

**WORKING CAPITAL MANAGEMENT AND THE FINANCIAL PERFORMANCE OF  
QUOTED FOOD AND BEVERAGES COMPANIES IN NIGERIA.**

**By**

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**NSU/MBA/MKT/0032/17/18**

**BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF BUSINESS  
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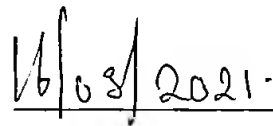
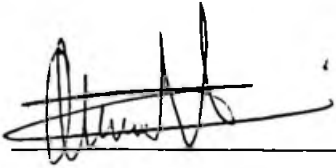
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**MARCH, 2020.**

## DECLARATION

I hereby declare that this Dissertation has been written by me and it is a report of my research work. It has not been presented in any previous application for any degree. All quotations are indicated and sources of information specially acknowledged by means of references.




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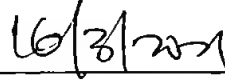
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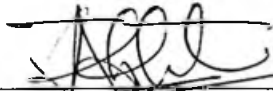
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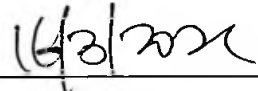
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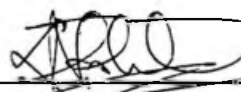
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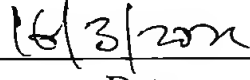
  
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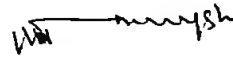
  
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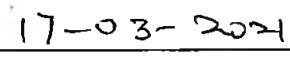
  
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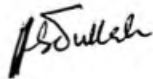
  
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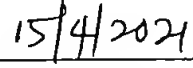
  
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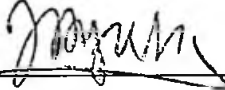
  
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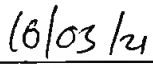
  
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## **DEDICATION**

I dedicate this research project to Almighty God.

## **ACKNOWLEDGEMENT**

I am sincerely grateful to numerous people who have made invaluable contribution toward the success of my education pursued and this research work, Even though time and space constraint would not permit me to mention all their names.

My special appreciation goes to my supervisor Dr. R.A Andah for his supervision, constructive criticism and in valuable contribution to this Dissertation. He tried all he could by drawing up a guide for me to follow. May Almighty Allah reward him abundantly.

I also want to acknowledge the contribution of my head of Department, Dr. Abdul Adamu and all the lecturers in the Department of Business Administration Faculty of Administration Nasarawa State University, Keffi.

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Finally, my hearties appreciation goes to all that pray for me during my programme in Nasarawa State University Keffi, God will bless you all for your numerous contributions

## **ABSTRACT**

*This research work is an attempt to find out the effect of privatization and commercialization on Nigeria economy, a study of Power Holding Company of Nigeria (PHCN). This study therefore has a direct focus on the privatization and commercialization concept of PHCN. The effect of privatization and commercialization was to ensure that every industry is efficient and effective in their areas of responsibilities more importantly, to curb the corrupt practices of the public servant especially the income generating sector of the economy. More still, to ensure that the resources of the country are fully tapped and exploited to improve the living standard of the Nigerian citizen.*

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Working capital Management is important since it affects both liquidity and profitability of the firms (Smith, 1980). The main goal of working capital management is to ensure that companies have sufficient cash flow to continue normal operations in such a way that minimize risk of inability to pay short-term liabilities. Moreover, managers should try to avoid unnecessary investment in working capital since it imposes opportunity cost to the firms and decreases the firm's profitability. However, balancing firm's liquidity and profitability is not a simple task and it depends on the efficiency of working capital management.

Organizations invest their funds in assets that have long life span, fixed assets, which it can use for operating for a long period. These are the core tools for functioning the organization to produce goods and services to meet customers' needs. In financial theory, working capital is the composite of current assets and liabilities. Assets necessary for the working capital of fixed assets are inventories, cash and accounts receivables and liabilities necessary for the working of fixed assets are accounts payables. Pandey, (2000) noted

that excessive working capital results in unnecessary accumulation of inventories leading to inventory mishandling, wastage and theft, higher incidence of bad debts, complacency of management inefficiency, increasing speculative profit from accumulated inventories and consequent loss of profit. Inadequate working capital, he added stagnate growth from investment capital inadequacies. increased operating plans implementation difficult reducing profitability. The existence, survival, growth and stability of any firm is highly depended on the efficiency and effectiveness of its management. The study seeks to know the impact of working capital management on the financial performance of quoted manufacturing firms in Nigeria due to the fact that working capital management are the lifeblood of any business concern. The going concern concept of any business entity is usually sustained by its working capital. Working Capital Management has to do with using the money that is needed to run the day to day operations of an organization efficiently in order to achieve the aims and objectives on the organization, basically profit making, growth and good financial standing. Efficient working capital management is a continuous process that involves a number of day to day operations and decisions that determine the firm's level of current assets investment, the specific sources and mix of short term credit the company

should use, the level of investment in each type of current assets and the level of short term and long term debt the firm will use to finance its assets.

Owing to the trend of computerization and globalization of taking the lead in the world today, it becomes worrisome where a firm is loaded with inventories and other workable securities when cash is in short supply for payments. And also a situation where a firm is over loaded with idle cash, whereas there are very many profitable investments that could have some of such cash. Knieger (2005) defined that working capital is the difference between resources in cash or readily convertible into cash (Current Assets) and organization commitments for which cash will soon be required (current liabilities). Organizations will be able to reduce financing cost of increasing the funds available for expansion by minimizing the amount of funds tied up in current assets.

According to Vanhorne and Wachowicz (2005), working capital is the difference between current assets and current liabilities. Efficient working capital management involves the mix of current asset, current liabilities and fixed assets of the business in order to meet up with the day to day need of the business. In other words, to keep the business with less waste. However, from the management point of view, Vanhorne and Wachowicz (2005) pointed out

that it makes little or no sense to talk about trying to actively manage a net difference between current assets and current liabilities, particularly when that difference is continuously changing. They further pointed out that financial analysts mean current assets they talk about working capital, implying that the focus is on gross working capital. This study is to address the impact of working capital management on the financial performance of quoted manufacturing firms in Nigeria.

## **1.2 Statement of the Problem**

Nigerian manufacturing firms are of immense importance to the nation, the management of working capital is essential for the company to remain liquid enough to meet its short term obligations. But can working capital management make a company more profitable than a competitor who does not manage its working capital? What are the different metrics and processes that need to be improved to increase profitability through working capital management? A fundamental concern in any firm is continuing in business. The firm has to put in more efforts in managing its current assets and liabilities. This has also resulted in giving extra ordinary attention to the working capital in recent times. According to Smith. (1973), a large number of business failures, particularly in the Manufacturing sector have been

attributed to inability of financial managers to plan and control properly the current assets and liabilities of their respective firms. Therefore, since working capital plays an important role in the day to day operation of the firm, an assessment of working capital management becomes necessary in any firm for its continued survival and profitability. Inefficient management of working capital has led to non-availability of profitability, excess working capital carries a definite cost and its shortage can lead to loss in operation of manufacturing firms.

Although studies on working capital management have been carried out by various scholars such as Gui, Khan, Rehrnan, Khan, Khan and Khan (2013); Oladipupo and Okafor (2013):

Ahmad (2013); Akoto, Awunyo-Vitor and Angrnor (2013); Ornesa. Maniagi, Musiega and Makori (2013); Maradi, Salehi and Arianpoor (2012); Gakure, Cheluget, Onyango and Keraro (2012); Sharma and Kumar (2011); Mathuva (2010); and Gill, Biger and Mathur (2010) Chatterjee (2010); Dong and Su (2010); Karaduman et al. (2010); Afza and Nazir (2009); Falope and Ajilore (2009); Raheman and Nasr (2007); Lazaridis and Tryfonidis (2006); Eljelly (2004) and others, it is instructive to note that there is still ambiguity regarding the appropriate variables that might serve as proxies for working

capital management. These studies do not provide clear-cut direction of the relationship between working capital and firm's profitability. Further examination of these studies reveals that there is little of empirical evidence on the working capital management and its impact on the firm profitability in case of manufacturing in Nigeria. Therefore, the present study is an attempt to fill this gap and estimates the relationship between working capital management variables (Account Receivable Days, Account Payable Days, Inventory Conversion Days, Cash Conversion Cycle and Current Ratio) and firm profitability of quoted food and beverages manufacturing companies in Nigeria.

### **1.3 Objective of the Study**

The main objective of this study is to determine the impact of working capital management on the financial performance of quoted food and beverages manufacturing firms in Nigeria. Specifically, the study seeks to assess the impact of:

- i. Account Receivable Days (ARD) on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.
- ii. Account Payable Days (APD) on Profitability (ROE) of Quoted Food and Beverages manufacturing firms in Nigeria.

- iii. Inventory Conversion Days (ICD) on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.
- iv. Cash Conversion Cycle (CCC) on Profitability (ROE) of Quoted Food and Beverages manufacturing firms in Nigeria.
- v. Current Ratio (CR) on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.

#### **1.4 Statement of Hypotheses**

Based on the objectives of the study, the following hypotheses are formulated:

H01: Account Receivable Days (ARD) has no significant impact on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.

H02: Account Payable Days (APD) has no significant impact on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.

1103: Inventory Conversion Days (ICD) has no significant impact on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.

1104: Cash Conversion Cycle (CCC) has no significant impact on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.

H05: Current Ratio (CR) has no significant impact on Profitability (ROE) of Quoted Food and Beverages Manufacturing firms in Nigeria.

## 1.5 Significance of the Study

Companies: To companies, it helps them to know excess working capital means operating inefficiencies, money that is tied up in inventory or money that customers still owe to the company cannot be used to pay off any of the company's obligations. So, if a company is not operating in the most efficient manner (slow collection), it will show up as an increase in the working capital. This can be seen by comparing the working capital from one period to another; slow collection may signal an underlying problem in the company's operations.

SMEs: to SMEs owners, it will help them to know the firms investments in short-term assets (cash, marketable securities, accounts receivables and inventories), it helps in administering to both short-term assets and short-term liabilities. Assets and liabilities must be matched and coordinated in order to keep costs to a minimum and to control risk. Generally, SMEs will want to match the firm's financing with lines of its assets.

Managers: To managers, it will help them to maintain the optimum balance of each of the working capital management. This includes making sure that

funds are held as cash in bank deposits for as long as in the largest amounts possible, thereby maximizing the interest earned. However, such cash is more appropriately be invested in other assets or in reducing other liabilities.

Government Agencies: To government, the government will also benefit from the results of this study to the extent that when firms implement the results and findings of the study, they stand the chance of making more profit and that will also translate into more tax revenue for the government from the firms.

## **1.6 Scope and Limitation of the Study**

The study focused on Working Capital Management measured by Account Receivables Days, Account Payable Days, Inventory Conversion Period, Cash Conversion Cycle and Current Ratio as independent variables, and profitability (i.e. profit after tax to total equity) as dependent variable of quoted food and beverages manufacturing firms in Nigeria. The study covered four (7-up Bottling Company Plc. Nestle food Nigeria Plc. Dangote Hour Mills Plc. Nigerian Bottling Company Plc.) Out of 16 quoted food and beverages manufacturing firms in Nigeria. The period of the study is 10 years (2004-2013).

## 1.7 Definition of Terms

**Working Capital:** Is concerned with the firm's current assets which include current liabilities.

**Current Assets:** are assets normally converted into cash within one year or accounting period.

**Current Liabilities:** are asset outside which are expected to mature for payment within accounting year.

**Net working capital:** Is the difference between a firm's current assets and current liabilities

**Cash:** this is currency plus checking account balances held at commercial banks and also includes near-cash assets such as marketable securities or bank time deposits.

**Credit Period:** Refers to the period over which credit is granted usually measured in days from the date of the invoice.

**Credit Terms:** Include both the length of the credit period and the discount offered. (Collection Policy: this is undertaken to collect accounts that paid with the specified period.

**Credit Policy:** Refers to credit standards, credit terms, and collection policy collectively of the firm.

**Raw Materials:** Are materials, parts and sub-assemblies that are purchased from and become a part of the final product.

**Cash conversion cycle:** This is the length of time for cash to complete the operational cycle.

**Factoring:** This involves raising funds on the security on the company's debt so that the cash is received earlier than if the company waited for the debtors to pay.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Working capital management is a very important component of corporate finance since it affects the profitability of a company. It is recognized as an important concern of the financial manager due to many reasons. For one thing, a typical manufacturing firm's current assets account for over half of its total assets and For a distribution company, they account for even more. The decision making process on the level of different working capital components has become frequent, repetitive and time-consuming. Corporations are looking for new ways to stimulate growth, improve financial performance, and reduce risk in today's challenging economic climate. Funds tied up in working capital can be seen as hidden reserves that can be used to fund growth strategies, such as capital expansion cash flows locked in stock and receivables can be freed up by understanding the determinants of working capital. Many organizations that have earned profits over the years have shown the efficient management of working capital. Thus the successful management of working capital is essential for short- run corporate solvency or the survival of any organization, particularly. Efficient working capital

management changes in market variables, such as interest rates and raw materials prices, gain competitive advantages over its rivals. Too often, however, this is an area that many organizations have ignored.

## **2.2 Concept of Working Capital Management**

Decisions relating to the management of current assets and current liabilities are referred to as working capital management (Shuan, 2005). This involves managing the relationship between a firm's short-term assets and short term liabilities. Working capital management has this rare objectives of sustaining the liquidity of an organization by coming up with adequate proportion of current assets to current liabilities that ensures the organization is solvent. Bearing in mind that all organizations transactions have implications in terms of cash flow either into or out of the organization, the goals of working capital management is to ensure that firm is able to operate and that it has sufficient cash flows to service upcoming operational expenses and long term debts. There are gross and net approaches to the conception of working capital. Pandey (1999) observed gross working capital is the firms and total investments in current assets. Pike and Weal (1999) saw net working capital as the arithmetical difference between current assets and current liabilities. Both approaches have their limitations, whichever one is adopted it does not

cover a)) that is needed in financial decision-making financial analyst for instance prefer the net concept as it reveals how firms could maintain its gross position through the pressing demand on current liabilities where there is more than one firm to be compared by an analyst, the net approach provides the best yardstick for such gross analysis. The gross working capital approach on the other hand has wider application. It takes into consideration all current resources of the firm from whenever they have been financed and their application to the current and future operation of the firms

Current liabilities are those claims of outside which are expected to mature for payment within an accounting year and include creditors (accounts payable). Bills payable and outstanding expenses. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities while a negative net working capital occurs when current liabilities are in excess of current assets (Pandey. 2000). The two concepts of working capital (i.e. gross and net) are not exclusive. Rather they have equal significance from the management viewpoint. The gross working capital focuses attention on two aspects of current assets management. (i) how to optimize investment in current assets (ii) how should current assets be financed. We conceptualize that the consideration of the

level of investment in current assets. Investment in current assets should be just adequate, not more, not less, to the needs of the business firm. Excessive investment in current assets should be guided because it impairs the firm's profitability as idle investment earns nothing. On the other hand, inadequate amount of working capital can threaten solvency of the firm because of its inability to meet its current obligations. It should be realized that the working capital needs of the firm may be fluctuating with changing business activity. This may cause excess or shortage of working capital frequently. The management should be prompted to initiate an action and current imbalances (Pandey, 2000)

Whenever a need for working capital funds arises due to the increasing level of business activity or for any other reason, financing arrangement should be made quickly? Similarly, if suddenly, some surplus funds arise they should not be allowed to remain idle, but should be invested in securities. Thus, the financial manager should have knowledge of the sources of working capital funds as well as investment avenues where idle funds may be temporarily invested. Net working Capital is a qualitative concept and as such it indicates the liquidity position of the firm and suggests the extent to which working capital needs could be financed by permanent sources of funds. Currents

assets should be sufficiently in excess of current liabilities to constitute a margin or buffer for maturing obligations in line with the ordinary operating cycle of a business. In order to protect their interest, short-term creditors could always like a company to maintain current assets at a higher level than current liabilities and in most cases, twice the level of current liabilities (Pandey, 2000). However, the quality of current assets should be considered in determining the level of current assets vis-a-vis current liabilities. A weak liquidity position poses a threat to the solvency of the company and makes it unsafe and unsound. A negative working capital means a negative liquidity, and may prove harmful for the company's reputation. Excessive liquidity is also bad. It may be due to mismanagement of current assets. Therefore, prompt and timely action should be taken by management to improve and correct the imbalances in the liquidity position of the firm (Pandey, 2000). Net working capital concept also covers the question of judicious mix of long-term and short-term funds for financing current assets (Pandey, 2000). For every firm, there is a minimum amount of net working capital which is permanent. Therefore, a portion of the working capital should be financed with the permanent sources of funds, such as equity share capital, debentures, long-term debt, preference share capital or retained earnings. Management

must, therefore decide the extent to which current assets should be financed with equity capital and or debt capital (Uremadu, 2009).

In sum, it may appear that both gross and net concept of working capital are equally important for the efficient management of working capital. There is no precise way to determine the exact amount of gross or net working capital for an firm. The data and problems of each company should be analyzed to determine the amounts of any firm. The data and problems of each company should be analyzed to determine the amounts of working capital. There is no specific rule as to how current assets should be financed. It is also not feasible in practice to finance current assets by short-term sources only. Keeping in view the constraints of the individual firm, a judicious mix of long and short-term finances should be invested in current assets. Since current assets involve cost of funds they should be put to productive use (Pandey, 2000).

### **2.3 Working Capital Management Components**

Working capital decisions provide a classic example of the risk-return rate nature of financial decision making. Increasing the firm's net working capital, current assets less current liabilities, reduces the risk of the firm not being able to pay its bills on time, This at the same time reduces the overall profitability of the firm working capital management involves the risk—

return trade—off not taking additional risk unless compensated with additional returns. The existence of the firm according to Ross (2005) depends on the ability of its management to manage the firm's working capital. Working capital management involves the process of converting investment in inventories and accounts receivable into cash for the firm to use in paying its operational bills, As such working capital management are added, thus at the very heart of the firm's day to day operating environment and improving corporate profitability. Effective working capital management has a crucial role to play in enhancing the financial performance and growth of the firm hut inadequate planning and control of working capital is one of the more common causes of business failure. Working capital management refers to the management of current or short-term assets and short-term liabilities, In essence, the purpose of that function is to make certain that the firm has enough assets to operate its business.

Hardcastle (2009) defines working capital, as the firm's total assets (tile short-term ones) cash, marketable securities, accounts receivable and inventory. Obviously without good working capital management. no firm can be efficient and profitable. Of funds (2009) describes that working capital

management as the cash needed to Carl) on operations during the case conversion cycle.

The strength of the firm is depended on the working capital management hut this working capital itself depends on the effective of the management of the firm, The firm requires current assets to support and maintain operational or functional activities and this current assets which can be converted into cash within a year such as receivables, inventories and liquid cash. Working capital Management refer to the management of current or short-term assets and short-term liabilities. Components of short-term assets include inventories, loans and advances, debtors, investments and cash and balances. Short-term liabilities include creditors, trade advances, borrowings and provisions. The major emphasis is however, on short-term assets, since short-term liabilities arise in the context of short-term assets. It is important that firm minimize risk by prudent working capital management. Working capital requirements have to do with profitability and much more do with cash flow. One of the reasons which cause change in working capital from one period to another is the change in management efficiency. The change in management efficiency will affect the change in working capital in a way as increase or reduce from one period to another.

Decisions relating to the management of current assets and current liabilities are to as working capital management. Shuan (2005), stated that managing the relationship between a firm's short-term assets and short-term liabilities. Working Capital Management has this rare objectives of sustaining the liquidity of an organization by coming up with adequate proportion of current assets to current liabilities that ensures the organization is solvent. Bearing in mind that all organizations transactions gave implications in terms of cash flow either into or out of the organization, the goals of working capital management is to ensure that firms are able to operate and that is has sufficient cash flows to service upcoming operational expenses and long term debts.

#### **2.4 Corporate Working Capital Management Efficiency**

Its goal is to ensure that is able to continue its operations and that it has sufficient cash flow to satisfy both maturing and short-term debts, upcoming operational expenses, working capital decisions are reversible and based on cash flows and profitability. Measurement of cash flow is by the cash conversion cycle, the net of days from the outlay of cash for raw materials, to receiving payments from customers. The financial performance measure of the firm working capital compares the Returns on Capital (ROC) which results

from working capital management with the cost of capital resulting from investment decisions. Firm value is enhanced when return of capital exceeds cost of capital. In combination of these criteria. Management combined policies and techniques for management of working capital. These policies aimed to manage current sets, cash and its equivalents, inventories, debtors and short—term financing such that cash flows and returns are acceptable cash management identifies the cash balance which allows for the business to meet day to day expenses while reducing cash holding costs. Inventory management identifies the level of inventory which allows for uninterrupted production while reducing investments in raw materials and minimizing re-ordering costs, and hence increasing cash flows.

Debtor management identifies appropriate credit policy i.e. credit terms which will attract customers such that any impact on cash flows and the cash conversion cycle will be offset b) increased revenue and hence return on capital. Short-term financing management identifies the appropriate sources of financing given the cash conversion cycle. Though it is agreed in financial theory that inventory is ideally financed by credit granted by the supplier banks may need to be utilized over draft or convert debtors to cash through factoring.

Investments in customer credit in the form of accounts receivables and inventories of goods or materials, are long term resource commitments. Minimization of these investment relative to the level and pattern of the firm's operation is crucial in the total management of operating funds. The key to a successful management of customers' credit and inventories according to Helfert is clear understanding of the economics of trade-offs involved in it. Credit terms are function of the competitive environment as well as of a credit worthiness of the customers. Involved in this is the decision on whether to extend credit terms and the resulting rise in receivables outstanding are compensated for the contribution from an incremental sales gained. Similarly, extending normal credit to marginal customers need to be carefully assessed in terms of risk of delayed payments or default, compared with contribution from sales gained.

To forestall adverse effects of credit on firm operators, working capital efficiency require constant updating of credit performance and developing sound criteria for credit extension. Efficiency in credit management ensures that the firm is able to pay its bills on time and carry sufficient stocks. Firms are going concerned requiring working capital for its day to day operations. Current assets are considered long-term commitment to ensure proper

planning and commitment of resources, unless the firm is characterized by significant seasonal or cyclical fluctuations. This central importance of working capital to the operational efficiency has co-opted firms to put much emphasis on adequate planning, co-ordination and control of its working capital to reduce associated costs and increase revenue and profitability. Management of working capital in financial theory is possible using ratios. The ratios used to analyze components of working capital attempts to express the relative effectiveness with which inventories and receivables are managed. Inventories are related to sales and cost of sales to determine to changes in relationship overtime, Account receivables are also related to sales to determine changes overtime. The debtors to credit sales ratio establishes how quick cash is being collected from credit sales and creditors to purchase ratio establish the length of time it takes a firm to pay its suppliers. The liquidity ratios of current and acid test are used to determine the responsiveness of the firm to pay for its liabilities. Working capital management turnover ratios focus on working capital items only. Relating sales revenue to working capital. The cash conversion cycle determines the length of time for cash to complete the operating cycle. From time of purchase of materials with cash to time of sales and recovery of cash.

## 2.5 Working Capital Management and Firms' Performance

Various studies have analyzed the relationship of working capital management (WCM) and firm profitability in various markets. The results are quite mixed, but a majority of studies conclude a negative relationship between WCM and firm profitability. The studies reviewed have used various variables to analyze the relationship, with different methodology such as linear regression and panel data regression.

Gul, Khan, Rehman. Khan, Khan and Khan (2013) investigated the influence of working capital management (WCM) on performance of small medium enterprises (SMEs) in Pakistan. The duration of the study was seven years from 2006 to 2012. The data used in this study was taken from SMEDA, Karachi Stock Exchange, tax offices, company itself and Bloom burgee business week. The dependent variable of the study was Return on Assets (ROA) which was used as a proxy for profitability. Independent variables were Number of Days Account Receivable (ACP). Number of Day's Inventory (INV), Cash Conversion Cycle (CCC) and Number of Days Account Payable (APP). In addition to these variables some other variables were used which included Firm Size (SIZE). Debit Ratio (DR) and Growth (GROWTH). Regression analysis was used to determine the relationship between WCM and

performance of SMEs in Pakistan, Results suggested that APP, GROWTH H and SIZE have positive association with Profitability whereas ACP, INV, CCC and DR have inverse relation with profitability.

Oladipupo and Okafor (2013) examined the implications of a firm working capital management practice on its profitability and dividend payout ratio. The study focused on the extent of the effects of working capital management on the Profitability and Dividend Payout Ratio. Financial data were obtained from 12 manufacturing companies quoted on the Nigeria Stock Exchange over 5 years period (2002 to 2006). Using both the Pearson product moment correlation technique and ordinary least square (OLS) regression technique. They observed that shorter net trade cycle and debt ratio promote high corporate profitability. While the level of leverage has negative significant impact on corporate profitability, the impacts of working capital management on corporate profitability appeared to be statistically insignificant at 5% confidence level. On the other hand, they observed that dividend payout ratio was influenced positively by profitability and net trade cycle but negatively by growth rate in earnings. Almazari (2013) investigated the relationship between the working capital management (WCM) and the firms' profitability for the Saudi cement manufacturing companies. The sample included 8 Saudi

cement manufacturing companies listed in the Saudi Stock Exchange for the period of 5 years from 2008-2012, Pearson Bivariate correlation and regression analysis were used. The study results showed that Salidi cement industry's current ratio was the most important liquidity measure which effected profitability, therefore, the cement firms must set a trade-off between these two objectives so that, neither the liquidity nor profitability suffers. It was also found, as the size of a firm increases, profitability increased. Besides, when the debt financing increased, profitability declined. Linear regression tests confirmed a high degree of association between the working capital management and profitability.

Akoto, Awunyo-Vitor and Angmor (2013) analyzed the relationship between working capital management practices and profitability of listed manufacturing firms in Ghana. The study used data collected from annual reports of all the 13 listed manufacturing firms in Ghana covering the period from 2005-2009. Using panel data methodology and regression analysis. The study found a significant negative relationship between Profitability and Accounts Receivable Days. However, the firms' Cash Conversion Cycle, Current Asset Ratio, Size, and Current Asset Turnover significantly positively influence profitability. The study suggests that managers can create value for their

shareholders by creating incentives to reduce their accounts receivable to 30 days. It is further recommended that, enactments of local laws that protect indigenous firms and restrict the activities of importers are eminent 10 prollote increase demand for locally manufactured goods both in the short and long runs in Ghana.

Omesa, Maniagi, Musiega and Makori (2013) examined the relationships between Working Capital Management and Corporate Performance of manufacturing firms listed on the Nairobi securities exchange. A sample of 20 companies whose data for 5 years from 2007-2010 was selected. For analysis Principal components analysis (PCA) is used due to its simplicity and its capacity of extracting relevant information from confounding data sets. From the results using PCA and multiple regression, working capital proxies (Cash Conversion Cycle (CCC), Average Collection Period (ACP) and control variables Current Liabilities (CLTA), Net Working Capital Turnover Ratio (NSCA) and Fixed Financial Ratio (FATA) were significant at 95% confidence (p values are < 0.05) to performance as measured by Return on Equity (ROE). Further, ACP was found to be negatively related to ROE while CCC, CLATA, NSCA and FATA.

Maradi, Salehi and Arianpoor (2012) compared working capital management of two groups of listed companies in Tehran Stock Exchange (TSE). Which comprised of chemical industry and medicine industry. In chemical industry, 34 companies and medicine industry. 30 companies were selected and information related to these companies was gathered over 10 years (2001-2010) and analyzed using OLS multiple regression. The results show that, in medicine industry compared to chemical industry, debt ratio makes more impact on reduction of net liquidity. But examination of impact of LEV over WCR indicate that, in chemical industry, debt ratio makes more impact on reduction of working capital requirements compared to medicine industry.

Nyabwanga, Ojera, Lumumba, Odondo and Otieno (2012) assessed the effect of working capital management practices on the financial performance of SSEs in Kisii South District. A sample of 113 SSEs comprising 72 trading and 41 manufacturing enterprises was used. Pearson's correlation coefficients and multiple regression analysis techniques were used to analyze data. Consequently, the findings of the study were that, working capital management practices were low amongst SSEs as majority had not adopted formal working capital management routines and their financial performance was on a low average. The study also revealed that SSE financial performance

was positively related to efficiency of cash management (ECM), efficiency of receivables management (ERM) and efficiency of inventory management (EIM).

Gakure, Cheluget, Onyango and Keraro (2012) analyzed the relationship between working capital management and performance of 15 manufacturing firms listed at the Nairobi NSL from 2006 to 2010 and for a total 75 firms year observations. They used secondary data from a sample of 18 companies at the NSF. A regression model was used to establish the relationship between the dependent variable and (lie independent variables. Pearson's correlation and regression analysis were used for the analysis. The results indicated that there is a strong negative relationship between firm's performance and liquidity of the firm. The study found that there is a negative coefficient relationship between accounts collection period, average payment period, inventory holding period and profitability while the cash conversion cycle was found to be positively correlated with profitability, however, the effects of the independent variables except the average payment period were not statistically significant though the overall model was statistically significant.

Sharma and Kumar (2011) examined the effect of working capital on profitability of Indian firms. They collected data about a sample of 263 non-

financial BSE 500 firms listed at the Bombay Stock (BSE) from 2000 to 2008 and evaluated the data using OLS multiple regression. The results revealed that working capital management and profitability is positively correlated in Indian companies. The study further reveals that inventory of number of days and numbers of day's accounts payable are negatively correlated with a firm's profitability, whereas number of days accounts receivables and cash conversion period exhibit a positive relationship with corporate profitability.

Raheman, Afza, Qayyum and Bodla (2010) analyzed the impact of working capital management on firm's performance in Pakistan for the period 1998 to 2007. For this purpose, balanced panel data of 204 manufacturing firms was used which are listed on Karachi Stock exchange. The results indicate that the cash conversion cycle, net trade cycle and inventory turnover in days are significantly affecting the performance of the firms. They concluded that manufacturing firms were in general facing problems with their collection and payment policies. Moreover, financial leverage, sales growth and firm size also had significant effect on the firm's profitability. They study recommended that effective policies must be formulated for the individual components of working capital.

Mathuva (2010) in his study on the influence of working capital management on corporate profitability found that there exists a highly significant negative relationship between the time it takes for firms to collect cash from their customers and profitability. He explained that the more profitable firms take the shortest time to collect cash from the customers. The study further revealed that there exist a highly significant positive relationship between the inventory conversion period and profitability. It was explained that firms, which maintain sufficiently high inventory levels reduce costs of possible interruptions in the production process and loss of business due to scarcity and products. Finally, the study established that there exists a highly significant positive significant positive relationship between the average payment period and profitability. He held that the longer a firm takes to pay its creditors, the more profitable it is. In this study, a sample of 30 firms listed on Nairobi Stock Exchange for the periods 1993 to 2008 was used. Both the ported OLS and the fixed effects regression models were used.

Gill, Biger and Mathur (2010) analyzed the relationship between working capital management and profitability of 88 American firms listed on New York Stock Exchange for a period of 3 years from 2005 to 2007 was selected. The

data was analyzed using Pearson Bivariate Correlation Analysis and Weighted Least Squares (WLS) Regression techniques.

They found statistically significant relationship between the cash conversion cycle and profitability, measured through gross operating profit. It followed that managers can create profits for their companies by handling correctly the cash conversion cycle and by keeping accounts receivables at an optimal level.

Chatterjee (2010) studied the relationship between working capital management practices and the profitability of listed firms on the London Stock Exchange, using a sample of 30 UK firms and employing the Pearson correlation data analysis technique. The study confirms a significantly negative association between profitability and working capital management variables. Specifically, the study observes a significantly negative relationship between profitability and liquidity and also significantly negative relationship between total debt and profitability. The study further finds a significantly positive association between profitability and firm size. The implication is that, profitability of firms increase when they improve upon their working capital management. Particularly, holding highly liquid assets is important as it significantly enhances firms' profitability. This is because assets can easily and quickly be sold off and the revenue re-invested in other relatively higher

short-term assets and coupled with the fact that it also prevents court actions and its associated cost emanating from the firm's inability to pay its short-term creditors. The findings further imply that a high level of debt use is unhealthy for the financial success of the firm whereas increases in sales encourage firm profitability.

Dong and Su (2010) examined working capital management effects on firms' profitability of listed Vietnamese firms from 2006-2008. The authors find that a significantly negative relationship exists between profitability measured as gross operating profit and the components of cash conversion cycle (inventory days, and receivable days). Furthermore, the study also observed a statistically significant positive association between profitability and accounts payable days. These findings imply that increasing firms' inventory and receivable days lead to a decreasing profit while significant financial success can be attained with increased payable days.

Karadurnan et al. (2010) investigated the impact of working capital management practices on the profitability of 140 randomly selected companies listed on the Istanbul Stock Exchange. Using data from 2005-2008, their findings indicate a statistically significant negative association between firm profitability, measured as return on assets on one hand and accounts

receivable and inventory days on the other hand. The study further reveals a significantly positive relationship between accounts payable days and firm profitability. Thus, the study has reiterated the importance of effective and efficient working capital management in ensuring firms' profitability.

Afza and Nazir (2009) investigated the traditional relationship between working capital management policies and a firm's profitability for a sample of 204 non-financial firms listed on the Karachi Stock Exchange (KSE). Using regression analysis technique and data from 1998—2005, the study relates a significantly negative relationship between the profitability of firms and degree of aggressiveness of working capital investment and financing policies. The study further indicates a significant difference among the working capital requirements and financing policies across different industries, the authors suggest that managers can create value if they adopt a conservative approach towards working capital investment and working capital financing policies.

Falope and Ajilore (2009) examined the effects of working capital management on the profitability of 50 quoted non-financial Nigerian firms. Using panel data methodology and data from 1996-2005. The authors observe a significantly negative relationship between net operating profit and working capital management variables, namely: average collection period, inventory

days, and cash conversion cycle. However, the study notices no significant variations in the effects of working capital management between large and small firms. An important lesson therefore is that, prudent working capital management is critical for the profitability of firms of all sizes.

Raheman and Nasr (2007) studied the effect of different variables of working capital management including average collection and inventory days, cash conversion cycle, and current ratio on the net operating profitability of 94 listed Pakistani firms. Using regression analysis and data covering the period from 1999-2004, the authors find a significantly negative association between working capital management variables and profitability of the firms. The authors further report a significantly negative relationship between corporate debt and profitability but a significantly positive association between size and profitability. The implications of these findings are that prudent management of working capital, reasonable levels of debt use and increase sales are all very crucial in enhancing the profitability of the modern firm.

Lazaridis and Tryfonidis (2006) examined the relationship between profitability and working capital management of 131 firms listed on the Athens Stock Exchange. Using regression estimation approach and data covering the period from 2001-2004, the authors find a statistically

significant inverse relationship between profitability, measured as gross operating profit and the cash conversion cycle, accounts receivables days and inventory days. They also observe a significantly positive association between profitability and accounts payable days. This study re-emphasizes that, firms can enhance profitability by prudently keeping their working capital management components (accounts receivables, accounts payables, and inventory) within optimal levels.

In another study, Eljelly (2004) examined the relationship between profitability and working capital management on a sample of 929 Saudi firms spread across three industries. Using correlation data analysis and regression data estimation technique. The author finds a significantly negative relationship between the firms' profitability and liquidity level, as measured by current ratio and cash conversion cycle. The study further observes variations in the cash conversion cycle among the industries used in the study and conclude that short cash conversion cycle and large firm size is associated with enhance profitability.

Mohammed and Noriza (2010) worked on creating the relationship between working capital management (WCM) and performance of manufacturing firms. For their analysis they chose the Malaysian listed companies. They

administered the perspective of market valuation and profitability. They use total of 172 listed companies from the databases of Bloomberg. They randomly selected five years data (2003-2007). This research likewise the researches quoted before studied the impact of the dimensions of Working capital components i.e. CCC. Current Ratio (CR), current asset to total asset ratio (C.A.T.A.R), current liabilities to total asset ratio (C.L.T.A.R), and debt to asset ratio (D)'A.R) in effect to the firms performance whereby firm's value dimension was taken as Tobin Q (T.Q) and profitability i.e. return on asset (R.O.A) and return on invested capital (R.O.I.C). They applied two different techniques for analyzing the data that are multiple regression and correlations. They found that there is a negative relationship between working capital variables and the firm's performance.

Saswata (2010) focused on the importance of the fixed and current assets in the successful running of any organization. It poses direct impacts on the profitability liquidity. There have been a phenomenon observed in the business that most of the companies increase the margin for the profits and losses because this act shrinks the size of working capital relative to sales. But if the companies want increase or improve its liquidity, then it has to increase its working capital. In the response of this policy the organization has to lower

down its sales and hence the financial performance will be affected due to this action. For this purpose 30 United Kingdom based companies were selected which were listed in the London stock exchange. The data were taken of three years 2006-2008. It analyses the impact of the working capital on the profitability. The dimensions of working capital management include in this research which is quick ratios, current ratios CCC, average days of payment, inventory turnover and A.C.P (average collection period) on the net operation profitability of the United Kingdom companies.

Mathuva (2009) studied the impact of working capital management on the performance. He took almost 30 listed firms as a sample and all these companies were listed in Nairobi stock exchange and the data was taken from 1993 to 2008. There were certain findings of his research by analyzing the fixed effects regression models. Firstly, there is a negative relationship between the time when the cash is collected from the customers and the firms' productivity. This depicts firms that are more profitable enjoys less time period for the collection of cash from the customers as compare to ones which are less profitable. Secondly, there is a positive relationship between the inventories when they were brought in and the period to which they are sold and the firms profitability. The interpretation comes out as that the firms or

the organization which takes more time to keep the inventories it reduces the costs of the disruption in the business losses as there is the insufficiency in the goods. This situation decreases the operating cost of the firm. The third assumption of the research was the association between the average payment period and profitability and found out to be positive ( $p < 0.01$ ). The more the time taken to disburse the creditors, the profitability will increase.

Son (2009) examined the ISE (Istanbul stock exchanges) listed firms and checked out the relationship with the working capital. According to them there is negative relationship among variables. His research uncovered the importance of the finance directors who act as moderators or catalysts to increase the productivity of the firm in other words they positively affect the firm's performance.

Teruel and Martinez-salmon (2007) also provided the empirical relationship between both the variables. They chose the small and medium sized Spanish firms, a sample of about 8872 small to medium sized enterprises for 1996 to 2002. After the in depth view it was found out that the negative relationship between the profitability of SME's and the number of days account receivable and days of inventory. But it did not provide the exact impact of no. Of days account payable affect and SME's return on assets.

Ganesan (2007) selected telecommunication equipment industry to study the effectiveness of working capital management. The sample include for his research paper included 443 annual financial statements of 349 telecommunication equipment companies tests used included correlation, regression analyses and analysis of variance (ANOVA). The results showed that days of the working capital negatively affects the profitability of these firms but in reality it does not affect the transportability of firms in telecommunication equipment industry.

Sayaduzzarnan (2006) examined that the management of British American Tobacco is highly reasonable due to the constructive cash inflows, designed approach in running the major components of working capital by evaluating five years data from 1992 — 2000 to 2002 — 2003. Appliance of multi-dimensional modal of existing assets mix may have optimistic impact on the nonstop expansion extension of this multinational enterprise. This also depends on collaboration of the stakeholders and business environment in the framework of globalization.

Filbeck et al. (2005) investigated the data of 26 industries by taking, the data of 970 companies during 1996 to 1999. They found out that firms are able to decrease financing cost and or augment the funds attached for the

development by reduce the amount of finds attached to the current assets, They revealed that significant difference exist between industries in working capital measures across time. In addition, we determine that these measures for working capital very extensively with the passage of time.

It is concluded that negative relationship was also found out between profitability and liquidity of companies of United Kingdom. Conversely' a positive relationship was seen between debt and firm's profitability. The research propose that profitability can be increase by Managers if reduction in the days of accounts receivable and inventories accrued. Therefore, the companies whose profitability is less opt to take much longer time to pay their bills. The aim of this heading is to discuss the work being done by the researchers andscholars in different industries and firms so as to reveal the contents or the variables and in their dimensions in depth. (Rafuse, 1 996) Effective Management of working capital consists of two steps which are planning for resources and controlling them. Both of these are required to facilitate the firm in meeting its short-term obligations and also the let the form avoid wastage of resources by our investment in current assets (Eljelly, 2004) effective Management of working capital decreases the need for lending funds to pay back the short term debts to the firm,

There are different approaches for the management of working capital. Two basic policies of working capital management are namely aggressive working capital management policy and conservative working capital management policy. An aggressive investment policy with low level of fixed assets and low investment in current assets may generate more profits for a firm. On the other hand it also accompanies a risk of sufficient funds for daily operations and for payment of short-term debts. A conservative investment policy is apposite to it with less investment in fixed assets and more in current assets for financing of working capital aggressive policy implies that current liabilities are maintained in a greater portion as compared long-term debts. High level of current liabilities requires more resources to be in liquid form to pay back debts earlier. But current payouts bear less rate of interest and hence can cause more savings. In conservative working capital financing policy a greater portion of long-term debts is used in contrast to current liabilities.

Smith (1980) conducted a study on profitability and liquidity and suggested that working capital management directly influence risk and profitability of a firm. Hence it can be inferred that effective working capital Management can increase the financial strength of a business. Soenen (1993) also performed an

analysis of working capital management and its relationship with financial performance. His study was based on US firms and after the study he suggested that if the length of the net trade cycle increases then it affects the return on investment negatively.

The working capital Management is regarded as an essential part of financial management of a firm (Joshi, 1995). Comberson (1995) observed the impact of economic activity on the working capital management policy. For this he took a sample of 50 small firms of US for a time period of 12 years i.e. 1980—1991. He found that economic expansion does not cause an increase in the investment of working capital during a specific period. Finally he suggested that there exists a slight impact of any change in economic activity on working capital management of these firms. Some other researchers namely, Jose, Lancaster, and Stevens (1996) carried out a detailed analysis on the association of cash conversion cycle and financial returns. They located an inverse association of profitability with cash conversion cycle.

Shin and Soene (1998) conducted an expanded study by taking a large sample of 58985 firms of US. Their study was based on a longer time period of 1975 — 1995. They suggested that for generating greater volume of wealth for the shareholders of a firm, it is very crucial to manage the working capital of that

firm effectively and in an efficient manner. They also recommended that profitability and net trade cycle both are inversely related to each other.

Lyrودي and Lazaridis (2000) investigated the relationship of liquidity and cash conversion cycle for the food industry of Greece. They concluded that a considerable positive relationship exists among cash conversion cycle and current ratio, average age of inventory and average collection period. Also they located an inverse relationship between CCC and average payment period. They concluded that there was no statistically significant relationship between variables used for liquidity measurement and that used for profitability measurement. Also they suggested that cash conversion cycle had no significant relationship with debt ratio.

Working Capital Management and profitability relationship has been explored by many other researchers as well. Deloof (2003) analysed 1009 non-financial firms of Belgium. He found that gross operating profit of a firm is negatively related to inventory turnover and average collection period. Hence, he recommended that financial managers can try to improve profitability by enhancing average payment period and by curbing inventory turnover and average collection period. He also recommended that profitability is strongly related to working Capital Management of a business. Through a study on

Saudi Arabian Companies, Eljelly (2004) discoursed that the profitability and cash gap have a significant negative relationship with each other. Mallik, Sur, and Rakshit (2005) evacuated Indian pharmaceutical industry. They discovered that profitability and liquidity do not have any significant relationship for these firm.

Two researchers namely Mezelc and Polewski (2006) analyse the construction sector. Their work targeted mainly the strategies which be used for the working capital management in construction sector. They have not worked to evaluate the overall working capital management effectiveness and financial performance of construction sector. The study of SM. Amir Shah and Sana (2006) was based on a period of five years i.e. 2001 —2005. They used working capital ratios to determine the effect of working capital management on financial performance. These working capital ratios include inventory turnover, current ratio, quid ratio, average collection period and average payment period. They used correlation analysis and OLS method to reach the results. Finally, they revealed that gross profit is negatively association with all working capital ratios except number of days payable. In a study on small manufacturing firms Padachi (2006) analyzed working capital management and its relation with profitability by examine a sample of manufacturing firm

of maturities. Period of the study was six years i.e. 1998 — 2003. He used days to receivable, inventory turnover, cash conversion cycle and days of payables as explanatory variables and return on total assets (ROA) as dependent variable. They used regression analysis to find out the results. They found that paper and printing industry showed greater scores for different working capital components against the overall manufacturing industry. These greater scores affect the profitability of this industry positively. Finally, they concluded that if a firm will invest heavily in its inventory and accounts receivables then the profitability of that firm would be covered.

Vishnani and Shah (2007) from their study on Indian consumer electronic industry discovered that profitability for the overall industry had no recognized relationship with liquidity but majority of the companies belonging to this industry showed a positive association for profitability and liquidity. Ganesan (2007) conducted a study on telecommunication and equipment industry by taking 349 firms of this sector. The time period of this study was 7 years i.e. 2001 — 2007. He declared that in this industry effective working capital management and financial performance do not have any significant inverse relationship with each other. He also indicated that there

exists a strong and inverse association between Financial Performance and liquidity.

Uyar (2009) took a sample of 166 Turkish companies to predict the nature of relationship of profitability and size of the firms with Cash Conversion cycle, The result demonstrated that profitability and size of the firms both are negatively related with Cash conversion cycle.

The study of BintiMohamad and MohdSaad (2010) was based on secondary data of 172 firms of Malaysia. They evaluated the impact of various components of working capital on profitability and market value of the firms. The study covered a time span of five years from 2003 to 2007. For this purpose they used different working capital components namely cash conversion cycles (CCC), debt ratio (DR), current assets to total assets ratio (CATAR), current liabilities to total assets ratio (CLTAR) and current ratio (CR),. To see the effect of invested capital (ROIC) and return on assets (ROA) as a measurement of financial performance of the selected firms. To deduce the results they used correlations and multiple regression analysis. The results showed that there exists an inverse relationship between different working capital components and performance of firms.

Another researcher Danuletiu (2010) conducted an analysis on 20 companies of Alba country. He assessed the effect of working capital management efficiency on the financial performance of these companies for a period of five years i.e. 2004 to 2008. For his analysis he used net working capital (NWC) as a measure of long—term financial balance, working capital necessary (WCN) as a measure of short-term financial balance and net treasury (NT) a difference of both NWC and WCN. Return on Assets (ROA), Return on sales (RS) and Return on equity (ROE) were used to measure the profitability. To find the results, Pearson correlation analysis was used. The study concluded that profitability has an inverse relationship with working capital management components.

GillmBiger, and Mathur (2010) studied 88 companies of Newyork. The time span of the study was 3 years i.e. 2005 to 2007. To elaborate the relationship of profitability with working capital management, they took Accounts receivables, Accounts payables, Cash conversion cycle, inventory, natural log of sales as a proxy of size of the firm, fixed assets ratio and debt ratio as independent variables while dependent variable was Gross Operating profit. The regression analysis was used to find out the results. They stated that if the collection period of accounts receivable is greater, then there would be less

profitability. So, they suggested that managers should try to reduce the credit period in order to improve the profitability. They also recommended that cash conversion cycle is positively related with financial performance.

IkramulHaq, Sohal, Zaman, and Alam (2011) also carried out a study using data of 14 companies from cement sector of Pakistan. The study was based on six years i.e. 2004-2009, They used current ratio (CR), Current assets to total assets ratio (CATAR), Liquid Ratio (LR), inventory Turnover ratio (ITR), Age of Debtors (ADD), Current assets to total sales ratio (CTSR) and Age of creditors (AOC) as predictors and Return on investment (ROI) as dependent variable for this purpose. To produce the results they used statistical techniques of regression and correlation analysis. They realized that a moderate relationship exists between financial performance and working capital management. To propose working capital management's effect on liquidity and solvency of small and medium size enterprises (SMEs). James Sunday (2011) worked on Nigerian companies. He reported that small firms have weak financial positions so they highly depend on credit for smooth running of their operations.

Singh and Asress (2011) also examined the effect of working capital solvency level on profitability by their study on a sample of 449 Indian manufacturing

firms. The study was based on a period of ten years i.e 1999-2008. For this purpose, working capital requirement (WCR) was selected as dependent variable and Total operating Cost (TOC), cycles (N) and operational breakeven point (OBEP) as independent variables, To find out the results they used one-way ANOVA test, multiple means comparison test (Bonferroni, Scheffe and Sidak) and independent t-test, Results of these tests showed that if a firm will have adequate amount of capital for its current operations than its performance will be better as compared to the firms having lower amount of working capital. So, they suggested that availability of sufficient amount of working capital have positive impacts on the profitability of a firm as it enables a firm to manage all the current operating activities without any interruption. Overall from this review of literature, it is concluded that a lot of work is available on manufacturing sector of Pakistan regarding working capital management and profitability. But there is no research work available specifically on textile sector of Pakistan. Textile sector contributes a lot in exports of Pakistan. Pakistan is regarded as 8th, biggest exporter in Asia for exports of textile products. Textile sector can play a major role in the future growth of economy of Pakistan. So, this sector requires considerable attention. This study aims to fill this gap of non-availability of research work on textile sector of Pakistan.

Although studies on working capital management have been carried out by various scholars such as GLII, Khan, Rehrman, Khan, Khan and Khan (2013); Oladipupo and Okafor (2013);

Ahmad (2013); Akoto, Awunyo-Vitor and Angmor (2013); Oniesa. Maniagi. Musiega and Makori (2013); Maradi, Salehi and Arianpoor (2012); Gakure, Cheluget, Onyango and Keraro (2012); Sharma and Kumar (2011); Mathuva (2010); and Gill, Biger and Mathur (2010) Chatterjee (2010); Dong and Su (2010); Karaduman et al. (2010); Afza and Nazir (2009); Falope and Ajilore (2009); Rehman and Nasr (2007); Lazaridis and Tryfonidis (2006); Eljelly (2004) and others, it is instructive to note that there is still ambiguity regarding the appropriate variables that might serve as proxies for working capital management. These studies do not provide clear-cut direction of the relationship between working capital and firm's profitability. Further examination of these studies reveals that there is little of empirical evidence on the working capital management and its impact on the firm profitability in case of manufacturing in Nigeria. Therefore, the present study is an attempt to fill this gap and estimates the relationship between working capital management variables (Average Collection Period, Inventory Conversion

Period, Average Payment Period and Cash Conversion Cycle) and firm profitability of manufacturing in Nigeria.

## **2.6 Theoretical Framework**

### **2.6.1 The Value Network Model**

Rapaport's (1986) theory on shareholder value network explains the linkage between the corporate objective of value creation and its value drivers. He argues that to be effective management must be guided by a set of principles that can be applied to decision making in various situations. To this effect, he also developed a number of financial management approaches and basic principles are the objectives of shareholder value creation and the cash flow approach to decision making. The objective of the shareholder is value creation, because owners of firms hire managers to act in order to maximize their wealth by generating profit. Value drivers are the variables that create value and are taken as the building blocks by which firms create a product valuable to buyers. Rappaport's shareholder value network depicts the essential link between the corporate objective and the basic value drivers (or valuation parameters) sales growth rate, operating profit margin, income tax rate, working capital investment, fixed capital investment, cost of capital, and value growth duration. According to the theory, in order for shareholder value

to be created, management has to concentrate on three main decision operation, decisions, investment decisions and financing decisions. The changes in firm value depend on the decisions made by management on each value driver. Investment decisions refer to managerial decisions on capital tied-up in working capital (cash, receivables, and inventories) and fixed capital (buildings, machinery, equipment etc). Which investment type to choose depends on the investment's effect on the cash flows from operations?

### **2.6.2 Theory of Transaction Cost**

According to Coase, (1937) and Williamson, (1985), firms exist because; there are transaction costs of using the price mechanism in the market. Therefore, firms exist in order to reduce these transaction costs by developing distinctive competencies. According to Williamson (1985) a transaction occurs if a goods or a service is transferred across a technologically separable interface and can therefore occur within the firm (hierarchy) or out the firm (market). The basic idea behind the theory of transaction costs is that, the characteristics of a transaction exchange determine the type of efficient governance structure in inter-firm and intra-firm linkages. The extent of transaction cost is affected by the prevailing environmental and behavioural dimensions with regard to their environmental dimensions transactions differ in some basic characteristics

such as asset specificity, frequency and volume, complexity and uncertainty, possibility of performance measurement, and connectedness.

## **2.7 Summary**

The study reviews related literatures relevant for the purpose of assessing the impact of working capital management on profitability. It was found that the studies conducted by previous researchers are still ambiguous regarding the appropriate variables that might serve as proxies for working capital management. These studies do not provide clear-cut direction of the relationship between working capital and firm's profitability. Further examination of these studies reveals that there is little of empirical evidence on the working capital management and its impact on the firm profitability in case of manufacturing in Nigeria. Therefore, the present study is an attempt to fill this gap and estimates the relationship between working capital management variables (Average Collection Period, Inventory Conversion Period, Average Payment Period, Cash Conversion Cycle and Current Ratio) and firm profitability of manufacturing in Nigeria. The theory of transaction cost on the other hand, according to Coase (1937) and Williams (1985) posits that the characteristics of a transaction exchange determine the type of efficient governance in inter firm and intra firm Linkages.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the procedures employed for the conduct of the research. Specifically; it covers research design, population and sampling technique, method of data collection, procedures for data analysis and model specification, and the justification of the methods used.

#### **3.2 Research Design**

This research work will adopt descriptive research design to explore the cause effect relationship between the independent variables and the dependent variable. The study will evaluate the relationship between Working Capital Management and profitability of manufacturing firms.

#### **3.3 Population and Sampling Technique**

The population of the study is the 16 quoted food and beverages manufacturing companies in Nigeria (i.e. 7-Up Bottling Company Plc., Big Treat Plc., Cadbury Nigeria Plc., Dangote Flour Mills Plc., Dangote Sugar Refinery Plc., Ferdinand Oil Mills Plc., Flour Mills Nigeria Plc., Foremost Dairies Plc., National Salt Co. Nigeria Plc., Nestle Foods Nigeria Plc., Nigerian

Bottling Company Plc., Northern Nigeria Flour Mills Plc., P S Mandrides & Co. Plc., Tate Industries Plc., Union Dicon Salt Plc., and UTC Nigeria Plc.). Using Yaro Yamane's (1973) sampling size determination, a sample of four food and beverages companies were selected.

Formular,

$$\frac{N}{S}$$

$$S = \frac{N}{3 + N(ME)^2}$$

Where

S = dired sample size

N = Survey population

ME = Margin of error allowable.

Given the survey population (N) as 16, and making an allowance for error of 20 per cent, the sample size is determined as approximately 4:

$$S = \frac{N}{3 + N(ME)^2} = \frac{16}{3 + 16(0.04)} = \frac{16}{3.64} = 4.3$$

$$3 + N(ME)^2 \quad 3 + 16(0.04) \quad 3.64$$

Then, a random sampling procedure was used to select four quoted food & beverage firms from the list of 16. Thus, 7-Up Bottling Company Plc., Nestle Foods Nigeria Plc., Dangote Flour Mills Plc., and Nigerian Bottling Company Plc. were selected.

### **3.4 Method of Data Collection**

The study utilized the secondary data from annual reports of the sampled firms, and the Nigeria Stock Exchange Market Fact Book as they are more reliable.

### **3.5 Procedures for Data Analysis and Model Specification**

The ordinary least square method of regression was used with the aid of statistical package for social sciences (SPSS) to determine and analyze the relationship between working capital management (ARD, APD, LCD, CCC & CR) as independent variables and profitability (ROE) as dependent variable.

### **Ratios**

Return on Equity (ROE)  $PAT/Total\ Equity$

Account Receivable Days (ARD)  $average\ accounts\ receivable/sales * 365$

Account Payable Days (APD)  $= average\ accounts\ payable/cost\ of\ sales * 365$

Inventories Conversion Days (ICD) average stock/cost of sales \*365

Cash Conversion Cycle (CCC) ARD+ICD-APD

Current Ratio (CR) = current assets/current liabilities

### **Decision Rule**

In order to estimate the regression analysis model, SPSS was used. The procedure involved specifying the dependent and independent variable; in this case, ARD, APD, ICD, CCC & CR were the independent variables and ROE was the dependent variable. SPSS was run and from the output, the values of the constant ( $\alpha$ ) and coefficient of regression ( $\beta$ ) were obtained. In addition the outputs showed the T statistics and P values for the coefficients which resulted in either rejecting or failure to reject the hypotheses at 5% level of significance. The P value is a probability of getting a result that is at least extreme as the critical values. The null hypotheses was rejected if the P-value is less than or equal to the critical value. Also, the outputs showed the coefficient of determination ( $r^2$ ), which measured the proportion of the dependent variable that can be explained by the regression model. At the P-value of less than or equal to critical value the null hypothesis was rejected that there is a slope between the variables. The linear relationship exist when the P-value or significance level is less than or equal to the critical value.

### **3.6 Justification of the Method**

The ordinary least square method of regression (simple) was used to measure the impact of each of these variables (That is ARD, APD, ICD, CCC and CR) on ROE. The method is considered simply and explicit, it helps in drawing a reliable and reasonable conclusion without much stress. The estimation period is 10 years (i.e. 2004-2013). Yamane's Sampling Techniques was used for the sample size determination because is scientific. Thus, random sampling technique was used to select the four quoted food and beverages companies in Nigeria.

### **3.6 Summary**

In this chapter, relevant methodology for the study are explained ranging from research design, population and sampling technique, method of data collection, procedures for data analysis and model specification down to justification of method used. Thus, descriptive research design was used, secondary data from annual reports and NSE fact book of the sampled firms were used, and OLS was chosen for the analysis.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Introduction

In this chapter the data are presented and analyzed to assess the impact of working capital management on the profitability of quoted food and beverages manufacturing firms in Nigeria. The analysis was based on the objectives and hypotheses of the study which is done at 5% level of significance.

#### 4.2 Account Receivable Days (ARD) und Profitability of Quoted Food and Beverages Companies in Nigeria

ARD	ROE
56.00	0.44
47.00	0.41
50.00	0.38
52.00	0.31
32.00	2.45

53.00	0.17
65.00	0.13
89.00	0.09
51.00	0.08
59.00	0.04

Model Summary<sup>b</sup>

Model R	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson
1	.635	.404	.329	.58817	2.575

- a. Predictor: (constant). Account received Days
- b. Dependent Variable: return on Assets

Annova<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.874	1		1.874	5.417
Residual Total	2.768	8		.346	
	4.642	9			

a. Predictors: (Constant), Account Receivable Days

b. Dependent Variable: return on Assets

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.182	.767		2.845	.022
	Account Receivable Days	-.031	.013	-.635	-2.328	.048

a. Dependent Variable: Return on Assets

Regression Summary and other Statistics

A	P	P-Value	R	r <sup>2</sup>
2.182	-0.031	0.048	0.635	0.404

Source: Researcher's computation, 2014

The regression line  $ROE = 2.182 - 0.031 \times ARD$  indicates that profitability (ROE) will decrease by 0.031% for every 1% increase in Account Receivable Days (ARD). The P-value of 0.048 is less than the t-value of 0.05. The Null Hypothesis is therefore, rejected that the impact of ARD on profitability of Food and Beverages Companies Quoted on the floor of the Nigerian Stock Exchange Market is significant. The correlation coefficient (r) of 0.635 shows a moderate relationship and the coefficient of determination ( $r^2$ ) of 0.404 indicates that 40.4% of variation in profitability can be explained by ARD, and the remaining 59.6% can be explained by other variables not captured in the regression line (error term).

#### 4.3 Account Payable Days (APD) and Profitability of Quoted Food and Beverages Companies in Nigeria

Table 4.2 APD & ROE

APD	ROE
59	0.44
51	0.41
89	0.38
65	0.31

138	2.45
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46	0,17
50	0.13
39	0.09
40	0.08
49	0.04

Model Summary

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.923 <sup>a</sup>	.851	.833	.29391	2.096

a. Predictors: (Constant), Account Payable Days

b. Dependent Variable: Return on Assets

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.951	1	3.951	45.732	.000 <sup>a</sup>
	Residual	.691	8	.086		
	Total	4.642	9			

a. Predictors: (Constant), Account Payable Days

b. Dependent Variable: Return on Assets

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.922	.223		-4.132	.003
Account Payable Days	.022	.003	.923	6.763	.000

a. Dependent Variable: Return on Assets

**Regression Summary and other statistics**

A	P	P-Value	R	R <sup>2</sup>
-0.922	0.022	0.000	0.923	0.851

**4.4 Inventory Convention Days (ICD) and Profitability of quoted food and beverages companies in Nigeria.**

Table 4.3: ICD & ROE

ICD	ROE
76	0.44
42	0.41
60	0.38
55	0.31

89	2.45
92	0.17
112	0.13
113	0.09
162	0.08
184	0.04

The regression line  $ROE = -1.547 + 0.030ICD$  indicates that profitability (ROE) will increase by 0.030% for every 1% increase in Inventory Conversion Days (ICD). The P-value of 0,019 is less than the t-value of 0.05. The Null hypothesis is therefore, rejected that the impact of ICD on profitability of Food and Beverages Companies Quoted on the floor of the Nigerian Stock Exchange Market is significant. The correlation coefficient (r) of 0.720 shows a strong relationship and the coefficient of determination (1.2) of 0.5 19 indicates that 51.9% of variation in profitability can be explained by ICD and the remaining 48.1% can be explained by other variables not captured in the regression line (error term).

## 4.5 Cash Conversion Cycle (CCC) and Profitability of Quoted' Food and Beverages Companies in Nigeria

Table 4.4: CCC & ROE

CCC	ROE
67.00	0.44
69.00	0.41
67.00	0.38
63.00	0.31
43.00	2.45
64.00	0.17
76.00	0.13
98.00	0.09
63.00	0.08
61.00	0.04

### Regression Summary and other statistics

A	P	P-Value	R	r <sup>2</sup>
2.693	-0.033	0.047	0.639	0.409

The regression line  $ROE=2.693-0.033CCC$  indicates that profitability (ROE) will decrease by 0.033% for every 1% increase in Cash Conversion Cycle (CCC). The P-value of 0.047 is less than the t-value of 0.05. The Null Hypothesis is therefore, rejected that the impact of (CCC on profitability of Food and Beverages Companies Quoted on the floor of the Nigerian Stock Exchange Market is significant. The correlation coefficient (r) of 0.639 shows a moderate relationship and the coefficient of determination ( $r^2$ ) of 0.409 indicates that about 41% of variation in profitability can be explained by CCC, and the remaining 59% can be explained by other variables not captured in the regression line (error term).

#### 4.6 Current Ratio (CR) and Profitability of Quoted Food and Beverages Companies in Nigeria

Table 4.5: CR & ROE

CR	ROE
0.06	0.44
0.05	0.41
0.08	0.38
0.07	0.31

0.14	2.45
0.05	0.17
0.05	0.13
0.04	0,09
0.04	0.08
0.05	0.04

Regression Summary and other statistics

A	P	P-Value	R	R <sup>2</sup>
-0.984	22.759	0.000	0.945	0.894

Source: Researcher's Computation, 2014

The regression line  $ROE = -0.984 + 22.759CR$  indicates that profitability (ROE) will increase by 22.759% for every 1% increase in Current Ratio (CR). The P-value of 0.000 is less than the t-value of 0.05. The Null Hypothesis is therefore, rejected that the impact of CR on profitability of Food and Beverages Companies Quoted on the floor of the Nigerian Stock Exchange Market is significant. The correlation coefficient (r) of 0.945 shows a strong relationship and the coefficient of determination (1.2) of 0.894 indicates that 89.4% of variation in profitability can be explained by APD, and the remaining 10.6%

can be explained by other variables not captured in the regression line (error term).

#### **4.7 Discussion of Findings**

It is clear from the regression results above that, account payable days; inventory conversion days and current ratio are positively related with profitability (ROE) of quoted food and beverages manufacturing firms in Nigeria with statistical significance. With respect to account receivable days and cash conversion cycle negative relationship are indicated with probability of quoted food and beverages manufacturing firms in Nigeria. This implies that increase in account payable days: inventory conversion days and current ratio increases profitability (ROE) of quoted food and beverages manufacturing firms in Nigeria significantly. Conversely, increase in account receivable days and cash conversion cycle decreases profitability of quoted food and beverages manufacturing firms in Nigeria. This findings is consistent with the findings in previous studies such as Gul, IKhan, Rehman, Khan, Khan and Khan (2013); Almazari (2013); Akoto, Awunyo-Vitor and Angrnor (2013); Omesa, Maniagi, Musiega and Makori (2013), but inconsistent with the findings in the previous world of Sharma and Kumar (2011). and more recently Gakure, Cheluget, Onyango and Keraro (2012).

#### **4.8 Summary of Findings**

This section summarizes the findings of the study. It is revealed that account payable days; inventory conversion days and current ratio are positively related with profitability (ROE) of quoted food and beverages manufacturing firms in Nigeria with statistical significance. With respect to account receivable days and cash conversion cycle, a negative and significant impact on profitability was revealed for quoted food and beverages manufacturing firms in Nigeria. This means that profitability increases with increase in account payable days; inventory conversion days and current ratio, but decreases with increase in account receivable days and cash conversion cycle.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.1 Summary

This study examined the impact of working capital management on the profitability (ROE) of food and beverages manufacturing firms in Nigeria. The study presented the statement of the problem which exposes the need for further research, Various literatures with respect to the subject matter were also reviewed ranging from the concept of the working capital management down to theoretical framework. The study employed descriptive research design using cross-sectional time series data of ten years (2004-2013) to explore the impact of independent variables (ARD, APD, LCD, CCC and CR) on the dependent variable (Profitability: i.e. ROE). The population of the study is the 16 quoted food and beverages companies in Nigeria as at 2013, To determine the appropriate sample size for the study as well as select the sample elements, giving each equal chance of being selected, Yarnane's sampling size technique and the simple random sampling technique were used. The study utilized the secondary data from food & beverages firms, annual reports, and the Nigeria Stock Exchange Market Fact Book as they are more reliable. The ordinary least squares method of regression was used with

the aid of statistical package for social sciences (SPSS) to determine and analyze the impact of working capital management on the financial performance of quoted food and beverages companies in Nigeria. It was found that account payable days; inventory conversion days and current ratio are positively related to profitability (ROE) of quoted food and beverages manufacturing firms in Nigeria with statistical significance. While, account receivable days and cash conversion cycle, are negatively related with profitability of quoted food and beverages manufacturing firms in Nigeria with statistical significance.

## **5.2 Conclusion**

This study presented evidence that variables of working capital management can impact significantly on the profitability of quoted food and beverages manufacturing firms in Nigeria. The study revealed that account payable days; inventory conversion days and current ratio are positively related with profitability (ROE) of quoted food and beverages manufacturing firms in Nigeria with statistical significance. While, account receivable days and cash conversion cycle, are negatively related with profitability of quoted food and beverages manufacturing firms in Nigeria with statistical significance. This implies that, increase in account payable days; inventory conversion days and

current ratio increases profitability (ROE), as increase in account receivable days and cash conversion cycle decreases profitability. These results suggested that managers can create value for their shareholders by reducing the number of day's accounts receivable and cash conversion cycle, and increasing the accounts payment days, inventory conversion days and current ratio, This inspired the study to conclude that, increase in accounts payment days, inventory conversion days and current ratio will increase the profitability of food and beverages companies in Nigeria, as their profitability will decrease with increase in number of day's accounts receivable and cash conversion cycle.

### **5.3 Recommendations**

In the light of the findings of the study, it is recommended that:

Food and Beverages Manufacturing firms in Nigeria should have a longer credit period for the firms to realize higher profitability. There exists positive association between Inventory Turnover in Days and Return on Equity for the food and beverages manufacturing firms in Nigeria as a whole, which implies that firms, which maintain sufficiently high inventory levels, reduce costs of possible interruptions in the production process and loss of business due to scarcity of products will spring up its profitability.

The longer the accounts payable, the better the profitability this could be due to good name created by suppliers and suppliers will not interrupt supplies to the firm which in turn leads to smooth operation during the year and ends up with better profitability.

Firms are advised to reduce the level of high working capital and use such for longer term investment and cash conversion cycle, which can enhance future profitability of the firms.

The liquidity position of the food and beverages companies should be increased for better profitability, this will enable the food and beverages companies in Nigeria to exploit all necessary opportunity that avails itself before them.

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