WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF FIRMS IN CONSUMER GOODS SECTOR IN NIGERIA

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE, COLLEGE OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES, MOUNTAIN TOP UNIVERSITY, IBAFO, OGUN STATE, NIGERIA, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE (B.Sc.) HONOURS IN ACCOUNTING AND FINANCE OF MOUNTAIN TOP UNIVERSITY, IBAFO, OGUN STATE, NIGERIA.

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Certification

This is to certify that this research project work was carried out by **“ABRAHAM EMMANUEL TEMITOPE”** with the matric number **15020101032**, in partial fulfillment of the requirements for the award of Bachelor of Science (Bsc) degree in Accounting and the Department of Accounting and Finance, College of Humanities, Management and Social Science, Mountain Top University, Ogun State, Nigeria.

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Dedication

This project is dedicated to Almighty God for His infinite mercy, protection, and guidance throughout my stay at Mountain Top University. Also to my wonderful and lovely parents, siblings, my honorable supervisor, Head of Department, other staffs and friends for their unquantifiable support and encouragement.

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Abstract

Working capital mangement is one of the most vital areas while making the profitability comparison among firms and involves the decison of the amount and composition of current assets and the financing of this assets. Working capital management is necessary because of its effect on profitablity and risk and also determines the running of the business firm, and consequently, its value and long term survival of the firm. The success of these companies depend largely on proper financing and management of working capital. Many consumer goods firms are facing problems with their collection and payment procedures, strategy and policies as well as not paying attention to inventory basis. These have negatively affected profitability of the firms and in turn have affected the value of the companies. This study examined the relationship between working capital management and profitability of selected consumer goods firms in Nigeria.

The objectives of this study is to evaluate and examine the relationship between net working capital, debtors collection period, creditors payment period, and inventory conversion period on the profitability of firms in consumer goods sector in Nigeria.

This research study adopts descriptive research design and ex-post facto research design. The population of the study comprised the 25 consumer goods firms listed at the Nigerian Stock Exchange, as at December 2017. Purposive and convienence sampling technique were used to select 19 companies out of 25 quoted companies in the industry which have complete data till at least 2017 in the Nigerian Stock Exchange Fact Book. Time series were extracted using secondary source from the published financial statements of the firms and Nigerian Stock Exchange from 2013- 2017. Data were examined and analyzed quantitatively using descriptive and inferential statistics.

Findings revealed that net working capital had positively and no significant effect on the return on assets of selected consumer goods sector in Nigeria(R^2 = 6%; Adj R- sq= -5%; and F- stat =.5.32, p<.05) . Debtor's collection period has positively and non-significant effect on return on asset of selected consumer goods sector in Nigeria (R^2 =3%; Adj R –sq= -7%; and F-stat=3.09, p<.05). Creditors payment period also influenced return on assets of selected consumer goods sector in Nigeria (R^2 = 1%; Adj R- sq = -2%; and F-stat = 8.36, , p<.05). Inventory conversion period influenced return on assets of selected consumer goods sector in Nigeria (R^2 =9%; Adj R- sq = -10%;and F-stat =0.095, , p<.05).

The study concluded that working capital management have no significant influence on profitability of consumer goods sector in Nigeria. It was recommended that management of selected consumer goods firms should pay close attention and focus to sound management of their working capital management components as they influenced their profitability.

Keywords: Creditors payment period, debtor's collection period, inventory conversion period, net working capital, and profitability.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Investors all over the globe put their money and resources into a business with a view to having some return on investment irrespective of whether it is in a proprietorship, partnership and corporations. In small and medium businesses, owners have direct or indirect control over the management of the business, so they themselves are answerable and responsible for the profit and loss. On the other side, the management of the business in multinational businesses manages the company's business on behalf of shareholders; however, managers need management to take such choices and decisions which can offer positive signal to promote market, increase the worth of the firm, enhance profitability and maximize holding period return.

A firm is a company that employs resources to produce goods or services for profit and generally owns and operates one or additional plants (Pass, Lowess & Davies, 2005). Firms should control their working capital very carefully. Survival of companies and actual achievement may rely on whether profit becomes money and whether that money is accessible when the company requires it. Controlling the working capital will be of limited value unless it is exercised within a framework, which takes into account; The assets needed to achieve the target and objective of the business, the way in which such asset are used and the way in which the business choose to finance activities

Afza and Nazir (2008) observed that financial decisions of short term assets and short term liabilities management influence the stock price. These choices are essential as they show the firm's and market's economic stability that develops the company's perception accordingly. An efficient

working capital management can create value for stakeholders while a deprived policy or inefficient management would possibly affect or have associate effect on the business in a frightful manner and might possibly cause a financial or monetary distress.

1.1.1 Working capital Management

Working capital management involves planning and controlling current assets and current liabilities in a very manner that eradicate the risk of inability to satisfy due short term obligations on one part to ignore excessive investment in these assets on the other part. The management of working capital is elementary in assuring that the operations of the organization are straightforward and effortless. This is mainly because the management of these funds makes certain that there is effective and productive use of resources (Lazaridis & Tryfonidis, 2006). Working capital management has become one of the most vital problems in organizations, where many financial managers notice the difficulties to spot and identify the important drivers of working capital and optimum level of working capital. As a result, if they can understand the role and determinants of working capital, companies can minimize risk and improve overall performance. The connection between the current assets and the present item of liability is called the organization's working capital. Management of working capital includes not only managing current assets, but also managing current liabilities and the connection between the two. Time is the feature of all items creating up working capital.

According to Boisjoly (2009), working capital management delegate to the ability of the management of an organization to manage short term capital provided to operate the day to day activities effectively. Working capital describes the assets and liabilities of a business that are related directly and the area unit connected to its trading activities. Some of them are held enable the business to function, such as debtors and creditors. Working capital liabilities are those for

which the business is most immediately at risk or danger, hence, they are usually termed current liabilities. Working capital assets are those on which the business can call or will decision most easily: hence, they tend to be referred to as current assets. Current assets include raw materials, work-in-progress, finished goods, bills receivable, cash and bank balances. These assets are purchased unit for manufacturing and sales purposes, such as raw materials in semi-manufactured goods, finished goods and debtors is turned over cash or bills receivable. The fixed assets are used to increase a company's output and the current assets are used for day-to-day working with the fixed assets. Therefore, current assets, called working capital, are also thought to be the lifeblood of a business enterprise. It relates to the firm's capital needed for short-term funding. Working capital should be more or less sufficient, but not more or less.

1.1.2 Profitability

Profitability is all company ventures main goal and objective of all business ventures. The company will not survive and maintain in the long run without profitability. It is therefore very important to measure current and previous profitability and to project future profitability (Hofstrand, 2013). Profitability of a company is a business ' capacity to earn a profit. Profitability is the measurement used to ascertain the scope of a company's profit associated to the size of the business. Profitability is a measurement of efficiency and effectiveness which guarantee the success of failure of the firm.

Efficient and effective utilization of the firm's resources and better and well management of receivables means that firms' management should discover effective and efficient dimension to deal with the cash available for the daily activities operations in order to achieve the optimum impact. The firm's ability to produce return on an investment in comparable with an alternative

investment, is the ability and capability of a company to utilize its resources to generate revenues in surpassing its expenses, that is, to generate profit from its operation.

A company's profitability is an essential measure and criteria to management as it is an outcome which has been achieved by an individual or a group of individuals in an organization related to its authority and responsibility, not against the law, and conforming to the morale and ethic. Such profitability is the function of the ability of an organization to access and manage the economic resources in diverse ways to develop competitive advantage (Hansen & Mowen, 2005).

Profitability is one of the four constructing component for identifying, recording, measuring, classifying, verifying, analyzing summarizing, interpreting communicating of financial information through financial statements in a true and fair manner and company performance as a whole. It shows the nature of a firm's asset and owner's equity. The other three are solvency, efficiency, and market prospects. Investors, managers and creditors use these vital concepts to analyze the performance of a company and the future potential and possibilities it could attract if operations were managed properly and effectively.

The two crucial aspect of profitability are revenues and expenses. Revenue is the business generated income. It is the amount of money derived or earned from customers by sales of products or providing essential services. Generating revenue isn't unconstrained or free, nevertheless, businesses must utilize their resources in order to produce these products and provide these services.

Resources, like cash, are used to pay for expenses rent, utilities, employee payroll, and other necessities in the production process. Profitability view at the relationship between the revenues

and expenses to determine how well a company is performing and the future potential growth and development a company might achieve.

1.1.3 Working capital Management and firm's profitability

Working capital management plays an influential role in improving profitability of firms. Firms can achieve optimal management of working capital by making the compromise between profitability and liquidity which are desirable to a firm. Working capital management is the ability to control and manage effectively and efficiently the current assets and current liabilities in a manner that provides the firm with maximum return on its assets and minimizes payments for its liabilities (Raheman & Nasr, 2007).

Effective working capital management is a remarkable factor affecting the survival and sustainability of the firm, the perpetual continuity and existence of its activities, and the maintenance of profitability. Excessive working capital like inadequate working capital has result to many businesses downfall and prevents their growth and existence. Working capital management (WCM) is significant as a result to the effect on profitability of firm, firm's risk, and the firm value. In this perspective, these studies fix on to disclose the tradeoff between working capital management and firm's profitability by using the data of the firms listed on in consumer goods sector in Nigeria.

This study, which discover and examine the impact of the working capital management on the profitability of all consumer goods sector in Nigeria, is regarded to bestow on the determination of working capital investment levels of these firms, determination of the distribution among the working capital components, effective use of scarce resources, and resource supply and sustainability growth and development of future investments by applying a working capital that

will improve and increase the profitability. There are a number of studies that comprises of the developed countries in the literature, while there are limited studies covering the emerging countries. It is expected that the study will contribute to the literature in terms of comparing the relationship between the WCM and profitability of firms in consumer goods sector in Nigeria. It is supposed that the study with these aspects will be beneficial to both managers and researcher.

1.1.4 Firms in consumer goods sector in Nigeria

Consumer firms or consumer goods sector is the second fastest industry in Nigeria. Nigerian firms (Consumer firms) as well as others the world over, utilize working capital for smooth operation. They plan and manage their inventories, cash receivables and payables in order to ensure that their items meet the requirements. Nigerian consumer companies manage the little working capital available to them to prevent operational embarrassment. Mostly imported raw material inputs are impacted by the government's volatile foreign exchange market and monetary policies. As a result, the inventory of raw materials is impacted by insufficient foreign exchange for imports, delays in clearing at Nigerian ports and bad transport networks.These affect the production runs of Nigerian consumer firms and delivery of finished goods to customers. Local delivery of raw materials to companies through the country's bad transport infrastructure, heavy debt/overdraft costs in Nigeria also restricted Nigerian firms ' short-term financing for sales collection, hampering network capital growth. The outcomes and recommendations of these studies could not be wholesomely to make suitable here in Nigeria because our economy is underdeveloped and characterized by crises which originated from socio-economic and political problems since independence. The Nigerian capital and money markets are not really helping to improve the problem. Instead, they compound the issue more often than not by generating bottlenecks with severe circumstances that the businesses on the brink of collapse could not readily meet. According to Olugbenga (2010), the

mismanagement of working capital in companies has resulted in some promising investments, with elevated return rates, being failures and frustrated from company. Many factories have either been shut down temporarily or permanently owing to illiquidity that will influence profitability.

As a consequence of their organization's aborted mission triggered by the twin factors, many Nigerian employees were forcibly thrown into the unemployment market of working capital and profitability. Financial institutions like banks are unwilling or reluctant to lend out money to these firms due to their poor credit position, while most firms are not willing to obtain available credits offered them due to high interest rates. Assets in commercial firms consist of two kinds, which are fixed and current assets. Fixed assets include land, building, plant, furniture, while current assets are inventory, account receivables, prepaid expenses etc.

1.2 Statement of the Problem

The management of the working capital of any organization is sensitive area of that organization and its growth and strength may depend on it. The effect of inefficient working capital management and profitability of firms in consumer goods sector in Nigeria will be addressed in this study.

Oluboyede (2007) suggested that inefficient working capital management has remained a predicament for firms in Nigeria due to its negative impact on their profitability. Adegoke (2007) further discovered and examined that some firms in Nigeria with some promising investments, with high rate of return have turned out to be failures and frustrated out of business due to lack of inefficient working capital.

The prevalent pressure on cash and credit is menacing the survival of many businesses globally, including Nigeria. Many companies, both in private and public sector of consumer goods irrespective of their age, size or product range, have been experiencing difficulties meeting short-

term maturing obligations/liabilities. The Nigerian economy characterized by infrastructural breakdown, lack of raw materials input, low level of disposable income, low capacity utilizations of firms, Instable monetary policies, volatile foreign exchange markets, elevated financial costs and citizens ' buying power have had a negative impact on Nigerian consumer firms ' working capital position.

These variables have had a negative impact on Nigerian consumer firm's working capital positions, planning, leadership and operational efficiencies, them to operational embarrassments. Though efficient management of the working capital is important for both profitability and prosperity of any firm, not many studies have been conducted on the issue in Nigeria (Akinlo, 2011). Not enough evidences have been provided on the firm's performance and working capital management with reference to Nigeria provides a strong motivation for evaluating the relationship between working capital management and profitability on firm's performance in detail. Against this backdrop, the need to carry out a study on the topical issue becomes necessary. The focus is to exploit the possibility of coming out with achievable suggestions that will remove or cushion the attendant unfavorable effects of working capital, profitability on the overall performance of the quoted Nigerian economy, firms dealing with consumer goods sectors precisely.

1.3 Objective of the Study

This research focuses on the effects of working capital management on profitability of firms in consumer goods sector in Nigeria. These specific objective of this study are:

(1) To examine the effect of net working capital on the profitability of firms in consumer goods sector in Nigeria

(2) To ascertain the relationship between debtors collection period and profitability of firms in consumer goods in Nigeria.

(3) To investigate the impact on creditor's payment period on profitability of firms in consumer goods sector in Nigeria.

(4) To evaluate the impact of inventory conversion period on profitability of firms in consumer goods sector in Nigeria.

1.4 Research Questions

In order to achieve the objective of this work, the following research questions will be addressed.

(1) What is the extent of the effect that net working capital has on profitability of firms in consumer goods sector in Nigeria?

(2) To what extent does debtor's collection period relate with profitability of firms in consumer goods sector in Nigeria?

(3) To what extent does creditor's payment period impact on the profitability of firms in consumer goods sector in Nigeria?

(4) To what significant extent does inventory conversion period impact on profitability of consumer goods sector in Nigeria?

1.5 Research Hypothesis

The hypothesis upon which the study is based are presented in the null form as follows:

(1) Ho. Net working capital has no significant effect on profitability of firms in consumer goods sector in Nigeria.

(2) Ho. There is no significant relationship between debtor's collection period and profitability of firms in consumer goods sector in Nigeria.

(3) Ho. Creditors payment period has no significant impact on profitability of firms in consumer goods sector in Nigeria.

(4) Ho. Inventory conversion period has no significant on profitability of firms in consumer goods sector in Nigeria.

1.6 Significance of the Study

This research work is significant for the fact that it tries to highlight the stakeholders that will benefit from this study.

A stakeholder in business is generally an investor in your business whose activities and business strategy determine the result of your business choices. They are also individuals or organizations impacted by the activities of the company. You also need to consider how your company is influenced by clients, community, staff, shareholders and company associates. A well rounded approach that shows understanding of each stakeholder normally increases and improves your long term viability and success.

There are ways these stakeholders are of beneficial competence to the firm, which are;

(1) Customers: In the long run, your ability to meet the needs of the customers is a key to success. As a matter of fact and necessity, without customers the company cannot survive. In almost all situations, the customer needs are prioritized first. So you must understand customer wants and needs and meet them on ongoing basis. The customer can always decide, select and choose to take his business to a competitor, so it is of prominent importance that we continue to innovate, to offer good products and good value for money. Customers provide the revenue and cash flow that your business needs to operate and ultimately earn a profit.

(2) Employees: companies and firms tend to place greater value on the contributions and provisions employees make to business operations. The employees are the ones in-charge to create and deliver the products or services that the customers consume to derive maximum satisfaction. If you operate a service-based business, your employees provide the compatible service that helps you attract, maintain and retain customers. Motivating your employees with fair compensation, proper training, and empowerments helps you deliver a better customer experience. Empowering employees at all levels to make more decisions and take on more responsibilities not only makes them feel valued, but it can also improve your efficiency in responding to customer needs which attract profitability to the business firm.

(3) Community: In the long run also, it is very crucial that your ability to function effectively in your business environment also depends on the community. We want to be a good citizen with healthy and wholesome links to the local community. We want to be seen as a responsible employer who is providing employment for a good place to work. However, community leaders and activists also hold your company accountable to act with social and environmental responsibility. This means that if you don't participate in community activities and give to charities, you could face negative public sentiment and objection.

(4) Shareholders: the shareholders are those who own, control and manage the affairs of the company. They might as well have put forward the seed capital which is needed to start the business into operation. So company owners usually have a strong voice in the direction your company takes. Owners usually engage in the business day-to-day operation or vote on critical choices. Each owner-partner has a monetary stake in the

business ' profit potential in a partnership. In a corporate set-up, shareholders also vote on significant corporate choices and serve as a source of economic responsibility and resolution competence to solving the problems affecting the business driving company leaders to make logical decisions.

(5) Business partner: Business partners and suppliers can also significantly impact your business. Partners are companies that work together to achieve a common goal with in joint ventures or shared investment opportunities. Suppliers are companies you depend for vital resources used inside your company and for products to resell. If you have strong and determined, trusting relationships with vital suppliers, you can normally bargain or negotiate more reasonable costs and get more efficient replenishments when your inventory runs low.

1.7 Scope of the Study

The main focus of this work is to verify the effect of corporate working capital management on profitability. The limitations of this study include financial and time constraint. The study uses secondary data obtainable from reports on the selected firms. This study will cover the period 2013 – 2017.

1.8 Definition of Terms

Working Capital Management: it involves the management of current assets and current liabilities of an enterprise in such a way that the firms will be able to meet its cash needs. In this study, it refers to net working capital, debtor’s collection period, creditor’s payment period, and inventory conversion period.

Profitability: it is a measurement of efficiency of financial performance of the selected firms. It is measured as return in asset (ROA). That is profit before tax divided by total assets.

Formula: Profitability – Return on assets (ROA) = Profit before income tax/total asset × 100

Net Working Capital: Net working capital (NWC) is the difference between a company's current assets and current liabilities. A positive net working capital signifies that a company has sufficient funds to meet its current financial obligations and invest in other activities.

Debtors Collection Period: This indicates the average time taken to collect trade debts. In other words, a reducing period of time is a directional signal of increasing efficiency. It allows the enterprise to compare the real collection period with the granted/ theoretical period.

Formula: Debtors Collection Period = (Average debtors/ Credit sales) × 365.

Creditors Collection Period: This indicator measures the average time taken to settle its debts with trade suppliers (Accounts payable). Hence, among other things, it gives information about payment habits and also whether a business is taking full advantage of trade credit available.

Creditors Collection Period = (Trade or average creditors/Credit purchases) × 365.

Inventory Conversion Period: The conversion period of the stock is the time needed to acquire, produce and sell products for a product. The conversion of stock is fundamentally the period in which a business has to spend money while converting products into a sale. The calculation is:

Formula: Inventory Conversion Period = (Inventory/Cost of sales) × 365.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter is partitioned into three sections, the first is conceptual review, followed by the theoretical framework and lastly, empirical review that this study is built upon. At the conceptual review stage, the relationship existing between the independent variables and dependent variables under this study are revealed. The theoretical framework reveals theories related to working capital management and profitability. That is, the empirical review emphasizes on previous studies on working capital management and profitability.

2.1 Conceptual Review

The independent variable in the research work is working capital management, which refers to a company's managerial accounting strategy designed to monitor and exploit the two components of working capital, current assets and current liabilities, to ensure the ascertain the most financially efficient operation of the company. The principal target of working capital management is to guarantee the company always maintains sufficient cash flow to meet its short term operating costs and short term debt obligations. Efficient working capital management helps maintain unconstrained operation of the operating cycle (the minimum amount of time required to change net current assets and liabilities into cash) and can also help to enhance the company's earnings and profitability. Working capital management includes inventory management and account receivables and payable accounts management. In this research, money flow, assets and liabilities are monitored through the ratio assessment of main components of operating expenditures,

including working capital ratio, collection ratio (debtors and creditors collection period), and the inventory turnover ratio.

2.1.1 Elements of Working Capital Management

Working capital ratio/current ratio: This is calculated as current assets divided by current liabilities, is regarded a key significant of a company's ground laying financial health since it signifies the company's ability to successfully accomplish all of its short term financial obligations. Notwithstanding numbers differs by firms, industry or organization, a working capital ratio below 1.0 is collectively betoken or signified of a company having distressing meeting its short term duty. Working capital ratios of 1.2 to 2.0 are regarded desirable, but a ratio higher than 2.0 may indicate a company is not effectively using its assets to boost revenues.

The collection ratio: Efficiently a company manages its accounts receivables. The collection ratio is calculated as the product Collection ratio. This is also known as the average collection period ratio, is a primary measure of how of the number of days in accounting period multiplied by the average amount of outstanding accounts receivables divided by the total amount of net credit sales during the accounting period. The collection ratio calculation provides the average number of days it requires a company to receive payment. The lower a company's collection ratio, the more efficient it's the cash flow. Under this collection ratio, we have the debtor's collection period and the creditor's collection period.

(1) Debtor's Collection Period: For the company to obtain the debt owed from its clients, this is the average period of days. The sooner debtors make payment, the better the company. So a brief collection period for debtors is nice. If debtors make payment quickly, it fosters cash flow and minimizes risk of customers not paying the money they owe.

$$\text{Debtors Collection Period} = \frac{\text{Debtors (Amount of money owed)}}{\text{Sales turnover}} \times 365$$

The following calculation under this will equate to the number of days taken to recover debts.

(2) Creditors Collection Period: This is the average period of days it takes, for the business recover and settle its outstanding debt with trade suppliers. Hence, a short creditor's collection period is favorable and preferred by the companies because of creditor is source of free financing. Nevertheless, shorter creditor's collection period has number of beneficial advantages which helps to improve the certainty and self-assurance of the supplier, continuity or stability of supplies is assured, more credit options are available, and goodwill of the company is at the positive beneficial level.

Creditors Collection Period = = (Trade or average creditors/Credit purchases) × 365.

Inventory turnover ratio: The final element of working capital management is inventory management. To carry out with maximum efficiency and affirm contentment high level of working capital, a company must be cautioned carefully to balance sufficient inventory on hand to meet customers' needs while avoiding superfluous or unnecessary inventory that hold up working capital for a long period before it is converted to cash. Companies commonly measure how efficiently that balance is affirm by monitoring and supervising the inventory turnover ratio. The inventory turnover ratio, calculated as revenues divided by inventory cost, unveil how swift a company's inventory is being sold and restored. A relatively low ratio compared to industry peers signifies that inventory levels are extravagant and excessively high; while a relatively high ratio signifies the efficiency of inventory ordering can be ameliorate and improved.

Furthermore, the dependent variable is profitability, which serves as a measurement of efficiency and finally or ultimately its success or failure. Profitability can further be defined as the ability of a business to produce a return on an investment based on its resources in differentiation with a

mutually exclusive choice of possibilities on investment. Profitability is measured by an “income statement” that maintains a record of income and expenses over a duration of time. Firms cannot survive without profitability, it’s inevitable, and a highly profitable business firm rewards its owners with a significant return on their investment. Business managers are bestowed the responsibility for increasing a firm’s profitability, by subjecting each process under exploration, the target is to point out transformations that improve profitability. Various decision tools or profitability ratio can be used to examine an organization’s profitability, which is profit margin, return on assets, and return on equity.

Return on Assets: Return on assets which is also known as return on investments (ROI), acts as a directional signal of company profitability in relation to its total assets. It discloses how efficient the management is in making use of resources to its full capacity and potential, to generate profit. Return on assets is indicated as a percentage and is calculated by dividing an organization’s annual earnings by its total assets.

$$\text{Return on assets} = \frac{\text{Profit before tax}}{\text{Total assets}} \times 100\%$$

Profit margin: It is explicit and expressly in percentage and can be estimated by dividing net income by revenue. Net income or net profit is the remaining amount after deducting company expenses from total revenue or total sales. Gross profit margin, pre-tax profit margin, net margin, operating margin are different kinds of profit margins usually used during evaluation.

$$\text{Profit margin} = \frac{\text{Net profit}}{\text{Net sales}} \times 100\%$$

Return on Equity: Return on equity is the ratio that determines revenue created by a company in relation to investments made by equity holders. It is also indicated as a percentage and measurement of a company’s efficiency, signifying its capacity to generate or create profit without

much investment. A higher return on equity is a measurement of management efficiency when employing investment.

$$\text{Return on Equity} = \frac{\text{Profit after tax}}{\text{Equity}} \times 100\%$$

2.2 Theoretical Review

These sections of framework contain all previous theories and models that are associated with this study on working capital management and profitability. There are fundamental five theories of working capital, which includes:

1. Agency / stakeholder theory
2. Modern portfolio theory
3. Operating cycle theory and Cash conversion cycle theory
4. Resource based theory

2.2.1 Agency theory / Stakeholder theory: -

Agency theory reflects on the matter of the agency challenges, confrontation, and predicament and its possible solution or positive outcome. The first proposed scholars that express and demonstrated that a theory of agency must be originated was propounded by "Stephen Ross, 1973; Barry Mitinick, 1976; who singlehandedly and roughly concord jointly. Ross is responsible for the creation of the economic agency theory, and mitinick is responsible for the institutional agency theory. This fundamental terms under these theory are comparable and similar, but under different assumptions. Precisely, Ross brought about the study of agency in concepts of unpleasant situations of compensating contracting; agency was viewed, in short, as a motivating weakness. Mitinick created the recent common perception that institutions form around agency, and to

transform dealing with agency, in reaction to the important flaws of agency relationships. Behaviors never happen as it is favored by the principal because it does not worth it to make it accurate. Society generates institutions that give attention to these problems or imperfections, managing or minimizing them, suitable and adapting to them, or becoming chronically deformed by them. Hence, to have maximum understanding of agency, we need both agency approaches to see the motivation as well as the institutional structures.

Agency theory is a theory explaining the relationship between the principals (shareholders) and agents (managers). It is also a principle that is used to emphasize and provide possible solutions to issues in the relationship between business principals and their agents. Most generally, that relationship is the one between shareholders as principals and company executive as agent. An agency in comprehensive terms, is any relationship between two parties in which one party, the agent serves as a representative to the other, the principal, in day to day activities or transactions. In this association, the principal bestows the duty by authorizing or delegating an agent to perform work in the best interest of the principal.

Moreover, due to the relationship between the principal and its agents, there are agency problem that arises or exist and possible resolution are made to curb this problems. This explains problems that can occur due to the delegation of decision making authority which can lead or bring large inefficiency and therefore increased cost. For instance, if the owner (principal) authorize decision making authority to a manager (the agent), there is possibility that the manager will not perform his work full effectiveness and capacity as the owner would, given that the manager does not participate fully or directly in the outcome of the organization. The continuity of information that is not identical on both sides, moral hazards and self-interest among the parties can cause the agents

behavior to differ fundamental and essential information from what is the joint principal interest, bringing loss of efficiency.

In essence, the importance of agency theory/ stakeholder theory to working capital management and profitability could be sighted from the context of financial manager, who in most cases is an agent of the owners (principals) of a firm who is responsible for fundamental decisions concerning all the short term assets and liabilities of a business. He takes responsibility of decisions concerning receivables, payables, inventories / stock and liabilities of a firm. Nevertheless, by enlarging this to stakeholders, the creditors, for instance, provide sources of finance to the firm and in return as an exchange expects repayment of their loan at a set time schedule or a particular period of time. Employees and managers assist firm with necessary skills, time, and also human capital requirement in exchange they expect effective and efficient good working conditions, true and fair income and remuneration. Customers provide net sales or revenue for the firms and in return expect to have value for money and maximum satisfactory services. Suppliers are input providers to the firm and thus expect to have value of money, fair prices and dependable buyers to derive satisfactory services. Stakeholders normally have no same traits or characteristic with respect to their share of interest or stake in the firms. The level of individual's stake depends on the measure of his exchange of relationship and commitment with the firm which depends on a particular or specific asset investment.

2.2.2 Modern portfolio theory/ Risk and return theory:

This theory concentrates on the effect or outcome of investments have on an entire portfolio (the group of investments and other assets held by an investor). From 1950's, rather than a single

investment, in other words, selecting and choosing different types of investment will distinguish your risk.

An economist named Dr Harry Markowitz (1952, 1959) who is the father of modern portfolio theory introduced modern portfolio theory or MPT in his doctoral thesis in 1952, which earned him an awarded Nobel Prize in Economics. He revealed that current strategies just concentrated on return but did not account for risk.

Markowitz decided to write and publish on “Portfolio Selection” which kindled his involvement and interest in diversifying a portfolio, which is one of the most fundamental and influential economic theories of investment. The main purpose and ideology behind markowitz’s paper was that a diversified portfolio is worthwhile chosen in a limited manner on the investment with the highest return. Factually, his theory stated that through diversification, there is a formula to maximize investments returns and minimize the risk factor in their portfolio. In essence, his theory means “not putting your eggs all in one basket”.

Modern portfolio theory or mean variance analysis is a mathematical and construction framework which comprises assembling a portfolio of assets such that the expected return is maximized for a certain proportion of risk. It is a definite form and extension of diversification in investing. The ideology is that acquiring and owning different kinds of financial asset is minimizing the risk than acquiring and owning one type. This theory is filled with insights as a key that an asset’s risk and return should not be determined by itself, but by how it be of beneficial strategy to a portfolio overall risk and return. It uses the variance of asset prices as a representative of risk.

For example; you invest in three stocks individually, unfocused on how they affect your entire portfolio. This indicates that it depends on the favorable and unfavorable condition of the stock

market alone. If stocks in general falls, you will be confronted with serious risk without anything equivalent compensating your risk. But if otherwise, you diversify or make diverse forms without putting all your eggs in one basket, you may equivalently compensate your risk. Let's point that instead of investing in just stocks, you put some money in bonds too. The bonds may equivalently compensate the riskiness of the stock. If stock prices falls, the bond prices may increase, assisting to decrease the risk of a complete loss.

Risk and return are the two important component of modern portfolio theory. While they may be both obvious terminologies which as a matter of necessity, they are worthwhile recognized and mentioned.

Return: - The profit acquired and generated from an investment is the return. It could be capital gain from:

1. Stock
2. Dividend paid from companies you have ownership in
3. Appreciation of an investment or bond payment upon maturity.

Risk: - The chances investors partake that specific investment will not provide the expected return. It is a risk of probability of an investor participating in an investment may or not the desired return. In general, stocks have a dominating higher risk level than bonds, but every investment carries some type of risk.

Modern portfolio theory assumes that investors views risk and return as inter-related. Investors require a higher risk and return in order to receive higher returns. These theories insinuate, nevertheless, that diversifying will minimize risk without reducing your returns. In essence, an investor chooses the best outcome the portfolio with the lower risk without sacrificing the return.

Other presumed assumptions of modern portfolio theory includes

1. Investors don't partake in unnecessary or superfluous risk.
2. All investors comprehend expected return.
3. Investors are in the market to maximize profit or return.
4. All investors have access to the same information at their disposal.
5. Inclusion of decision is not included in commission.

Moreover, there are criticisms against the modern portfolio theory. No theory that has ever come into existence is without a defect and naysayers, which makes modern portfolio management has no exception. Despite of its theoretical importance, critics of modern portfolio management stills have imbedded questions on whether it is the best optimal possibility investment tool for investors, because its model of financial markets does not match with the real world in many ways.

Some critics, who include investors says that technical analysis is more preferable which presents a better penetration and insights. Some others believe that the buy and hold philosophy or nature that modern portfolio theory agrees to isn't the best choice and alternative to maximize returns.

Better still, in this context, the relevance of this theory to working capital management and profitability is that buy and hold philosophy is more preferable to modern portfolio theory in the sense that buy and hold investors believe that "time in the market" is more provident investment style than "timing in the market". This strategy is applicable by buying investment securities such as (stocks bonds and other type of securities) and holding them for long periods of time irrespective of wavering and unsteadiness in the market. In respect to that, investors

believe that long term returns can be proper and reasonable regardless the degree of uncertainty of the characteristic of short term period. This strategy proves as an evident that is contrary to absolute market timing, which precisely has an investor buying and selling over a shorter period with the motive of purchasing at low prices and sales at high prices.

2.2.3 Operating cycle / Cash conversion cycle theory: -

This theory was propounded by Richards and Lauglin (1986). In their research work, as a matter of necessity, they both saw the need to have a careful and examined analysis at working capital management and its individual components. They supposed that although an essential position of financial manager's time is sacrificed on decision associated to short term assets and liabilities, meanwhile, less attention has been given by most of the literature and researcher in this aspect. In accordance, they describe the inventories, receivables, and payables as the components of the cash conversion model.

It follow the process of; Raw material ---- Work-in-Progress ---- Finished Goods ----- Accounts Receivable ---- Cash

This theory determines the measurement that expresses the length and duration of time (measured in days) it takes for a company or business entity to purchase of inventory and the receiving of cash from account receivables. This theory also target to measure how duration of time frame it requires a company or business entity to convert its investment and other resources into cash flow from sales whereby selling its inventories, collect its receivables and payoff or settle its debt without any hesitation penalty been charged or incurred. Hence, in the operation of the business, the total of inventory holding period and a receivable collection period of a firm is the operating cycle of that firm. Cash flow analysis using cash conversion cycles also unveil in an entire manner,

how efficiently the company or business entity is managing its working capital. Every naira that is tied up and occupied to the process of production, till it's retrieved as sales are accounted and audited for the verification to calculate the cash cycle of an entity. A lower duration of days is the most desirable and preferable when it comes to cash conversion cycle. The cash conversion cycle can be also called net operating cycle.

Consequently, this theory of cash conversion cycle comprises of three main working capital components which are; Days inventory outstanding (DIO), Days sales outstanding (DSO), and days payable outstanding (DPO). The cash conversion cycle equates to the time acquired to make sales of inventory and collect receivables less the time acquired to pay the company payable.

Formula: Cash conversion cycle (CCC) =DIO + DSO + DPO

Or it can be represented as: inventory conversion period + receivables conversion period – payable conversion period.

It can also be represented as: average inventory / cost of goods sold × 365 + average account receivables / sales × 365 - average account payable / purchases × 365.

2.2.4 Resource based theory:

The principal attention of the resource based theory is the ability of contention and acquisition of sustainable comparative advantage which is the possession of strategic resources that provides an organization with advantageous and favorable opportunities to develop and advance competitive advantages over its rivals or over other firms in the industry. The distinctiveness or pivotal role of firm's resources in terms of comparative advantage is regarded to be of assistance to an

organization to enjoy and benefit strong maximization of profit, and ward off threat, especially over time.

Wernerfelt (1984) was the profounder of the resource based theory of firms which is considered as one of the theories of strategic management that is generally referenced specifically because it's effective and applicable to be of pertinence to our modern age management practices. Correspondingly to Barney (1991), firm's resources include all assets, capabilities, organizational processes, information, knowledge, and firm's characteristics, controlled by a firm that empowers the firm to develop and carry out strategies that will enhance its efficiency and effectiveness in order to achieve sustainable comparative advantage.

The main stand point of the resource based view is the penetration of a firm's resources inspired towards accessing and gaining sustainable competitive advantage over the competing firms in the industry. Hence, the philosophical ideology of the theory insinuate that competitive advantage can only be obtained and achieved by the effective and efficient employment of all availability of resources to a firm (Mahoney 2001). The resource based theory is a standard of business survival and corporate profitability. The resources of a firm can either be human or material. When taking the stock of firms resources, a clear distinguishing need to be considered between resources and capabilities. The resources are input in the production process, they are regarded as the elementary essentiality unit of analysis. The resources of a firm includes items such as patents, capital equipment, brand names, the skills connected with individual employees, finance and so on while capabilities perspective is the ability or capacity of a team of a resources to have a team work together in performing ,obtaining and achieving certain task, goals and objectives. The theoretical framework of the resource based theory view developed with a point of focus on recognizing the portraying attribute of a resource. If firm's resources can easily be copied or portrayed by

competitors then sustainable competitive advantage cannot be obtained and achieved. Consequently, the theory elaborates and stresses the crucial importance of firm's resources in the obtaining and achievement of a higher and superior performance and competitive advantage over the firms or the competitors in the industry.

This study is hinged on two theories, the resource based theory and cash conversion cycle / operating cycle theory. The resource based theory is pointed on the dependent variable, which is profitability while cash conversion cycle (CCC) or operating cycle theory expresses the independent variable, which is working capital management. The cash conversion cycle theory is of crucial essential constituent of working capital management because it directly affects the profitability of the company, firms and business entity. It deals with current assets and current liabilities which is part of the independent variable in this study.

2.3 Approaches to Working Capital Management

To prolong the continuity of a firm, especially the consumer firms, the methods of financing working capital needs important consideration and concern. Working capital is financed internally and externally by means of long-term funding and short-term funding, through debt and property funds. The source of finances are used to raise working capital whereby it is accepted generally that long term sources and short term sources should be utilized for raising working capital. In our recent modern firms, both the type of sources is used effectively for financing both fixed and current assets. There are fundamentally three approaches to financial working capital.

1. Conservative approach
2. Aggressive approach
3. Moderate approach. (Nwankwo 2005)

These theories are observed and critically inspected below with their implications. They have different risk and profitability trade-off.

Conservative approach: This approach has the lowest risk and lowest profitability among other working capital financing strategies. It is a risk free strategy of working capital financing. A company selecting this strategy upholds a higher and increase level of current assets and however higher and increase working capital also. The prominent part of the working capital is funded and financed by the long term financing or sources of funds such as term loans, debentures etc. Hence, the risk related with short term financing is nullified to a remarkable great extent.

Under this conservative approach, fixed assets, permanent working capital and a portion of temporary working capital or seasonal working capital funded or financed by long-term financing sources and the remaining part is financed by short term financing sources (Figure 2.1). Consequently, the primary or the sole objective of working capital management is guaranteed. It is explained in the equation below:

FINANCING STRATEGY IN EQUATION

Long term financing = Fixed assets + Permanent working capital + Part of temporary working capital

Short term financing = Remaining part of temporary working capital

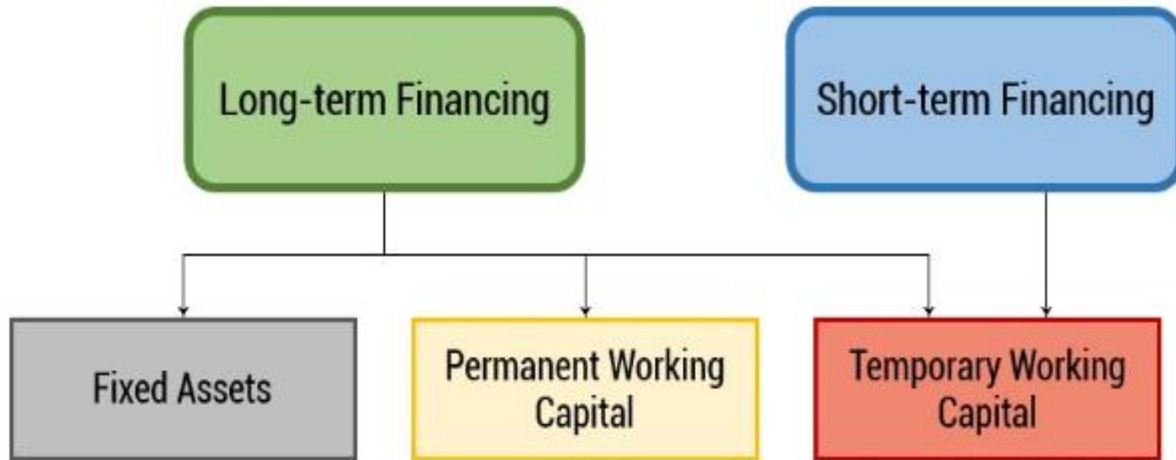

Figure 2.1: CONSERVATIVE APPROACH DIAGRAM (1)

Source: Yuriy. S. (2018)

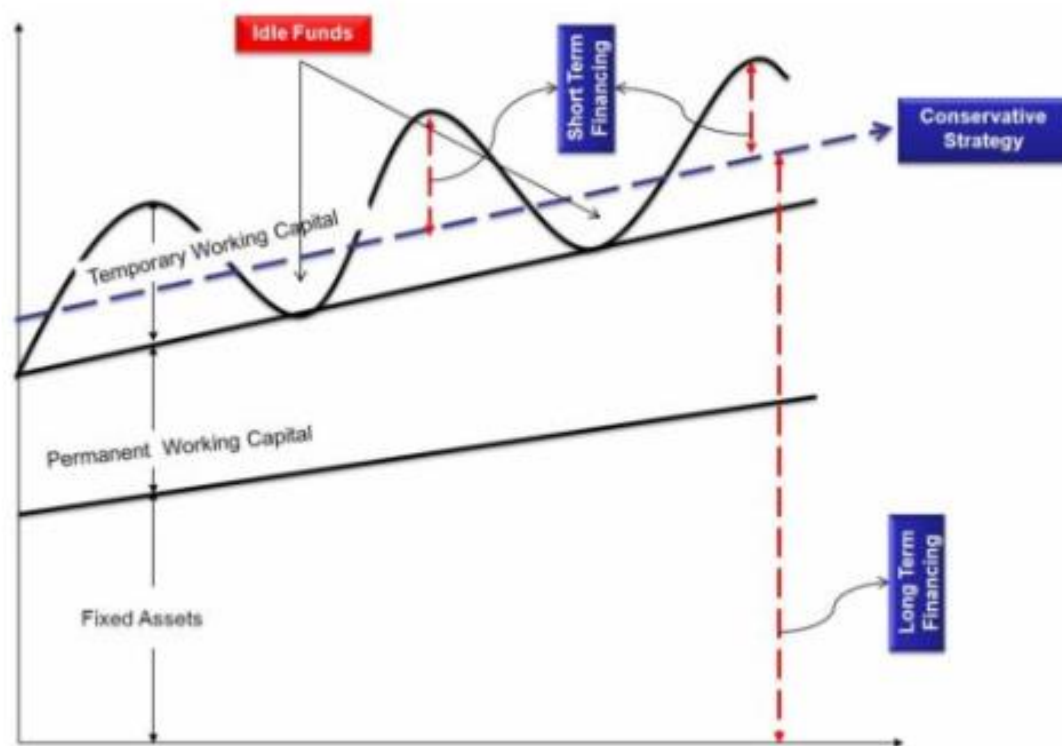

Figure 2.2: CONSERVATIVE APPROACH DIAGRAM (2)

Source:Yuriy. S. (2018)

To elaborate the approach in details with more clarity, the identified diagram (Figure 2.2) above indicates that the dotted lines, horizontal line signifies the point at which extent which the long

term financing will be employ and utilize effectively. The dotted vertical line signifies the sources of finance and they are followed closely as “long term financing” and “short term financing”

Therefore, we can ascertain that long term funds are financing total fixed assets, total permanent assets and a portion of the temporary or seasonal working capital also. Temporary working capital or seasonal prerequisite has ups and downs. The two aspects of downs beneath the long term financing line point out that there are worthless long term funds incurring superfluous or unneeded interest cost.

Aggressive approach: This approach is a high risk strategy among working capital management financing strategies. Specifically, in this approach of financing, the degree of inventory, accounts receivables, and bank balances are adequate and just more than enough without absorption or cushion for ambiguity or uncertainty. There is a satisfactory dependence on the trade credit.

According to this aggressive approach, fixed assets and a portion of permanent working capital are funded and financed by long term financing sources and the other portion of permanent working capital and total working capital is only utilized and financed by short term financing sources (Figure 2.3). It is explained in the equation below:

FINANCING STRATEGY IN EQUATION

Long term financing = Fixed assets + Part of permanent working capital

Short term financing = Remaining portion of permanent working capital + Temporary working capital

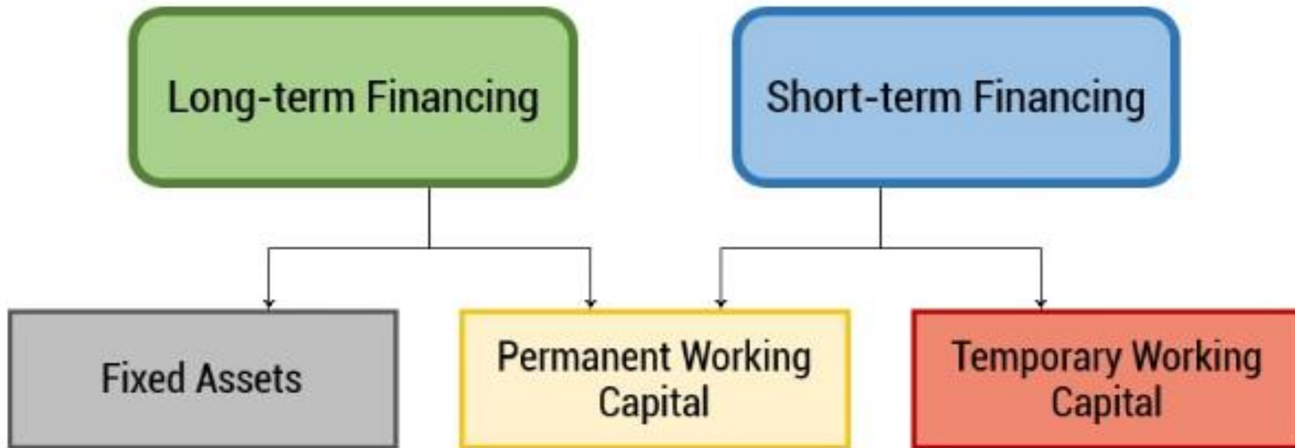

Figure 2.3: AGGRESSIVE APPROACH DIAGRAM (1)

Source: Yuriy. S. (2018)

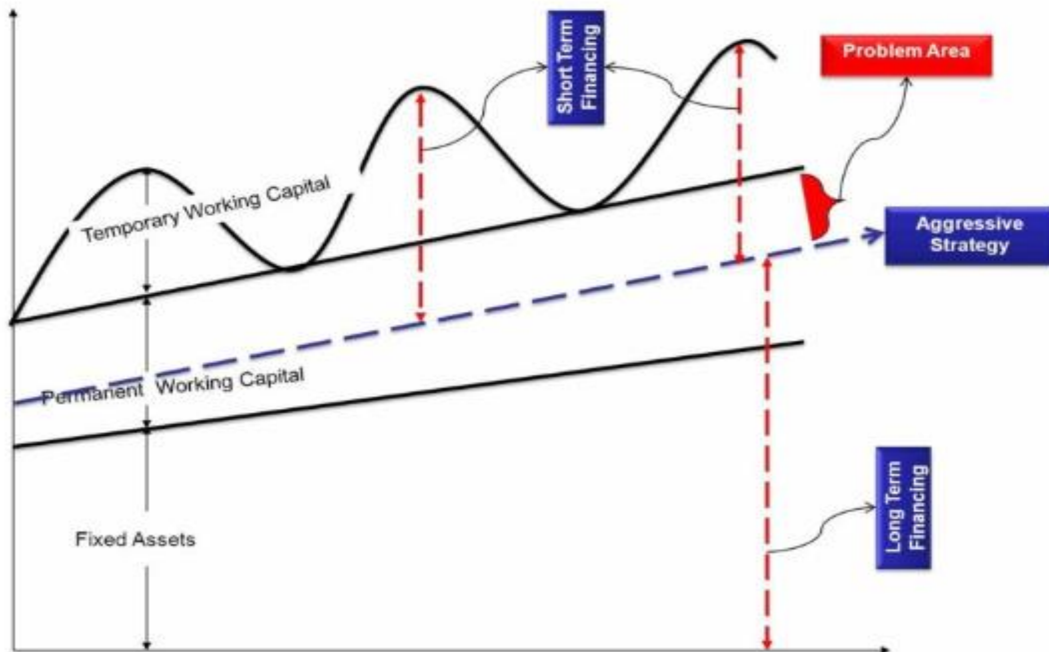

Figure 2.4: AGGRESSIVE APPROACH DIAGRAM (2)

Source: Yuriy. S. (2018)

For more emphasize in this approach for betterment and clear understanding, the recognized diagram above (Figure 2.4) approves that the dotted lines, horizontal line signifies the point at which extent the long term finance will be put into use. The dotted vertical lines represent the

sources of finance and they are followed closely as “long term financing” and “short term financing”.

Consequently, we can easily establish that long term funds are financing total fixed assets and a portion of permanent assets. A significant part of seasonal condition or temporary working capital is financed by short term source of finance. Under this approach, the predicament aspect is the part of permanent working capital which is financed by short term sources. It can constitute problems of liquidity and bankruptcy to the firm. Obtaining this approach makes it possible to minimize interest expense and increase profitability of a business, but it also bears greater risk.

Moderate approach: This approach is a stabilized and balanced approach risk strategy in working capital management financing strategies which is also called “hedging strategy” (Figure 2.5). Corresponding to this approach, fixed assets, permanent working capital are funded and financed by long term financing and temporary working capital or seasonal condition is only utilized by short term financing (Figure 2.6). Thus, under a moderate approach, businesses and consumer firms should use long term financing to finance fixed assets and permanent working capital. The necessity for temporary working capital should be accomplished by short term financing.

FINANCING STRATEGY IN EQUATION

Long term financing = Fixed assets + Permanent working capital

Short term financing = Temporary working capital

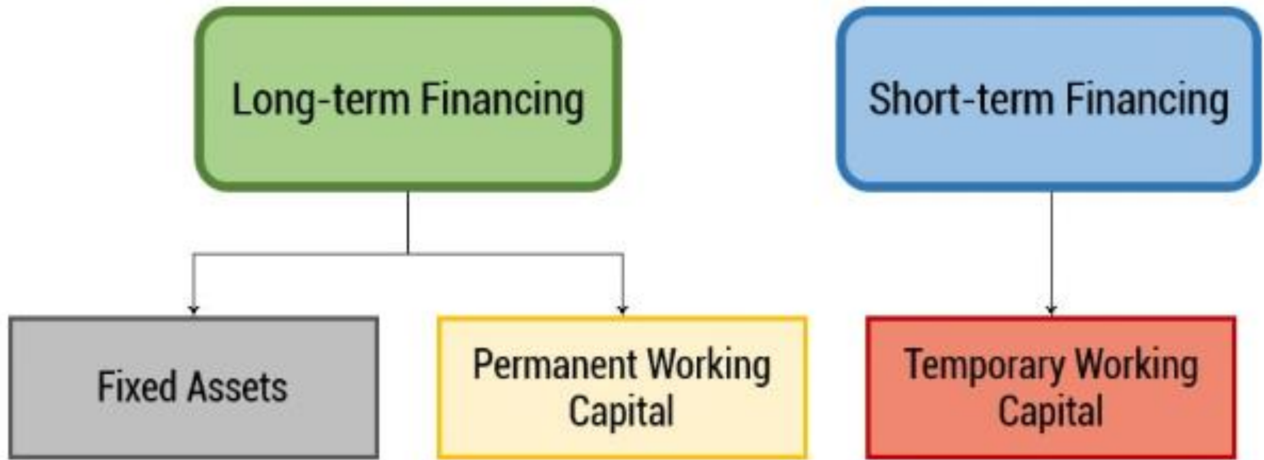

Figure 2.5: MODERATE APPROACH DIAGRAM (1)

Source: Yuriy.S. (2018)

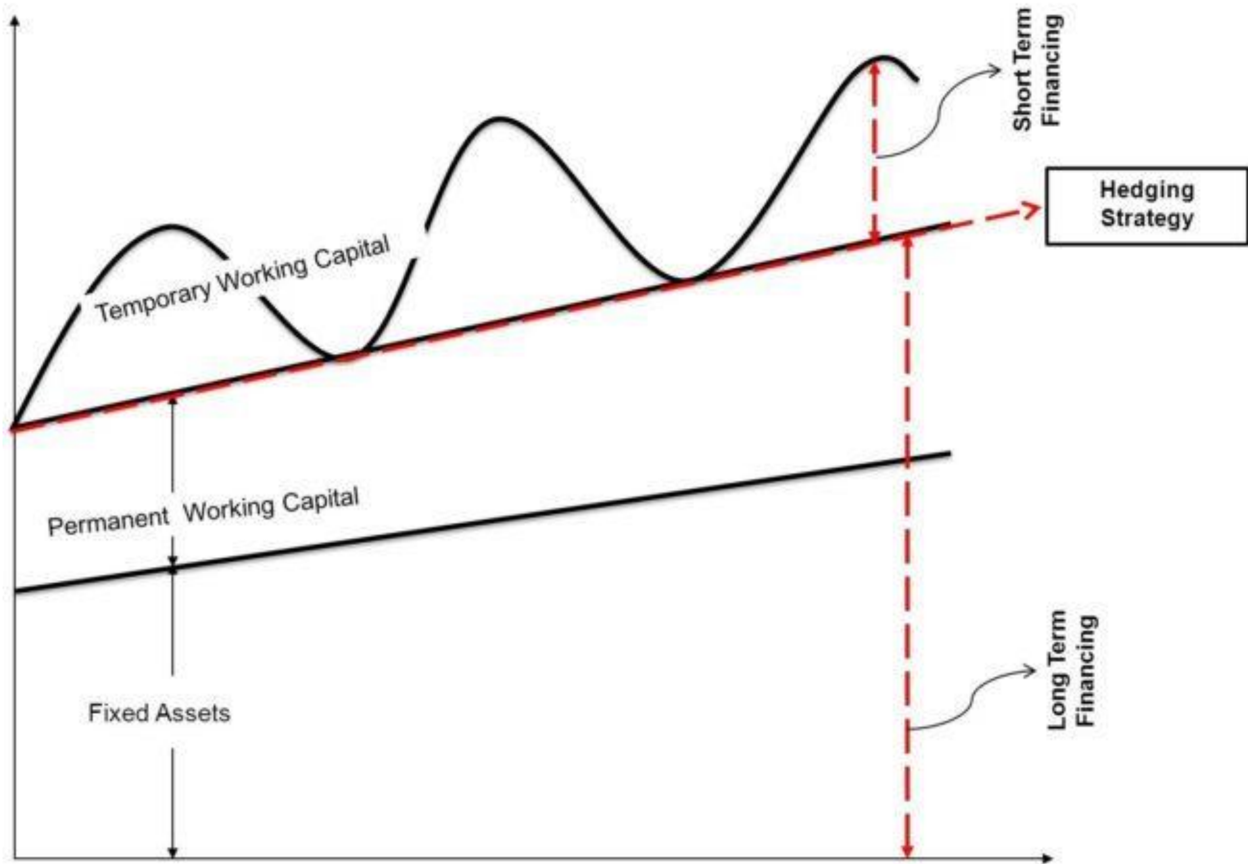

Figure 2.6: MODERATE APPROACH DIAGRAM (2)

Source: Yuriy. S. (2018)

2.3 Emperical Review

This section inspect carefully on past and recent or current empirical research and findings of various researchers on studies that are technical, functional, and beneficial to this research. It states past studies on working capital management on profitability, and other related topics. Diverse studies have been made and carried out on the conceptual matter and different conclusion attained.

This study is with the objective to provide empirical evidence about the effects of working capital management on profitability performance on consumer goods sectors in Nigeria. This study discovered a significant negative relationship between net operating profitability and the inventory turnover in days, debtor’s collection period, creditor’s payment period net working capital and cash conversion cycle for a sample of twenty four Nigerian firms in consumer goods sector listed on the Nigerian Stock Exchange. In addition, the study discovered no significant variations in the effects of working capital management between large and small firms. These results implied that managers can generate value for their shareholders if the firms can handle and manage their working capital in more efficient ways by reducing the number of day’s accounts receivable and inventories to a reasonable minimum.

The effect of working capital management on profitability is a matter of necessary debate. During the triumphant period of the sixties, seventies and eighties, existing literature of working capital were of importance and value, when most of the models of working capital management were formed, but seems to have lost recognition in formality. Thus, even though these models were not created and developed in a composed and coordinated manner, they were very fundamental topic for expression given their effect on the value and performance of firms.

As a result of this gap, in the literature of the concept of working capital , this review will only be emphasized on more recent and current paper shall be outlined as they are targeted at bringing up the discussion on working capital management. Previous studies reported that working capital management may have a significant effect on the firm's profitability. Therefore, the management of working capital may have both positive and negative impact on the firm's profitability, which brings a side effect of positive and negative impact on shareholders wealth (Amarjit, Nahum & Niel 2010). Nevertheless, few of those works are analyzed, examined and explained.

Lazaridis and Tryfonidis (2006), Raheman and Nasr (2007), among others, evaluated cash-conversion working capital consisting of stock period, debtors collection period and creditors payment period. These scientists endorsed that greater investment in working capital (the longer cash conversion cycle) led to a decrease in the profitability of the company (Banos, Nazr & Afza, 2010).

Egbide, Falope, Ajilore (2009) in their analysis of working capital management and profitability of listed companies in Nigeria, made a cross sectional prospect review and survey of some quoted companies between 1995 – 2005 and 2005 – 2006. The data were examined in such a manner as to ascertain using the ordinary least square regression analyses on one hand and panel data econometrics in a pooled regression on the other hand; and unveil that all of component of working capital management such as inventory conversion period, debtors collection period, creditors payment period, cash conversion cycle have an impact on profitability at different levels of importance with debtors collection period having the highest and influential impact, which is negative. Their study also disclose a negligible variation in the outcome of working capital management between small and large firms and propose hence that, managers can generate value and worth for their shareholders if they have the ability to manage their working capital in more

efficient and effective ways by proper and appropriate handling of each working capital component and keeping them at the best or most desirable levels, as well as reducing debtors collection period and inventory conversion period. The findings of Charitou, Elfani and Lois (2010) and Al – Debi'e (2011) agree to these findings but, Charitou et al included that efficient and full utilization of the firm's resources result to increased profitability and decreases volatility which leads to decreasing in default risk and hence enhances the firms value. Thus, if the components of cash conversion cycle are effectively and efficiently managed, they will add value to the firm since they improve and increase the firm's profitability.

Shin and Soenen (2010) investigated the connection between cash conversion cycle and the profitability of the firms for a sample of companies listed in the United States Stock Exchange during the period spanning from 1975 to 1994; they discovered a significant and important negative relationship between the value of the companies and the cash conversion cycle of the same companies. Furthermore to this, Shin and Soenen (2010) intended and planned to come up with the determinants of working capital and discovered that its management is correlated in a positive way to firm size. They also found and established that industry focus does not have an effect on working capital management and that a greater compensation paid to the chief executive officer (CEO) of the firm decisively enhances the company's management of working capital. These outcomes insinuate that working capital management has an important and significant impact on the profitability of the firms.

Amarjit, Nahum and Neil (2010) examined and studied the connection and relationship between working capital management and profitability in the United States with 88 American firms listed on the New York Stock Exchange for a period of 3 years (2005 - 2007). Their study applied a corresponding relationship and non-experimental research design and measured the variables as;

(independent) number of days account receivable, number of days account payables, cash conversion cycle; (dependent) gross operating profit; (control variables) firm size, financial debt ratio and fixed financial asset ratio. Their study signifies:

(i) A negative relationship between profitability (which they measured in terms of gross operating profit) and average days of account receivable and

(ii) Positive relationship between cash conversion cycle and profitability.

Based on these findings, they implied that managers can create and organize value for their shareholders by decreasing the debtor's collection period. Moreover, less profitable firms will pursue or aim for a decrease of their debtors in an attempt to reduce their cash conversion cycle. Therefore, they concluded that profitability can be improved if firms can effectively and efficiently manage their working capital to boost the firm's performance.

Most of the empirical studies uphold the traditional belief regarding working capital and profitability, that reducing working capital investment would positively have an effect on the profitability of firm by reducing the level of current assets in total assets. For the first time, Soenen (2010) investigated the relationship between the net trade cycle as a measure of working capital and return on assets, and discovered a negative relationship between the lengths of trade cycle fluctuation on return on assets, in order to validate and verify the outcome on large sample and with longer period of time. Jose (1996) examined and studied the relationship between aggressive working capital management and profitability of US firms using cash conversion cycle as a measure of working capital management. The result reveals that more aggressive working capital management is connected with higher profitability.

Khan, Rasheed, Ahmed and Rizwan (2012) examined closely the effect and impact of working capital management on firms' profitability in Pakistan between the period of 2004 and 2009 using

textile, chemical, engineering and sugar & allied sectors i.e. the annual cross sectional data for those years were used. The variables associated to the study are Net Operating Profit (NOP), Inventory Turnover in Days (ITID), and Creditors Payment Period (CPP), and Current Ratio (CR), firm size in terms of Natural Logarithm of Sales (LOS), Debtors Collection Period (DCP), and Debt Ratio (DR). CR and LOS are the control variables. The data were carefully considered using regression model and sensitivity analysis performed to examine the evincing strength of the result. In the textile sector, the outcome of the analyses showed that ITID has a significant negative relationship with NOP; CPP, CR and LOS have positive significant relationship NOP. DCP and DR have an opposite or inverse relationship with NOP which is not even significant and as such, they were dropped from the model. For engineering and chemical sectors, the results are the same except that in the engineering sector, DR has a significant negative relationship with NOP. The results are also identical in the sugar and allied sector except that DCP is highly significantly related with NOP in a positive manner while CPP has a negative and an insignificant impact on NOP. Based on these, as a result, they applied that every sector has its own dynamics and strategy since working capital variables reacted differently with profitability in each sector. Thus, they suppose that sufficient and adequate level of working capital has crucial impact on net operating profitability and liquidity of firms. Nevertheless, if the sectors would perform in managing their working capital more effectively and efficiently, their profitability would be strengthened and improved. Therefore, the connection between working capital and profitability of companies is important and positive.

Alipour (2011) conducted a survey on the connection between management of working capital and profitability in Iran. For companies listed on the Tehran Stock Exchange, the cash conversion cycle was used to calculate the effectiveness of WCM for the period 2001-2006. He selected 1063 out

of 2628 companies using the multiple regression and Pearson Correlation to test the hypothesis. The result signified that there was a negative significant relationship between accounts receivable and profitability, same with inventory and accounts payable with profitability. In addition, there was a negative significant relationship between cash conversion cycle and profitability. The results revealed that in the studied companies, there was a significant relationship between working capital management and profitability, and WCM has a great influence on the profitability of the companies and managers can create and enhance value for shareholders by means of decreasing accounts receivable and inventory.

Qazi, Shah, Abbas and Nadeem (2011) also investigated and examined systematically the performance of working capital on firms' profitability in Pakistan using 20 companies in the automobile and oil and gas sectors, from 2004 – 2009. In the research, panel data regression analysis and time series of data were observed. This study was measured as follows: working capital: the Net Working Capital (NWC); Inventory Turnover In Days (ITID); Number of Days Account Receivable (NDAR); Financial Assets to Total Assets (FATA); Profitability (PRT): profit after tax; control variables: Current Ratio (CR); Debt to Equity Ratio (DER) and Natural Logarithm Of Sales (LOS). The combined data were emphasized using regression and correlation model assisted by E – views software and the result showed that NWC has strong and positive relationship with PRT while NDAR and ITID have weak or low positive relationship with PRT. FATA, DER and CR on the other hand have weak or low negative relationship with PRT. Therefore, only NWC is positive and significant; NDAR and ITID are positive but insignificant; all other variables are negative and irrelevant. These results, hence, reveal positive movement of working capital on the profitability of firms".

Notwithstanding working capital management may have a significant influence on the profit of an organization it can be portrayed from the preceding that the findings of these studies are not that on a dependable nature as some found a negative impact, others found a positive impact. Moreover, the authors are more of foreign (international authors) than local (Nigerian). Therefore, this study investigated the extent and level of the effect which effective working capital management has on the profitability on consumer goods sector in Nigeria.

2.3.1 Summary and Gaps in the literature

Regardless of the fact that working capital management is a regular and continual area of research in accounting and finance, there is very little significant study that has been performed on firms in consumer goods sector in Nigeria. Working capital management contains the management of the most liquid resources of a firm with a view to maintain the firm's liquidity, improve profitability and promote and encourage business growth. Working capital management focuses on the management of inventories, cash and cash equivalents and accounts receivable. The proper and effective management of these items is extremely important to the success and achievement of an organization. The management of inventories is targeted to ascertain definitely the best desirable level of stocks an organization should hold or keep. It ensures and assures that the organization is holding the right quantity of inventories at the right time and in the right location. Comprehensive and proper management of inventories ensures to check and verify on costs related with holding incorrect quantity of stocks which includes damages to stocks, high capital tied up in stocks, stock holding costs and lost goodwill and profitability associated with being out of stocks.

Majority of the research on this studies experimented neglect to include a clarification on the association between the studies and the associated theories and models. Five models have been reflected on in this study, they are: Agency theory, the modern portfolio theory, operating and cash

conversion cycle theory, as well as the resource-based theory. The aim and objective of the theories is to determine and ascertain the best optimal target cash balance for a good and proper working capital Management. The five theories depend on the trade-off between the liquidity provided by holding money and the interest forgone by holding one's assets in the form of non-interest bearing money.

From the findings of the above studies it has been discovered that the term performance was measured in diverse ways by the authors. It was measured in terms of return on sales (ROS), return on assets (ROA), return on equity (ROE), and return on investment (ROI). But, all the above and distinguished authors established negative relationship between cash conversion cycle and profitability. Also, the authors discovered negative relationship between debt used by the firm and profitability.

The management of cash is directed towards a target at determining the optimal level of cash an organization should hold. This is to empower it to meet its day to day operating expenses, its short term financial obligations and enable that availability of funds for investments in expansion projects. The excess of cash balances not immediately called for usage are invested in income generating activities.

Accounts receivable management can be directed towards the determination of the optimal level of debtors an organization should hold. It includes a cost benefit analysis of selling on credit. It includes evaluating and accessing the credit policies of an organization with a view to selecting and implementing a policy that will give ways to the maximum benefit to a firm. A company that sells on loan terms improves its turnover or sales, thereby increasing its earnings, after all, loan sales associated expenses. Debtor management policy affects the company's profitability, liquidity, development and operational and financial risk levels of an organization. An unpleasant situation

therefore arises as to what should be the best favorable level of debtors and the credit policy that an organization should adopt and practice in order to achieve maximum benefits. Various studies do not provide straightforward direction of the association between working capital and firm's profitability.

Majority of the researchers that researched on the effect of working capital management on profitability used either return on asset or return on capital employed as their measure for profitability. This study used both return on assets and return on equity employed as measure of profitability. Most work accomplished on this topic did not include the theories of liquidity and profitability. This study focused and emphasized on selected consumer goods companies. This research work also takes into account the most current financial statements. Accordingly, this study was an effort and attempts to fill the gap in knowledge regarding effects of working capital management on the profitability of firms in consumer goods sector in Nigeria. The study used secondary data for the independent variables and dependent variable.

Further examination and observation of these studies unveil that there is no empirical evidence on the working capital management and its impact on the firm profitability in the case of consumer goods sectors in Nigeria. Therefore, the current study is an endeavor to fill this gap and estimates the link between working capital management variables (Average Collection Period, Inventory Conversion Period, Average Payment Period and Cash Conversion Cycle) and firm profitability of consumer goods sector.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter surveys and presents the study and procedures that will be used to carry out the study that was followed towards attainment of the objectives. Specifically, it discusses and outlined the research design, study population, sampling technique, method of data collection, research instrument, validity of the research instrument, reliability of the research instrument, model specification, research model, model estimation and evaluation technique and techniques for evaluation of models parameter.

3.1 Research Design

The research design is a kind of blue print or evidence that guides the researcher in his or her investigation, examination and analysis. This study will employ a cross sectional study conveying 5 years between 2013- 2017 using panel data technique. Research design is also a structuring of inquiring and investigation for the purpose of identifying variables and their relationship (Asika 2006).

This study adopted the descriptive research design. The study was focused with the effects of working capital components on profitability. It scoped at recognizing the impact and effect of working capital components, that is, the Debtors collection period (DCP); Inventory Conversion period (ICP); Creditors payment period (CPP) and Cash conversion cycle (CCC) on profitability. Descriptive research tries to determine the relationship of the concept matter with something else (Kothari, 2004). The design allows the researcher to take a clear identification of the association that exists between the independent variables and the dependent variable. As a result of this,

examining data is necessary for the study, which requires panel data analysis to find out the relationships that exists among the variables under study over a given period (Huang, Hwang & Yang 2008).

Another research design that will be adopted for this study is ex-post facto research design which involves quantitative approaches using information from the company's financial statement which serve as a source or to generate secondary data. The type of research that includes event that have occurred (Onwumere 2009)

The data already existed has no effort was made to attempt would be made to control and manipulate relevant independent variable. It directed towards a target as to ascertain definitely and measuring the relationship between one variable and another or the significant of one variable on another.

3.2 Population of the study

Population is well defined as to all the members of a real or hypothetical set of people, events or objects, elements, services, a group of things or household to which we wish to generalize the results of our research or being investigated. The population of this study is comprised of twenty five (25) firms in consumer goods sector in Nigeria, since they are entities and organizations operating under the Nigeria Stock Exchange, strict corporate governance regulations, making their financial and accounting disclosures widely reliable. The data was acquired from document analysis of consolidated financial reports for year ending December: 2013, 2014, 2015, 2016, and 2017 of the companies. These reports allows the research to save time in terms of data collection, they were cost effective and contained the obtainable information. Furthermore, the rapid and swift growth and development that is happening in the industry as a result of high priority given by the

government to the consumer goods sector is also a cause for this industry choice. Table 3.3.1 shows the population of study.

Table 3.2.1 Breakdown of consumer goods sector in Nigeria Stock Exchange

S/N	Firms in Consumer goods sector	Products
1.	7UP Bottling Company Plc	Soft drinks
2.	Cadbury Nigeria Plc	Food drinks
3.	Champion Brewery Plc	Alcoholic drinks
4.	Coca-Cola Bottling Company Plc	Soft drinks
5.	Dangote Flour Mills Plc	Flour, Indomie etc
6.	Dangote Sugar Refinery Plc	Sugar
7.	DN Tyre & Rubber Plc	Dunlop tires and rubbers
8.	Guinness Nigeria Plc	Beer, stout, malt etc
9.	Golden Guinea Brewery Plc	Beer. Stout
10.	Flour Mills Nigeria Plc	Flour
11.	Honeywell Flour Mill Plc	Flour
12.	International Breweries Plc	Alcoholic drinks
13.	Mcnichols Plc	Alcoholic drinks
14.	Multi – Trex Integrated Food Plc	Cocoa processor and products
15.	Northern Nigeria Flour Mills Plc	Flour
16.	Nascon Allied Industries Plc	Vegetable oil, tomato paste, salt
17.	Nigerian Brewery Plc	Beer, malt, water

18.	Nigerian Enamelware Plc	Plastic products and galvanized buckets
19.	PZ Cussons Nigeria Plc	Personal care, beauty, home care, food and nutrition & electrical
20.	Unilever Nigeria Plc	Household items – food, soap, detergent, vegetable oil etc
21.	Union Dicon Salt Plc	Processing of crude salt
22.	Vita foam Nigeria Plc	Bed, pillows
23.	Nestle Nigeria Plc	Food drinks
24.	Presco Plc	Oil palm plantations, palm oil mill, palm kernel crushing plant, vegetable oil refinery, and fractionation plant.
25.	Okomu Palm oil	Palm oil

Source: Nigerian Stock Exchange Fact book 2017

3.3 Sample size

This is defined as the list of individuals, elements or subjects in the population from which the sample is selected. The sample frame of this study is comprised of selected consumer goods firms that have been in existence and operation for a minimum of ten years and are based in Nigeria. These companies are with their distinguished products among other rivals. The sum up number of

annual reports and accounts from consumer goods firms in Nigeria for five years was Ninety five years firm observations, that is, a list of twenty (95) annual reports and accounts from the four firms for five years made up the sampling frame.

The sample of this study was restricted to listed companies with adequate and consistent data in a true and fair manner for a period of 2013 to 2017 under the firms in consumer goods sector. Nineteen companies were selected out of 25 listed companies in the industry which have complete data till at least 2017 in the Nigeria Stock Exchange Fact book and at the same time with the highest profit before tax in the industry. Hence, these companies are located within Nigeria.

3.4 Sampling technique

Based on this research, purposive, convenience and Census sampling technique will be adopted. It means that all the firms in the sector will serve as sample for this study. It is a systematic method of gathering, recording and analyzing data within a portion of population selected to represent the entire group, in all its characteristics. This technique will be used because the researcher can obtain the required data from all the population of the study within the time frame for the study.

Purposive sampling was first adopted by the researcher to select the nineteen companies adopted in this study. Convenience sampling was later used to acquire quantitative data from the annual reports of these selected companies. The advantages of convenience sampling are the availability and the rapidness with which data can be collected. Census sampling technique is an execution performance of as a study of every unit from a subset units in a population selected to represents all units in a population of interest.

3.5 Sources of Data

Secondary source of data will be used for this research, using financial and statistical formulas as methods to accomplish and these figures for further statistical computation and analysis. Secondary data from 2013 – 2017 will be generated from the sampled firms. The independent variable for this study was working capital management which had its delegates as Net working capital (NWC), Debtors collection period (DCP), Inventory conversion period (ICP), Creditors payment period (CPP), and Cash conversion cycle (CCC). The dependent variable is profitability which had its delegates as Return on asset (ROA), Return on equity (ROE), Return on investment (ROI), and Return on sales (ROS). Secondary data will be sourced and generated from the published financial statements of the two (2) food and beverages consumer goods sectors and (2) soft drinks consumer goods sector in Lagos State, Nigeria, as acquired from Nigerian Stock Exchange and the concerned firms.

3.6 Method of Data collection

To make certain of comprehensive examination and inter-firm comparison, this study will make use of the adoption of secondary data. The secondary data was ascertained and published from financial statements or reports and inventory records with the aid of previous conceived details review checklist, which were extracted from fact book, websites, and also Nigerian Stock Exchange. Using secondary data was helpful and justified in improving reliability of findings as a result of the least possible inconsistencies. The secondary data is based on the purpose that this study is a quantitative research, which makes effort to discover the outcome effect as such data that is historical in nature were examined and analyzed. Furthermore, previous researchers who have researched on working capital management and profitability had equally made use of

secondary data because of the reliability of such data. The data covers a period of five (5) years from 2013 to 2017.

3.7 Validity and Reliability of Data

Matters which concerns research reliability and validity needs to be addressed in a concise manner.

Validity of research can be expressed as the quality of a measurement indicating the degree to which the measure reflects the underlying construct. It is an extent that determines the necessities of scientific research method of data collection instrument effectiveness, that have been monitored during the process of generating findings, and also if this findings can be generalized on what they are supposed to. Oliver (2010) reflects on validity to be mandatory requirement for all types of studies. Internal validity for the study is achieved by elaborating only the relationship between working capital variables and profitability. External validity was attained as well because all the data that were collected were annual data comprising of working capital variables which will be a representative or identification of the working capital variables for the whole industry at large.

Reliability of research can be emphasized as the measurement signifying the degree to which the measure is consistent which connotes that it is repeated measurements would give the same result. Thus, the reliability test is a signal of internal consistency. In this study, reliability is not a problem because profitability data will be collected from the Nigerian Stock Exchange and Annual Financial Reports of the consumer goods firms in Nigeria where it is obtainable to everybody therefore comparable study can be carried out and consistent results will be achieved.

3.8 Method of Data Analysis

The data collected will be examined and analyzed quantitatively using descriptive and inferential statistics. Descriptive statistics of the study variables will be focused on computing and presenting in the form of the mean, minimum, maximum and standard deviation while several inferential statistical tests such as Pearson product moment correlation to know the relationship between the variables and panel regression analysis to ascertain definitely the effect of independent variables on the dependent variables.

Generalized methods of moments model (GMM) estimation and hypothesis testing. The properties of this method is consistency, asymptotic normality and efficiency (CANE) of GMM in the class of all estimators that do not use any extra information aside from that contained in the moment condition.

3.9 Model Specification

To test the hypotheses of the study, the following model was employed to analyze the relationship between the variables:

Profit = $\propto 0 + \propto 1\ (NWC) + \propto 2\ (DCP) + \propto 3\ (CPP) + \propto 4\ (ICP) + \sum$

Where:

$\propto 0$ = Intercept

$\propto 1, \propto 2, \propto 3, \propto 4 = Coefficient$

$\sum$ = Error term

Profit = profitability

Variables = Net working capital (NWC), Debtors collection period (DCP), Creditors collection period (CPP), Inventory collection period (ICP).

To examine in such a manner as to ascertain the effect of working capital management on profitability, we define profitability in such a way that it can be practically as return on assets (ROA). ROA is defined as:

$$\text{Return on Assets} = \frac{\text{Profit before tax}}{\text{Total assets}} \times 100\%$$

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS

4.1 Data Presentation, Analysis and Interpretation

This chapter shows findings and empirical results which are presented, analyzed and interpreted of the study and discusses these findings in extension. The study is comprised of twenty four (24) firms in consumer goods sector in Nigeria, since they are entities and organization operating under Nigeria Stock Exchange, and two (4) consumer firms have been selected out as a case study out of 24 listed companies for a period of five (5) years from 2013 to 2017. Section 4.2 offers the descriptive statistics, section 4.3 employs the diagnostic statistics while section 4.4 is the chapter summary.

4.1.1 Descriptive Statistics

Descriptive analysis unveils the mean or average, and standard deviation of the distinguish variables of interest in the study. It also employ the minimum and maximum values of the variables which assist in getting a clear picture about the maximum and minimum values a variable can obtain and achieve.

Table 4.1.1: Preliminary Analysis of Working Capital Management and Profitability on Descriptive Statistics of the mean score of each company and the overall mean for all research variables

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return on Asset	95	.01	1.22	.1318	.15920
Net Working Capital	95	-18.23	17.31	-1.7222	15.33891
Debtor's Collection Period	95	.03	121.10	29.5400	24.78269
Creditor's Collection Period	95	1.37	483.42	50.5228	60.63007
Inventory Conversion Period	95	5.55	269.10	76.6012	49.98181
Valid N (listwise)	95				

Source: Research Survey (2019)

Table 4.1 presents the descriptive statistics for the dependent and explanatory variables. From the table, return on assets has minimum and maximum values of 0.01 and 1.22 respectively and the mean value of 0.1318 as well as the standard deviation value of 0.15920. The standard deviation of 0.15920 signifies that the data deviate from the mean value from both sides by 0.15920 implying that there is a wide dispersion of the data from the mean because standard deviation is higher than the mean value.

The table also shows that the mean of the net working capital of the sampled firms is -1.7222 with standard deviation of 15.33891, and minimum and maximum values of -18.23 and 17.31

respectively. This implies that the performance of the firms in terms of net working capital is on average -1.7222, and the standard deviation value indicates that the net working capital of the sampled firms deviates from the mean value from both sides by 15.33891, implying that there is no significant dispersion of the data from the mean because the standard deviation is lower.

Moreover, the table shows that the mean of the debtor’s collection period of the firms is 29.5400 with standard deviation of 29.5400. The minimum and maximum values are 0.03 and 121.10 respectively. This implies that debtor’s collection period of the sampled firms is on average 29.5400, and the standard deviation value indicates that the value deviates from the mean from both sides by 24.78269, implying that there is significant dispersion of the data from the mean because the standard deviation is larger.

Furthermore, the table shows that the mean of the creditor’s payment period of the firms is 50.5228 with standard deviation of 60.63007. The minimum and maximum values are of 1.37 and 483.42 respectively. This implies that creditors payment period of the firms is on average 50.4632. The standard deviation indicates that the value of the firms’ creditors’ payment period deviates from the mean value from both sides by 60.63007. This implies that there is significant dispersion of the data from the mean because the standard deviation is higher.

Finally, the table portrays that the inventory conversion period has an average value of 76.6012 with standard deviation of 49.98181. The minimum and maximum values are 5.55 and 269.10 respectively. The standard deviation indicates that the value of creditor’s payment period of the firms deviates from the mean value from both sides by 4. This 49.98181further implies that there is widely no dispersed data from the mean because the standard deviation is small.

4.2 Test of Hypotheses and Discussion

The hypotheses were tested using regression analysis.

4.2.1 Regression Result

Objective 1: To examine the effect of net working capital on the profitability of some selected firms in the consumer goods sector in Nigeria.

Hypothesis 1:

$H0_1$: Net working capital has no significant effect on the profitability of some selected firms in the consumer goods sector in Nigeria.

H_1: Net working capital has significant effect on the profitability of some selected firms in consumer goods sector in Nigeria.

Table 4.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.075[a]	.006	-.005	.15959

Source: Research Survey (2019)

a. Predictors: (Constant), Net Working Capital

The model summary shows the predictive power of the model. R is the correlation coefficient between the dependent variable (observed) and the independent variable(s); the predictor(s). The sig of R indicates the direction of the relationship (positive or negative). The value of R range from -1 to 1. The absolute value of R indicates the strength, with larger absolute value indicating strong relationship.

In Table 4.2.1, R= 0.075.This means that there is a positive relationship between the return on asset and net working capital, while its value shows moderate relationship.

The R squared (coefficient of determination) show the degree of linear- correlation of variables (goodness of fit) in regression analysis. This is the proportion of variation in the dependent variable explained by the regression model. In other words, it shows the extent to which the independent variable(s) can explain the variance in the dependent variable. The sample R squared tends to be the optimistic estimate of how well the model fit the population.

Table 4.2.1 show R square of 0.006, which means that net working capital can explain variation in the value of return on asset while holding other independent variables constant.

Adjusted R square only adjust for the number of variables in the regression model. Standard error of the estimate is the standard deviation of the residuals. It attempts to correct R squared to a more closely reflect the goodness of fit of the model. It is also R squared value adjusted for the number of variables in the regression model. The value of Adjusted R in this table is -0.005.

The standard error of estimates is the standard deviation of the residuals. As R squared increases, the standard error of the estimate decreases. In other words, a better fit leads to less estimate error. It is an important indicator of how precise an estimate of the population parameter the sample statistic is

Table4.3: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.014	1	.014	.532	.468[b]
	Residual	2.369	93	.025		
	Total	2.382	94			

2.1 Dependent Variable: Return on Asset
2.2 Predictors:(Constant), Net Working Capital
Source: Research Survey (2019)

The ANOVA table tells us the overall significance of the model. The F-statistics is the Regression Mean Square (RMS) divided by the Residual Mean Square. F-Statistics determine whether the model is a good fit for the data based on its significance level. A significant value of F-statistics shows that the model is better at predicting the outcome value of the dependent variable than its average. If the significance value of the F-statistics is smaller than 0.05 then the independent variable(s) is significant to explaining the variation in the dependent variable and the null hypothesis is accepted. Table 4.2.2 show a value of 0.468 which is more than 0.05. It suggests that there is no significant relationship between the return on asset and net working capital. $H0_1$ is therefore non adopoted while $H0_2$ is rejected.

Table 4.4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.133	.016		8.082	.000
	Net Working Capital	.001	.001	.075	.729	.468

Source: Research Survey (2019)

The standardized coefficients or beta is an attempt to make the regression coefficient more comparable. It provides a useful way of seeing what impact of changing the explanatory variable by one standard deviation it will have on the dependent variable. It is usually equal to the correlation coefficient between the variables.

Objective 2: To ascertain the relationship between debtors collection period on the profitability of some selected firms in the consumer goods sector in Nigeria.

Hypothesis 2:

$H0_2$: There is no significant relationship between debtors collection period on the profitability of some selected firms in the consumer goods sector in Nigeria.

H_2: There is significant relationship between debtors collection period on the profitability of some selected firms in the consumer goods sector in Nigeria.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.058[a]	.003	-.007	.15978

a. Predictors: (Constant), Debtor's Collection Period
Source: Research Survey (2019)

In Table 4.3.1, R value is 0.08. This mean that the positive correlation between the return on asset and debtors collection period is 8%. The R square value is 0.003 meaning that net working capital cannot be explained variation of return on asset while holding other independent variables constant.

Table 4.6: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.008	1	.008	.309	.580[b]
	Residual	2.374	93	.026		
	Total	2.382	94			

a. Dependent Variable: Return on Asset
b.Predictors (Constant), Debtors collection period
Source: Research Survey (2019)

Table 4.3.2 show an F-statistics value of 0.309 with a p-value of 0.580. This is more than 0.05 (5%) the critical value. This suggest the non-adoption and non acceptance of $H0_2$ of no significant relationship and the rejection of H_2 of significant relationship between return on asset on debtors collection period.

Table 4.7: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.143	.026		5.579	.000
	Debtor's Collection Period	.000	.001	-.058	-.556	.580

Source: Research survey (2019)

Objective 3: To investigate the impact of creditors payment period on profitability of firms in consumer goods sector in Nigeria.

Hypothesis 3:

$H0_3$: Creditors payment period has no significant relationship impact on profitability of firms in consumer goods sector in Nigeria.

H_3: Creditors payment period has significant relationship impact on profitablity of firms in consumer goods sector in Nigeria.

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.032[a]	.001	-.010	.15997

a. Predictors: (Constant), Creditor's Collection Period

Source: Research survey (2019)

In Table 4.4.1, R = 0.032. This mean there is a positive relationship between Return on asset and creditor's payment period. The positive relationship is weak (3.2%). The R square result show a value of -0.010. This mean the creditor's payment period can only explain the variation to the return on asset by -10%

Table 4.9: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.002	1	.002	.095	.759[b]
	Residual	2.380	93	.026		
	Total	2.382	94			

a. Dependent Variable: Return on Asset

b.Predictors: (Constant), Creditor's Collection Period

Source: Research Survey (2019)

Table 4.4.2 showed an F-Statistics value of 0.095 with a p-value of 0.759. This is more than the 0.05 or 5%. This suggest the non adoption of $H0_3$ of no significant relationship and the rejection of H_3.

Table 4.10: Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.136	.021		6.355	.000
	Creditor's Collection Period	-8.376E-5	.000	-.032	-.308	.759

a.Dependent Variable: Return on Asset

Source: Research Survey (2019)

4.11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.094[a]	.009	-.002	.15934

Source: Research Survey (2019)

In Table 4.4.1, R = 0.94. This mean there is a positive relationship between Return on asset and short-term debts to total assets. The positive relationship is weak (9.4%). The R square result show a value of 0.009. This mean the inventory conversion period can only explain the variation to the return on asset by 0.2%.

Table 4.12: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.021	1	.021	.836	.363[b]
	Residual	2.361	93	.025		
	Total	2.382	94			

a.Dependent Variable: Return on Asset

b.Predictors: (Constant), Inventory Conversion Period

Source: Research Survey (2019)

Table 4.5.2 showed an F-Statistics value 1.188 with a p-value of 0.363. This is more than the 0.05 or 5%. This suggest the non sadoption of $H0_4$ of no significant relationship and the rejection of H_4.

Table 4.13: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.155	.030		5.157	.000
	Inventory Conversion Period	.000	.000	-.094	-.914	.363

a. Dependent Variable: Return on Asset
Source: Research Survey (2019)

Table 4.14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.122[a]	.015	-.029	.16147

a.Predictors: (Constant), Inventory Conversion Period, Net Working Capital, Debtor's Collection Period, Creditor's Collection Period

Source: Research Survey (2019)

Table 4.15: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.026	4	.007	.512	.727[b]
	Residual	1.145	90	.013		
	Total	1.171	94			

a. Dependent Variable: Return on Asset
b. Predictors: (Constant), Inventory Conversion Period, Creditor's Collection Period, Net Working Capital, Debtor's Collection Period

Table 4.6.2 show F-Statistics value of 0.342 with a p-value of 0.849 which is more than 0.05. This means that jointly the independent variables has a statistically no significant relationship with the dependent variable (return on asset) which is a measure of profitability.

Table 4.16: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.159	.034		4.622	.000
	Net Working Capital	.001	.001	.069	.636	.526
	Debtor's Collection Period	.000	.001	-.038	-.347	.730
	Creditor's Collection Period	4.482E-5	.000	.017	.150	.881
	Inventory Conversion Period	.000	.000	-.087	-.791	.431

a.Dependent Variable: Return on Asset
Source: Field Survey (2019)

Table 4.6.3 revealed the overall contribution of each variable to the model. It is also used for predictive purposes. Net working capital, inventory conversion period and creditors payment period contribution (p-values of 0.526, 0.881 and 0.431 respectively) are not significant, and total debtors collection period contribution (0.730) is not significant to the model.

Therefore:

ROA = 0.000 -0.004(NWC) - 0.000(DCP) + 0.000(CCP) + 0000(ICP) +e

4.17 Summary of Hypotheses Testing

This section present the summary of hypotheses tested for this study

Table 4.17: Summary table of hypotheses tested

S/N	Statement of Hypotheses	Remarks
1.	H01: Net working capital has no significant effect on the return on assets of selected consumer goods sector in Nigeria.	Not Accepted
2.	H02: Debtors collection period has no significant effect on the return on assets of selected consumer goods sector in Nigeria.	Not Accepted
3.	H03: Creditors payment period has no significant effect on the return on assets of selected consumer goods sector in Nigeria.	Not Accepted
4.	H04: Inventory conversion period has no significant effect on the return on assets of selected consumer goods sector in Nigeria.	Not Accepted

Source: Field survey (2019)

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Work Done

The purpose of this study is to ascertain the effect of working capital management and profitability of firms in consumer goods sector in Nigeria. The researcher search for different ideas from several articles and authors who studied in this area before now in order to make a comprehensive analysis of the study.

The first chapter introduces the topic by giving insight of working capital management of different firms in the consumer goods sector in Nigeria. This chapter also covers the statement of the problem, objectives of the study, research questions, hypotheses and the plan of the study generally.

The second chapter reviewed several literatures relevant to the study, some basic concepts were also explained to aid a better understanding of the study. Some theories reviewed in the course of this study include Agency / Stakeholder theory, modern portfolio theory, operating cycle/ cash conversion cycle theory and resource based theory but the study was anchored on operating cycle/ cash conversion cycle theory and resource based cycle, several literatures were also reviewed in the course of the study.

The chapter three of this study comprises of the methodology. Descriptive research design was used in this study, secondary data selected from audited financial statement of consumer goods firm for a period 2013 to 2017. It also mentioned the method of data analysis which is descriptive, correlation and regression analysis, and the model specification.

Chapter four discusses the results obtained from the descriptive, correlation and regression analysis using SPSS version 22.

5.2 Conclusion

The study used data collected from secondary sources and was analyzed in line with the objectives of the study and the hypotheses were tested. The sample population of the study consist of 19 out of the 25 consumer goods firms companies listed in the Nigerian Stock Exchange because their data were fully obtained. Data was mainly collected from Nigeria Stock Exchange (NSE) for a period of 5 years from 2013 to 2017 using panel data. When the data was collected it was presented and analyzed using regression analysis through SPSS version 22.

The regression result shows that the relationship between return on asset and total debt to total assets is positive and has significant relationship, also the relationship between return on asset and total debt to total equity is positive and there is significant relationship between the two variables which led to the acceptance of the alternative hypothesis and rejection of the null hypothesis.

The relationship between the return on asset and creditors payment period is also positive but having no significant relationship. Lastly, the result states that the relationship between return on asset and inventory conversion period is also positive but also no significant relationship. Thereby accepting the hypothesis in a null form and rejecting alternative hypothesis.

5.3 Recommendations

The study has identified a clear understanding of working capital components and their influence on firm performance on profitability. This promotes the efforts and abilities of managers to improve effectively their firms’ performance which can be done through corrective measure of

appropriate management of working capital components. Thus, management should intensify initiatives and intellectual skills to encourage greater understanding and acceptance of working capital components that boosts financial performance on profitability in the consumer goods sector in Nigeria.

Regulatory agencies of the organizations such as Corporate Affairs Commission (CAC), Standards organization of Nigeria (SON), and National Agency for Food & Drugs Administration Control (NAFDAC), should state penalties for the organizations with negative working capital at the end of their financial year. Management of organizations should make sure that the development of adequate or sufficient and efficient working capital policy for the organizations Auditors should make it compulsory to make observation and comments in their audit reports where organizations have negative working capital.

5.4 Suggestions for Further Studies

Ssuggestion's for future researchers is to investigate other variables that are not used in this study. The other variables that can be used are return on equity, earnings per share and the firm's size which can be investigated to discover different factors of working capital management impacting on the profitability of consumer goods firm listed in the Nigerian Stock Exchange.

Since this study focuses and emphasizes on the consumer goods sector of the Nigerian economy. It is suggested for future researchers to conduct their studies with data from multiple sectors and compare the results among the sectors. This may provide evidence on the influence of capital structure on the financial performance of the whole economy.

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