THE IMPACT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF LISTED DEPOSIT MONEY BANKS IN NIGERIA.

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DECLARATION

I declare that this research work was undertaken by researcher under the guidance and supervision of **Mal. Usman Umar** of the department of Accountancy**,** no part of this work was lifted, it is purely my effort. All Authors whose works were referred have been duly acknowledged.

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CERTIFICATION

This is to certify that this research work **"The Impact of Working Capital Management on Profitability of Listed Deposit Money Banks in Nigeria"** is an original work undertaken by **Muhammed Adam Maijama'a** with registration number **KPT/CBMS/19/47623** and has been prepared in accordance with the appropriate norms, procedure, rules and regulations governing the preparation & presentation of project in Kaduna polytechnic, Kaduna.

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DEDICATION

This project is dedicated to Almighty Allah for His mercy and protection through the course of my studies.

ACKNOWLEDGEMENT

My gratitude goes to Almighty Allah, most merciful for this successful programme.

I want to also appreciate my parent and all my Siblings who made sure I made it to this level with their support, encouragement and for not giving up on me. Thank you all for your support.

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Finally, my gratitude goes to all friends which time will not permit me to mention their names, thanks for your prayer and support. Thank you all for your undertaking, patient, kindness, love and support towards me. God bless you all richly.

ABSTRACT

This research examined the extent to which working capital management is important to listed deposit money banks in Nigeria. Thus, the study examined the Impact of Listed Deposit Money Banks in Nigeria. The research has a sample size of 3 banks for the periods of 2014 – 2019, it uses ex- post facto method and non- survey design, judgemental sampling technique was apply and also uses secondary sources of data for its analysis. The research uses annual reports and accounts of Zenith, Eco and Access bank for data analysis. The research analyzed the data using descriptive statistics, Pearson correlation Coefficient analysis and regression analysis. The research used Microsoft Office Excel 2007 (Analysis ToolPak 12) for running its data. All the informations were collected from publications, text books, journals and periodical, news paper and magazines. The research concluded that Working Capital Management variables such as Current Ratio (CR) and Average Collection Period (ACP) have significant and positive impact on Profitability variable (i.e. Return on Assets),but Cash Ratio (CR) has no significant impact on Return on Asset (ROA). Finally the study recommended that the management of listed Deposit Money Banks in Nigeria should maintained its efficiency and effectiveness on the current ratio (CR) by establishing and monitoring a stronger policy in regards to its liquidity and profitability position and should develop necessary steps to utilize its idle cash and bank balances in order to meet its short term debt obligations and operating cost thereby improving its cash ratio (CR) and strengthening its profitability.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In any organization one of the major objectives of a business is to maximize profit to enable the business organization to improve and grow potentially. This shows that profit Maximization is a vital part of the function of manager in all business organizations.

The maximization of profit is important to companies and forms a major objective of manager to satisfy the interest of owners to invest more in the business.

Profitability is the ability to earn profit from all the activities of an enterprise. It indicates how well management of an enterprise generates earnings by using the resources at its disposal. It is composed of two words profit and ability. The word profit represents the absolute figure of profit but an absolute figure alone does not give an exact ideas of the adequacy or otherwise of increase or change in performance as shown in the financial statement of the enterprise. The word 'ability' reflects the power of an enterprise to earn profits, it is called earning performance. Earnings are essential requirements to continue the business. So we can say that a healthy enterprise is that which has good profitability. Profitability is among the major tools used to appraise and measure the performance of an organization.

Profitability refers to the ability of a firm to earn returns on investment made in its assets that has a positive net present value (Sohail (2011). A financial action that has a positive net present value will create wealth for shareholders and is therefore desirable. A financial action resulting in a negative net present value should be dropped because it will endanger share holders' wealth. Profitability measures management efficiency in the use of organizational resources in adding value to the business.

In the words of Raheman and Nasr (2007) “every business is most concerned with its profitability”. They define profitability as the ability to make profit from all the business activities of an organization, firm or an enterprise. Additionally, it shows how efficiently the management can make profit by using all the resources available at market. They also said that one of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company’s success. Ricci and Vito (2000) maintain that the basic purpose of managing working capital is to control the financial resources of a firm in such a way that a balance is created between profitability of the firm and risk associated with that profitability.

Return on Assets (ROA) as a proxy of profitability also, expresses the net income earned by a company as percentage of the total assets available for use by that company (Pandy, 2005). Return on Assets measures management ability to earn a return on the firm’s resources. That is, it measures the efficiency of the entity in using its assets to generate net income.

Deloof (2003) held that profitability refers to the ability of an enterprise to generate profit from its investment. According to him, the management of cash, debtors, and stocks affects the level of profit made by organization.

The management and control of working capital is important to companies and forms a major workload function of the finance manager and accountant. The concern of managers all over the world is to formulate a strategy of managing their day to day operations in order to meet their obligations and increase profitability of the company and shareholder’s wealth. According to Pandey (1999:805), the concept of working capital means the difference between the firm current assets and its current liabilities.

Working capital is a vibrant element in any organization and it requires more attention as well as management. By working capital, the commonly accepted descriptive term for these resources,

they mean the company's investment in short-term assets. Traditionally these relate to items coming under the balance-sheet heading of current assets (in practice, of course, all capital is working, whether invested in fixed or current assets). Thus inventories (stocks), accounts receivable (debtors), short-term investments and cash balances all come within the term working capital.

The relationship between current asset items and current liability items is called the working capital of the business organization. The resources of a firm that are used to conduct the day-to-day activities of any business are referred to as the working capital. Its proper management is one of the most important areas in determining the success of a firm. It is generally organization; that is, the difference between resources in cash or readily convertible into cash (current assets) and the organizational commitments for which cash would soon be required (current liabilities). Looking at this, it can be said that working capital simply means the resources which a firm has at hand to run its daily operations.

Working capital connotes the funds locked up in materials, work in progress, finished goods (inventory), account receivables (debtors) and cash. In this regard, Khan and Jain (2005) state that current assets are those assets, which can be converted into cash within a short period of time, and the cash received is again invested into these assets; hence, it is constantly revolving or circulating. Therefore, working capital is one of the most important measurements of the financial position, which according to Guthmann (2008) is the life-blood and nerve centre of any business entity. For these reasons and more, the proper and efficient management of the working capital of every business becomes a necessity if not obligatory.

According to Kumaring (2013) Working capital management is the decision relating to working capital and short term financing, and these includes managing the relationship between the

company to continue operations and to have enough cash flow at its disposal to satisfy both maturing short term debts and upcoming operational expenses, which is the major objective of working capital management.

Working capital management is concerned with managing the different components of current assets (inventories, debtors/receivables, cash/bank, short-term investments, and prepaid expenses) and current liabilities (creditors/payables, provision for tax payable within a period of 1 year) in such a way and manner that optimum level of working capital is attained and maintained. All these are very crucial in order to promote a satisfactory profitability and thus achieve the goal of the business which is the maximization of shareholder's wealth (Ojeani, 2014). It is therefore of importance to state at this juncture, as posited by Ojeani (2014) that optimal efficient working capital is usually achieved through the management of inventory, receivables, payables, cash conversion cycle and the operating cycle as a whole. In essence, managing working capital is necessary owing to its direct impact on the profitability and liquidity of a corporate entity.

Osisioma (1997) reveals that working capital management ensures a sound liquidity and attainment of profit generating process, and also ensures acceptable relationship between the components of firms' working capital for efficient mix which guarantees capital adequacy.

It is believed that the management of working capital will go a long way in the achievement of profitability and overall performance of businesses since there is a great relationship between level of a company's liquidity and its profitability Ojeani (2014). This implies that a firm's liquidity does to a large extent determine its profitability. However, liquidity and profitability are not the same but are the core objectives of a firm. Any attempt to increase profitability by reducing the liquidity can bring some problems as goals cannot be ignored at any cost. If the goal

of maximizing profit is ignored, survival is not possible for a longer time and if liquidity objective is ignored, insolvency or bankruptcy could be faced (Qazi, Syed,Zaheer & Nadeem, 2011). Managers must therefore endeavor to monitor and appropriately manage the in-balances.

The foregoing discussions have gone a long way to demonstrate the need to balance working capital position of the business enterprise in order to maintain adequate liquidity, minimize risks and raise profitability at all times.

For a firm to attain a balanced profitability level, Management has to balance their investment in current asset with their investment in fixed asset. The concept of Working Capital is important because it gives a view of a firm ability to meet its short term debt obligation from its holding of current asset. Banks will always loan out money to customer, received deposit from customer and sell other services to their customer, then all the money has to be effectively managed by manager, in order to add value to the bank and to show its shareholder that there is proper management.

In Nigeria today, some banks are insolvent, illiquid and unprofitable because there is no proper management of the working capital in these banks. The mismanagement of working capital will affect the profitability and growth of any organization. Any Organization that wants to grow and become profitable must manage its working capital effectively and efficiently and to make sure that what should be done is done. However Working Capital is also the administration of the organization's current asset and the financing needed to support current assets.

This Project will focus on the importance and effect of working capital in banks and how working capital management affects the profitability and growth of banks in Nigeria. The project will cover the banking sector of Nigeria.

1.2 Statement of Research Problem

Any firm that ignores the efficient management of working capital will find it difficult to achieve profit maximization objective. Despite the fact that working capital management is very important, most organizations often neglect the issues of planning and controlling of working capital. This result in excess or inadequate working capital. But the issues is, do excess or inadequate working capital lead to efficiency and productivity of an organization? Or do organizations that neglect working capital management make efficient and effective use of their resources? This has cut the attention of the researcher to know whether working capital management is a tool for cost minimization and profit maximization or not.

The management of the working capital of any organization is sensitive area of that organization and its growth and strength depends on it. A company, whose working capital is poorly managed, for instance, is prone to financial crisis when faced with unforeseen circumstances such as unforeseen expenditure. Thus, an investor who invests in such a company tends to get disappointed at the end of the day because it (the company) is bound to fold up at the initial stage. Stephen (2012) says that evidence that most business organizations do not hold the right amount of stocks, debtors and cash; as a result of which the firms are unable to meet their maturing short term obligations and its upcoming operational needs. Similarly, insufficient working capital means that a firm is unable to undertake expansion projects and increase its sales, therefore limiting the growth and profitability of the business.

Empirical efforts have been made by researchers to proffer solutions to these problems of working capital management faced by some firms; most of the researches still have some lapses due to approaches and methodologies adopted. For instance, some of these works were carried

out trying to study the impact of an optimal inventory management on profitability; many others only focused on the optimal way of managing receivables to attain desired level of profitability.

In Nigeria, the improper management of working capital by most manager of business enterprises, both in private and public sectors clearly show their ignorance and lack of importance they attach to the vital and integral aspect of working capital. Much is not being said about the working capital management of firms and because of this much is not known about the importance of the management of working capital of firms.

1.3 Aim and Objectives of the Study

The main aim of this study is to examine the impact of working capital management on the profitability of listed Deposit Money Banks in Nigeria. The Specific objectives are as follows:

i. Assess the impact of Current Ratio (CR) on Return on Assets (ROA) of listed Deposit Money Banks in Nigeria.
ii. Determine the impact of Cash Ratio (CR) on Return on Asset (ROA) of listed Deposit Money Banks in Nigeria.
iii. Examine the impact of Average Collection Period (ACP) (Debtors Turnover Ratio) on Return on Asset (ROA) of listed Deposit Money Banks in Nigeria.

1.4 Research Hypothesis

In line with the objectives of the study, the following hypotheses have been formulated in their null form:

Hypothesis 1

H_{01}: Current Ratio (CR) has no significant impact on Return on Assets (ROA) of listed Deposit Money Banks in Nigeria.

Hypothesis 2

H_{02}: Cash Ratio (CR)has no significant impact on Return on Assets (ROA) of listed Deposit Money Banks in Nigeria.

Hypothesis 3

H_{03}: Average Collection Period (ACP) has no significant impact on Return on Assets (ROA) of listed Deposit Money Banks in Nigeria.

1.5 Significance of the Study

This study is very significant in the sense that it centers on the working capital management which plays a critical role in the profitability position of listed deposit banks in Nigeria. The study's findings may help the listed deposit banks in Nigeria and other financial Institutions in general to improve on their financial decision making so as to optimize the value of the shareholders and maintain a favorable trade-off between liquidity and profitability.

Working capital management as a tool for cost minimization and profit maximization assist financial institutions on their operations and enable them to formulate a working capital management that is suitable for their financial environment in order to optimize the profit of their operations.

The study shall be of great benefit to various stakeholders which include:

- **Researcher:** This Project will help the researcher to understand the role of working capital management in the banking sector in Nigeria. It will also make him to understand the effect of working capital has on the profitability of listed Deposit Money Banks in Nigeria.
- **The public:** This Project will educate the public on how the management of banks manages their funds and the importance of working capital management in banks.

- **Central Banks of Nigeria (CBN):** This Project will help the CBN in improving the rules and regulations of deposit money banks in order for these banks to have the best working capital management in the achievement of its objectives.
- **Managers:** This Project could broaden the knowledge of managers in choosing accurate working capital strategies that would improve their efficiency. This is because understanding the firm's profitability position, as being discovered by this study, helps managers to be more efficient and productive bearing in mind the information at their disposal. The findings may be helpful to financial managers to be able to measure the level of safety for them to discharge obligations towards attaining profitability and to get prepared against eventualities. By this singular fact, awareness is being created for the financial managers that there is the need to pay serious attention to financing current assets. Managers of finance are therefore, expected to derive allot of benefits from this work as it gives details and comprehensive analysis on the importance of working capital which is the main tool they use in achieving the desired goal of profit maximization.
- **Creditors:** This Project could also be of significant importance to creditors, because they are interested in the credit worthiness of the banks in meeting their obligations, which could only be possible with efficient management of deposit banks working capital.
- **Government:** This study is significant in the sense that it can be of beneficial source of information to government of Nigeria who is always interested in promoting economic activities through the establishment of an enabling environment that is conducive for banking.
- **Students:** The study will help students of accounting and finance in their field on practical approach to knowledge. It is hoped that this Project is going to be of great use to the students

of accounting and finance who may also have interest in researching further on this topic. This is because the work is expected to serve as source of knowledge that can be derived for students who may be interested in carrying out further study on similar topic.

- **Policy Makers:** This Project will assist policy makers in shaping their policy on capital management, as it would reveal to them the extent to which it affect cost minimization and profit maximization.
- **Literature:** The study will also serve as a reference point to those that want to research further into the area. It would enable them have more insight into the subject matter under study.

1.6 Scope of the Study

This study will be streamlined on the banking sector of Nigeria, it will take an in depth look at how the working capital determines the profitability of Listed Deposit money banks and how working capital can be improved to boost up performance. The study limits itself to the information in the annual report and accounts of three (3) listed deposit banks in Nigeria during the period of 2014-2019. These banks are: Eco Bank, Access Bank and Zenith Bank.

1.7 Definition of key Terms

Working Capital: This could be define as a firm's investment in current asset. It could also be called gross working capital. It is the amount of Capital that a firm has available to meet the day-to-day cash requirements of its operations.

Net Working Capital: This is current assets minus current liabilities, the net working capital indicates the proportion of current asset which form long term sources.

Working Capital Policy: These are policies made by the management that are concerned not only with the management of current asset but with the maturity structure of the firm's debts as well.

Working Capital Management: This is the administration of the organization current asset and financing needed to support the current asset.

Permanent Working Capital: This can be defining as the amount of current asset required to meet a firms long term minimum requirements.

Temporal Working Capital: This is the amount of current asset that varies with the seasonal requirement.

Cash Management: This involved the control over the cash inflow and the cash outflow of an organization.

Profitability: Profitability is the reward to an organization for bringing together people and resources to render services, or to accomplish another objective. It is in form of retained earnings, typically one of the key sources of capital generation.

Current Asset: These are asset whose useful life does not exceed one year. They exist for only a short time before they are transformed into other kinds of asset. Examples are account receivable, inventory, cash and cash equivalent and prepayment etc.

Cash: Cash refers to money on hand (currency, coins, money order, cheque, etc) and credit balance(s) in the bank.

Account Receivable: This is the account that keeps track what payment has been made to which invoice. It is also define as the amount owed by a customer for sales on credit.

Current Liabilities: These are liabilities which fall within one year. Current liabilities are company's debts or obligations that are due within one year or within a normal operating cycle.

Also current liabilities are liabilities (obligations) that are due to be cleared or settled within a year. Examples are account payable, bank overdraft and accrued expenses etc.

Account Payable: This is the opposite of account receivable, this account keeps track of the amount the firm owes its supplier for goods received.

Liquidity: Liquidity is the ability of current assets to meet current liabilities. Also Liquidity is the ability of a firm to meet its short term liabilities as they fall due.

Credit Policy: These are decisions that determine an organization credit period, credit standard, collection procedure and discount.

Inventory Management: These involves control over the balancing of a set of cost that increase with larger inventory holding and a set of cost that decrease with larger order size.

Operating Cycle: This is the length of time from commitment of cash for the purchase until the collection of the receivable resulting from the sale of goods or services.

Cash cycle: This refers to as the length of time from the actual outlay of cash for the purchase until the collection of receivables resulting from the sale of goods and services.

Return on Assets (ROA): This is the ratio of net profit after tax for the period to average total assets of a business during a financial year (preferably total assets at the end).

Current Ratio (CR): This is a liquidity ratio that measures the ability of a business to settle its short term obligations as and when due using its current assets.

Cash Ratio (CR): This measures the ability of the business to settle its short term obligations as and when due using its highly liquid assets (i.e. cash balance, bank balance, marketable securities and short term investments).

Debtors Turnover Ratio (DTR): This measure on the average how often the business receives Settlement from credit customers. That is, it measures the rapidity of debt collection.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of relevant and related literature on the relationship between working capital management and bank's profitability. This is undertaken in order to provide a theoretical background to the study and to be acquainted with the subject matter of the study. The chapter is divided into parts beginning with this introduction. The second part is the conceptual issues which deals with the definitions of the basic concepts related to the subject matter. The third part is the review of empirical studies that were previously carried out by other researchers on the subject matter, while the last part presents the theoretical framework that gives support to this work.

2.2 The Concept of Profitability

Profitability is the ability to earn profit from all the activities of an enterprise. It indicates how well management of an enterprise generates earnings by using the resources at its disposal. It is composed of two words profit and ability. The word profit represents the absolute figure of profit but an absolute figure alone does not give an exact ideas of the adequacy or otherwise of increase or change in performance as shown in the financial statement of the enterprise. The word 'ability' reflects the power of an enterprise to earn profits, it is called earning performance. Earnings are essential requirements to continue the business. So we can say that a healthy enterprise is that which has good profitability. Profitability may be defined according to Weston and Brigham (1977) as the net surplus of a large number of policies and decisions.

According to Sohail (2011), profitability refers to the ability of a firm to earn returns on investment made in its assets that has a positive net present value. A financial action that has a

positive net present value will create wealth for shareholders and is therefore desirable. A financial action resulting in a negative net present value should be dropped because it will endanger share holders' wealth. Hill, Kelly and Lockhart (2012) describe firm's profitability as the ability to generate revenue in excess of the cost of generating such revenue. It is a relative term measurable in terms of profit and its relation with other elements that can directly influence the profit. Profitability measures management efficiency in the use of organizational resources in adding value to the business.

In the words of Raheman and Nasr (2007) "every business is most concerned with its profitability". They define profitability as the ability to make profit from all the business activities of an organization, firm or an enterprise. Additionally, it shows how efficiently the management can make profit by using all the resources available at market. They also said that one of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's success. Ricci and Vito (2000) maintain that the basic purpose of managing working capital is to control the financial resources of a firm in such a way that a balance is created between profitability of the firm and risk associated with that profitability.

For return on equity, Rahmen and Nasr (2007) hold that common and ordinary shareholders are entitled to the residual profits; nevertheless, the net profit after tax represents their own wealth. It is held by them that a return on shareholder's equity is calculated to see the profitability of owners' investment. The shareholders equity or net worth will include paid up share capital, share premium and reserves and surplus less accumulated losses (Rahman & Nasr 2007). Raheman and Nasr (2007) argue that a company should earn profit to survive and grow over a long period of time. They however say that, though profits are essential, all management decisions should not be profit centered at the expense of the concerns for the customers,

employees, suppliers or social responsibilities. They went further to say that investment refers to pool of funds supplied by shareholders and lenders. The conventional approach to calculating Return on Investment is to divide profit after tax by investment.

According to Kurawa (2009) Return on Equity (ROE) is net profit after tax divided by shareholders' equity which is given as net worth. Return on Assets (ROA) expresses the net income earned by a company as percentage of the total assets available for use by that company (Pandy, 2005). According to him, the companies with higher amounts of assets are expected to make more profits that those with little. Return on Assets measures management ability to earn a return on the firm's resources.

Deloof (2003) held that profitability refers to the ability of an enterprise to generate profit from its investment. According to him, the management of cash, debtors, and stocks affects the level of profit made by organization. He further explains that the excessive holding of stocks leads to high stock handling costs, deterioration in the value of stocks due to damage and obsolescence, theft or pilferage by employees and wastage, and all these reduce a firm's profitability.

2.3 Concept of Working Capital

The term working capital originated from the days of the old, According to Akinsulere (2008, 424), Working Capital refers to the items that are required for the day to day production of goods to be sold by a company. It can also be define as the excess of current assets over current liabilities. It represents the amount that is invested in assets that are expected to be realized within a year's trading. It is not a permanent investment but an investment which is continuous in nature and can be turned over severally during a year.

According to Camsey, Working Capital is sometimes termed as gross working capital. It is the investment in short term cash, marketable securities, inventories and account receivable. It is also

current asset less current liabilities. It can also be define as circulating capital as it is the investment which a business needs to make in its day to day operations.

Adeniyi (2008) describes working capital as the capital available for the day-to-day operations of an organization represented by its current assets. According to Kantudu (2009) working capital can be referred to as circulating assets which consist of inventories, accounts payable and receivable, cash and short-term securities. The inventories acquired through purchases create accounts payable. The finished goods in turn are sold out and create accounts receivable. The accounts receivable are converted into cash which is used to settle the accounts payable.

It is generally believed and held that working capital is all about current assets/liabilities. Furthermore, according to Pass and Pike (1984) working capital is the equilibrium between the income-generating and resource-purchasing activities of a company. That is the difference between current assets and current liabilities. For instance, Khan and Jain (2005) hold that working capital is divided into two that is there are two concept of working capital, which are: Gross and Net.

Gross working capital: This refers to the amount of funds invested in current assets that are employed in the business process. It is also known as total current assets. Current assets are the assets which can be converted into cash within an accounting year or operating cycle. It includes; inventories of raw materials, work-in-progress and finished goods, trade receivables, prepayments, cash and bank balance, short-term marketing securities and bills receivables, among others. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year. They include trade payables, Accrued expenses, overdrafts and short-term loans. The level of current assets is a key factor in a company's liquidity position (Pass and Pike 2009).

Net working capital: This is the difference between current assets and current liabilities. Net working capital may be positive or negative. This measurement demonstrates how well companies can manage their short-term commitments. Net working capital indicates the liquidity position of the bank and suggests the extent to which working capital could be finance.

Adeniyi (2008) says Positive net working capital will arise when current assets exceed current liabilities and firm can use the surplus of current assets to fulfill their financial commitments and obligations to shareholders which is a vital aspect for the continuing growth of any company. The advantages of having a positive net working capital are clear, but there are also disadvantage to consider and they occur when the companies have too high level of capital tied up in their current assets. Tied up capital, is capital that does not generate any additional value to the companies and would do more good in new investment that could bring the company further return (Lantz, 2008). While a negative net working capital occurs when current liabilities exceed current assets. It means the company does not have enough own capital for financing its short-term debts.

Most companies suffer badly when their working capital is negative and this is a condition that also profitable companies can end up in if they do not manage their working capital efficiently.

The three important features that particularly distinguish working capital from other categories of the firm's capital are: Firstly, investment in working capital is continuous in nature. That is, it is made on daily, weekly, monthly, quarterly, semi-annually or yearly basis. Secondly, the components of working capital are readily available or easily convertible into cash. Thirdly, working capital is used in settling the firm's short-term obligations and expenses. Thus, working capital is non-permanent portion of the firm's capital which is readily available for the

satisfaction of both maturing short-term obligations and upcoming operational expenses (Adeniyi, 2008).

2.3.1 The Derivation of Working Capital

According to Mcmenamin (1999, 579), Working capital is derived by subtracting the current liabilities from the current assets:

Current Assets – Current Liabilities = Working Capital

CA – CL = WC

Technically the difference between current assets and the current liabilities is the firm's net working capital or net current assets. However in practice the difference between currents and current liabilities is often referred to as working capital.

2.3.2 Types of Working Capital

According to Van Horne (1975), working capital can be divided into two types which are as follows: permanent working capital and temporal or fluctuating working capital.

a. Permanent Working Capital

This is the amount of current assets required to meet long term minimum needs, it could be called bare bones.

b. Temporary or Fluctuating Working Capital

These are the extra current assets needed above the permanent current assets. They are needed to support changing production and sale in the peak period. It could also be define as the investment in current assets that varies with seasonal requirement. This type of working capital has constantly changing form. Fluctuating Working capital can be funded with short or long finance.

2.3.3 Importance of Working Capital

The importance of sufficient working capital in any business concern can never be overemphasized. Firms require adequate working capital to carry on its day- to- day operations smoothly and efficiently. Lack of adequate working capital not only impairs firm's profitability but also results in stoppage in production and efficiency in payment of its current obligations. Working Capital comprises of a large part of the firm's assets and Liabilities, thus considered as the life-blood of businesses. The following are reasons why working capital management is important to any firm.

1. Smaller firm's well-being show up first in its working capital accounts, since they often carry a higher percentage of both current assets and current liabilities. Their survival is much more dependent on effective working capital management than that of larger firms.

2. The size and volatility of working capital make it a major managerial concern. Managers spend much of their time on the day- to- day activities that revolve around working capital management.

3. *To maintain a smooth flow of production.* It is necessary that adequate working capital is available for paying trade suppliers, hiring labour and incurring other operating expenses.

4. It enhances the Liquidity and solvency position of the business concern.

5. *It enhances the reputation of the firm (Goodwill).* A firm with sound working capital position can make timely payment of its outstanding bills.

6. *Easy Loan.* Adequate amount of working capital builds a sound credit-worthiness of the firm. As a result it makes it easier for the firm to obtain additional loans in favourable terms and conditions in order to meet seasonal increase in demand or to finance the increased working capital resulting from expansion.

7. *It increases the morale and efficiency of employees.* The firm can make regular and timely payment of wages and salaries to its employees.

8. It creates a sense of security and confidence in the mind of management or officials of the firm.

9. Adequate amount of working capital enables the firm to use its fixed assets more efficiently and extensively.

10. Adequate working capital can easily overcome firm's unforeseen contingencies like business depression, financial crisis that occur due to huge losses.

11. *It enables a firm to increase its profitability.* A sound management of working capital helps in completing the operating cycle quickly.

12. Adequate working capital ensures regular payment of dividends to shareholders.

2.3.4 Factors Affecting Working Capital

A large number of factors affect the working capital needs of firms. All factors are of different importance and therefore, an analysis of the relevant factors should be made in order to determine the total investment in working capital. Generally the following factors influence the working capital requirement of the firm.

Nature and size of the business: Working capital requirement of a firm are basically influenced by the nature of its business. The working capital requirements of firms are interlinked. In practice the manufacturing industry has a long cycle of operation of the working capital, than an enterprises involved in providing services. Trading and financial firms have a very small investment in fixed assets but require a large sum of money to be invested in current assets.

Sales and Demand: There is a relationship between volume of sales and working capital needs of an organization. Though, it may be difficult to precisely determine the relationship between

volumes of sales and working capital needs. In practice current assets will have to be employed. It is therefore necessary to make advanced planning of working capital for a growing firm on a continuous basis (Akinsulere, 2011). Sales depend in demand condition. When there is an upward swing in the economy, sales will increase, this will require further addition of working capital and firm do this by borrowing. While under a decline in the economy, sales will fall and consequently level of debtors will reduce, this tends to make firm reduce their shot term borrowing.

Availability of Credit: The working capital requirements of a firm are also affected by credit terms granted by its creditors. A firm will need less working capital if liberal terms are available to it. Similarly, the availability of credit from banks also influences the working capital needs of a firm (Alipour, 2011). A firm which can obtain bank credit easily will operate on a less working capital than another which cannot.

Operating Efficiency: According to Pujari (2013), Operating Efficiency means efficiently completing the various business operations. Operating efficiency of every organization happens to be different. Some such examples are: (i) Converting raw materials into finished goods at the earliest, (ii) Selling the finished goods quickly, and (iii) quickly getting payment from receivables. A company which has a better efficiency has to invest less in inventories and receivables. Therefore, it requires less working capital, while the case is different in respect of companies with less operating efficiency.

Price level changes: Generally, raising price level requires a firm to maintain higher investment in the working capital. The increasing shifts in price level make functions of financial manager difficult. When prices are increasing, the same levels of current assets needs enhanced

investment. However, companies which can immediately revise their product prices with rising price level do not face a severe working capital problem.

Credit policy: According to Deivikaram (2013), defective credit policy leads to a higher incidence of bad debts. The credit policy of the firm affects the working capital by influencing the level of debtors. The credit terms to be granted to customers may depend upon the norms of the industry to which the firm belongs (Hanson, 2003). The firm should use discretion in granting credit terms to its customers.

2.3.5 The Components of Working Capital

According to Mcmenamin (1999, 579) Working Capital involves current assets minus current liabilities. The key components of working capital are named below:

1) Inventories
2) Short term Investment
3) Account Receivables
4) Cash and Cash Equivalents
5) Current Liabilities

1. **Inventories:** These consist of closing raw material, work in progress and the finished goods together with consumables and spare parts. For financial firm their receivable is cash. They are measured at the lower of cost and NRV.
2. **Short Term Investment:** According to Mcmenamin (1999,580) these will include short term easily liquidated investment such as marketable securities. Marketable Securities are short term maturity investments which are easily liquidated and on which interest is earned. Marketable Securities are financial assets on which a company can earn a rate of return by investing temporarily surplus cash and which are readily and quickly

convertible back into cash with minimal risk of loss to their value. E.g. are treasury bills and Certificates of Deposits (CDs). Marketable securities are freely traded in the money market.

3. **Account or Trade Receivables:** These represents the money owed at any point in time to the firm in respect of goods and services which it has supplied on credit to its customer. It represents trade receivable at the end less allowances for receivables. That is trade debtors less current period provisions for doubtful debts. It also include any prepayment in respect of goods or services e.g. prepayment of rent and insurance.
4. **Cash and Cash Equivalent:** Cash is the most important current asset for the operation of the business. It is the basic input to keep the business running on a continuous basis. They include cash in hand, cash held in current account, cash held in demand deposit account with banks and other financial institution and other short term investments that can be easily converted to cash within a short term period of time. Cash Plus marketable securities collectively represent a firm's liquid assets.

Current Liabilities: These represent the amount actually owed at any point in time by the firm and technically due to be paid within one year of the balance sheet. They include the amount due to trade creditors for goods and services supplied, interest and principal due on any short term borrowing and payment due in respect of taxes, dividend and short term provisions etc.

2.3.6 Financing of Working Capital

Pandey (827-828) suggests that a firm can adopt different financing policies for the current assets. Three types of financing available are as follows:

- **Long Term financing:** The source of long term financing include ordinary share capital, preference share capital, debenture, long term borrowing from financial institution, reserves and surplus etc.

Ordinary Share capital: These are those shares which carry no fixed dividend rates. These shares usually carry the voting right and are known as the equity capital of the business.

Preference Share capital: This class of shares is fixed bearing capital of the business. They are usually described by their dividend rate. Usually preference Shares do not carry voting right and except they are participating preference shareholders, they are not entitle to anything except the fixed dividend income.

Long- term Debts: These are loans which duration is in excess of 10 years. Long term debts can either be: 1). Debentures or 2). Unsecured loan stocks

1) **Debentures:** Debentures are long term loans usually issued on security of the company's asset. They are certificates of debt and are long term sources of fund that give the holders the opportunity to collect the principal amount at a fixed future date. They have a definite interest rate, which is payable at annual basis until the capital sum of the amount borrowed is fully paid. The loan is usually created by a trust deed known as Debenture Trust Deed with some Intuitional investors as trustees.
2) **Unsecured Loan Stock:** This is also created by instrument Known as Trust Deed, but they are unsecured and in the case of liquidation would rank as any other unsecured creditor.

- **Short Term Financing:** The short term financing is obtained for a period less than one year. Short Term Finances include working capital funds from banks, public deposit, commercial paper, financing of receivables. They include:

Bank Overdraft: Overdraft is a short term accommodation by the bank arising from where the bank allows its customer to overdraw its accounts. Overdraft is one of the cheapest sources of finance since the interest charged by the bank is based on the actual overdraft incurred on daily basis.

Commercial Paper: This is a short term promising note sold by large firms to obtain financing. The principal issuers of commercial paper include finance companies, bank holding companies and large industrial firms.

Financing of Receivables: Financing of account receivables involves pledging receivables or Factoring. Pledging of Receivables involves the specific use of receivable as collateral for loan While Factoring involves the sale of account receivables. The Factoring firm is responsible for both credit checking and for collection of the receivables.

- **Spontaneous Financing:** This refers to the automatic source of short term fund arising in the normal course of a business. Examples of Spontaneous financing are Trade credit and outstanding expenses. There is no explicit cost of spontaneous financing. The real choice of financing current assets, once the spontaneous sources of financing have been fully utilized is between the long term and short term sources.

Factors to consider in financing working capital

1. **Cost:** Short term financing should generally be less costly than long term financing. The cost of financing has a great impact on the firm's returns and both method finance has its leverage effect on the organization return but that of short term financing is less costly than long term finance and it give a higher for the organization.
2. **Flexibility:** It is relatively easy to refund short term funds when the need for funds diminished. Long term funds such as debenture loan or preference shares capital cannot

be refunded before time. Thus if a firm anticipates that its requirement for funds will diminish in near future, it would most likely choose short term finance.

3. **Risk:** Short term finance involves less cost and is more flexible than long term finance but it is more risky than long term finance. If a firm should use short term financing for its working capital it runs the risk of having to renew it borrowing again and again. These are problems much less when the firm is financed with long term funds; there is less risk of failure when the long term financing is used.

2.3.7 Working Capital Position

A firm should maintain a sound working capital position. It should have adequate working capital to run the business. The working capital of a firm should not be overcapitalized or undercapitalized because this is dangerous from the firm's point of view.

Overcapitalization (Under Trading): According to Oye Overcapitalization (Under Trading) is define as where a company commits excessive working capital into the company's trading activities, so that there are excessive receivables and cash and few payables. If a company manages its working capital inefficiently, that is if working capital is excessive and the company becomes overcapitalized, the return on capital employed would be lower than what it should be.

Undercapitalization (Over Trading): Undercapitalization (Over Trading) occurs when a company tries to do too much, too quickly with little capital so that it is trying to support too large volume of trade with little capital resources at its disposal. An overtrading business can be operating at a profit; nevertheless it will eventually run into serious trouble because it is short of funds and this liquidity troubles stem from the fact that it does not have enough capital to provide cash to pay its debt as they fall due.

2.3.8 Concepts of Working Capital Management

Working capital management is an important aspect of financial management that seeks proper policies for managing current assets, current liabilities and practically for maximizing the benefits from managing working capital.. It is the lifeblood and controlling nerve centre for any types of business organization because without the proper control of it, no business can run smoothly (Joshi, 2013). The management of current assets and current liabilities is necessary for daily operations of any organizations. Thus, it plays the vital role in the success and failure of the organizations as it deal with the part of assets, which are transformed from one form to another during the course of manufacturing cycle. Therefore, the role of working capital management is more significant for every business organization irrespective of their nature.

According to Napompech (2012), working capital management involves planning and controlling of current assets and current liabilities in a manner that eliminates the risk of inability to meet short-term obligations on one hand and avoid excessive investment in current assets on the other hand.

Qazi, Seyd, Zaheer and Nadeem (2011) define working capital management as an accounting strategy focusing on maintaining efficient levels of current assets and current liabilities in respect to each other. Working capital management is very fundamental to the liquidity and profitability of any organization and the two variables are vital in evaluating the performance and ultimately deciding the survival of the organization (Ikpefan & Owolabi, 2014). According to Sen and Oruc (2009), working capital management is consequential to a firm and that is usually explained by the relationship between working capital management and profitability.

Kurawa (2009) opines that working capital management deals with the determination of levels and compositions of current assets and ensuring that right sources of funds are tapped to finance

current assets and ensuring that current liabilities are paid in time. Van Horne (2005) defines working capital management as the administration of current assets in the name of cash, marketable securities, receivables, and staff advances, and inventories.

Working capital management is defined by Brigham, et al. (2015) as the management of the investment in current assets and the financing of the current assets, and involves setting working capital management policy and carrying out that policy in a business's daily operations, to achieves its goals and objectives, such as shareholder wealth maximization, Competitive advantage, and growth. To achieve these objectives, the financial manager has two key tasks to perform. First task is to achieve a balance in the investment not to over or under invest funds in working capital, so the financial manager should determine the level of working capital which balances risks, returns and maximizes profit. Second task is to manage the rate of asset turnover which is an indicator of how efficiently a company utilizes its assets.

There should be consideration of the level of investment in current assets by avoiding two danger points; excessive and inadequate investment in current assets. Investment in current assets should be just adequate, not more, not less to the needs of the firm. Excessive investment in current assets impairs profitability while inadequate investment in current assets threatens the liquidity or solvency of the firm because of its inability to meet its current obligations. Managers must therefore endeavor to monitor and appropriately manage the in-balances. The second issue covers the question of judicious mix of long-term and short-term funds for financing current assets (Egbide & Enyi, 2012).

From the above propositions it is clear that working capital management is aimed at achieving “an optimum balance between the twin objectives of profitability and liquidity by maintaining an appropriate level, volume, mixture, Composition and combination of various components of

working capital to ensure that firms have sufficient funds to meet their short-term financial requirements" (Egbide & Enyi, 2012).

2.3.9 Components of Working Capital Management

Working capital management deals with the determination of optimum balance of each component of working capital to ensure that firms have sufficient funds to satisfy their short term obligations and upcoming operational expenses. The basic working capital components which should be managed efficiently includes the account receivables or debtors collection period, accounts payables or creditors payment period, inventory management, cash and cash equivalents and the operating cycle of a firm. According to Van Horne and Wachowicz (2010) the necessary components of an organization's working capital, basically, depend on the type of business and industry. Thus, the basic components of working capital management include inventory management, account receivable management, cash management, accounts payable management and marketable securities.

I. Cash Management

Cash management, which is part of treasury management is concerned with optimizing the amount of cash available, maximizing the interest earned by spare funds not required immediately and reducing losses caused by delays in the transmission of funds (Uyar, 2009). Cash is often called a "non earning asset"

Cash is the ultimate output to be realized by selling of goods and services. It is the money that a firm can readily disburse without any restriction (Pandey, 2005). The functions of cash management include managing cash received and paid out by the company, managing of cash circulating within the company, managing cash balances held by the firm and investing of surplus cash and finding ways to finance cash deficits (Shin & Soenen, 1998).

Tully (1994) defines cash management as a set of techniques that act on the short-term liquidity of a company, and at the same time affect those factors and processes that translate immediately into cash, with the ultimate aim of increasing both the liquidity and profitability of the company. In this sense cash management is the back bone of liquidity management as it affects banks profitability. Cash in excess of what is required need to be invested in short term securities pending when it is required. The major problem faced by most businesses is the ability to determine the minimum cash level required by the business. Minimum cash level assist management to maintain enough cash to meet its day-to-day operating expenses.

Van (2000) posits that cash management is important for many reasons; cash flows cannot be predicted accurately. Also, cash inflows and outflows do not coincide perfectly in time and amounts. Kurawa (2009) argues that both cash collection and disbursement impact on the overall efficiency of cash management. To achieve efficient cash management, accounts receivable would have to be collected as soon as possible, but pay accounts payable as late as it is consistent with the firm's credit standing with suppliers.

There are four reasons why companies hold cash. These are transaction motive, precaution motive, speculative motive and compensation to banks for providing loans services.

1. ***Transaction Motive:*** The transaction reason for which companies need cash is to balance short-term cash inflows and outflows since these are not perfectly matched. The approximate size of the cash reserve can be estimated by forecasting cash inflows and outflows and by preparing cash budgets. In addition to the cash reserve held for day-to-day operational needs, cash may be built up to meet significant anticipated cash outflows.
2. ***Precautionary motive:*** According to Van Horne (1995) this is forecasts of future cash inflows due to uncertainty. This is because it is possible that a company will experience

unexpected demands for cash which gives rise to the precautionary motive for holding cash. Reserves held for precautionary reasons could be in the form of easily realized short term investments. Van Horne (1995) says that companies may build up cash reserves in order to take advantage of any attractive investment opportunities that may arise.

3. ***Speculative Motive:*** Some cash balances may be held to enable the firm to take advantages of any bargain purchases that may arises. This can be called speculative balances. According to Van Horne (2010) for speculative motive, companies may build up cash reserves in order to take advantage of any attractive investment opportunities that may arise, for example in the takeover market. Such reserves are held for speculative reasons.
4. ***Compensation to banks for providing loans services:*** The bank makes money by lending out funds that have been deposited with it, so the larger it's deposit, the better the banks' profits. The bank may require the borrower to hold some minimum level of deposit at the bank. This is define as compensating balances.

Cash Budget

The most important tool in cash management is the cash budget. Cash budget is defined as a statement showing the firms cash inflow and outflow over some specified period of time. Cash budget can be constructed on a monthly, weekly, or even on a daily basis depending on the firm. Generally firm used a monthly cash budget forecasted over the next year plus. The monthly cash budget is used for planning purpose and the daily or weekly budget are used for actual cash control.

Cash Management Techniques

The following are the techniques for managing cash in a firm:

1. Synchronizing cash inflow and outflow
2. Using Float: Float is defined as the difference between the balance shown in a firm check book and the balance in the bank's books. It is also define as the amount of funds tied up in checks that have been written but are still in process and have not yet been collected.
3. Speed up the check-clearing process: Check-clearing process is the process of converting a check, after it is written and mailed into cash in the payee's account. This is an important aspect of cash management because it deals with the process of clearing checks.

Cash Conversion Cycle

The cash conversion cycle is used in measuring cash management and it represents the interaction between the components of working capital and the flow of cash within a company (Wang, 2002). Cash conversion cycle can also be used to determine the amount of cash needed for any sales level; it is the period of time between the outlay of cash on raw materials and inflow of cash from the sales of finished goods and represents the number of days of operation for which financing is needed (Ojeani, 2014). Uyar (2009) posits that the longer the cash conversion cycle, the greater the amount of investment required in working capital. According to him, the length of cash conversion cycle depends on the length of: the inventory conversion period, the trade receivables collection period; and the trade payables deferral period. The length of the cash conversion cycle (CCC) is given by:

CCC=inventory days + Trade Receivables days – Trade Payables days.

II. Marketable Securities

Marketable Securities are securities that can be sold on short notice for close to their quoted market prices. Marketable Securities such as Treasury bill or bank certificates are often reported

on financial statement.

The reasons for holding marketable securities are as follows:

1. Marketable Securities serves as substitutes for cash. Some firms hold marketable securities in lieu of large cash balances, liquidating part of the portfolio will increase the cash account when cash outflow is in excess of cash inflow.
2. Marketable Securities is held as a temporary investment: Firms hold marketable securities when they must finance seasonal or cyclical operation, especially when they must meet some known financial requirement or when they has just sold long term securities.

III. Inventory Management

Inventory Management involves the balancing of a set of cost that increase with larger inventory holding with a set of cost that decrease with higher order size. Inventory management is also the systematic control of inventory through establishment of inventory control models, physical control as well as accurate and up-to-date records of inventory (Uremadu, Egbide & Enyi, 2012). It covers the range of management techniques for controlling the level of inventory holding so that profitability/competitiveness can be maximized.

The composition of an inventory differs depending on what kind of production or business companies are involved in. The five different assets an inventory can consists of are raw-materials, work-in-progress and finished goods, extra materials and consumption materials. The level of inventory a company will hold depends on the nature of its business. Inventories are approximately 60% of current assets in public companies in India (Pandey, 2004).

Similarly, Kurawa (2009) argues that inventories must be well managed to ensure continuous supply of raw-materials to avoid interruptions in production, maintaining sufficient stock of raw

materials in period of scarcity and anticipated price changes, minimize carrying costs and time, and keep investment in inventories at optimal level. Inventory turnover in days is another important component of working capital management which is also called inventory conversion period (Raheman, Qayyum & Afza, 2011). According to them, it is the average time required to convert materials into finished goods and then to sell the goods. This variable helps in evaluating the efficiency in inventory management policy of the firm. If the firms take more time in selling inventory which means inventories are not getting convert into sales, will decrease the growth of firm. Inventory holding period is calculated using inventory divided by the cost of sales multiplied by 365 days.

Pandey (2005) rightly states that inventory policy will maximize a firm's value at a point in which incremental or marginal return from that investment inventory equals the incremental or marginal cost of funds used to finance it. The financial manager should be concerned with the excessiveness of inventories because of its effect on profitability, since excessive inventories erode the profit margin. Effective measures should be use in controlling the levels of inventories. It can be done by using the Economic Ordering Quantity (EOQ) Model.

EOQ is the optimal quantity of inventory that should be ordered. Economic Order Quantity is the quantity of inventory a company can purchase in order to minimize total costs. The total costs are the aggregate of the purchase price, holding/carrying cost, ordering cost and stock out costs, which are attributable to obtain a specific quantity of inventory (Dr. Sadiq Rabiu Abdullahi). Economic Order Quantity is the level of inventory that minimizes the total inventory holding costs and ordering costs (Wikipedia).It is one of the oldest classical scheduling models. The framework used to determine this order quantity is also known as Wilson EOQ model or Wilson formula. The model was developed by F. W. Harrison in 1913.

The EOQ can be found by using the formula below:

$$EOQ = \frac{\sqrt{2DS}}{CP}$$

Where EOQ = Economic Order Quantity

D =Annual Demand quantity of the product

S = Annual Sales in units

C = Carrying cost expressed as percentage of inventory value

P = Purchase cost per unit of inventory

Other forms of inventory control systems are as follows:

1. *Computerized Inventory System*: This is a system of inventory control in which computer is used to determine reorder points and to adjust inventory balances.
2. *Just In Tim (JIT) System:* This is a system of inventory control in a firm to coordinates production with supplier so that raw materials or components arrive just as they are needed in the production process. JIT is also an inventory strategy that strives to improve a business return on investment by reducing in-process inventory and associated carrying costs (Wikipedia).

According to Gabriel J. (1986), the management of inventory requires the identification and balancing of two different types of costs:

- **Cost of Holding Inventory:** These are the generally tangible cost which increases as inventory level increases. These costs are:
    1. *Financing Cost:* These are the cost of acquiring the inventory held.
    2. *Storage Cost:* These are the cost of physically accommodating the inventories. These costs include rent on storage space and the salaries of personnel at the store house.

3. *Insurance Cost:* This is the cost of insuring the inventory against loss firm theft damages.
4. *Obsolescence Cost:* These costs occur where inventory are held for too long, and they become too difficult or impossible to be sold and will lose much of their original value.

- **Cost of Holding Zero or low level of Inventory:** These are generally intangible cost which relate to profits forgone rather than to expense incurred. These cost are:

1. *Ordering Cost:* This relate with the cost of placing each order with a supplier, and includes associated cost such as the handling of the goods when delivered. The higher the number of orders, the greater the cost will be.

2. *Cost of Loss of Customer Goodwill:* These occur if a firm is unable to supply its customer as and when they require supplies, then it is likely to experience a loss of customer goodwill with a subsequent damaging effect upon sales.

Starr and Miller (1992), Maintained that there are three motives for holding inventories and they include:

1. **The Transaction Motive**: This emphasizes on the need to maintain inventories to facilitate smooth production and sales operations.

2. The Precautionary Motive: This necessitate holding of inventories to guard against the risk of Unpredictable change in demand and supply forces as well as other forces.

3. **The Speculative Motive**: This motive influences the decision to increase or reduce inventory level to take advantage of price fluctuations.

IV Account Receivable Management

This is the amount due from a customer on a current account (Ibitoye, 1985).Accounts receivables arise when a company sells products or services on credit and does not collect cash immediately. Banks grant trade credit for many reasons such as giving incentives to customers, to protect sales from competitors and attract potential customers, build and strengthen long-term relationships with dealers and to conform to past or industrial practice. In working capital management, the receivables are a very important component of current assets and receivables collection period or receivables turnover in days is the average length of time required to convert the bank's receivables into profit (Raheman, Qayyum & Afza, 2011).

Receivables management involves decisions relating to the investment in business debtors. In credit selling, it is certain that the firm have to pay the cost of getting money from debtors and to take some risk of loss due to bad debts. Receivables management begins with the decision of whether or not to grant credit. Where goods are sold on credit, a monitoring system is important, because without it, receivables will build up to excessive levels, cash flow (liquidity) will decline and bad debts will offset the profit on sales. Corrective action is often needed and the only way to know whether the situation is getting out of hand is to set up and then follow a good receivable control system (Kurawa, 2009). Van Horne (1995) states that since the purpose of offering credit are to maximize the profitability, the cost of debt collection should not be allowed to exceed the amount recovered.

The investment in accounts receivable depends on the volume of credit sales and the average collection period, which is determined by the firm's credit policy (Pandey, 2005). Kantudu (2009) proposes that credit policy is made up of three decision variables, namely; credit standard, credit terms and collection efforts. Changes in any of these variables will affect total investment

in account receivable by the firm. Uremadu et al (2012) assert that all efforts the financial manager makes in setting credit standard, credit terms and credit collection periods should be geared towards establishing an optimal credit policy for the firm. Optimal credit policy invariably translates into an optimal investment in receivables which, in turn, maximizes firm's value or net worth. Usually, banks lengthen their credit period to raise their operating profit through expanded sales turnover program. However, there will be net increase in operating profit only when the cost of extended credit period is less than the incremental operating profit (Egbide & Enyi, 2008).

In line with the foregoing, Lazaridis and Tryfonidis (2005) also maintain that credit periods granted to customers, in most cases, have a positive impacts on profitability. However, due to associated risks inherent in credit policy, financial managers, most often, vary with the level of receivables in keeping with the trade-off between profitability and risk. Raheman and Nasr (2007) add further that, given a significant investment in accounts receivable by most large banks, credit management policy choices and practices have important implications on banks value and that successful management of accounts receivable will often lead to higher banks profitability. Hence, there should be a guided flexibility introduced in managing bank's customer's credit extension policy.

More so, banks should prepare regularly aged trade receivables analysis and take steps to chase late payers. It is helpful to establish clear procedures for chasing late payers, to set out the circumstances under which credit control staff should send out reminders and initiate legal proceedings. Some thought could also be given to charging interest on overdue accounts to encourage timely payment, depending on the likely response of customers. The Accounts receivables Turnover ratio is also termed as Debtors speed ratio. It indicates the quickness in

realization of sundry debtors (Padachi, 2006; Deloof, 2009). The main object of this ratio is to know how much credit time is allowed and capital blocked in debtors. Account receivables turnover ratio also shows the effectiveness in collection of debts due. Generally, higher ratio is the indication of efficient management of liquidity. However, a firm should maintain a balance between the debtors outstanding and the amount of interest incurred on the blocked funds. The account receivables collection period is computed by dividing account receivables by net sales multiplied by 365 days (Raheman, et al., 2011).

Credit Terms: This specifies the length of time over which credit is extended to a customer and the discount, if any, given for early payment. For example, one firm's credit term might be expressed as 2/10, net 30. The term 2/10 means that a 2% discount is given if a bill is paid within 10 days of the invoice date. The term net 30 implies that if a discount is not taken, the full payment is due by the 30^{th} day from the invoice date. Thus the credit policy is 30 days.

Collection Period and Procedures: Firms determines their overall collection policy by the combination of collection procedures it undertakes. These procedures include such things like legal collection, letters, personal visits etc. One of the principal variables is the amount of money spent on collection procedure.

Therefore, the credit and collection policies of a firm involve several decisions such as:

1. The quality of the account accepted.
2. The length of the credit period.
3. The size of the cash discount.
4. Any special terms to follow.
5. The level of collection expenditure.

Account Receivable can be financed under either a factoring or assignment arrangement.

Factoring refer to the outright sale of account receivable to a bank or finance company without recourse.

In an Assignment Arrangement, there is no transfer of the ownership of the account receivables. Receivables are given to the finance company with recourse.

The manager should be aware of the impact of change in the account receivable policy on the cost of financing receivables.

V Accounts Payable Management

Accounts payable arise when a company buys product or services on credit but does no pay cash immediately. It constitutes a short-term source of finance along with accrued expenses and deferred income. Trade credits could take the form of bills payable or promissory notes (Akinsulere, 2011). Trade credit is a spontaneous source of finance and is relatively easy to obtain compared to other negotiated sources of finance Pandy (2005).The accounts or trade payables deferral period is the average time taken by a company to pay its trade payables, i.e. its suppliers (Uyar, 2009). Uyar (2009), opined that, accounts payables or Creditors Turnover ratio is used to know how much credit time received by the firm from its trade creditors. Creditors' turnover ratio shows the breathing time received by the firm in terms of payment of credit purchase. Hence, the effectiveness lies in whether the firm is enjoying the actual credit period promised by suppliers. It is calculated by dividing the amount of purchases by creditors. Here it has been assumed that all of the purchases have been made as credit purchases. The account payables period is computed by dividing account payables by net purchases multiplied by 365days (Raheman,*et. al.*,2011).

Paterson and Rajan (1997) opine that accounts payable are largely dependent on the firm's purchases which in turn, will depend on the volume of production. Thus, a decision as to whether

to take trade discount or not, or to stretch accounts payable or not, should be based on the cost and benefits analysis of a firm's credit policy in relation to profitability and liquidity of the enterprise. Alipour (2011) put it this way "the firm must balance the advantages of trade credit against the cost of foregoing a possible cash discount, any possible late payment penalties, the opportunity cost associated with any possible deterioration in credit reputation and the possible increase in the selling price the seller imposes on the buyer."

Egbide and Enyi (2008) proposed that the ultimate effect of efficiently managing accounts payable is to optimize the cash outflow that ensures that a firm's liquidity is not adversely affected so that a company's profitability will not also be affected in the long run. The opportunity cost of trade credit should be compared with the cost of other sources of credit.

Furthermore, Svensson (1997) is of the opinion that delaying the payment of trade credit beyond due dates generates additional short-term finance but not without cost. Implicit cost of credit will increase as cash discount is forgone and penalty may be imposed. Moreover, the firm's credit worthiness will be affected which means it will not be able to obtain credit in the future and also from other sources of funds. Hence, the firm's management policy with regard to accounts payable or trade credit should be aimed at striking balance among various factors which directly or indirectly influence the profitability objective of the firm.

2.3.10 Working Capital Management Policy

According to Mcmenamin (1999: 585-592) Working Capital Management Policy refers to basic policy decision regarding target level for each category of current assets and to the financing of the current assets. It also involves investment and financial decisions, decision which should contribute to the maximization of the Shareholder's value.

According to Kantudu (2009), working capital management policy is a strategy that specifies the

rules or parameters for determining how much should be tied down in each item of current asset and what proportion of the total fund should be financed with short-term or long-term sources. In line with this, Napompech (2012) states that working capital policy refers to the firm's basic policies regarding target level for each category of current asset and deciding how current asset will be financed.

The needs for policy formulation on working capital management by management of banks cannot be over emphasized considering the important role it plays in attaining the desired goals. Chittenden, Poutziouris & Michaelas (1998) hold that a company should have working capital policies on the management of inventory, trade receivables, cash and short-term investments in order to minimize the possibility of illiquidity and inefficiency. Working capital policies need to consider the nature of the company's business since different businesses will have different working capital requirements (Chittenden, Poutziouris & Michaelas, 1998).

Ojeani (2014) says that a Sensible working capital policy will reflect banks decisions on: the total investment needed in current assets, i.e. the overall level of investment; the amount of investment needed in each type of current asset, i.e. the mix of current assets; and the way in which current assets are to be financed. The type of policy banks should adapt to should relate to the firm's general approach to the investment and financing of its working capital.

Broadly there are three distinct types of working capital management policy which a company can adopt. They include the following:

1) Aggressive Policy
2) Moderate Policy
3) Conservative Policy

Aggressive Policy

An aggressive Policy is the reverse of conservative policy; it relies on minimum investment in the current asset and is highly dependent on access to short term financing.

Aggressive Policy is a restricted current asset investment policy also known as the lean and mean approach by Brigham (2002). In this policy total investment in current asset will be kept to minimum.

Chittenden, Poutziouris and Michaelas (1998) maintain that an aggressive policy with regards to the level of investment in working capital means that a company chooses to operate with lower levels of inventory, trade receivables and cash for a given level of activity or sales. They went further to say that though aggressive policy will increase profitability since less cash will be tied up in current assets, it will also increase risk since the possibility of cash shortages or running out of inventory is increased. This policy indicates poor liquidity and higher risk of insolvency but results in higher profitability.

Moderate Policy

With the moderate policy the level of investment is neither lean nor excessive. It is a midway between the aggressive and the conservative policy. Moderate policy involves average investment in current assets. Kantudu (2009) argues that the policy tries to strike a balance between profitability and liquidity proportionate to the level of current assets being held. A Moderate Policy is less risky than an aggressive but more risky than conservative policy. It could be said that moderate policy will produce moderate risk and moderate return.

Conservative Policy

Conservative Policy implies relatively high investment in current asset in relation to sales. The current assets to sales ratio will be comparatively high and asset turnover ratios corresponding

low. A conservative policy is a relaxed current assets investment policy which Brigham and Ehrhardt (2004) referred to as “fat cat” policy. Large amount of cash, marketable securities and inventories are carried out. This policy implies greater liquidity and lower risk of insolvency but gives a lower profitability.]

In this policy stock and cash level will generally be high to avoid stock out and cash out cost. The conservative policy relies on long term financing which make it a more expensive policy to follow than one which allow for an element of short term financing. Therefore it is known that a conservative policy will produce lower risk and lower return.

2.3.11 Determination of Optimum Level of Working Capital

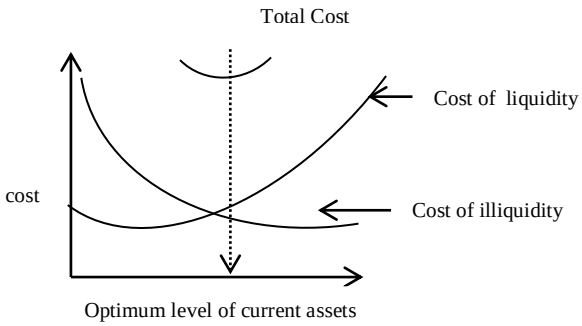
The optimum level of working capital can be arrived by considering it from the cost aspect of holding current assets. According to Pandey (2005), there are two types of cost associated to holding a particular level of current assets. These costs are the cost of liquidity and the cost of illiquidity. Cost of liquidity refers to the cost of holding high level of current assets. If the current assets level is high, the organization will be highly liquid but its profitability will be greatly affected as the excessive current assets tied up in cash and inventories earn nothing and similarly, high level of receivables will reduce profitability as well. Hence, the higher the level of current assets being held, the more liquid the organization will be and the higher the cost of liquidity.

Conversely, an organization may decide to maintain low level of current assets; which results in illiquidity that also has costs associated to it. Such costs include risk of being unable to honor financial obligations as they become due, borrowing at a high level of interest, poor credit worthiness, loss of sales and eventually loss of customers to competitors. However, illiquidity has some benefits associated to it, most important of which is high level profitability. Hence, all

things being equal, the more illiquid an organization is, the more profitable it will be Kantudu (2009).

To determine the optimum level of working capital, balance is maintained between the cost of liquidity and the cost of illiquidity. Hence, optimum level of working capital will be that level of current assets where the cost of liquidity equals to the cost of illiquidity (Pandey, 2005). In fig 2.1 (a), the optimum level of working capital is where the cost of liquidity curve cuts the cost of illiquidity curve, resulting in a minimum point on the total cost curve. With increasing liquidity the cost of liquidity increases. Similarly, cost of illiquidity increases as the level of current assets decreases. Therefore, current assets should be maintained at a level where the sum of these two costs is minimized. That is, where the cost of liquidity curve cuts the cost of illiquidity curve and the total cost curve at the minimum point.

Fig. 2.1 (a): Cost Trade-off



Source: Pandey (2005)

2.3.12 The Operating Cycle

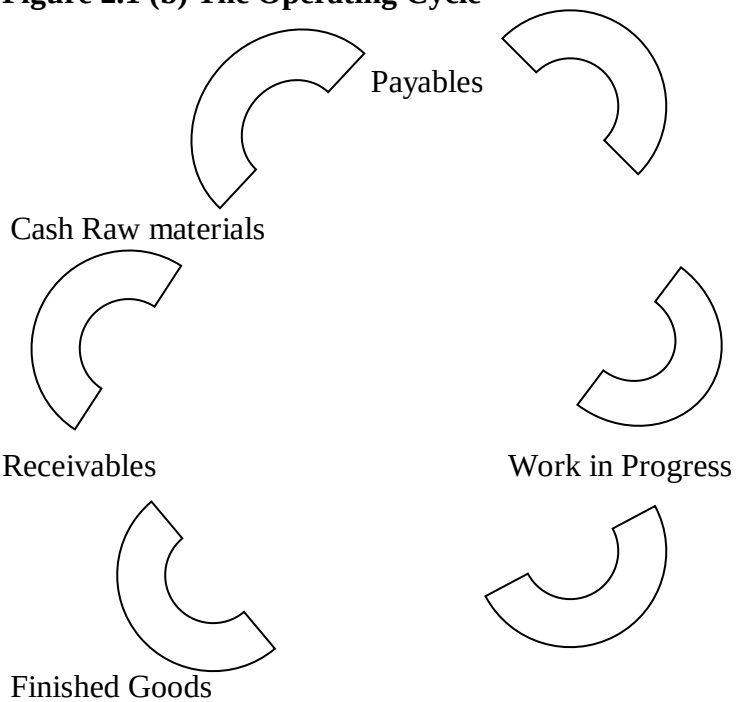
According to Akinsulere (2008, 425) Operating or Working Capital Cycle is define as the period between the payment of cash to creditors (i.e. cash outflow) and the receipt of cash from debtors (i.e. cash inflow). The cycle is the length of time it takes to acquire inventory of raw material, convert them to finished goods, sell them and collect cash from sales. Thus operating cycle

begins life as inventory, it is converted into accounts receivables when it is sold and it is finally converted to cash when cash is collected from sales.

According to James Van Hommes, Operating Cycle is defined as the length of time from the commitment of cash for purchases until the collection of receivables resulting from the sales of goods or services.

Pandy (2005) define operating cycle as the gross operating cycle, which is made up of the Inventory Conversion Period (ICP) and the Debtors Conversion Period (DCP). Thus, the operating cycle is ICP + DCP. The inventory conversion period measures the length of time on average between acquisition and sales of merchandize. While the debtors' conversion period measures the average number of days from the sale of goods to collection of resulting receivables.

Figure 2.1 (b) The Operating Cycle



Source: Olowe R.A, *financial management concept, analysis and capital investment*

2.4 Review of Empirical Studies

The effect of working capital management upon Deposit Money bank's profitability has been the focus of a substantial amount of theoretical and empirical researches for many years in different environments. This study therefore examines the effect of working capital management on the profitability of Deposit Money Banks in Nigeria. Umoren and Udo (2015) examined the effects of working capital management on the profitability and liquidity of selected deposit money banks using descriptive statistics, regression and Pearson's correlation coefficients. Descriptive statistics, correlation and panel regression analysis were adopted as the tool for measurement and analysis.

The main objective of a business organization is to maximize profit. The extent to which this profit maximization is achieved depends on how much profit is made. Again, one of the main characteristics of a commercial organization is profit motive. According to Wang (2002), the earning of profit is usually the main reason why the business was set up in the first pace and the proprietor will want to know for various reasons how much profit has been made. The business organization would want to know its profit for divers' reasons as; - to assist it plan ahead, to help it obtain loan from creditors, to show a prospective buyer or may be, to know its profit for income tax purposes. From the foregoing, it could be seen that the main objective of the business organization is to make profit and thus, it serves as a good parameter for measuring firm's performance. Thus, this study intends to review the previous empirical studies along the following issues

Bandara (2015) also examined the impact of working capital management policy on market value addition in Sri Lankan companies were descriptive statistics, correlation and panel regression analysis were adopted as tool for measurement and analysis .According to the overall

panel regression model, working capital investment policy and working capital financing policy both recorded a negative relationship to market value addition.

Yahaya and Bala (2015) asserted that liquidity signifies more profitability, stating that listed Deposit Money Banks in Nigeria should maintain a higher acid test ratio (quick ratio) as it will have a positive impact on their profitability. They further stated that banks' management should minimize the cash held as current assets and focus more in investing them, to ensure a higher return.

Mandiefe (2016) investigated the effect of working capital management on the profitability of Afriland First Bank Cameroon using a twelve-year time series data (2002–2013), which was extracted from the bank's financial statement. Thus, using correlation and ordinary least square for the analysis, the result of the analysis showed that working Capital management influenced the Afriland First Bank of Cameroon. Charitou et al. (2010) examined the effect of working capital management on the financial performance of banks in emerging institutions. The study revealed that working capital management and profitability are positively correlated in Indian companies as cited in Mandiefe (2016).

Sharma and Kumar (2011) conducted a similar study in Indian companies which concord with the results of Brigham (2004). The study by Sharma and Kumar (2011) found that working capital management (WCM) and profitability are positively correlated in Indian companies. Many researchers investigated the impact of working capital management on profitability. Most of these past researches demonstrated that efficient working capital management leads to greater profitability while other researchers are on the contrary opinion. Smith (1980) conducted a study on Profitability and Liquidity and suggested that working capital management directly influence

risk and profitability of a firm. Hence it can be inferred that effective working capital management can increase the financial strength of a business.

2.4.1 Cash conversion cycle and Profitability

The relationship between cash conversion cycle and profitability does not have a clear demarcation as two schools of thought have emerged namely: the traditional and conventional. The traditional school believes that a short cash conversion cycle favors profitability and the conventional view holds that a longer cash conversion cycle can lead to improvement of profitability. Consequently, researchers around the world have subjected this relationship to empirical examinations at different platforms.

According to (Kurawa, 2009), Cash conversion cycle is widely used as the most comprehensive measure of working capital management. It is a composite metric describing the average number of days it takes to turn a Naira invested in raw materials into a Naira collected from customers.

An empirical study from Ghana by Samuel and Benjamin (2011) focused on the working capital management practices and profitability of Banks. The study covers all commercial banks in Ghana, over a ten-year period (1999-2008). Using panel data methodology, within the framework of the random effects model, the study concludes that while cash operating cycle has a significantly positive relationship with bank profitability, like debtors' collection period, creditors' payment period exhibits a significantly opposite relationship with profitability. The study also adds that credit risk and exchange risk significantly increases bank profitability similar to that of bank capital structure and size. The study further reports that listed banks appear to perform poorly as compared to unlisted banks. They conclude by advising banks to improve their cash conversion cycle, they are to do so cautiously since the level of interest income earned by banks depends largely on the level of credit available to them for lending.

Yeboah and Yeboah, (2014)examined working capital management on Ghanaian banks profitability using regression models within a six year period (2005-2010) and it was empirically proven that cash conversion cycle is inversely related to bank's profitability.

Conversely, a number of arguments could arise in favor of a direct and positive relationship between a longer cash conversion cycle and profitability. For example, Shin and Soenen (1998) argue that a firm could have larger sales volume with a generous credit policy that extends cash cycle. In that case, the longer cash conversion cycle may result in higher profitability. Similarly, Deloof (2003) says that a longer cash conversion cycle might increase profitability because it leads to higher sales.

It was found that there is a significant positive relationship between bank performance and bank size; there is a significant negative relationship between profitability and cash conversion cycle, which supports the findings of Yeboah and Yeboah (2014).

Shin and Soenen (1998) and Deloof (2003) further suggested that aggressive working capital policy improves firm performance as cited in ALShubiri

However, this study is unique in that, it empirically examined the most crucial working capital components. Specifically, the study investigate the impact of accounts receivables and payables, CCC, Inventory, operating cash flows and cash ratio on the profitability of listed deposit money banks in Nigeria.

To sum it up, most of the studies reviewed show that working capital management plays a significant role in the success of any enterprise due to its positive effect on profitability and liquidity. From the foregoing literature review, all the papers support the importance of efficient working capital management on profitability but the indices used are varied with different level

of impact observed. They opine that liquidity management is as well very important to the continued survival of the firm.

2.5Theoretical Framework

The theoretical framework explains the theoretical basis of the study. Several theories have been propounded by various scholars on working capital management and profitability of listed deposit money banks. Some few ones which are relevant to the study are highlighted below:

2.5.1 Agency Theory

Doubts about managerial effectiveness in utilization of firm resources to achieve a desired level of growth arises as a results of the separation of ownership from control in the modern enterprise; the agent-principal relationship and the consequential conflict of interest have emerged (Fama & Jensen 2015). According to this agency theory, managers as agents are expected to monitor corporate affairs in a most profitable manner so as to maximize the value of the owners as principals and protect the interest of other stakeholders. Under the theory, managers are responsible for maximizing shareholder's wealth and managing the business growth. One of the factors responsible for the agency problem in the corporate world by the managers is the self-serving interest and incentives.

For instance, the interest of the managements usually conflict with the interest of the owners, in which the managers try to meet their personal interest at the expense of the firm, and this affect the performance in many ways (Roberts, McNulty & Stiles 2005). However, proper monitoring and control could effectively reduce the agency cost being caused by separation between ownership and control (Fama& Jensen 2015); thus, efficient resources utilization can be achieved. One of the areas that require adequate attention with regards to firm resources is

working capital; this is due to its direct relation with the profitability, liquidity and the overall growth of firms.

From the agency perspective, working capital is a managerial activity that managers are expected to efficiently monitor and manage so as to make profit and maximize the owners' value (Stephens &Bartunek, 2011). Based on agency theory, as managers managed working capital according to prescriptive theory, then it would be expected that businesses would invest in working capital, finance working capital, monitor factors that influence working capital, manage cash, accounts receivable, inventory, accounts payable, the cash conversion cycle (aggregative approach), and measure and analyze performance to ensure that the long term (fixed) assets are utilized effectively and efficiently (Quayyum 2012).Stephen (2012) also held that from the agency perspective.

The agency theory therefore emphasizes that managers, being the arrowhead in the relationship, are to manage working capital in accordance with the prescription, reduced the amount of working capital by reducing the amount of cash tied up in accounts receivable and inventory while running the business, contributes in improving the business's internal performance and thus shareholder wealth maximization (Stephens & Bartunek, 2011).

Tully (1994) says that to satisfy the requirement of efficiency, working capital management seeks to ensure that the investment in working capital components is neither too little(undercapitalization) nor too large(overcapitalization). The former could give rise to illiquidity, stock out and loss of sales; whereas the latter amounts to waste.

Therefore, this study is underpinned by the agency theory from the perspective of efficiency and prescription. This is because the theory gives a framework and a link that is logical between the management of working capital and profitability.

2.5.2 Competitive Advantage Theory

Competitive advantage occurs when an organization acquires or develops an attribute or combination of attributes that allows it to outperform its competitors. These attributes can include access to natural resources, such as high grade scores or inexpensive power, or access to highly trained and skilled personnel and human resources. The term competitive advantage is the ability to gain through attributes and resources to perform at a higher level than others in the same industry or market (Porter, 2008; Johnson *et. al.,* 2009). A firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential player (Hill & Jones, 2009). Successfully implemented strategies will lift a firm to superior performance by facilitating the firm with competitive advantage to outperform current or potential players (Porter, 2008). To gain competitive advantage the firm manipulates the various resources and capabilities over which it has direct control and these resources have the ability to generate competitive advantage (Thomas, *et. al.,* 2006). Superior performance outcomes and superiority in production resources reflects competitive advantage (Lau & Busenetiz, 2012).

Van Duren, (2012) views business strategy as the tools that manipulate the resources and create competitive advantage, hence, viable business strategy may not be adequate unless it possess control over unique assets, resources and capabilities that have the ability to create such a unique advantage. Competitive advantage is a key determinant of superior performance and it ensures survival and prominent positioning in the market. Superior performance being the ultimate desired goal of a firm, competitive advantage becomes the foundation highlighting the significant importance to develop same (Porter & Kramer, 2011).Therefore, the theory that underpins this study is agency theory from efficiency and prescriptive perspectives. Therefore, this

theoryexamined the impact of the working capital management and profitability of listed deposit money banks in Nigeria.

2.5.3Pecking Order Theory

This study is built on the Pecking order theory as popularized by Myers and Majluf in 1984. The pecking order theory states that the cost of financing increases with asymmetric information. Thus, this theory follows a three order of preference which finance managers usually follow. The theory also posits that internal source of finance is the most preferred means of financing a firm followed by equity financing and the last resort is debt financing which have to do with theinvolvement of external ownership into the business.

As working capital has to do with the capital involvement in the daily finance of the business, it is highly imperative for the best financing mix to be used in other toensure excess of current assets over liabilities. The rationale for adopting the Pecking Order theory is that it speculates the best means of making capital available either through internal source, debt financing or equity financing. Thus, it ensures the availability of working capital to a firm through the three major financing sources namely; internal source, debt financing and equity financing respectively.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology may be define as the parameters and procedures used in carrying out research work, whereby conclusions are drawn. (adedayo: 2000, 56).

This chapter is concerned with the methods used in collecting, analyzing, presenting and interpreting the data for the study. This includes the research design, the population of the study, sampling techniques and sampling size, sources of data, instrument used in data collection, method used in recording and techniques used in data analysis.

3.2 Research Design

According to cooper & Schindler (2008:340) research design is the plan and structure of investigation concerned with obtaining answers to research questions which includes an outline of what the investigator will do from writing hypothesis and their operational implication to the final analysis of the data. The design used in this research is the ex-post facto method and non-survey design, as the study entails the use of annual financial reports and accounts of listed deposit money banks in Nigeria.

3.3 Population of the Study

The population of this study includes all the fifteen (15) listed deposit money banks quoted on the Nigeria Stock Exchange (NSE). Listed /Quoted banks can be described in this study as those banks whose issued shares of stock are traded on the Nigerian Stock Exchange, while those banks whose share of stock are not traded at the Nigeria Stock Exchange are referred to as the unlisted /unquoted banks.

Table 3.1: Population of the Study

S/N	Bank Name	Year of Listing
1.	Access Bank plc.	1989
2.	Fidelity Bank Plc.	1988
3.	First City Monument Bank (FCMB)	1982
4.	First Bank of Nigeria Limited	1894
5.	Guaranty Trust Bank Plc.	1990
6.	Union Bank of Nigeria Plc.	1917
7.	United Bank for Africa(UBA) Plc.	1949
8.	Zenith Bank Plc.	1990
9.	Diamond Bank Plc.	1990
10.	Eco Bank Nigeria Plc.	1989
11.	Polaris Bank Plc. (formerly Skye Bank)	2018
12.	Stanbic IBTC Bank Plc.	1989
13.	Unity Bank Plc.	2006
14.	Wema Bank Plc.	1945
15.	Union Bank of Nigeria Plc.	1917

SOURCE: From NSE Daily Official list, 2019

3.4 Sample Size and Sampling Technique

This study is a case study research of three (3) Listed Deposit Money Banks out of the fifteen (15) listed deposit money banksquoted onthe Nigeria Stock Exchange (NSE).The Sample size includes Access Bank plc, Eco Bank Plc, and Zenith Bank Plc. Judgmental sampling technique was used through applying criteria. For a bank to be part of the sample, the bank should be qualified in terms of the following:

a) They should have been on the Nigerian ListedDeposit Money Banks throughout the period covered by the study i.e. 2014 - 2019.

b) The required data should be available.

However, the judgmental sampling technique, also called purposive sampling or authoritative sampling, is a non-probability sampling technique in which the sample members are chosen only on the basis of the researcher's knowledge and judgment.

Table 3.2: Sample Size

S/N	Bank Name	Year of Listing
1	Zenith Bank Plc.	1990
2	Eco Bank Nigeria Plc.	1989
3	Access Bank Plc.	1989

3.5 Method of Data Collection

The instrument for data collection used for this project is secondary source which consist of annual reports and accounts of the sampled listed deposit money banks obtained for analysis. It consists of existing information which may be useful for the purpose of the study. The secondary data were sourced from the bank's financial statement for the period of 6 years from 2014 to 2019 contained in the bank's annual reports and account.

3.6 Variable and their Measurement

The study used dependent and independent variables

1. The dependent variable used as proxy of profitability for banks is:
   a) Return on asset (ROA). ROA = Profit after tax ÷Total Asset×100
2. The independent variables used as proxy of working capital are:

   a)Current Ratio (CR)= Current Assets ÷Current Liabilities

b) Cash Ratio (CR) = Cash balance + Cash Equivalents÷ Current Liabilities

c) Average Collection Period (ACP) = Average Debtors ÷ Credit Sales or Turnover

Table 3.3: Variables and their Measurement

S/N	Variables	Measurement
1	Return on Assets (ROA)	Profit After Tax ÷Total Assets × 100
2	Current Ratio (CR)	Current Assets ÷Current Liabilities
3	Cash Ratio (CR)	Cash + Cash Equivalents÷ Current Liabilities
4	Average Collection Period (ACP)	Average Debtors ÷ Credit Sales or Turnover

3.7 Techniques of Data Analysis

For the purpose of presentation and discussion of the result of data generated in the course of this research, three (3) techniques of data analysis will be used in Microsoft Office Excel Package 2007:Analysis ToolPak 12 (ANALYSIS 32.XLL). These techniques include Descriptive Statistics, Correlation Analysis and Regression Analysis.

a. Descriptive Statistics

The descriptive statistics was used to organized and summarized the data with a view of reducing the cumbersomeness and making it meaningful and comprehensive. For the purpose of this study, the descriptive statistics used are mean, standard deviation, minimum values and maximum values.

b. Correlation Analysis

This is a technique of determining the degree of association between two variables. The main objective of this method of determining correlation is to find out the extent to which two sets of ranking are similar or dissimilar. For the purpose of this study, Pearson's correlation coefficient known as non-parametric method was used to analyze the financial statement of the selected listed deposit money banks.

c. Regression Analysis

This is a technique of determining the impact of the independent variable(s) on the dependent variable. The relationship is expressed as an equation that predicts a response variable from a function of regression and parameters. For the purpose of this study the multiple regressions will be used. Hence, the models is as follows

ROA = f (CR, CR, ACP)

$ROA_{it} = \beta_{0it} + \beta_1 CR_{it} + \beta_2 CR_{it} + \beta_3 ACP_{it} + e_{it}$

Where:

ROA_{it} = Return on Assets of Bank

β_{0it} = Constant (i.e. the intercept)

β_{1it} = Coefficient of the independent variables (i.e. the slope)

e_{it} = Error term

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

In this chapter, the results obtained from the analysis of data collected for the study are presented and discussed. The chapter begins with analysis of the descriptive statistics for the variables of the study together with discussion of the results. It is followed with analyzing and discussing the inferential statistics (i.e. correlation and regression analysis) from which relevant inferences were drawn and test of hypotheses formulated for the study carried out.

4.2Descriptive Statistics

The descriptive statistics shows the trend and comprehensive evidence about the variables. Therefore, it demonstrates the average (mean), standard deviation, minimum and maximum value of the different variables of interest in the study.

Table 4.1 Descriptive Statistics Result

Variables	Number of Observations	Minimum value	Maximum value	Mean	Standard Deviation
ROA	18	0.320	3.339	1.947	0.942
Current Ratio	18	0.575	1.661	1.204	0.315
Cash Ratio	18	2.648	69.079	34.011	20.984
ACP	18	1073.086	2146.805	1696.479	281.668

Source: *Microsoft Office Excel2007: Analysis ToolPak 12 – ANALYS 32.XLL*

Table 4.1above presents the descriptive statistics of the variables employed. It revealed that on average, the banks included in our sample size generate Return on Asset (ROA) for the period. The Return on Asset (ROA) generated an average mean of **1.947**, and it ranges from**0.320** to

3.339. The standard deviation level of**0.942** indicates an insignificant variation in the ROA of deposit money banking institutions. The Current Ratio (CR) of the sampled Listed Deposit Money Banks has a mean of **1.204**, and ranges from**0.575** to**1.661**. This means that the sampled Listed Deposit Money Banks has an average of **1.204%** in their Current Ratio. The standard deviation of **0.315** shows a very low variation in the Current Ratio of listed deposit Money Banks in Nigeria.

The descriptive statistics results also show that the Cash Ratio (CR) of the Banks has a mean of **34.011,** which ranges from**2.984**to **69.079**. Therefore the sampled Banks has an average of **34.011%** for each Cash Ratio. The standard deviation of **20.984** shows significant variation in the Cash Ratio of the banks.

The descriptive statistics results further indicates that the Average Collection Period (ACP) for the selected banks generate an average mean of **1696.479**, ranging from **1073.086** to **2146.805** respectively. The Standard deviation level of **281.668** being recorded indicates a very high variation in the Average Collection Period (ACP) of the listed deposit money banks in Nigeria.

4.3 Correlation Analysis

In this section, the Correlation Coefficients for the variables of the study are presented in Table 4.2 as follows:

Table 4.2: Correlation Matrix

VARIABLES	**Return on Assets (ROA)**	**Current Ratio (CR)**	**Average Collection Period (ACP)**	**Cash Ratio (CR)**
ROA	1			
Current Ratio	0.786	1		
ACP	0.480	0.516	1	
Cash Ratio	0.821	0.879	0.559	1

Source: *Microsoft Office Excel 2007: Analysis ToolPak 12 – ANALYS 32.XLL*

The correlation matrix presented in **table 4.2** above shows the association between variables selected for this study. The most common correlation coefficient is Pearson's correlation coefficient which is used in this study to determine the presence or absence of association among the variables. It compares two ratio variables, and most times, the main diagonal of the correlation matrix table as set of ones, because the correlation between a variable and itself is always one (1). In other words, a correlation matrix is also a symmetric matrix.

Table**4.2** also presents the correlation results between the proxies of working capital management i.e. Current Ratio (CR), Average Collection Period (ACP), Cash Ratio (CR) and proxy of profitability i.e. Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria. It can be seen from the results that there is a strong positive relationship between ROA and Current Ratio (CR) from the correlation coefficient of **0.786.** This relationship suggest that the higher the Current Ratio, the higher the profitability of banks. It also indicates moderate positive relationship between ROA and Average Collection Period (ACP) based on the correlation coefficient of **0.480.**This relationship further suggests that where the Average Collection Period from customers and from other banks is short, the better for the bank.

The correlation between Average Collection Period (ACP) and Current ratio (CR) is moderate with correlation coefficient of **0.516.**The results also show that there is strong positive relationship between ROA and Cash Ratio (CR) due to correlation coefficient of **0.821.** This relationship also suggests that the higher the Cash Ratio, the higher the profitability of listed deposit money banks in Nigeria. The correlation between Cash Ratio (CR) and Current ratio (CR) is positively very strong with correlation coefficient of **0.879.** The association between Cash Ratio (CR) and Average Collection Period (ACP) is positively moderate with correlation coefficient of **0.559.**

4.4 Regression Analysis

The sub section presents regression analysis result that is utilized in examining the impact of the explanatory variable (independent variable) on the dependent variable in testing the hypothesis. Thus, the table below presents the regression result.

Table 4.3: Multiple Regression Result

VARIABLES	coefficient	standard Error	t Stat	P-value
Intercept	-0.031	1.112	-0.028	0.9781
Current Ratio	2.350	0.463	5.079	0.0001
Cash Ratio	3.689	0.640	5.760	2.9263
ACP	0.002	0.001	2.188	0.0439
Multiple R	0.832			
R square	0.693			
Adjusted Square	0.627			
R standard error	0.576			
Observation	18			

Source: *Microsoft Office Excel 2007: Analysis ToolPak 12 – ANALYS 32.XLL*

The summary of the multiple regression result obtained from the model of the study expressed as an equation that predicts a response variable from a function of regression and parameters is as follows:

ROA = f (CR, CR, ACP)

$ROA_{it} = \beta_{0it} + \beta_1 CR_{it} + \beta_2 CR_{it} + \beta_3 ACP_{it} + e_{it}$

ROA= -0.031 + 2.350CR + 3.689CR + 0.002ACP.

From the regression line, β_{0it} is **-0.031** which shows the constant value of ROA when the proxies of independent variable are all zero (0). β_{1it} is **2.350** which indicate the expected increase in ROA

corresponding to a unit increase in Current Ratio (CR) when the other proxies of independent variable do not change. β_{2it} is **3.689** which shows the expected increase in ROA corresponding to a unit increase in Cash Ratio (CR) when the other proxies of independent variable do not change. β_{3it} is **0.002**also indicating expected increase in ROA corresponding to a unit increase in Average Collection Period (ACP) when the other proxies of independent variable do not change.

From the above regression results of table **4.3,** the OBS stands for No. of Observations (i.e. no. of count) being gotten from the multiple of 3 banks (sample size) and 6 years (i.e. from 2014 – 2019). The Multiple R which represents the correlation coefficient is **0.832.**The coefficient of correlation (i.e. multiple R) is a quantity which lies between **-1 and +1**, i.e. $-1 \leq r \leq +1$, where **-1** indicates perfect negative relationship and **+1** indicates a perfect positive relationship. The corresponding R square (R^2) which is the coefficient of determination that tells us the percentage of variation in Y (the dependent variable) being explained by X (the independent variable) is **0.693** (i.e. **69.3%**). This means that **69.3%** change in Return on Assets (ROA) were caused by changes in explanatory variables- Current Ratio (CR), Cash Ratio (CR) and Average Collection Period (ACP). While other factors not studied in this research contributes **30.7%** changes in ROA of listed Deposit Money Banks in Nigeria.

Then the Adjusted R square (R^2) value of **0.627**which stands for the number of terms in the model is used whenever there is more than one X (independent variable),and finally the Standard Error which entailed an estimate of the standard deviation of the coefficient and as precision with which the regression coefficient is measured is **0.576**.

Table 4.3above also shows that the Impact of Current Ratio (CR), Cash Ratio (CR) and Average Collection Period (ACP) on Return on Assets (ROA) of Listed Deposit Money Banks are positive with coefficient value of **2.350, 3.689 and 0.002.** The positive impact from Current

Ratio (CR) and Cash Ratio (CR) means that by one unit increase in Current Ratio and Cash Ratio while other variables remain constant leads to increase in ROA. With the probability value of **0.0001 (i.e. 0.01%)**, it could be inferred that Current Ratio is statistically very significant to the model at **5%** level of significant, but the Cash Ratio is statistically very insignificant in the model with probability level of **2.9263 (i.e. 292.63%).** While the low positive impact from Average Collection Period (ACP) defines that decrease in the Average Collection Period could leads to decrease in ROA, but statistically significant to the model with probability value of **0.0439 (i.e. 4.39)** respectively.

4.5 Hypotheses Testing

The hypotheses formulated for the study are tested in this section. The Multiple Regression Results presents the Coefficients of the variables for the study from which the hypotheses are tested. In order to decide whether to reject or accept the null(H_{01}) hypothesis at **0.05 level of significant**, the decision point adopted states that; if *p* value is equal to or less than **0.05,** the null(H_{01}) hypothesis is rejected, on the other hand, if *p* value is more than **0.05,** the null(H_{01}) hypothesis is not rejected. Hence, the stated hypotheses are tested below:

4.5.1 Current Ratio and Return on Asset.

The regression result above in **table 4.3** shows that the relationship between Current Ratio (CR) and Return on Asset (ROA) is significantly positive with ***p* value** of **0.0001** which is less than **0.05,** where the ***t statistic*** is **5.079.**This shows that the management efficiently and effectively managed its working capital by settling its short term obligations as and when due using its current assets, and profitable as well. Therefore, the null hypothesis which states that Current Ratio has no significant impact on Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria is rejected because the p value is highly significant.

4.5.2 Cash Ratio and Return on Asset.

Table 4.3 indicates that the relationship between Cash Ratio(CR) and Return on Asset (ROA) is insignificantly positive with ***p* value** of **2.9263**much higher than **0.05,** where the ***t statistic*** is **5.760.**This indicates that the management were unable to settled its short term obligations as and when due using its highly liquid assets (i.e. cash and cash equivalents), but profitable during the financial period. Therefore, the null hypothesis which states that Cash Ratio (CR) has no significant impact on the Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria cannot be rejected since the p value is very insignificant.

4.5.3 Average Collection Period and Return on Asset.

Also, the regression result in the table shows that ***t statistic*** for Average Collection Period (ACP) is **2.1875** with ***p* value** of **0.0439** less than **0.05**indicating significant and positive relationship between Average Collection Period and ROA**.** This implies that the banks often receive settlement from their credit customers, and as well profitable during the period. This result shows that the null hypothesis which states that Average Collection Period (ACP) has no significant impact on Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria is rejected because the p value indicates a significant impact.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This is the final section of the study designed to present the summary of the study, the Conclusion of the study based on the summary as well as policy recommendations from the study based on the findings and suggestions for further studies as well.

5.2 Summary

This study examines the impact of working capital management on the profitability of listed Deposit Money Banks in Nigeria.

An Introduction was provided in the first chapter highlighting background to the study, statement of the research problem, main aim and specific objectives of the study, its significance to the environment and the scope the study covered.

In the second chapter, the concept and components of working capital and working capital management, the types, importance and financing of working capital, the factors affecting working capital, working capital position and management policy, determination of optimum level of working capital, the operating cycle, the concept of profitability, review of empirical studies and theoretical framework (such as Agency theory, Competitive advantage theory and Pecking Order theory) were duly covered.

The third chapter covered the Methodological aspect of the research showing the research design employed, population of the study which includes all the fifteen (15) listed deposit money banks quoted on the Nigeria Stock Exchange (NSE) with which the research was concerned, and the sample size of three (3) banks which include Zenith Bank, Eco Bank and Access Bank Plc for

the period of 2014 - 2019 were drawn from the population. The techniques of data analysis employed in carrying out the sampling, method of data collection, variables and their measurement.

Chapter four entailed data analysis of descriptive statistics for the variables collected, correlation matrix of dependent and independent variables, multiple regression results using ordinary least square (OLS) regression coefficients, testing of hypotheses using Microsoft Office Excel 2007 – Analysis ToolPak 12 (ANALYS 32. XLL).Based on the tests of hypotheses conducted from the data collected and the analysis of the results, the study found that:

i. There is significant relationship between Current Ratio (CR)and the Return on Assets (ROA) of the sampled listed Deposit Money Banks in Nigeria.
ii. There is no significant relationship between Cash Ratio (CR)and the Return on Assets (ROA) of the sampled listed Deposit Money Banks in Nigeria.
iii. There is significant relationship between Average Collection Period (ACP)and the Return on Assets (ROA) of the sampled listed Deposit Money Banks in Nigeria.

5.3 Conclusion

This research work draws out conclusion based on facts and data being collected and gathered. Working Capital Management cannot be overemphasized as it is very important to listed deposit money banks in Nigeria. This is to say that managers should pay close attention to the management of working capital in order to achieve the aim and objectives of their institutions.

In this research study, empirical analysis was carried out in order to determine the impact of working capital management on profitability of listed Deposit Money Banks in Nigeria. However a sample of 3 banks out of the 15 quoted/ listed deposit banks on the Nigeria stock exchange (NSE)were used due to availability of information in the financial statement.

The three (3) variables of working capital management which stood as the explanatory variables of the study are Current Ratio (CR), Cash Ratio (CR) and Average Collection Period (ACP), while the proxy representing the explained variable (i.e. the profitability) of the study is Return on Asset (ROA). Base on the finding of the study, the following conclusion were drawn.

i. The study concludes that Current Ratio (CR) has significant and positive impact on the Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria. This shows that the management efficiently and effectively managed its working capital by settling its short term obligations as and when due using its current assets, and profitable as well.

ii. The study concludes that the Cash Ratio (CR) has positive but insignificant impact on the Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria. This indicates that the management were unable to settled its short term obligations as and when due using its highly liquid assets (i.e. cash and cash equivalents), however profitable during the financial period.

iii. The study also concludes that Average Collection Period (ACP) has significant and positive impact on the Return on Assets (ROA) of Listed Deposit Money Banks in Nigeria. This implies that the banks often receive settlement from their credit customers, and as well profitable during the period.

5.4 Recommendations

In line with the conclusions deduced in this study and in addition to the review of relevant literature, the following recommendations are deemed necessary to ensure efficient management of working capital in banks:

(1) The management of the listed Deposit Money Banks in Nigeria should maintained its efficiency and effectiveness on the current ratio (CR) towards management of working capital by

establishing and monitoring a stronger policy in regards to its liquidity and profitability position on regular basis, and also to eliminate abnormal high value of Current Ratio (CR).

(2) The deposit money banks should develop necessary steps to utilize its idle cash and bank balances in order to meet its short term debt obligations and operating cost thereby improving its cash ratio (CR) and strengthening its profitability.

(3) The management of the listed Deposit Money Banks in Nigeria is expected to strengthen the credit policy and set up a very sound mechanism to help in monitoring the application of the policy in order to ensure that the overall goal of the improved profitability and shareholders' wealth maximization are achieved and sustained thereby stabilizing its Average Collection Period (ACP), and eliminating insignificance increase in the trend of Average Collection Period.

5.5 Frontiers for Further Studies

When this project was conducted, it was discovered that other variables could be used to measure the performance of Listed Deposit Money Banks in Nigeria. The study only covers the sampled size from 2014-2019 financial years. As policy regulation in the environment keeps fluctuating more studies should be conducted in order to give more detailed explanation of working capital management and profitability in Nigeria. However I suggest that further studies should be specifically conducted in the following areas:

1. The Impact of Liquidity Management on Financial Performance of Listed Deposit Money Banks in Nigeria.

2. The Impact of Capital Structure on Financial Performance of Listed Deposit Money Banks in Nigeria.

3. Effect of Debt Management on Financial Performance of Nigeria Banking Industry.

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