CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA

BY

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BEING A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE (M.Sc.) IN ACCOUNTING AND FINANCE

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Declaration

I hereby declare that this Dissertation titled CAPITAL STRUCTURE AND FINACIAL PEFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA written under the supervision of Dr. A. B. Dogarawa and Dr. A. M. Haruna is a product of my own research work. Information derived from various sources has been duly acknowledged in the text and a list of references provided. This Dissertation has not been previously presented anywhere for the award of any degree or certificate.

_____ _____

Ibrahim Dahiru Date

Certification

This Dissertation titled CAPITAL STRUCTURE AND FINACIAL PEFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA by Ibrahim Dahiru meets the requirements governing the award of the Degree of Master of Science in Accounting and Finance of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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Abstract

There exists divergence of opinion in literature on the relationship between capital structure and firms financial performance. This mix of opinions makes the direction of the relationship between debt holders and equity holders to be controversial. Therefore, this study investigated the impact of capital structure on financial performance of listed manufacturing firms in Nigeria. The study formulated four hypotheses and used generalized least square multiple regression to analyze the secondary data extracted from the annual reports and accounts of the 31 sampled firms for the period 2009 to 2014. The study found that total debt, long-term debt and short-term debt have significant impact on the financial performance of listed manufacturing firms in Nigeria. The study also found that total debt to total equity has no significant effect on the financial performance of the firms. In view of the findings, it is recommended among others that the management of listed manufacturing firms should work very hard to increase the short term debt to total assets component of their capital structure, since it has positive impact on their financial performance. Also, the firms should reduce the level of total debt to total assets and long term debt to total assets in their capital structure components, because they affect their financial performance negatively.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

The nature and extent of relationship between capital structure and financial performance of firms have attracted attention in the literature of finance. Capital structure involves the decision about the combination of the various sources of funds a firm uses to finance its operations and capital investments. These sources include the use of long-term debt finance called debt financing, as well as preferred stock and common stock also called equity financing. One of the most important goals of financial managers is to maximize shareholders wealth through determination of the best combination of financial resources for a company and maximization of the company's value by determining where to invest their resources.

Capital structure represents the major claims to a corporation's asset. This includes the different types of equities and liabilities (Riahi-Belkaoui, 1999). The debt-equity mix can take any of the following forms: 100% equity: 0% debt, 0% equity: 100% debt; and X% equity: Y% debt. From these three alternatives, the first option is that of the unlevered firm, that is, the firm shuns the advantage of leverage (if any). Option two is that of a firm that has no equity capital. This option may not actually be realistic or possible in the real life economic situation, because no provider of funds will invest money in a firm without equity capital. This partially explains the term "trading on equity", that is, the equity element that is present in the firm's capital structure that encourages the debt providers to give their scarce resources to the business. The third Option is the most realistic one in that, it combined both a certain percentage of debt and equity in the capital structure and thus, the

advantages of leverage (if any) is exploited. This mix of debt and equity has long been a subject of debate in finance literature concerning its determination, evaluation and accounting.

Financial performance is the measure of how well a firm can use its assets from its primary business to generate revenues. Erasmus (2008) noted that financial performance measures like profitability and liquidity among others provide a valuable tool to stake holders which aids in evaluating the past financial performance and current position of a firm. Financial performance evaluation are designed to provide answers to a broad range of important questions, some of which include whether the company has enough cash to meet all its obligations, is it generating sufficient volume of sales to justify recent investment. Capital structure is closely linked with financial performance (Tian and Zeitun, 2007). Financial performance can be measured by variables which involve productivity, profitability, growth or, even, customers' satisfaction. These measures are related among each other. Financial measurement is one of the tools which indicate the financial strengths, weaknesses, opportunities and threats. Those measurements are return on investment (ROI), residual income (RI), earning per share (EPS), dividend yield, return on assets (ROA),, growth in sales, return on equity (ROE),e.t.c (Stanford, 2009).

One of the main factors that could influence the firm's performance is capital structure. Since bankruptcy costs exist, deteriorating returns occur with further use of debt in order to get the benefits of tax deduction and interest. Therefore, there is an appropriate capital structure beyond which increases in bankruptcy costs are higher than the marginal tax-sheltering benefits associated with the additional substitution of debt for equity. Firms

are willing to maximise their performance, and minimise their financing cost, by maintaining the appropriate capital structure or the optimal capital structure.

Previous studies on capital structure have used different proxies to measure capital structure. The measures commonly used in the literature in form of ratios include total debt to total assets, total debt to total equity, short term debt to total assets and long term debt to total assets. Total debt to total assets is the amount of debt used to finance firms' assets and other capital expenditure that can improve firms' performance. Thus, it is expected that increasing leverage components of a firm's capital structure may increase the level of efficiency and thereby increasing their performance. Company's managers who are able to identify the level of leverages as components of firms' capital structure are rewarded by reducing firm's cost of finance thereby maximizing the firm's revenue (Zeitun & Tian, 2007). Total debt to total assets measures the amount of the total funds provided by outsiders in relation to the total assets of the firm. It shows the extent of cover for debts of a company by total assets. It described the extent to which a business or investor is using the borrowed money. Generally, investors would prefer low ratio for all debts, because the lower the ratio the better the cushion against the creditors losses in the event of liquidation. Most firms use debt to finance their operation with the hope of improving their performance. By doing so, a company increases its leverage because it can invest in business operations without increasing its equity.

Total debt to total equity is also expected to have an influence on a firm's performance. Total debt to total equity assesses the extent to which a firm is using borrowed funds. It shows the extent to which a firm is using borrowed funds in relation to its equity. It

indicates the solvency of the business and the extent of cover for external liabilities. It also measure of a company's financial leverage calculated by dividing its total liability, by stockholders equity, it indicates what proportion of equity and debt a company is using to finance its assets (Ojo, 2012). Total debt to total equity is a measure of how much firm uses equity and debt. Investors prefer the ratio to be lower; because the lower ratio the higher the level of firms financing that is being provided by shareholders and the larger the cushion (margin of protection) in the event of shrinking asset values or outright losses. From the creditor's point of view, it is possible that debt to equity helps in understanding business risk management strategies and how firms determine the likelihood of default associated with firms' financial performance (Kurfi, 2003). Semiu and Collins (2011) see equity capital as including share-capital, share premium, reserves and surpluses (retained earnings).

Short term debt to total assets is another item in a firm's capital structure that affects its financial performance. Short term debts to total assets affect the financial performance of a firm either negatively or positively. Short-term debt to total asset measures the relative short-term debts to total assets of a firm are to meet it financial obligation over the accounting period. Some scholars argue that the shorter the debt the better the firm is in improving its performance.

Understanding the relationship between long term debt to total assets and performance of various sectors of an economy is important to all stakeholders. Long-term debt to total assets measures the relative weight of long-term debt to the capital structure (long-term financing) of the firm in long run. The level of long-term debt of a firm is also

believed to be one of the forces expected to influence the performance of a firm. A firm that has a higher long-term debt as proposed by previous studies would have little resources to take care of some other objectives and vice versa (Kurfi, 2013).

As firm financial capital is an uncertain but critical resource for all firms, providers of finance are able to exert control over firms. Debt and equity are the major classes of capital structure, with debt holders and equity holders representing the two types of investors in a firm. Each of them is associated with different levels of control, benefits and risk. While debt holders exert lower control, they earn a fixed rate of return and are protected by contractual obligations with respect to their investment. Equity holders are the real owners of a firm, bearing most of the risk and correspondingly, have greater control over decisions (Aliu, 2010).

The use of debt in an organizations capital structure has both positive and negative effects on its financial performance. Organizations that use an optimum amount of debt in their capital structure have enhanced firm value which is manifested in the form of increased sales, efficiency in production and low taxes. While firms with different cases of sub optimal use of debt in their capital structure usually suffer from a variety of financial ailments which Rajan and Zingales (1995) described as payment of high taxes, high proportions of accounts payable, large deficits in the firms cash flow and in some cases corporate dissolution. Accordingly Modigliani and Miller (1963) suggested that firms should incorporate more debt in their capital structure in order to maximize the firm's value which is manifested through high profits, increased share prices and efficiency in management.

The capital structure theory originated from the famous work of Modigliani and Miller (M & M) (1958). They argued that, under certain conditions, the choice between debt and equity does not affect a firm's value and hence, the capital structure decision is irrelevant; but in a world with tax-deductible interest payment, firm value and capital structure are positively related. M & M (1958) pointed out the direction that capital structure must take by showing under what conditions the capital structure is irrelevant. Titman (2001) lists some fundamental issues that make the M & M proposition hold as: no taxes, no transaction cost, no bankruptcy cost, perfect contracting assumptions and complete and perfect market assumption. The M & M presentation became a subject of considerable debate both in theoretical and empirical research. The work of M & M has been criticized by many scholars in view of the fact that in the real world situation, the main assumptions never hold. They argued that in a 'non-perfect' world, there are factors influencing capital structure decision of a firm.

Since the presentation of M & M's irrelevance propositions, a lot of issues have been raised with respect to capital structure. Many researchers have attempted to establish whether their theory is realistic and capable of resolving basic financing decision problems regarding optimal capital structure for individual firm and the effect of an appropriate financing mix on firm performance and in what condition is the choice of capital structure relevant (Aliu 2010). Their studies however, have provided different opinion on the direction of their association. The mixed and inconclusive findings provided motivation for further studies in this area to determine whether capital structure has an influence on financial performance of firms in different sectors of the economy.

The fact that manufacturing firms in Nigeria frequently use leverage to finance their operation through debt or equity or both, the extent to which capital structure affects their operation has been an issue of concern. It has been argued that the fastest trend through which a nation can achieve sustainable economic growth and development is neither by the level of its endowed material resources nor that of its vast human resources but technological innovation, enterprise development and industrial capacity. In the modern world, manufacturing sector is regarded as a basis for determining a nation economic efficiency.

Arising from the strategic importance of the manufacturing sector to an economy such as Nigeria's, it is important for investors and shareholders to understand the effect of capital structure on the performance of manufacturing firms. This is because capital structure decision on how to finance their assets by debt or by equity will affect relationship with the final result for any given period since it influences the returns and risks of shareholders and consequently affects the market value of the shares. In view of this, it becomes imperative to study the relationship between capital structure and financial performance of manufacturing firms in Nigeria.

1.2 Statement of the Problem

There has been an ongoing debate on the issue of capital structure and financial performance of firms. This controversy is further narrowed down to identifying which of the variables debated is most influential in predicting and determining the capital structure of manufacturing firms. The choice of optimal capital structure of a firm is difficult to determine. A firm has to issue various securities in a countless mixture to come across particular combinations that can maximize its overall value which means optimal capital structure. Optimal capital structure also means that with a minimum weighted-average cost of capital, the value of a firm is maximized. According to Rahul (1997), poor capital structure decisions may lead to a possible reduction in the value derived from strategic assets. Hence, the capability of a company in managing its financial policies is important if the firm is to realize gains from its specialized resources. The nature and extent of relationship between capital structure and financial performance of firms have attracted the attention of many researchers. The studies, which are largely foreign based, have however revealed conflicting findings.

In Nigeria, most of the studies did not use other components on capital structure and financial performance. The studies which include Bello and Onyesom (2005), Salawu (2007), Olokoyo (2012), Babalola (2012), Yinusa and Babalola (2012), Sabastian and Rapuluchukwu (2012) and Idode, Adeleke, Ogunlowo and Ashogbon (2014) have left a gap that need to be filled. For example, Salawu (2007), who studied the effect of capital structure on financial performance of selected quoted companies in Nigeria between 1990 and 2004 concentrated on short term debt. His study did not extend to other forms of

financing, thus the finding could only be used in the context of short term debt financing. This means even within the purview of debt financing; only the short term aspect of the debt was covered in his study. In reality, a study on capital structure is supposed to cover both types of debt financing.

Babalola (2012) who also studied the effect of optimal capital structure on firm's performance in Nigeria between 2000 to 2009 using samples of 10 firms, concentrated on total debt to total assets. His study excluded the aspect of total debt to equity, short term debt to total assets and long term debt to total assets financing despite the fact that both types of debt financing are used by the sampled firms. More so, his study and those of Bello and Onyesom (2005) and Olokoyo (2012) used Chi-square technique to analyze their data. Chi-square is considered deficient in terms of reflecting time variant and specific characteristic issues. Studies on capital structure and performance of firms are supposed to use parametric techniques that measure both time variant and specific characteristic issues.

Furthermore, the study of Yinusa and Babalola (2012) examined the impact of corporate governance on capital structure decision of ten (10) firms in the food and beverage sector during the period from 2000 to 2009. They used total debt to total assets ratio as proxy of capital structure. The study did not cover other components or types of debt financing such as total debt to total equity, short- term debt and long-term debt. Additionally, Sebastian and Rapuluchukwu (2012) that studied the impact of capital structure and liquidity on corporate returns of manufacturing firms between 2002 to 2006, focused on short-term debt, long-term debt and total debt without including total debt to total equity financing. The study failed to use total debt to total equity as variable of debt

financing. Idode, Adeleke, Ogunlowore and Ashogbon (2014) in their study of the influence of capital structure on profitability of banks in Nigeria for the period of 2008 to 2012 covered both debt financing and equity financing. However, they ignored short-term debt and long-term debt which constitute other important forms of financing for manufacturing companies in Nigeria.

Owing to these identified gaps, a study that will cover the various forms of financing mix in order to address the following questions that remain unanswered is desirable: to what extent do total debt to total assets ratio, total debt to total equity ratio, and the ratios of short-term and long term debt to total assets affect the performance of manufacturing firms in Nigeria? This study attempts to provide answers to this fundamental question.

1.3 Objectives of the Study

The overall objective of this study is to examine the impact of capital structure on the financial performance of listed manufacturing firms in Nigeria. Specifically, the study sought to:

i. evaluate the extent to which total debt to total asset ratio affect financial performance of listed manufacturing firms in Nigeria;
ii. determine the effect of total debt to total equity ratio on financial performance of listed manufacturing firms in Nigeria;
iii. examine the impact of short-term debt to total assets ratio on financial performance of listed manufacturing firms in Nigeria; and
iv. assess the influence of long-term debt to total assets ratio on financial performance of listed manufacturing firms in Nigeria.

1.4 Statement of Hypotheses

To achieve the above mentioned objectives, the following hypotheses were formulated.

$H0_1$ Total debt to total assets ratio has no significant impact on financial performance of listed manufacturing firms in Nigeria.

$H0_2$ Total debt to total equity ratio has no significant impact on financial performance of listed manufacturing firms in Nigeria.

$H0_3$ Short-term debt to total assets ratio has no significant impact on financial performance of listed manufacturing firms in Nigeria.

$H0_4$ Long-term debt to total assets ratio has no significant impact on financial performance of listed manufacturing firms in Nigeria.

1.5 Scope of the Study

The study is designed to examine the impact of capital structure and financial performance of listed manufacturing firms in Nigeria. The study covers the period of six (6) years from 2009 to 2014. The study chooses the manufacturing firms as its domain because it covers the larger proportion of industry in Nigeria. The independent variables of the study are capital structure proxied by total debt to total assets, total debt to total equity, short-term debt to total assets and long-term debt to total assets, and the dependent variable is represented by financial performance proxied by return on assets. The period of the study is considered appropriate because it coincides with the period within which major reforms took place in the manufacturing sector.

1.6 Significance of the Study

The outcome of this study would contribute to the existing body of knowledge. Because, though there are a lot of studies on capital structure and financial performance around the globe, there is dearth of evidence using data on manufacturing firms in Nigeria. The outcome of the study would therefore serve as a reference material for subsequent researchers and would provide a basis for further research in this area.

It is the hope that the result of this study will be beneficial to both internal and external parties (i.e managers in maximizing investors return, owners in making an informed decision, creditors in ascertaining credit worthiness of a firm, Government in making favorable financing policies etc) to improve on the GDP contribution by the manufacturing sector and also improve on employment rate once the sector is viable since the stake holders are interested in knowing the impact of such decisions on an organization performance.

Also, the government and its agencies will somehow benefit from this study because the study will highlight the need from its findings if necessary for the government to formulate more favorable financial and economic guidelines as the sector demands and this will sustain the operations of Nigerian Manufacturing firms, especially the potential firms yet to be quoted in the stock market and resultantly contributing to GDP of the nation which have been on the decline hitherto.

The results of this study would also be of benefit to managers, shareholders and creditors of manufacturing firms in Nigeria. Managers would be placed on a sound footing to understand the effect of various financing mix on the operations of their firms.

Shareholders would be able to make an informed decision with regard to their equity interest in relation to the debt financing options available to their firms, while creditors would be able to identify the firms that are financially strong enough to settle their claim as at when due.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter discusses the concept of capital structure and financial performance. It also reviews empirical literature on the relationship between the total debt to total assets and financial performance, total debt to total equity and financial performance, short term to total assets and financial performance, and long term debt to total assets and financial performance. The chapter finally discusses the theoretical framework that underpins the study.

2.2. Concept of Capital Structure

Theoretical literature has documented a number of definitions of the term capital structure. Like most other terms in finance, no consensus exists on any of the definitions. According to Aliu (2010), a firm's capital structure refers to the combination of its financial liabilities and its equities. It is the way a corporation finances its assets through some mix of equity and debt. In line with this, Abdul (2010), Saad (2010), Shehu (2011), Miheala (2012) and Ishaya and Abduljaleel (2014) referred to it as a mix of different types of securities (long-term debt, common stock) which are issued by a firm to finance its assets. Semiu and Collins (2011) also referred to it as the proportions of capital at work in a business by type, namely, equity capital and debt capital, each of which having its own benefits and drawbacks. From the foregoing, capital structure is simply a firm's financial framework, which comprises of a firms retain earnings, debt financing and equity financing in order to maintain the business entity in financing its operations.

Capital structure is essential to how a firm finances its overall operations and growth by using different sources of funds. Modigliani & Miller (M&M) theorem is the broadly accepted capital structure theory because it is the foundation of capital structure theory which has been used by many researchers. It is recognized as a sort of structure with which firms receive direction and orientation concerning their business activities. It is also the heart of both a market economy and a democratic society. It is said to be the financing performance of a firm (Simon & Afolabi, 2011). In addition, capital structure represents a means for decision making of business firms and facilitates maximization of return on investment, as well as boosting the efficiency of financing and dividend decisions (Chandrasekharan, 2012).

Financing decisions generally facilitate the survival and growth of a business enterprise, which calls for the need to channel efforts of business towards realizing efficient decision, which will protect the shareholders interest. Capital structure decision is thus considered as one of the effective tools of management to manage the cost of capital. A substantial part of wise corporate stewardship and management attempts to find the appropriate capital structure in term of risks and return payoff for shareholders.

The capital structure of a firm consists of debt and equity. Debt is further classified into short and long term. Accounting and finance literature often discuss these components as ratio of total assets and of equity. The components are discussed hereunder.

2.2.1 Total Debt to Total Assets

The total debts to total assets measure the amount of the total funds provided by creditors in relation to the total assets of a firm. Generally, creditors would prefer low ratio

for all debts because the lower the ratio the greater is the cushion against creditors losses in the event of liquidation. Total debt to total assets is a debt ratio that defines the total amount of debt relative to assets. This enables comparison of debt to be made across different companies. The higher the ratio the better degree of debt and consequently financial risk. This is a broad ratio that includes long term debt and short term debt (borrowings maturity within one year) as well as all tangible and intangible assets (Akinsulire, 2014).

Debt ratio is a solvency ratio that measures firm's total liabilities as a percentage of its total assets. In a sense, the debt ratio shows a company's ability to pay off its liabilities with its assets. In other words, this shows how many assets the company must sell in order to pay off all of its liabilities. This ratio also measures the financial debt of a company. Companies with higher levels of liabilities compared with assets are considered highly indebted and more risky for lenders. It helps investors and creditors analyses the overall debt burden on the company as well as a firm's ability to pay off its debt in the future especially during uncertain economic times. The debt ratio is calculated by dividing total liabilities by total assets. Both of these numbers can easily be found in the balance sheet. A lower debt ratio usually implies a more stable business with the potential of longevity because a company with lower ratio also has an overall debt posture. Each industry has its own benchmarks for debt, but 0.5 is reasonable ratio (Ojo, 2012)

The debt ratio is a fundamental solvency ratio because creditors are always concerned about being repaid. When companies borrow more money, their ratio increases and creditors will no longer loan them money. Companies with higher debt ratios are better off looking to equity financing to grow their operations. Debt ratios measure a firm's ability

to repay long term debt. It is a financial ratio that indicates the percentage of a company's assets that are provided via debt. It is the ratio total debt, the sum of current liabilities and long term liabilities and total assets as well as the sum of current asset, fixed assets and other assets such as goodwill (Semiu & Collins, 2011).

2.2.2 Total Debt to Total Equity

Total debt to total equity ratios measure the proportion of creditors fund in relation to shareholders fund. Creditors would like this ratio to be lower; because the lower the ratio the higher the level a of firm's financing that is being provided by shareholders and the larger the cushion (margin of protection) in the event of shrinking asset values or outright losses. This a measure of how much suppliers, lenders, creditors and obligors have committed to the company versus what shareholders have committed (Kurfi, 2003). Total debt to total equity refers to the ratio of debt to equity capital of a company. As a result of the payment of interest and repayment of principal amount of the debt, a large part of the firm's cash flow would decrease (Magpayo, 2011).

The debt to equity ratio shows the percentage of a company's financing that comes from creditors and investors. A higher debt to equity ratio indicates that more creditors financing (bank loans) is used than investors financing (shareholders). The debt to equity ratio is considered a balance sheet because all of the elements are reported on the statement of financial position. Each industry has different debt to equity ratio bench marks, as some industries tend to use more debt financing than others. A debt ratio of 0.5 means that there are half as many liabilities as there is equity. In order words, the assets of the company are

funded 2 to 1 by investors to creditors. This means that investors own 66.6 cents on the dollar (Erasmus, 2008).

Companies with a higher debt to equity ratio are considered more risky to creditors and investors than companies with a lower ratio. Unlike equity financing, debt must be repaid to the lenders. Since debt financing also requires debt servicing or regular interest payments, debt can be a far cheaper form of financing than equity financing. Creditors view a higher debt to equity ratio as risky because it shows that investors have not funded the operations as much as creditors have. In other words, investors do not have as much skin in the game as the creditors do. This could mean that investors do not want to fund the business operations because the company is not performing well. Lack of performance might also be the reason why the company is seeking for extra debt financing (Stanford, 2009).

2.2.3 Short Term Debt to Total Assets

This measures how relative short-term debts to total asset of a firm are to be repaid within an accounting period. Some scholars argued that the shorter the debt the better the firm is in improving its performance. The short term debt to total assets ratio is a measure of the financial leverage of the company. It tells what percentage of the assets is financed by short term debt. Short term debt is debt due for repayment within or less than 12 months and is not included in the long term liabilities figure on the statement of financial position. It includes creditors and accruals (Akinyomi, 2013). Short term debt to total assets ratio is the ratio that represents the financial position of the company's ability to meet its current

financial requirements. It shows the percentage of company assets that are financed with loans and other financial obligations that last over a year.

The short term debt ratio is calculated by dividing current liabilities by total assets. Both of these numbers can easily be found in the balance sheet. A lower debt ratio usually implies a more stable business with the potential of longevity because a company with lower ratio also has short term debt.

2.2.4 Long Term Debt to Total Assets

Long-term debt to total assets measures the relative weight of long-term debt to the capital structure (long-term financing) of a firm's long-term debt to- total assets. Long term debt to total assets ratio is the ratio that represents the financial position of the company's ability to meet its financial requirements. As this ratio is calculated yearly, decrease in the ratio would denote that the company is faring well, and is less dependent on debts for their business needs (Kurfi, 2003). The higher the level of long term debt, the more important it is for a company to have positive revenue and steady cash flow. It is very helpful for management to check its debt structure and determine its debt capacity (Akinsulire, 2014).

The long term debt to total assets ratio is a measure of the financial leverage of a company. Long term debt is debt due for repayment in over 12 months and is not included in the current liabilities figure on the balance sheet. It includes mortgages and long term leases, but not general trading liabilities (Akinyomi, 2013). A high ratio usually indicates a higher degree of business risk because the company must meet principal and interest obligations. Potential creditors are reluctant to give financing to a company with a high debt position. However, the magnitude of debt depends on the type of business. For example, a

bank may have a high debt ratio but its assets are generally liquid. A utility can afford a higher ratio than a manufacturer because its earnings are more stable (Khalaf, 2013).

2.2.5 Equity

Equity is the difference between the values of the assets/interest and the cost of the liabilities of something owned. In accounting context, shareholders equity (stock holders equity, shareholders funds, share holders capital or similar terms) represents the equity of a company as divided among individual shareholders of common or preferred stock (Kurfi, 2003). Accounting shareholders are the cheapest risk bearers as they deal with the public. In financial accounting, owners' equity consists of the net asset which is the difference between the total assets of the entity and all its liabilities. Equity usually appears on the statement of financial position which is one of the four primary financial statements. The assets of an entity can be in tangible and intangible items. Intangible assets include items such as brand names, copy rights or goodwill. Tangible assets include land, equipment and cash (Akinsulire, 2014).

Equity is the residual interest in the assts of the entity after deducting all the liabilities (IASB frame work). Equity is what the owners of an entity have invested in an enterprise. It represents what the business owes to its owners. It is also a reflection of the capital left in the business after assets of the entity are used to pay off any outstanding liabilities. This is what the owners take home in the event of liquidation of the entity (Erasmus, 2008). Equity is the owners' value in an asset or group of assets. It is also refers to the value of the assets contributed by the owners. This is added to the total income earned and retained by the company to give the company's total equity value. This description of

equity is correct but very simplistic. A more profound description is really that used by home owner, that is, owners' value in an asset or group of assets. It is calculated by total assets minus total liabilities

2.3 Concept of Financial Performance

A firm's financial performance is of importance to investors, stakeholders and the economy at large. Investors are interested in the returns for their investment. A business that is performing well can bring better reward to their investors. Financial performance of a firm can increase the income of its staff, rendering quality product or services to its customers and creating more goodwill in the environment it operates. A company that has good performance can generate more returns which can lead to future opportunities that can in turn create employment and increase the wealth of people. Firm's performance is the ability of a firm to achieve its objectives resources. According to Rahul (1997) a company's performance is its ability to achieve its target objectives from its available resources. Suleiman (2013) viewed a firm's performance as the result of a company's assessment or strategy on how well a company accomplished its goals and objectives. Financial performance provides a deductive measure of how well a company can use assets from business operations to generate revenue. Van Horn (2005) defined financial performance as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term according to Pandey (2001) is used as a general measure of the overall financial health of a business. Research on the firm's financial performance emanates from organizations theory and strategic management. The notion of financial performance is used to describe performance of an entity with the legal status of a company.

The concept of financial performance is a controversial issue in finance due to its multidimensional meaning. In analyzing a firm's financial performance, emphasis should be made in formulating an adequate description of the concept of a financial performance.

Measuring of firms' financial performance is one of the management strategic functions aimed at satisfying the interest of shareholders and other stakeholders in a company. Firm's performance appraisal involves a periodic and systematic evaluation of its operations to determine the achievements of the firm's objectives. Evaluation of a firm's performance requires the use of certain principles that may be either internal or external. Internal principles are the ability of a company to achieve its stated objectives, while external principles refer to the comparison of a company with its competitors in the industry in order to develop a good business strategy that will enable the firm compete favourably in the market.

The existing researches on the relationship between capital structure and financial performance used different methods of measuring firms' financial performance. Most of the previous studies on firms' financial performance measured firm performance from the accounting based or market based methods of measuring company's financial performance. The most commonly used performance measures are accounting based which include: return on assets (ROA), return on equity (ROE), return on investment (ROI) and Tobin's Q.

Accounting based measurement of performance is the most popularly used. Returns On Assets (ROA) was widely used as was found in the studies of Abbasali, Esfandiar, Milad and Mohammed (2012), Babalola (2012), Muhammad, Zaighum, Saeed and

Muhammad (2012), Osuji and Odita (2012), Khalaf (2013) and Raheel, Shahnaz, Bashir and Umara (2013).

2.4 Review of Empirical Studies

This section provides some insights understanding of prior studies done by different authors in various countries at different periods in the area of capital structure and financial performance.

2.4.1 Total Debt to Total Assets and Financial Performance

The total debts to total assets measure the amount of the total funds provided by creditors in relation to the total assets of a firm. Generally creditors would prefer low ratio for all debts because the lower the ratio the greater cushion against the creditors losses in the event of liquidation. There are different views in the literature as to the relationship between total debt to total assets and financial performance. Fosberg and Ghosh (2006) in their research conducted on 1022 companies in the New York Stock Exchange (NYSE) and 244 companies in the America Stock Exchange (AMEX) concluded that the relationship between total debt and financial performance is negative. Houang and Song (2006) in the research conducted on 1200 Chinese companies during 1994 to 2003 concluded that leverage has negative relationship with financial performance. Andersen (2005) reviewed the relationship between capital structure and firms performance for 1323 companies from various industries and concluded that there is a significant relationship between total debts to total asset and financial performance. Ebaid (2009) studied the effect of capital structure on the performance of 64 Egyptian companies during 1997 to 2005. The results suggested that there is a significant negative relationship between total debts to total assets and

financial performance. Mramor and Crnigoj (2009) concluded that there is a significant negative relationship between total debt to total assets ratio and financial performance.

Zaitun and Tian (2007) found a significant negative relationship between total debt to total asset and financial performance. The studies of Abolfazl *et al* (2013) indicated significant negative relationship between total debt to total assets and financial performance. This shows that the lower total debt to total assets ratio, the better the financial performance. The studies are in line with the result of Heydar, Elham, Vahid and Mohsen (2012) which revealed that there is significant negative relationship between total debt to total assets and financial performance. Abdul (2010) examined the relationship between capital structure decisions and firm performance of the engineering sector of Pakistan. The results showed that total debt to total assets has significant negative relationship with firm financial performance. Onaolapo and Kajola (2010) investigated the effect of capital structure on financial performance of companies listed on Nigeria Stock Exchange. The study was performed on 30 nonfinancial companies in 15 industry sectors for the period 2001 to 2007. The results showed that total debt to total assets ratio has significant negative effect on financial performance.

Osuji and Odita (2012) studied the impact of capital structure on the financial performance of Nigerian firms using a sample of 30 non-financial firms listed on the Nigerian Stock Exchange for the period 2004-2010. The results showed that total debt to total assets has significant negative impact on financial performance of the firms. Taiwo (2012) investigated the effect of capital structure on firm's performance in Nigeria using five-year annual data of 10 firms. The result of the regression indicated a negative

relationship between the explanatory and outcome variables. Suleiman and Nour (2012) studied the effect of capital structure on the performance of Palestinian financial institutions. The result revealed that total debt to total asset has a positive relationship with financial performance. Abbasali, Ali, Hamid and Kambiz (2012) investigated the impact of capital structure on the financial performance of companies listed in the Tehran Stock Exchange using a sample of 400 firms from 2006 to 2010. The results suggested that there is a significant negative relationship between total debt to total asset and financial performance. Rasa and Jurgita (2012) studied the relationship of corporate governance decisions on capital structure and performance of Lithuanian food and beverages companies for the period 2005 to 2010. The result revealed that total debt has strong negative relationship with financial performance of listed manufacturing firms in Lithuanian.

Gholamreg, Alireza and Alireza (2013) investigated the association between capital structure and financial performance of companies in Iran. The population of the study consists of 380 companies listed on Tehran Stock Exchange for 13 years from 2001 to 2013. To test the hypotheses, the pooled data regression method was used. F and T statistics were used to test the significance of patterns. The outcome of the study showed a significant negative relationship between total debt to total assets and financial performance. Roanne (2013) investigated the effect of capital structure on firm financial performance from 2003 to 2011. The result indicated a significant negative relationship between total debt to total assets and financial performance.

Maniagi, Mwalati, Ondiek, Mesiega and Ruto (2013) investigated the relationship between firm's capital structure and performance among a sample of 30 companies listed on

Nigeria Stock Exchange for the period of 5 years, 2007 to 2011. The results revealed that total debt to total assets ratio significantly influence return on assets of listed firms in Nairobi. Waqas, Imran, Hafiz, Jawad and Zahid (2013) examined the determinants of financial performance of textile and food sector in Pakistan. The result revealed that total debt to total assets has strongly negative relationship with financial performance at 5% level of significance. Appah, Okoroafor and Bariweni (2013) investigated the impact of capital structure on performance of 32 quoted firms in the Nigerian Stock Exchange for the period 2005 to 2011. They found that total debt to total assets has significant negative relationship with financial performance.

In addition, Saeed et al (2013) studied the impact of capital structure on performance of listed banks in Pakistan for the period of 2007-2011. The finding showed that total debt to total assets has a strong positive relationship with financial performance. Akinyomi (2013) studied the effect of capital structure in Nigeria. Data was obtained from annual reports of the companies from 2007 to 2011. Correlation analysis was employed in analysis the data. The finding revealed that total debt to total assets has significant positive effect on financial performance. Jude (2013) studied the impact of capital structure on financial performance of 30 listed manufacturing firms in Sri Lanka from 2008 to 2012. The findings revealed that there was no significant relationship between total debt to total assets and financial performance. Abdullah (2014) investigated the impact of capital structure of 74 firms on financial performance in Saudi Arabia for the period 2004 to 2012. The result of the regression showed that total debt to total assets has significant relationship with financial performance.

Rafiu, Taiwo and Dauda (2012) investigated the effect of financial policy on corporate performance in Nigeria. Panel data covering a period from 1990 to 2006 for 70 firms were analyzed. The result indicated a strong positive relationship between total debt to total assets and financial performance. Similarly, the study of Idode *et al* (2014) examined the influence of capital structure on profitability of listed banks in Nigeria. The study found a significant positive relationship between total debt to total assets and financial performance.

Mwangi, Makau and Kosimbei (2014) investigated the relationship between capital structure and performance of 42 non-financial companies listed in the Nairobi Securities Exchange, Kenya. The study used panel data extracted from the annual reports and financial statements of the sampled listed firms, and employed random effects model and feasible generalized least square (FGLS). The results showed that total debt to total assets has significant negative relationship with to financial performance. Innocent, Ikechukwu and Nnagbogu (2014) conducted a study on the effect of financial leverage on financial performance of quoted pharmaceutical companies in Nigeria for the period 2001- 2012. The study utilized secondary data sourced from financial statements of three pharmaceutical companies. Descriptive statistics, Pearson correlation and multiple regressions were employed in order to determine the relationship between financial leverage variables and performance. The results showed that total debt to total assets has negative relationship with financial performance.

Almustapha (2014) investigated the relationship between capital structure and firm performance during and after the global financial crisis among Malaysian listed companies.

The research used a panel data approach on a sample of 278 non-financial listed companies. The regression models revealed that total debt to total assets has a significant negative relationship with financial performance. Maina and Ishmail (2014) examined the relationship between capital structure and financial performance of all the firms listed at Nairobi Securities Exchange from 2002 to 2011. The result generated from the output of Gretl statistical software indicated a negative relationship between total debt to total assets and financial performance. Lawal, Edwin, Kiyanjui and Adisa (2014) studied the effect of capital structure on performance of manufacturing companies in Nigeria for the period 2003 to 2012. The result of the regression revealed a negative relationship between total debt to total assets and financial performance.

Furthermore, Harwood (2015) examined the effect of debt on the performance of commercial banks listed on Nairobi Securities Exchange. The study used longitudinal research design on 11 commercial banks and analyzed the data using SPSS version 16.0. The regression result revealed that total debt to total assets has negative relationship with firm performance. Aransiola and Oluwadetan (2015) examined the relationship between capital structure and profitability of quoted manufacturing companies in Nigeria. Using data extracted from the Nigerian Stock Exchange fact book and annual reports of the selected companies. The study showed that there is negative relationship between total debt to total assets ratio and financial performance. Mathanika, Virgina and Paviththira (2015) investigated the impact of capital structure on firm value of listed manufacturing companies in Sri Lanka. Secondary data was extracted from the financial statements of 15 companies.

The result indicated that total debt to total assets has insignificant association with financial performance.

2.4.2 Total Debt to Total Equity and Financial Performance

Total debt to total equity assesses the extent to which a firm is using borrowed funds. This is usually computed by dividing the total debt of a firm (including current liabilities) by its shareholders equity. Creditors would like this ratio to be lower; because the lower the ratio the higher the level a of firm's financing that is being provided by shareholders and the larger the cushion (margin of protection) in the event of shrinking asset values or outright losses. The total debt to total equity ratio compares the company's total liabilities to its total shareholder equity. This a measure of how much suppliers, lenders, creditors and obligors have committed to the company versus what shareholders have committed. A company's total debt to total equity ratio is expected to have a significant impact on a firm's financial performance as shown by many empirical studies conducted in Nigeria and in other Countries.

Lorpev and Kwanum (2012) investigated the relationship between capital structure and performance of manufacturing firms listed on Nigerian Stock Exchange. The study found insignificant relationship between total debt to total equity and financial performance. Rasa and Jurgita (2012) studied the effect of corporate governance decisions on capital structure on Lithuanian food and beverages companies for the period 2005 to 2010. The study found negative relationship between total debt to total equity and financial performance. Heydar et al (2012) studied the effect of capital structure on performance of firms listed on Tehran Stock Exchange. They found a significant positive relationship

between total debt to total equity and financial performance. Also, Karadeniz, Kandir, Balcilar and Onal (2012) examined the determinants of capital structure of Turkish companies. The results showed a significant positive relationship between total debt to total equity and financial performance. Simon and Afolabi (2011) examined the impact of capital structure on industrial performance of five quoted firms in Nigeria from 1999 to 2007 using panel data. The regression result showed a positive relationship between firms' performance and debt to equity ratio.

In addition, Olokoye (2012) studied the impact of capital structure on firm's performance in Nigeria. The findings revealed that there is a significant relationship between total debt to total equity and return on assets. On the contray, Cengiz, Yunus and Sukriye (2013) investigated the effect of capital structure decisions on firm performance in Turkey. The results showed an insignificant positive relationship between total debt to total equity and return on assets. Maina and Kondongo (2013) examined the effect of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002- 2011. The result revealed that significant negative relationship exists between total debts to total equity ratio and financial performances.

Syed (2013) studied the relationship between financial leverage and performance of listed sugar companies in Pakistan. The result indicated a significant positive relationship between total debt to total equity and financial performance. Akinyomi (2013) studied the effect of capital structure of companies in Nigeria using data obtained from annual reports of the companies from 2007 to 2011. The result indicated a positive relationship between total debt to total equity and financial performance. Gholamreg *et al* (2013) investigated the

association between capital structure and financial performance of 380 companies listed in Tehran Stock Exchange for the period 2001 to 2013. To test the hypotheses, the pooled data regression method was used. F and T statistics were used to test the significance of patterns. The result of the regression showed that total debt to total equity ratio has insignificant relationship with financial performance.

Khalaf (2013) investigated the relationship between capital structure and firm performance across different industries using a sample of Jordanian 45 listed manufacturing firms. The annual financial statements of the sampled firms were used for a period of five (5) years from 2005 to 2009. The result of the multiple regressions revealed a positive relationship between total debt to total equity and financial performance. Babalola (2014) conducted a triangulation analysis of capital structure and firms performance in Nigeria using thirty-one (31) manufacturing firms for the period 1999 to 2012. The result revealed a significant relationship between total debt to total equity and financial performance.

Another study by Amara and Bilal (2014) investigated the impact of capital structure on performance of 33 food firms listed on Karachi Stock Exchange for the period 2007 to 2012. The study found a negative relationship between total debt to total equity and financial performance. Amos and Francis (2014) also investigated the relationship between shareholders wealth and debt-equity mix of 60 listed non-financial companies in Nigeria from 1997 to 2011. The result showed a significant negative relationship between total debt to total equity and return on assets and earnings per share.

In addition, Suleiman (2013) examined the effect of capital structure on firm's performance in Saudi Arabia. The study found a significantly negative relationship between

total debt to total equity and return on assets. Maina and Ishmail (2014) examined the effect of capital structure on financial performance in Kenya. The population of the study consists of all firms listed at the Nairobi Securities Exchange and census approach was employed for the period 2002 to 2011. The result of the regression indicated a negative relationship between total debt to total equity ratio and financial performance. Lawal *et al* (2014) studied the effects of capital structure on performance of manufacturing companies in Nigeria for the period 2003 to 2012. Descriptive and regression technique were employed. The result revealed negative relationship between total debt to total equity and financial performance.

Idode et al (2014) assessed the influence of capital structure on performance of listed banks in Nigeria for the period 2008-2012. The findings of the study showed that total debt to total equity has a significant positive relationship with financial performance. Innocent *et al* (2014) studied the effect of financial leverage on financial performance of quoted pharmaceutical companies in Nigeria for the period 2001- 2012. The study utilized secondary data sourced from financial statements of 3 pharmaceutical companies quoted on the Nigerian Stock Exchange. Descriptive statistics, Pearson correlation and multiple regressions were employed. The results showed that total debt to total equity has negative relationship with financial performance. Mathanika *et al* (2015) investigated the impact of capital structure on a firm's value of listed manufacturing companies in Sri Lanka. Secondary sources of data were used from 15 manufacturing companies. Correlation and multiple regression analysis were used. The finding showed that total debt to total equity has significant association with financial performance.

2.4.3 Short Term Debt to Total Assets and Financial Performance

This measures how relative short-term debts to total asset of a firm are to be repaid within an accounting period. Some scholars argued that the shorter the debt the better the firm is in improving its performance. Abor (2008) studied determinants of capital of Ghanian firms listed on the Ghana Stock Exchange (GSE) during the six year period 1998 to 2003. The results of the analysis showed that short term debt influenced financial performance negatively and significantly. Zeitun and Tian (2007) surveyed the impact of capital structure on the performance of 167 Jordanian companies from 1989 to 2003. The result indicated that short-term debt to total assets ratio (SDTA) has a significantly negative impact on financial performance.

In addition, Abdul (2010) examined the relationship between capital structure decisions and firm performance of the engineering sector in Pakistan. The results showed that short term debt to total assets has insignificant relationship with firm financial performance. Lorpev and Kwanum (2012) investigated the effect of capital structure on performance of manufacturing firms listed on Nigerian Stock Exchange. The study found insignificant relationship between short term debt to total assets and financial performance. Cengiz *et al* (2013) also investigated the effect of capital structure decisions on firms' profitability in manufacturing sector in Turkey from 2005 to 2011. The findings showed a significant negative relationship between short-term debt and return on assets. Maniagi *et al* (2013) investigated the relationship between firm's capital structure and performance among a sample of 30 companies listed on Nigeria Stock Exchange for the period 2007 to

2011. The study revealed that short term debt has negative significant impact on financial performance.

Gholamreg *et al* (2013) investigated the association between capital structure and financial performance of 380 companies listed in Tehran Stock Exchange for the period 2001 to 2013. The result of the regression showed that short term debt to total assets has insignificant relationship with financial performance. Akinyomi (2013) studied the effect of capital structure on financial performance in Nigeria. Data was obtained from the annual reports of the sampled companies from 2007 to 2011. The result indicated a positive relationship between short term debt to total assets and financial performance. Appah *et al* (2013) examined the impact of capital structure on operating performance of quoted firms in the Nigerian Stock Exchange. They found that short term debt to total assets has significant negative relationship with financial performance.

Abdullah (2014) investigated the impact of capital structure on performance of 74 companies in Saudi Arabia the period 2004 to 2012. The result of the regression showed that short term debt to total assets has significant relationship with financial performance. Khalaf (2013) investigated the relationship between capital structure and firm performance across different industries using a sample of 45 manufacturing firms in Jordan for the period 2005 to 2009. The result revealed a negative and insignificant relationship between short term debt to total assets and financial performance. Amara and Bilal (2014) investigated the impact of capital structure on performance of 33 food companies listed on Karachi Stock Exchange for the period 2007 to 2012. The study revealed that there is no strong correlation between short term debt to total assets and financial performance.

Furthermore, Ngoc and Jeremy (2011) examined the relationship between firm characteristics, capital structure and operational performance of 427 companies listed on the Vietnamese Stock Exchange for the period 2007-2009. They found a significant negative relationship between short- term debt to total asset and return on asset. In addition, the study of Heydar et al (2012) found that there is no significant relationship between short-term debt to total assets and financial performance of firms. Appah et al (2013) investigated the impact of capital structure on performance of 32 listed firms in the Nigerian Stock Exchange for the period 2005-2011. The study found a significant negative relationship between short-term debt to total assets and financial performance.

Maina and Kondongo (2013) examined the effect of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002- 2011. The results showed that short term debt to total assets has significant relationship with financial performance. Almustapha (2014) investigated the relationship between capital structure and firm performance during and after the global financial crisis among Malaysian listed companies. The research used a panel data approach on a sample of 278 non-financial listed companies. The regression models revealed that short debt to total assets has a significant negative relationship with financial performance.

2.4.4 Long-term Debt to Total Assets and Financial Performance

Long-term debt to total assets measures the relative weight of long-term debt to the capital structure (long-term financing) of a firm's long-term debt to- total assets. Suleiman (2013) argues that the higher the long-term debt to total assets the greater the return on

assets. Empirically, Abor (2008) studied determinants of capital of Ghanaian firms listed on the Ghana Stock Exchange (GSE) for the period 1998 to 2003. The results suggested that there is a significant negative relationship between long term debt to total assets and financial performance. Karadeniz et al (2009) and Heydar et al (2012) found that long term debt to total asset has a positive and insignificant relation with financial performance. Khalaf (2013) investigated the relationship between capital structure and firm performance across different industries using a sampled listed 45 Jordanian manufacturing firms for the period 2005-2009. The result showed that there is an insignificant negative relationship between long-term debt to total assets and financial performance. Maniagi *et al* (2013) investigated the relationship between firm's capital structure and performance among a sample of 30 companies listed on Nigeria Stock Exchange for the period of 5 years, 2007 to 2011. The results revealed that long term debt to total assets ratio significantly influences financial performance of listed firms in Nairobi.

Iorpev and Kwanum (2012) investigated the relationship capital structure and performance of manufacturing firms listed on Nigerian Stock Exchange. The study found insignificant relationship between long term debt to total assets and financial performance. Maniagi et al (2013) examined the relationship between a firm's capital structure and its performance among a sample of 30 companies listed on Nigeria Stock Exchange for the period 2007-2011. The findings showed that long-term debt to total assets has an insignificant positive relationship with financial performance. Gholamreg *et al* (2013) investigated the association between capital structure and financial performance of 380 companies listed in Tehran Stock Exchange for the period 2001 to 2013. The result of the

regression showed that long term debt to total assets has insignificant relationship with financial performance. Akinyomi (2013) studied the effect of capital structure on financial performance in Nigeria. Data was obtained from annual reports of the sampled companies from 2007 to 2011. The result indicated insignificant relationship between long term debt to total assets and financial performance.

Abdullah (2014) investigated the impact of capital structure on performance of 74 companies in Saudi Arabia for the period 2004 to 2012. The result of the regression showed that long term debt to total assets has significant relationship with financial performance. Amara and Bilal (2014) investigated the impact of capital structure on performance of 33 food companies listed on Karachi Stock Exchange for the period of 2007 to 2012. The study revealed that there is no strong correlation between long term debt to total assets and financial performance. Khalaf (2013) investigated the relationship between capital structure and firm performance across different industries using a sample of 45 Jordanian listed manufacturing firms. The annual financial statements of the sampled firms were used for a period of five (5) years from 2005 to 2009. The result of the multiple regression revealed a negative and insignificant relationship between long term debt to total asset and financial performance. Cengiz *et al* (2013) investigated the effect of capital structure decisions on firm's profitability in manufacturing sector in Turkey. The research been conducted on the basis of secondary information and for conducting smooth analysis data has been collected from different sources annual reports and publication. The results showed that long term debt to total assets has a negative relationship with the financial performance.

In addition Ngoc and Jeremy (2011) examined the relationship between firm characteristics, capital structure and operational performance of 427 companies listed on the Vietnamese Stock Exchange for the period 2007-2009. They found a significant negative relationship between long term debt to total assets and financial performance. In addition, the study of Heydar et al (2012) found that there is no significant relationship between short-term debt to total assets and financial performance of firms. Muhammad et al (2012) found that long-term debt to total assets has a negative relationship with performance. Mustafa and Osama (2013) found insignificant negative relationship between long term debt to total assets and firm's performance and on the contrary, Zaitun and Tian (2007) earlier found that long term debt has significant negatively relationship with financial performance. Similarly, Rasa and Jurgita (2012) investigated the relationship between corporate governance decision on capital structure and performance of Lithuanian food and beverages listed companies for the period 2005-2010. The result showed a significant negative relationship between long-term debt to total assets and financial performance. Waqas et al (2013) conducted a study on determinants of firm's financial performance among firms in textile and food sectors in Pakistan for the period 2005-2010. The result showed significant negative relationship exists between long-term debt and financial performance. In contrast to the above findings, Rafiu *et al* (2012) found significant positive relationship between total debt to total assets and financial performance.

Almustapha (2014) investigated the relationship between capital structure and firm performance during and after the global financial crisis among Malaysian listed companies. The research used a panel data approach on a sample of 278 non-financial listed companies.

The regression models revealed that long debt to total assets has a significant negative relationship with financial performance.

2.5 Theoretical Framework

After the pioneering work of Modigliani and Miller (1958) on capital structure, several theories of capital structure have been developed. These include Modigliani and Miller theory, pecking order theory, efficiency-risk hypothesis, franchise value hypothesis, agency theory and static trade off theory. In this study, efficiency-risk hypothesis, franchise value hypothesis and agency cost theories would be used.

2.5.1 Efficiency-Risk Hypothesis

Firm performance may also affect the choice of capital structure. Efficiency- risk hypothesis is a spin- off of the trade- off theory of capital structure whereby differences in efficiency, other things constant, enable firms to fine tune their optimal capital structure. Under the efficiency-risk hypothesis, more efficient firms choose lower equity ratios than other firms, all else equal, because higher efficiency reduces the expected costs of bankruptcy and financial distress. Under this hypothesis, higher profit efficiency generates a higher expected return for a given capital structure, and the higher efficiency substitutes for equity capital to some degree in protecting the firm against future crises. This is a joint hypothesis, that firstly efficiency is strongly positively associated with expected returns, and secondly the higher expected returns from high efficiency are substituted for equity capital to manage risks.

Regarding the first part of the hypothesis, i.e., that efficiency is strongly positively associated with expected returns in firms, efficiency has been found to be significantly

positively correlated with returns on equity and returns on assets (see for example, Berger & Mester, 1997). Other evidence suggests that efficiency is relatively stable over time (see for example Pandey, 1997), therefore, a finding of high efficiency tends to yield high future expected returns.

Regarding the second part of the hypothesis – that higher expected returns for more efficient firms are substituted for equity capital – follows from a standard Altman z-score analysis of firm insolvency (Altman, 1968). High expected returns and high equity capital ratio can each serve as a buffer against portfolio risks to reduce the probabilities of incurring the costs of financial distress/bankruptcy, therefore, firms with high expected returns due to high efficiency can hold lower equity ratios. According to the above analysis, firms with higher efficiency will have higher expected returns, and a higher expected return allows the firm to have a lower equity ratio for a given z-score, so that more efficient firms may choose lower equity capital ratios. Berger and Bonaccorsi (2006) also proposed and supported the similar argument. Based on the above argument, we follow the previous studies and put forward the efficiency-risk hypothesis (H3): Efficiency is positively related to the Leverage.

2.5.2 Franchise-Value Hypothesis

The franchise-value hypothesis focuses on the income effect of the economic rents generated by efficiency on the choice of capital structure. Under this hypothesis, more efficient firms choose higher equity capital ratios, other things constant, to protect the rents or franchise value associated with high efficiency from the possibility of liquidation. Higher efficiency may create economic rents if the efficiency is expected to continue in the future, and shareholders may choose to hold extra equity capital to protect these rents, which would

be lost in the event of liquidation, even if the liquidation involves no overt bankruptcy or distress costs. The franchise-value hypothesis is also a joint hypothesis that efficiency is a source of rents, and that firms hold additional equity capital to prevent the loss of these rents in the event of liquidation.

Related literature to this field, Titman (2001), Titman and Wessels (1988), Van Horne (2005), Petersen & Rajan (1995) supports the notion that firms hold additional equity capital to protect franchise value. Based on the above argument, we follow the previous studies and propose the franchise-value hypothesis (H4): Efficiency is negatively related to Leverage.

These two hypotheses yield opposite predictions from one for the effects of leverage on efficiency to another for the effect of efficiency on leverage. The two individual effects may be thought of as substitution and income effects. Under the efficiency-risk hypothesis, the expected earnings from high efficiency substitute for equity capital in protecting the firm from the expected costs of bankruptcy or financial distress, whereas under the franchise-value hypothesis, firms try to protect the income from high efficiency by holding additional equity capital. We will examine the individual effect based on different leverage level and the net effect based on all sample firms respectively.

2.5.3 The Agency Cost Theory

This theory of capital structure states that an optimal capital structure will be determined by minimizing the costs arising from conflicts between the parties involved. Jensen and Meckling (1976) argue that agency cost plays an important role in financing decisions due to the conflict that may exist between shareholders and debt holders. If

companies are approaching financial distress, shareholders can encourage management to take decisions, which in effect, expropriate funds from debt holders to equity holders. Sophisticated debt holders will then require a higher return for their funds if there is potential for this transfer of wealth. Debt and the accompanying interest payments however may reduce the agency conflict between shareholders and management. Debt holders have legal redress if management fails to make interest payments when they are due, hence, managers concerned about potential loss of job, will be more likely to operate the firm as efficiently as possible in order to meet the interest payments, thus aligning their behavior closer to shareholder wealth maximization.

Jensen and Meckling (1976) see agency costs as the sum of the monitoring expenditure by the principal, bonding costs by the agent, and a residual loss. They also argue that the use of secured debt might reduce the agency cost of debt. Agency Theory demonstrates that in the decision about a firm's capital structure, the agency conflicts between shareholders and managers is affected by the level of leverage, as it encourages or constrains managers to take decisions in the interest of shareholders and their operation decisions and behaviors affect the firm performance. Thus, the use of debt capital will minimize the agency cost since the payment of debt interest reduces the surplus cash.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology adopted for the study. The chapter analyses the method and sources of data collection, discusses the research design, population of the study, sample size and sampling technique, statistical tool for data analysis, variables measurement, and model specification of the study. The chapter also highlights the robustness tests conducted on the data used for the study.

3.2 Research Design

Correlation research design was adopted based on positivism paradigm. This is because the study attempts to measure the relationship between capital structure and financial performance of listed manufacturing firms in Nigeria. Correlation design does not only establish relationship between variables but show cause and effect relationship between dependent and independent variables.

3.3 Population and Sampling Procedure of the Study

The population of this study consists of the 102 manufacturing firms listed on the Nigerian Stock Exchange as at December 2014. The firms are classified into eight (8) sub-subsectors. For the purpose of this study, stratified and random sampling techniques are used considering the sectorial grouping of firms in the stock market. The sample size of the study is thirty-one (31) manufacturing firms drawn from the defined population and it is arrived at by using Yamane sample size formula, which is represented thus:

n = N / (1 + Ne^2)

Where n = Number of samples

N = Total population

e = Error tolerance

Hence: $n = 102/1 + 100 (0.15)^2 = 31$

Table 3.1 presents the summary of listed manufacturing firms based on their strata and the basis of computation used to arrive at the number of sampled firms in each of the eight strata.

Table 3.1 Population and sample size of the manufacturing firms used in the study

S/N	STRATA	NUMBER OF FIRMS	COMPUTATION	NUMBER OF FIRMS FROM EACH STRATA
1	AGRICULTURE	5	5/102*31	2
2	CONGLOMERATES	8	8/102*31	2
3	CONSTRUCTION/REAL ESTATE	10	10/102*31	3
4	CONSUMER GOODS	28	28/102*31	8
5	HEALTH CARE	10	10/102*31	3
6	INFORMATION, COMMUNICATION&TELECOMS	10	10/102*31	3
7	INDUSTRIAL GOODS	25	25/102*31	8
8	NATURAL RESOURCES	6	6/102*31	2
	TOTAL	102		31

Sources: Author's computation based on NSE Fact Book, 2014

3.4 Sources and Method of Data Collection

This study used secondary sources of data. The data were obtained from the annual reports and accounts of the sampled manufacturing firms and Nigerian Stock Exchange Fact Book. Secondary data were used due to the nature of the variables under study. Cross-

sectional/time series data were extracted from the annual reports and accounts of the firms for the purpose of assessing the relationship between the variables of the study. Panel data were used in the study in order to detect and measure effect that cannot be simply observed by pure cross section or pure time series data. The data also suited the study dynamics of change and complicated behavioral pattern (Gujarati & Porter, 2009).

3.5 Technique of Data Analysis

Panel multiple regression was used to analyse the data in order to establish relationship between the variables. Multiple regression was considered appropriate in view of the fact that it helps in not only establishing relationship between variables, but shows the effect cause and effect relationship. In order to achieve reliability of the result, robustness tests that include multicollinearity test, Hausman test and heteroskedasticity test were conducted.

3.6 Variables Measurement

The variables of the study consist of dependent variable, financial performance measured by return on assets (ROA), and independent variable, capital structure proxied by total debt to total assets (TDTA), total debt to total equity (TDTE), short-term debt to total assets (STTA) and long-term debt to total assets (LTTA). The measurement of the variables are contained in table 3.2

Table 3. 2: Variables Measurement and Definitions

	Nature of variable	Proxies	Variables measurement and source
Capital structure	Independent Variable	Total debt to total assets	Total debt/Total assets (Akinyomi, 2013)
		Total debt to total equity	Total debt/Total equity (Khalaf, 2013)
		Short-term debt to total assets	Short-term debt/Total assets (Amara & Bilal, 2014)
		Long-term debt to total assets	Long-term debt/Total assets (Abdullah 2013)
Financial Performance	Dependent Variable	ROA	Earnings before interest and tax/Total assets (Abor 2008)

Source: Generated by the author 2016

3.7 Models Specification

The model that will be used in testing the hypotheses of the study is presented below:

$$R0A_{it} = \beta_0 + \beta_1 TDTA_{it} + \beta_2 TDTE_{it} + \beta_3 STTA_{it} + \beta_4 LTTA_{it} + \varepsilon_{it}$$

Where:

ROA = Return on asset
$\beta_0, \beta_1 - \beta_4 =$ parameters to be estimated
TDTA = Total-debt to total assets
TDTE = Total-debt to total equity
STTA = Short-debt to total assets
LTTA = Long-debt to total assets
ε = error term signifying other variables not captured in the study
it = Firm i at time t

3.8 Diagnostic and Robustness Tests

The following robustness tests were conducted in order to improve the validity of the results:

(i) **Multicollinearity Test:** The study adopted multiple regression models to ascertain the association between the independent and dependent variables. Where the association is highly correlated, multicolinearity exists. For that the study tested for it, to see the possibility of its existence or otherwise. This was done using variance inflation factor (VIF) and tolerance value.

(ii) **Heteroskedasticity Test:** The study deals with observations that constitute different sizes, some are in decimal while others in units, and that heteroskedasticity sometimes occurs when there is a large difference among the sizes of observations. For that, the study had to run a heteroskedasticity test in order to see its existence or otherwise. It was done using Breusch-pagan/cook-weisberg test for heteroskedasticity.

(iii) **Hausman Test:** In view of the fact that both fixed and random effect tests were conducted, Hausman test was used to decide the best out of the two results. The test enabled the researcher to choose the most appropriate between the fixed and random effect models.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter analyses and interprets the results obtained for the study. The chapter begins with descriptive statistics and correlation matrix. It then presents the regression results and discusses the findings in light of previous studies. The chapter concludes with highlight of the policy implications of the findings.

4.2 Descriptive Statistics

The summary of the descriptive statistics of the variables are presented in table 4.1. The full results are contained in appendix (IIA).

Table 4.1 Descriptive Statistics

Variables	Min.	Max.	Mean	Std. Dev.
ROA	-5.265	14.573	0.2364194	1.268423
TDTA	0.043	19.6572	6.987807	7.151588
TDTE	0.030	72.755	8.203064	10.15754
LTTA	0.000	30.648	0.8527	2.607513
STTA	0.110	56.932	1.747409	6.034367

SOURCE: Extract from STATA Output, 2016

Table 4.1 presents the descriptive statistics for the dependent and explanatory variables. From the table, return on assets has minimum and maximum values of -5.265 and 14.573 respectively and the mean value of 0.2364 as well as the standard deviation value of 1.2684. The standard deviation of 1.2684 signifies that the data deviate from the mean value from both sides by 1.2684 implying that there is a wide dispersion of the data from the mean because standard deviation is higher than the mean value.

The table also shows that the mean of the total debt to total assets of the sampled firms is 6.9878 with standard deviation of 7.1516, and minimum and maximum values of 0.043 and 19.6572 respectively. This implies that the performance of the firms in terms of total debt to total assets is on average 6.9878, and the standard deviation value indicates that the total debt to total assets of the sampled firms deviates from the mean value from both sides by 7.1516, implying that there is significant dispersion of the data from the mean because the standard deviation is higher.

Moreover, the table shows that the mean of the total debt to total equity of the firms is 8.2031 with standard deviation of 10.1575. The minimum and maximum values are 0.030 and 72.755 respectively. This implies that total debt to total equity of the sampled firms is on average 8.2031, and the standard deviation value indicates that the value deviates from the mean from both sides by 10.1575, implying that there is significant dispersion of the data from the mean because the standard deviation is larger.

Furthermore, the table shows that the mean of the long term debt to total assets of the firms is 0.8527 with standard deviation of 2.6075. The minimum and maximum values are of 0.000 and 30.648 respectively. This implies that long term debt to total assets of the firms is on average 0.8527. The standard deviation indicates that the value of the firms' long term debt to total assets deviates from the mean value from both sides by 2.6075. This implies that there is significant dispersion of the data from the mean because the standard deviation is higher.

Finally, the table portrays that the short term debt to total assets has an average value of 1.7474 with standard deviation of 6.0344. The minimum and maximum values are 0.011

and 56.932 respectively. The standard deviation indicates that the value of short term debt to total assets of the firms deviates from the mean value from both sides by 6.0344. This further implies that there is widely dispersed data from the mean because the standard deviation is large.

4.3 Correlation Matrix

The correlation matrix explains the degree of relationship between the dependent and independent variables of the study as well as the independent variables among themselves. The summary of the associations among the variables of the study is presented in table 4.2, while the full result is attached as appendix (IIB)

Table 4.2 Correlation Matrix

Variables	ROA	TDTA	TDTE	LTTA	STTA
ROA	1				
TDTA	0.0191	1			
	(0.7958)				
TDTE	0.2323***	-0.2766***	1		
	(0.0014)	(0.0001)			
LTTA	0.0770	0.0350	0.4854***	1	
	(0.2961)	(0.6351)	(0.0000)		
STTA	0.5110***	0.2065***	0.5706***	0.4732***	1
	(0.0000)	(0.0047)	(0.0000)	(0.0000)	

SOURCE: STATA Output, 2016

Table 4.2 reveals that total debt to total equity and short term debt to total assets of the firms are positively and strongly correlated with return on assets. The values of 0.2323 and 0.5110 of the variables indicated p-values of 0.0014 and 0.0000 that are all significant at 1% respectively. In contrast, total debt to total assets and long term debt to total assets respectively have positive relationship with return on assets that is not statistically significant.

The relationship of the independent variables among themselves indicates that total debt to total equity and total debt to total assets are negatively correlated among themselves. On the other hand, the relationship between short term debt to total assets and total debt to total assets, long term debt to total assets and total debt to total equity, short term debt to total assets and total debt to total equity, and short term debt to total assets and long term debt to total assets are positively related among themselves. Although some of the variables exhibited strong association, the overall relationship for the independent variables among themselves is not significant, though this may not be enough to surmise that multicollinearity exists among the explanatory or exogenous variables of the study unless the variance inflation factor and tolerance values are comparatively beyond the established rule of thumb. Thus, the tolerance value and variance inflation factor (VIF) are advanced measures for assessing harmful multicollinearity among explanatory variables. The variance inflation factor and tolerance values are determined with the use of STATA 10 and were found to be concurrently smaller than ten and one respectively, indicating the absence of harmful multicollinearity. This therefore, indicates the adequacy of fitting the model of the study with four independent variables.

4.4 Analysis of Regression Results and Discussion of Findings

In view of the nature of the data, both fixed effect and random effect models were tested. Hausman specification test was then used to decide between the two results. The result from the Hausman test revealed a Chi2 value of 34.34 with p-value of 0.000 that is statistically significant at 1%. This implies that the test considered the fixed effect as the most appropriate estimator. The full results of the fixed and random effect as well as

Hausman test are attached as appendix (IIE and IIF). In view of this, the fixed effect model was used for analysis.

Table 4.3 presents the summary of the fixed effect multiple regression results obtained while the full results are shown in appendix (IIE):

Table 4.3 Regression Results

Variables	Coefficient	T-Values	P-Values	Tolerance	VIF
Constant	0.5994104	2.58	0.011		
TDTA	-0.0550336	-2.19	0.030	0.721016	1.39
TDTE	-0.0206729	-0.94	0.348	0.465383	2.15
LTTA	-0.1892773	-5.42	0.000	0.701805	1.42
STTA	0.2017568	7.89	0.000	0.507822	1.97
R^2	0.4995				
Wald Chi^2	37.67				
Prob. Chi^2			0.0000		

Source: STATA Output, 2016

Table 4.3 shows that the functional relationship between the dependent and independent variables is:

ROA= 0.5994 - 0.0550TDTA -0.0207TDTE - 0.1893LTTA + 0.2018STTA

The table showed that total debt to total assets has negative significant impact on the financial performance of listed manufacturing firms in Nigeria. This can be observed from the value of beta the coefficient of -0.0550336 with p-value of 0.030 indicating that the p-value is statistically significant at 5%. This implies that total debt to total assets as one of the proxies of capital structure that significantly affect the financial performance of listed manufacturing firms in Nigeria. The results serves as a basis for rejecting the first

hypothesis, which states that total debt to total assets has no significant impact on the financial performance of listed manufacturing firms in Nigeria. The result supports? the findings of Song (2006), Fosberg and Ghosh (2006), Zaitun and Tain (2007), Ebaid (2009), Mramor and Cringoji (2009), Heydar et al (2012) and Abolfazl et al (2013) who found that total debt to total assets is negatively and significantly associated with performance of firms and the findings of jude (2013) and Mathanika et al (2015) who found a positive insignificant relationship between total debt to total assets and financial performance.

The table also revealed that total debt to total equity has negative insignificant impact on the financial performance of listed manufacturing firms in Nigeria. This can be seen from the value of the beta coefficient of -0.0206729 with p-value of 0.348 indicating that the p-value is not statistically significant. This implies that total debt to total equity does not have significant effect on the financial performance of the firms. The result could not provide sufficient evidence to reject the second hypothesis, which states that total debt to total equity has no significant impact on the financial performance of listed manufacturing firms in Nigeria. This is in line with the findings of Cengiz, Yunus,and Sukriye (2013) who reported negative insignificant relationship between total debt to total equity and firms' financial performance. The result is however in contrast with the findings of Gholamreg et al (2013), Sulieman (2013), Amara and Bilal (2014) and Maina and Ishmail (2014) who found that total debt to total equity is negatively and significantly associated with performance of firms and the findings of Heydar (2012), Karadeniz et al (2012), Simon and Afolabi (2012), Khalaf (2013) and Idode et al (2014) who found a positive significant relationship between total debt to total equity and financial performance.

Furthermore, the result showed that long term debt to total assets is negatively and significantly correlated with the financial performance of listed manufacturing firms in Nigeria. The beta coefficient of the variable is -0.1892773 and the p-value is 0.000 which is significant at 1% level of significance. This indicates that long term debt to total assets has negative significant impact on the financial performance of firms. The implication of this finding is that the lower the long term debt to total assets ratio of a firm the better the quantum of profit to be reported by the firm. The result provided a basis for rejecting the third hypothesis, which states that long-term debt to total assets has significant effect on the performance of listed manufacturing firms in Nigeria. This is in line with the findings of Zaitun and Tian (2007), Ngoc and Jeremy (2011), Muhammad et al (2012) and Rasa and Jurgita(2012) who found negative significant relationship between long-term debt to total assets ratio and financial performance and findings of Rafiu, Taiwo and Dauda (2012) who reported positive significant relationship between long-term debt to total asset and firms' financial performance. The result is however in contrast with the findings of Karadeniz et al (2012), Khalaf (2013) and Amara and Bilal (2014) who found that total debt to total assets is positively and insignificantly associated with performance of firms.

Finally, the table revealed a value of beta coefficient of 0.2017568 with p-value of 0.000 for short term debt to total assets ratio. This signifies that short term debt to total assets has strong positive influence on the financial performance of listed manufacturing firms in Nigeria at 1% level of significance. The result implies that short term debt to total assets increase the financial performance of the firms. The result provides evidence of rejecting the fourth hypothesis that assumed short-term debt to total assets has no significant

impact on the performance of listed manufacturing firms in Nigeria. The result is in line with the findings of Akinyomi (2013), Maina and Kondongo (2013) and Abdullah (2014) who reported positive significant relationship between short-term debt to total assets ratio and firms' financial performance. The result is contrary to the findings of Abdul (2010), Lorpev and Kwanum (2012) and Khalaf (2013) who found that short-term debt to total assets is negatively and insignificantly associated with performance of firms.

The combined and overall effect of the predictor variables on the explained variable showed that the model is adequate and free from misspecification. The Wald Chi^2 value of 37.67 with Prob. Chi^2 of 0.0000 which is significant at 1% level of significance shows that the model is well fitted with the variables of the study. Furthermore, the coefficient of determination R^2 which stands at 50% indicates the proportion of the total variation in dependent variable (return on assets) that is explained by the independent variables. This signifies that 50% of the total variation in financial performance of listed manufacturing firms in Nigeria is caused by the combined effect of the ratios of total debt to total assets, total debt to total equity, long term debt to total asset and short term debt to total assets; while the remaining 50% is caused by other factors not captured in the model of the study.

To enable comparison of the three results, table 4.4 presents summary of the Pooled OLS, Fixed and Random effects models: while the full result is attached as appendix (II G)

Table 4.4 Summary of Pooled OLS, Fixed and Random effects Models

Variables	Pooled OLS	Fixed	Random
TDTA	-0.0266**	-0.0550**	-0.0340**
TDTE	-0.0142	-0.2067	-0.0158
LTTA	-0.0938***	-0.1893***	-0.1469***
STTA	0.1468 ***	0.2018***	0.1724***
CONS	0.3624**	0.5994**	0.4269**
CHI^2			119.2213
N	186	186	186
R^2	0.3126	0.4994	

Source: STATA Output, 2016

From table 4.4 both LTTA and STTA turned a p-value that is statistically significant at 1% for all the three models. In addition, the models returned p-values that are significant at 1% with respect to TDTA. This implies that though the R^2 values of pooled OLS and fixed model are different, in terms of level of significance of the p-values, the models are very similar.

4.5 Policy Implications of the Research Findings

The study has a number of theoretical, practical and regulatory implications. One major implication is that manufacturing firms are the main source of raw materials, goods and services needed by individuals to build their personal houses, corporate entities to expand their branch network and government to provide the needed infrastructural facilities for its citizens. The outcome of this study could be used by manufacturing firms on sources of capital decision, as well as proper utilization of its capital. Based on the result the firms would understand the need to focus more attention on capital structure decision regarding how to finance their assets by debt or by equity as such decision would affect relationship

with the final result for any given period since it influences the returns and risks of shareholders and consequently the market value of the shares. The results of this study could also be used by the regulatory authorities in deciding on the most appropriate ways of increasing their assets and expanding the scope of their operations in order to maintain optimal levels of total debt, long-term debt and short term debt in view of the directions of association that exist between the ratios of these three types of debt and financial performance.

Theoretically, the study has implication on the understanding of both researchers and practitioners about the nature and extent of the relationship that exist between capital structure and performance. This will go a long way in contributing to existing literature on the subject matter and providing frontier for further studies.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study was conducted to investigate the impact of capital structure on financial performance of listed manufacturing firms in Nigeria. The study was divided into five chapters. The first chapter discussed the background issues, which led to developing four objectives and formulating four hypotheses for the research with a scope covering six (6) years, from 2009 to 2014. The review of conceptual literature and empirical studies on capital structure and financial performance was carried out. Also, the concept and measurement of firm performance was discussed as well as the review of the relationship between each of the proxies of the independent variables and the dependent variable. The theoretical framework that underpinned the study was also discussed.

Correlation research design was used in measuring the relationship among the variables of the study. Data was collected from secondary source through the annual reports and accounts of 31 sampled firms out of a population of 102 listed manufacturing firms in Nigerian Stock Exchange that have complete financial records either on their website or in the office of the Nigerian Stock Exchange. Multiple regression was used to test the four hypotheses formulated by the study. The result of the descriptive statistics, correlation matrix and regression were presented, analysed and discussed in chapter four. The regression result could not provide sufficient evidence for the rejection of hypotheses two that hypothesized that total debt to total equity ratios have no significant impact on the financial performance of manufacturing firms in Nigeria. The result however provided sufficient evidence for rejecting the first, third and fourth hypotheses on total debt to total asset, long term debt to total assets and short term debt to total assets ratios. Finally, the

chapter discussed the findings of the research in light of previous studies and highlighted the policy implications of the findings.

5.2 Conclusion

As a corollary of the discussion and analysis in the preceding chapter, the study concludes as follows:

Firstly, the study found a negative significant association between total debt to total assets ratio and financial performance. It is therefore concluded that total debt to total asset is one of the variable of capital structure that contribute in influencing financial performance of listed manufacturing firms in Nigeria.

In addition, the study found a negative insignificant association between total debt to total equity ratio and financial performance of listed manufacturing firms in Nigeria. Thus, the study concluded that total debt to total equity is not one of the factors that influence the financial performance of listed manufacturing firms in Nigeria.

Furthermore, long-term debt to total assets ratio was found to have negative significant impact on financial performance of listed manufacturing firms in Nigeria. The study therefore, concluded that long-term debt to total assets ratio is one of the strong determinants of the financial performance of listed manufacturing firms in Nigeria.

More so, the study found a positive significant relationship between the ratio of short-term debt to total assets and the financial performance of listed manufacturing firms in Nigeria. Thus, the study concluded that short- term debt to total asset is amongst the determinants of the financial performance of listed manufacturing firms in Nigeria.

5.3 Recommendations

In line with the findings of the study, the following recommendations are made:

(i) The management of Nigerian listed manufacturing firms should work very hard to optimize the capital structure of their listed manufacturing firms in order to increase the financial performance. They can do that through ensuring that their capital structure is optimal.

(ii) The Management of Nigerian listed manufacturing firms should increase their commitments into short term debt to total asset in order to improve financial performance from their business operation. This is in line with the findings of this study that the short term debt of listed manufacturing firms in Nigeria influences their financial performance positively.

(iii) The Management of Nigerian listed manufacturing firms should be concerned about the level of their total debt to total equity, for better financial performance. This is because the findings of this study revealed a negative insignificant relationship the variables and financial performance.

(iv) Stakeholders of listed Manufacturing firms in Nigeria should also reduce the level of total debt to total assets and long term debt of any firm in order to improve financial performance. This is in line with the findings of this study that revealed a negative significant impact of total debt and long term debt on financial performance of listed manufacturing firms in Nigeria.

5.4 Limitations of the Study

As it is the case with all studies, this study is associated with some limitations. The findings of this study are therefore to be considered in light of the following limitations:

(i) The study intended to use the entire population of listed manufacturing firms in Nigeria to constitute the population of the study. But some firms do not have complete financial records either on their website or in the office of Nigerian Stock Exchange during the period of the study. The study considered only those firms that meet up with the criterion to form the adjusted population. Therefore, the findings and recommendations of the study may not apply to the firms that were not covered by the study.

(ii) The study considered only four proxies of capital structure without considering other proxies that determine capital structure such as short term debt to total equity and long term debt to total equity. The result may be different if other variables were to be added.

5.5 Areas for Further Research

The issues involved in this study area cannot all together be covered by a single research, and hence, the need for further research. The following research areas are hereby recommended:

(i) The study covered only listed manufacturing firms in Nigerian for the period of six years. Therefore, there is the need for further research using other sectors and more years in Nigeria.

(ii) Researchers in the area can carry out similar studies using other performance measures such as return on equity, return on investment and Tobin's Q as their dependent variables to assist in providing a clear guidance to finance managers in Nigeria on the appropriate

financing mix that could optimize the value of a firm as most of the previous studies have been based on evidences from foreign countries.

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APPENDIX (I)

LIST OF QUOTED SAMPLED MANUFACTURING FIRMS IN NIGERIAN STOCK EXCHANGE AS AT 31st December, 2014 EXTRACTED FROM THE NSE FACTBOOK.

PRESCO Plc.

LIVESTOCK FEED Plc.

A.G. LEVENTIS Plc

ARIBCO Plc

COSTAIN Plc

JULIUS BERGER Plc

GUINNESS NIG Plc

7 UP BOTTLING COMPANY Plc

DANGOTE FLOUR MILL Plc

DANGOTE SUGAR REFINERY Plc

FLOUR MILLS OF NIG Plc

HONEY WELL FLOUR MILLS Plc

NORTHERN NIGERIA FLOUR MILLS plc

MORRISON INDUSTRIES plc

EVANS plc

FODSON plc

OMATEK VENTURE plc

MTECH COMMUNICATION plc

HIS NIG plc

AFRICAN PAINTS plc

ASHAKA CEMENT plc

BERGER PAINTS NIG plc

CEMENT COMPANY OF NORTHERN NIG plc

DANGOTE CEMENT plc

DN MEYER plc

FIRST ALUMINIUM NIG plc

NIGERIAN WIRE AND CABLE plc

B.O.C GASES NIG plc

ALUMINIUM EXTRUSION INDUSTRIES plc

APPENDIX (II A)

DESCRIPTIVE STATISTIC RESULTS

```
  ___  ____  ____  ____  ____ tm
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   10.0   Copyright 1984-2008
  Statistics/Data Analysis             StataCorp
                                       4905 Lakeway Drive
                                       College Station, Texas 7784
> 5 USA
                                       800-STATA-PC        http://
> www.stata.com
                                       979-696-4600        stata@s
> tata.com
                                       979-696-4601 (fax)

28-student Stata for Windows (network) perpetual license:
       Serial number:  1910569294
         Licensed to:  James Lin
                       UC Riverside

Notes:
      1.  (/m# option or -set memory-) 1.00 MB allocated to data
      2.  New update available; type -update all-

. edit
(7 vars, 186 obs pasted into editor)
- preserve

. su roa tdta tdte ltta stta, detail
```

ROA

Percentiles		Smallest		
1%	-2.205	-5.265		
5%	-.468	-2.205		
10%	-.188	-1.244	Obs	186
25%	.01	-.953	Sum of Wgt.	186
50%	.123		Mean	.2364194
		Largest	Std. Dev.	1.268423
75%	.308	2.057		
90%	.481	3.026	Variance	1.608896
95%	.792	4.59	Skewness	7.64939
99%	4.59	14.573	Kurtosis	91.67022

TDTA

Percentiles		Smallest		
1%	.067	.043		
5%	.304	.067		
10%	.542	.07	Obs	186
25%	.931	.093	Sum of Wgt.	186
50%	1.8565		Mean	6.987807
		Largest	Std. Dev.	7.151588
75%	12.3675	19.3147		
90%	18.6984	19.4625	Variance	51.14521
95%	19.0369	19.6217	Skewness	.5609182
99%	19.6217	19.6572	Kurtosis	1.658231

TDTE

Percentiles		Smallest		
1%	.064	.03		
5%	.117	.064		
10%	.214	.072	Obs	186
25%	.527	.074	Sum of Wgt.	186
50%	2.579		Mean	8.203064
		Largest	Std. Dev.	10.15754
75%	14.985	23.435		
90%	18.283	35.11	Variance	103.1756
95%	22.897	61.239	Skewness	2.374563
99%	61.239	72.755	Kurtosis	13.69533

LTTA

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	.022	0	Obs	186
25%	.075	0	Sum of Wgt.	186
50%	.192		Mean	.8527
		Largest	Std. Dev.	2.607513
75%	.734	7.535		
90%	1.538	9.051	Variance	6.799122
95%	2.627	9.456	Skewness	8.693619
99%	9.456	30.648	Kurtosis	94.4275

STTA

	Percentiles	Smallest		
1%	.014	.011		
5%	.027	.014		
10%	.04	.015	Obs	186
25%	.097	.016	Sum of Wgt.	186
50%	.2535		Mean	1.747409
		Largest	Std. Dev.	6.034367
75%	1.151	20.835		
90%	3.043	34.654	Variance	36.41359
95%	5.417	42.107	Skewness	6.853328
99%	42.107	56.932	Kurtosis	54.30098

APPENDIX (II B)

CORRELATION MATRIX RESULT

```
. pwcorr roa tdta tdte ltta stta, star (0.05) sig
```

	roa	tdta	tdte	ltta	stta
roa	1.0000				
tdta	0.0191 0.7958	1.0000			
tdte	0.2323* 0.0014	-0.2766* 0.0001	1.0000		
ltta	0.0770 0.2961	0.0350 0.6351	0.4854* 0.0000	1.0000	
stta	0.5110* 0.0000	0.2065* 0.0047	0.5706* 0.0000	0.4732* 0.0000	1.0000

APPENDIX (II C)

POOLED ORDINARY LEAST SQUAR REGRESSION RESULT

```
. reg roa tdta tdte ltta stta
```

Source	SS	df	MS		
Model	93.0405768	4	23.2601442	Number of obs =	186
Residual	204.605147	181	1.13041518	F(4, 181) =	20.58
				Prob > F =	0.0000
Total	297.645724	185	1.6088958	R-squared =	0.3126
				Adj R-squared =	0.2974
				Root MSE =	1.0632

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
tdta	-.0265789	.0128724	-2.06	0.040	-.0519781	-.0011797
tdte	-.0142246	.0112808	-1.26	0.209	-.0364833	.0080342
ltta	-.093795	.0357848	-2.62	0.010	-.164404	-.023186
stta	.1467572	.018178	8.07	0.000	.1108892	.1826252
_cons	.3623672	.1566116	2.31	0.022	.0533478	.6713865

APPENDIX (II D)

HETEROSKEDASTICITY AND VARIANCE INFLATION FACTOR RESULTS

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of roa

         chi2(1)      =  1129.98
         Prob > chi2  =   0.0000

. vif
```

Variable	VIF	1/VIF
tdte	2.15	0.465383
stta	1.97	0.507822
ltta	1.42	0.701805
tdta	1.39	0.721016
Mean VIF	1.73	

APPENDIX (II E)

FIXED AND RANDOM EFFECT REGRESSION RESULTS

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of roa

         chi2(1)      =  1129.98
         Prob > chi2  =   0.0000

. vif

    Variable |       VIF       1/VIF
-------------+----------------------
        tdte |      2.15    0.465383
        stta |      1.97    0.507822
        ltta |      1.42    0.701805
        tdta |      1.39    0.721016
-------------+----------------------
    Mean VIF |      1.73

. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2009 to 2014
                delta:  1 year

. xtreg roa tdta tdte ltta stta, fe

Fixed-effects (within) regression               Number of obs      =       186
Group variable: id                              Number of groups   =        31

R-sq:  within  = 0.4995                         Obs per group: min =         6
       between = 0.0360                                        avg =       6.0
       overall = 0.2980                                        max =         6

                                                F(4,151)           =     37.67
corr(u_i, Xb)  = -0.3531                        Prob > F           =    0.0000

------------------------------------------------------------------------------
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        tdta |  -.0550336   .0250776    -2.19   0.030    -.104582   -.0054853
        tdte |  -.0206729   .0219586    -0.94   0.348   -.0640587    .0227129
        ltta |  -.1892773   .0349429    -5.42   0.000   -.2583174   -.1202371
        stta |   .2017568   .0255691     7.89   0.000    .1512374    .2522762
       _cons |   .5994104   .2323636     2.58   0.011    .1403066    1.058514
-------------+----------------------------------------------------------------
     sigma_u |  .78827621
     sigma_e |  .85761165
         rho |  .45794816   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(30, 151) =     4.24                 Prob > F = 0.0000

. xtreg roa tdta tdte ltta stta, re

Random-effects GLS regression                   Number of obs      =       186
Group variable: id                              Number of groups   =        31

R-sq:  within  = 0.4958                         Obs per group: min =         6
       between = 0.0496                                        avg =       6.0
       overall = 0.3086                                        max =         6

Random effects u_i ~ Gaussian                   Wald chi2(4)       =    119.22
corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         roa |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        tdta |  -.0339518   .0153475    -2.21   0.027    -.0640324   -.0038712
        tdte |   -.015755   .0134497    -1.17   0.241    -.0421159    .0106059
        ltta |   -.146895   .0334488    -4.39   0.000    -.2124534   -.0813366
        stta |   .1724289   .0192092     8.98   0.000     .1347796    .2100782
       _cons |    .426861   .1900114     2.25   0.025     .0544456    .7992764
-------------+----------------------------------------------------------------
     sigma_u |  .42469567
     sigma_e |  .85761165
         rho |  .19693577   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store fixed

. est store random
```

APPENDIX (II F)

HAUSMAN FIXED AND RANDOM EFFECT TESTS

```
. hausman random fixed
```

	Coefficients (b) random	(B) fixed	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
tdta	-.0339518	-.0550336	.0210818	.
tdte	-.015755	-.0206729	.0049179	.
ltta	-.146895	-.1892773	.0423823	.
stta	.1724289	.2017568	-.0293279	.

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 34.34
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)

APPENDIX (II G)

SUMMARY OF POOLED OL, FIXED AND RANDOM EFFECT MODEL

```
. estimates table pooled_ols fixed random, stats(chi2 df N r2) star(.1 .05 .01) style(oneline)
```

Variable	pooled_ols	fixed	random
tdta	-.02657894**	-.05503362**	-.03395179**
tdte	-.01422459	-.02067295	-.01575502
ltta	-.09379501***	-.18927726***	-.146895***
stta	.14675724***	.20175678***	.1724289***
_cons	.36236717**	.59941041**	.42686102**
chi2			119.22133
df			
N	186	186	186
r2	.31258832	.49948372	

legend: * p<.1; ** p<.05; *** p<.01