to describe how borrowing rates influenced capital structure of the studied firm. Table 4.1 below illustrates the findings of the study .

Table 4.1: Descriptive Statistics

	Min	Max	Mean	STDev	Skewness	Kurtosis
Financial Performance	-.503	.385	.06645	.142511	3.358	-.503
Firm Size	5.969	7.949	7.04903	.582726	-.231	-1.260
Profitability	.000	5.686	6.290	.772	2.458	3.720
Capital Structure	-.577	2.244	6.764	.550	4.357	2.354
Leverage	.136	10.089	2.18	.184	3.270	2.933

The findings of the summary statistics are shown in Table 4.1. According to the data in the table, the mean financial performance of the companies listed on the NSE's manufacturing and allied sector was 0.066, with the minimum and maximum values being -0.503 and 0.385, respectively. As well as indicating that the average company size was 7.04903, the table also tells that the minimum value was 5.969 and the maximum value was 7.949.

The table further indicates that the average mean profitability of the firms was 6.290, with minimum and maximum values of 0.000 and 5.686, respectively, and that the minimum and

highest values were 0.000 and 5.686. Capacity utilization had an average mean of 6.764, as well as minimum and maximum values of -.577 and 2.244, respectively, in the capital structure. The table also shows that the leverage had an average mean of 2.18 and a minimum value of 0.136, and that the leverage had a minimum value of.136 and a maximum value of 10.089, and that the leverage had an average mean of 2.18 and a minimum value of 0.136, and that the leverage had a minimum value of.136 and a maximum value of 10.089, respectively. Final results showed that all of the skewness and kurtosis values fell between 1 and 4, indicating that the variables were regularly distributed and that the assumption of normality was not violated.

4.4 Diagnostic Tests

To determine whether the data set was suitable for carrying out inferential analysis, the researcher conducted diagnostic tests. These tests included; Multicollinearity tests, Normality, Autocorrelation and Heteroscedasticity.

4.4.1 Multicollinearity Test

In order to strengthen the statistical significance and eliminate the risk of high correlation of the variables, it was necessary for the researcher to carry out multicollinearity test. This was done through Variance of Inflation Factor (VIF). Table 4.2 presents the conclusions of the study.

Table 4.2: Multicollinearity Test

	Collinearity Statistics	
	Tolerance	**VIF**
Firm Size	.014	72.523
Profitability	.412	2.430
Capital Structure	.174	5.758
Leverage	.221	4.531

a. Dependent Variable: ROA

From Table 4.2 above, except for firm size, all independent variables had VIF values of between 1 and 10. This clearly implies that there was multicollinearity in the data set representing the firm size. To resolve this problem of multicollinearity, firm size variable of the study was removed. The new values of VIF after treatment of multicollinearity are presented in Table 4.3 below.

Table 4.3: Cured Multicollinearity

	Collinearity Statistics	
	Tolerance	**VIF**
Profitability	.660	1.514
Capital Structure	.703	1.423
Leverage	.660	1.514

a. Dependent Variable: ROA

In accordance with Table 4.3, after removing the firm size variable from the study, all of the VIF values for the remaining variables fell between 1 and 10 on a scale. As a result, there was no multicollinearity in the variables studied. As stated in statistics, multicollinearity occurs when more than one predictor variable is highly linked with one another. Strong correlations between independent variables are a bad circumstance to find yourself in. It is possible to achieve perfection in situations when there is a linear relationship between one or more variables. It is asserted that multicollinearity exists. On the basis of the data collected, a multicollinearity test was performed. The variable's VIF value was used in the calculation. Obtaining a result in which the value of VIF is less than 10 indicates that multicollinearity1 does not exist. As shown in Table 4.3, the findings revealed that multicollinearity1 was not present because all VIF values were less than 10.

4.4.2 Normality Test

The normality test determined whether or not the data set had a normally distributed distribution. It was accomplished through the use of Skewness and Kurtosis, as well as PP Plots. The findings are reported in Table 4.4 below.

Table 4.4: Normality Test

	Skewness		Kurtosis	
	Statistic	**Std. Error**	**Statistic**	**Std. Error**
Firm Size	.125	.398	-1.354	.778
Leverage	.510	.398	.338	.778
Profitability	-.178	.398	-.901	.778
Capital Structure	.037	.398	-1.445	.778

According to the data in Table 4.4, all of the values of Skewness and Kurtosis are within the range of +2 standard deviations. Inferential analysis can be performed because the data set was regularly distributed, as indicated by this. The PP plot in Figure 4.1 lends additional credence to the conclusions from Table 4.4, which are summarized above.

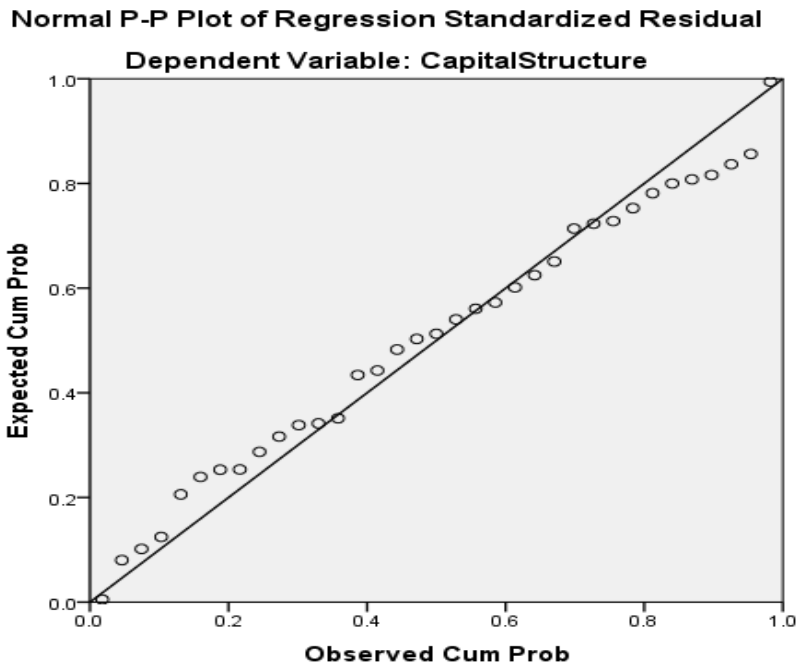

Figure 4.1: PP Plot

Data set was normally distributed since all the data points lie closely along the PP line, as shown in the PP plot in Figure 4.1 above.

4.4.3 Autocorrelation Test

The findings on autocorrelation test are indicated in Table 4.5 below. This was tested by Durbin Watson Statistics.

Table 4.5: Autocorrelation Test

Model	Durbin-Watson
1	2.02

a. Predictors: (Constant), Firm Size Profitability, Capital structure, Leverage,

b. Dependent Variable: ROA

In Table 4.5 above, the value of Durbin Watson Statistics was shown to be 2.002. This data panel was desirable since the data sets were not serially correlated.

4.4.4 Heteroscedasticity Test

Heteroscedasticity was tested using Scatter plot as shown in Figure 4.2 below.

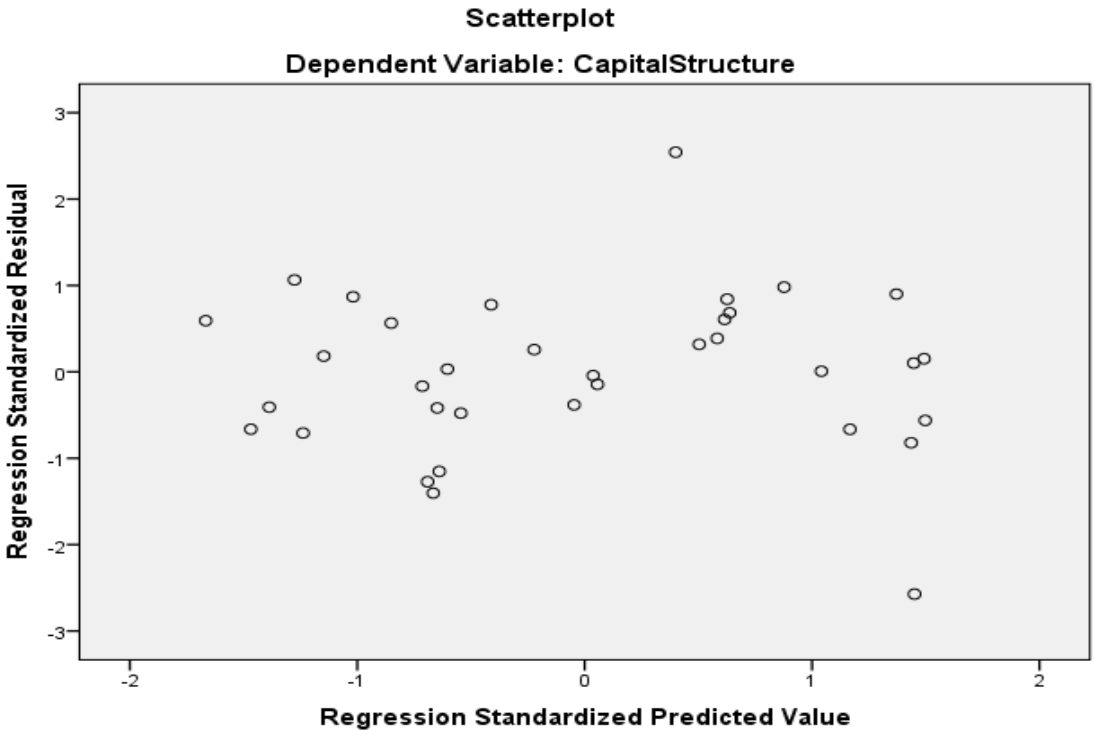

Figure 4.2: Scatter Plot

From the findings presented in Figure 4.2 above, there is no evident pattern or trend in the data, which is widely dispersed. Thus, the data set is suitable for regression modelling because there is no heteroscedasticity.

4.5 Correlation Analysis

A correlation analysis was carried out in order to establish how the capital intensity of manufacturing companies listed on the NSE affects their financial performance. Illustrated in Table 4.6 below are the findings.

Table 4.6: Correlation Analysis

		Financial Performance	Profitability	Leverage	Firm size	Capital structure
Financial performance	Pearson Correlation	1				
	Sig. (2-tailed)					
Profitability	Pearson Correlation	.301**	1			
	Sig. (2-tailed)	.000				
Leverage	Pearson Correlation	.378	.098	1		
	Sig. (2-tailed)	.000	.575			
Firm size	Pearson Correlation	-.155	.170	.215	1	
	Sig. (2-tailed)	.000	.328	.214		
Capital structure	Pearson Correlation	.224	.091	-.463**	-.045	1
	Sig. (2-tailed)	.000	.602	.005	.797	

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

* Correlation is significant at the 0.05 level (2-tailed).

From Table 4.6 above, Profitability had a positive and statistically significant Pearson coefficient r=0.301 and p=0.000<0.05 with Financial Performance, Leverage had a positive and a non-statistically significant Pearson coefficient r=0.378 and p=0.000>0.05 with Financial Performance, Firm size had a negative and a non-statistically significant Pearson coefficient r=-0.155, p=0.000>0.05 with Financial Performance, while Capital structure had a positive and a non-statistically significant Pearson coefficient r=0.224, p=0.000>0.05 with Financial Performance.

4.6 Regression Analysis

Regression analysis was conducted to determine the effect of capital structure on financial performance of manufacturing and allied companies listed on the NSE. The findings are shown sections below**.**

4.6.1 Model Summary

The findings of the model summary are indicated in Table 4.7 below**.**

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.864[a]	.746	.738	1.56708

From Table 4.7, the coefficient of determination Adjusted R square was 0.738. This indicates that 73.8% change in financial performance of manufacturing and allied firms listed on the NSE is explained by their capital intensity and other variables explain the remaining 26.2%.

4.6.2 Analysis of Variance

The findings of the Analysis of Variance (ANOVA) are shown in Table 4.8 below.

Table 4.8: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	683.997	6	114.0	13.682	.000[b]
Residual	233.296	28	8.332		
Total	**917.293**	**34**			

The ANOVA statistics in the table above reveal a level of significance of 0.00001, which indicates that the model and its data can be relied on to form conclusive inferences. In this case, the critical value (2.26213.682) was lower than the estimated F, indicating that the following independent factors had a statistically significant impact on the financial performance of manufacturing

companies listed on the NSE. This demonstrates that the total regression model was statistically significant at p=0.00005.

4.6.3 Regression Coefficients

The findings of the regression coefficients are indicated in Table 4.9 below.

Table 4.9: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	3.894	.442		8.817	.000
Profitability	.610	.030	.856	20.117	.000
Leverage	.219	.074	.076	2.946	.002
Firm size	-.767	.231	-.218	-3.314	.003
Capital structure	.751	.298	.095	2.524	.018

It can be observed in Table 4.9 that profitability (=0.610, p=0.0000.05) has a positive and statistically significant impact on the financial performance of manufacturing companies listed on the National Stock Exchange. It was shown that leverage (p=0.0020.05, r=0.219) had a favorable and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. The size of the firm (-0.767, p=0.0030.05) had a negative and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. The capital structure of manufacturing companies listed on the NSE (r=0.751, p=0.0180.05) had a favorable and statistically significant impact on their financial performance.

4.6 Discussion of Findings

The study, based on the data analysis, concluded that profitability has a statistically significant and positive impact on the financial performance of NSE-listed manufacturers. This was expected because profitable businesses can expand their size by utilizing internal sources of finance. These businesses thus become attractive to investors in the market since they can negotiate favourable deals for new financing and thus increase their market visibility. The ultimate reward for all of a company's management's hard work and planning, according to Oladele et al. (2012), is a profitable company, and they are continuously looking for methods to boost their profitability.

Leverage has a favorable and statistically significant impact on the financial performance of manufacturing companies that are publicly traded on the NSE. Financial leverage enables a corporation to multiply its earnings before interest and taxes, resulting in increased earnings per share for the company concerned. Moreover, according to Murikwa (2017), leverage has a negative relationship with financial performance (ROA). However, according to the findings of Enekwe, Agu, and Eziedo (2014), there is a negative relationship between the financial performance of Nigerian pharmaceutical businesses and the amount of financial leverage they have.

The size of the company has a negative and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. Because in today's world, the size of the company is an essential consideration in determining the capital structure. The size of a company, according to a study conducted by Saliha and Abdessatar (2011), has been shown to have a positive and significant impact on its profitability. The findings of the study, on the other hand, are in direct opposition to the findings of the Kiganane, Bwisa, and Kihoro (2012) study, which revealed that firm size had no significant impact on financial success.

The capital structure of manufacturing companies listed on the NSE has a favourable and statistically significant impact on their financial performance. The capital structure of a company

has a significant impact on its financial success, provided that it is utilized properly and effectively. This study is consistent with the findings of Eldomiaty and Azim (2008), who conducted a study on the impacts of capital structure on firm financial performance, which found that capital structure is positively associated to firm financial performance in a variety of industries. According to Banafa, Muturi, and Ngugi (2015), an investigation into the effects of capital structure on the financial performance of non-financial companies listed on the Nairobi Stock Exchange (NSE) discovered a negative relationship between capital structure and financial performance of non-financial companies listed on the NSE.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the findings of the data analysis are summarized. Arising from the analysis, recommendations and conclusions can be statistically drawn. Also, the areas that require more research are identified.

5.2 Summary of the Findings

The study was informed by the following variables during data collection process: firm size, profitability, capital structure, and leverage in the financial markets. Over the course of five years, the researchers gathered secondary data.

The findings of the study were analyzed utilizing both descriptive and inferential methods of statistical analysis. According to descriptive statistics, the size of the manufacturing firms listed on the NSE was the most important factor influencing their financial performance, followed by the capital structure of the manufacturing firms. Diagnostic tests such as normality, autocorrelation, multicolinearity, and heteroscedasticity were carried out by the researcher in addition to other testing. As a result of these tests, the variable of firm size was eliminated from the model due to its high degree of multicollinearity.

To investigate the relationship between capital intensity and financial performance of publicly traded manufacturing companies on the NSE, the researcher conducted a correlation analysis. Profitability had a Pearson coefficient of 0.301 and a p-value of 0.0000.05, leverage had Pearson coefficient of 0.378 and a p-value of 0.0000.05, firm size had a Pearson coefficient of -0.155 and a p-value of 0.0000.05, and capital structure had a Pearson coefficient of 0.224 and a p-value of 0.005.

The results of a regression analysis were used to estimate the impact of financial performance of manufacturing and affiliated companies that are publicly traded on the NSE. Adjusted R square

was found to have a value of 0.738 based on the findings to be the coefficient of determination. This demonstrates that capital intensity explains 73.8 percent of the changes in financial performance across manufacturing and associated firms listed on the NSE. The findings of the study also demonstrated that profitability (=0.610, p=0.0000.05) has a favorable and significant impact on the financial performance of manufacturing companies listed on the National Stock Exchange. It was shown that leverage (p=0.0020.05, r=0.219) had a favorable and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. The size of the firm (-0.767, p=0.0030.05) had a negative and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. The capital structure of manufacturing companies listed on the NSE (r=0.751, p=0.0180.05) had a favorable and statistically significant impact on their financial performance.

5.3 Conclusions

According to the findings of the study, profitability has a favorable and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. The use of leverage has a favorable and statistically significant impact on the financial performance of industrial companies listed on the NSE. The size of the company has a negative and statistically significant impact on the financial performance of manufacturing companies listed on the NSE. The capital structure of manufacturing companies listed on the NSE has a favorable and statistically significant impact on their financial performance.

5.4 Recommendations of the Study

In order to positively impact heir financial performance, the top management teams of all manufacturing and associated enterprises listed on the NSE should seek to enhance their leverage

and capital structure. In addition, finance managers of all manufacturing and associated enterprises listed on NSE should prudently balance equities and debts, among other things.

According to the findings of the study, regulatory and policy-making agencies such as the Capital Markets Authority (CMA) should develop good norms and regulations to increase the capital intensity not only for manufacturing companies but other companies listed under different categories at the NSE.

5.5 Limitations of the Study

The study was limited to capital intensity and how they influence the financial performance specifically for manufacturing and allied firms listed at the NSE. In total, 8 firms were studied. The study was limited to secondary data that was collected using data collection sheets. The study was further limited to firm size, profitability, capital structure and financial leverage as the independent variables.

The study presumed that the association between the variables are strictly linear which in reality may not be the case. The findings are therefore informed by a supposed linear relationship. There are possibilities of cyclic and curvilinear relationships.

5.6 Suggestions for Further Studies

The current study concentrated on publicly traded manufacturing and associated companies listed on the NSE. Future research should be conducted in conjunction with other firms in different industries such as insurance or banking that are listed on the NSE. The research looked into capital intensity and how it influenced the financial performance of manufacturing and allied companies that were listed on the NSE. According to the regression results, the study determined that the dependent variables used for this study only explain 73.8 percent of the change in capital intensity

over time. This suggests that there exist other capital intensity variables that influence the financial performance of manufacturing firms listed on the NSE that should be considered in future studies on the topic.

The variations in Capital Intensity among firms listed at the NSE is a possible area for further studies. The determinants of the levels of capital intensity is a potential area for further research as there are certain constructs that affect the levels of capital intensity.

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Appendix I: Data Collection Form

Year	Return on Assets	Firm size	Profitability	Capital structure	Financial leverage
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					