Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.7, No.14, 2016

Effect of Working Capital Management on Profitability of Flour Mills of Nigeria PLC

Nwachukwu Johnson Obinna, Odo Stephen Idenyi and Nwachukwu Nneka C.
Department of Accountancy, Ebonyi State University, PMB 053, Abakaliki, Ebonyi State
Department of Economics, Ebonyi State University, PMB 053, Abakaliki, Ebonyi State
Department of Business Management, Ebonyi State University, PMB 053, Abakaliki

ABSTRACT
The study investigated the effect of working capital management on the profitability of Flour Mills of Nigeria Plc. Specifically the study sought to determine the extent to which Number of Days of Accounts Receivable; Number of Days of Inventory; and Number of Days of Accounts Payable affect Gross Profit Margin (GPM) of Flour Mills of Nigeria Plc. The study was anchored on Trade-off theory of capital structure. The study adopted co relational descriptive non-experimental research design approach based on data derived from the past annual reports of Flour Mills of Nigeria Plc. Data collected was analyzed using Pearson correlation technique via the Statistical Package for Social Science (SPSS) version 20. The study reports a positive and significant influence of Number of Days of Accounts Receivable; Number of Days of Inventory; and Number of Days of Account Payable on gross profit margin (GPM) of Flour Mills of Nigeria Plc. The implication of the result which showed a positive impact of working capital management variables on gross profit margin of FMN indicates that the longer the number of days it takes a firm to be paid for sales made and inventory held, the less profit it is expected to make. The study recommended that Flour Mills of Nigeria Plc should be very apt in reducing the number of days of account receivables and inventories to a reasonable minimum in order to boost profitability.
Keywords: Working capital, Profitability, Accounts receivable, Accounts payable, Inventory, Flour mills, Nigeria.

INTRODUCTION

Increased profitability is one of the primary goals of financial managers. Without an acceptable level of profitability, businesses will find it very difficult, if not impossible, to survive in the long run. Managers are therefore continuously adopting and adapting strategies to improve profitability. And one of such strategies is through working capital management. Working capital is a financial metric which indicates the operating liquidity of organizations (Elijelly, 2004). Working capital is seen as a part of an organization operating capital, referring to current assets such as cash at hand, cash in bank, raw materials, work in progress, finished goods and accounts receivable. Management of working capital which aims at maintaining an optimal balance between each of the working capital components, that is, cash, receivables, inventory and payables is a fundamental part of the overall corporate strategy to create value and is an important source of competitive advantage in businesses (Deloof, 2003). In practice, it has become one of the most important issues in organizations with many financial executives struggling to identify the basic working capital drivers and the appropriate level of working capital to hold so as to minimize risk, effectively prepare for uncertainty and improve the overall performance of their businesses (Lamberson, 1995).

The major purpose of working capital management is to keep sufficient liquidity to sustain operations and to meet obligations (Eljelly, 2004). Hence, traditionally, efficiency of working capital management is based on the principle of speeding up collections as quickly as possible and slowing down disbursements as slowly as possible (Nobanee and AlHajjar, 2009) in order to minimize the risk of having insufficient funds to pay for the short term liabilities. However, holding too much liquidity will work to reduce the risk at the cost of decreased profitability. This trade-off between profitability and risk is the key to working capital management (Dash and Hanuman, 2009) which aims at maintaining a balance between liquidity and profitability while conducting the day-to-day operations of a business (Falope and Ajilore, 2009). Thus, efficient working capital management, as argued by Eljelly (2004), involves the planning and the controlling of the current assets and the current liabilities in such a manner that eliminates the risk of inability to meet due short term obligations while avoiding excessive investment in these assets.

The existence of efficient working capital management practices can make a substantial difference between the success and failure of a company. Usually, working capital efficiency is measured using net working capital which is defined as the difference between current assets and current liabilities. When the current assets are higher than the current liabilities, the company is said to have working capital efficiency which shows the company's ability to remain a going concern and to have sufficient funds to satisfy both maturing short debt and upcoming operational expenses. Efficient management of working capital is vital for the success and survival of companies to enhance performance and contribution to economic growth.

In the world of business, the ability to seize every opportunity and to seek practical business tools and techniques to improve the financial performance are of paramount importance for success. Good business acumen dictates that business resources should be managed efficiently. Money tied up in working capital is one area worth looking into. Managers have shortened the cash cycle through shortening the period of receivables collections and inventory turnover and lengthening the period of settling liabilities, in order to increase company profitability (Nobanee and Alhajjar, 2009).

Working capital is known as life giving force for any economic unit and its management is considered among the most important function of corporate management. Every organization whether, profit oriented or not, irrespective of size and nature of business, requires necessary amount of working capital. Working capital is the most crucial factor for maintaining liquidity, survival, solvency and profitability of business (Mukhopadhyay, 2004). Working capital management is one of the most important areas while making the liquidity and profitability comparisons among firms (Eljelly, 2004) involving the decision of the amount and composition of current assets and the financing of these assets. The greater the relative proportion of liquid assets, the lesser the risk of running out of cash, all other things being equal. All individual components of working capital including cash, marketable securities, account receivables and inventory management play a vital role in the performance of any firm. Efficient management of working capital plays an important role of overall corporate strategy in order to create shareholder value. Working capital is regarded as the result of the time lag between the expenditure for the purchase of raw material and the collection for the sale of the finished goods. The way of managing working capital can have a significant impact on both the liquidity and profitability of the company (Shin and Soenen, 1998).

To observe how working capital management can affect profitability, one needs to take a look at a company's statement of financial position. In analyzing the financial statement, one has to take a look at company's cash flow, the accounts receivable and account payment periods. The lower the accounts receivable period ratio the more liquid is the firm. Accounts payment period compare creditors with the total credit purchases. It signifies the credit period enjoyed by the firm in paying creditors. Accounts payable include both sundry creditors and bills payable. The longer the period the more advantageous for the firm as such fund can be put to other uses. However, longer accounts holding period can erode a firm's credit worthiness. It is expected that accounts payable days should relate positively with firm profitability. This is because, as accounts payable days increase, the firm tends to have more time to reinvest, acquire other short-term assets, and turn them over, before repaying their creditors.

Based on the foregoing relationship between working capital management and firm's profitability, a study as this is necessary. It is against this background that the study seeks to examine the effect of working capital management on the profitability of Flour Mills of Nigeria Plc. The indicators are analyzed on a time series basis to give insight to the level of profitability in the Flour Mills of Nigeria Plc.

STATEMENT OF THE PROBLEM

The chief finance officers of most industries spend most of their time and effort on day-to-day working capital management. Still, due to the inability of financial managers to properly plan and control the current assets and current liabilities of their companies, the failure of a large number of businesses can be attributed to the inefficient working capital management (Smith, 1973). Inadequate working capital leads the company to bankruptcy. On the other hand, too much working capital results in wasting cash and ultimately the decrease in profitability (Chakraborty, 2008). The effectiveness of working capital management may impact on both the liquidity and profitability of any corporation (Owolabi and Obida, 2012). Management strategy aimed at maintaining a balance between liquidity and profitability has far reaching consequences on the growth and survival of the firm. Thus, the manager of a business entity is in a dilemma of achieving desired trade-off between liquidity and profitability in order to maximize the value of a firm.

Despite the emphasis placed on working capital management in ensuring profitability of Flour Mills of Nigeria Plc, the management is yet to come on the path of sound profitability growth. They are faced with two major issues. First, given the level of sales and the relevant cost considerations the management of Flour Mills of Nigeria Plc are faced with issues in determining the optimal amounts of account receivable, account payable and inventory that they will choose to maintain in order to enhance performance. Secondly, given these optimal amounts, what is the most economical way to finance these working capital investments in order to produce the best possible results? Perhaps, the inability of management to use working capital management indicators as part of key measures of profitability may be responsible for the fluctuations in their profit performance..

OBJECTIVES OF THE STUDY

The general objective of this study is to assess the effect of working capital management on the profitability of Flour Mills of Nigeria Plc. Specifically, the study seek to:

i. Determine the influence of Number of Days of Accounts Receivable on Gross Profit Margin of Flour Mills of Nigeria Plc.
ii. Ascertain the influence of Number of Days of Inventory on Gross Profit Margin of Flour Mills of Nigeria Plc.
iii. Evaluate the influence of Number of Days of Accounts Payable on Gross Profit Margin of Flour Mills of Nigeria Plc.

RESEARCH QUESTIONS

i. What extent does number of days of account receivable influenced gross profit margin?
ii. What extent does number of days of inventory influenced gross profit margin?
iii. What extent does number of days of account payable influenced gross profit margin?

TEST OF HYPOTHESIS

Based on the above stated objectives and research questions, the following hypothesis are stated in its null form

i. Number of days of account receivable has not significantly influenced gross profit margin.
ii. Number of days of inventory has not significantly influenced gross profit margin
iii. Number of days of account payable has not significantly influenced gross profit margin

SIGNIFICANCE OF THE STUDY

This study will be a useful guide to management of Flour Mills of Nigeria Plc in their strategic management of various components of working capital for efficient service delivery. Also the study will be of immense benefit to future researchers and a blue print for policy makers.

CONCEPTUAL REVIEW

The profile of Flour Mills of Nigeria plc (FMN)

Incorporated in September 1960, Flour Mills of Nigeria Plc (FMN) is one of Nigeria's leading food and agro-allied companies which has grown into a diversified group with a broad product portfolio, an iconic brand – "Golden Penny", and robust distribution network. The Group is primarily engaged in flour milling; production of pasta, noodles, edible oil and refined sugar; production of livestock feeds; farming and other agro-allied activities; distribution and sale of fertilizer; manufacturing and marketing of laminated woven polypropylene sacks and flexible packaging materials; cement manufacturing; operation of Terminals A and B at the Apapa Port; customs clearing, forwarding agents, shipping agents and logistics; and, management of the mills of Maiduguri Flour Mills Limited and Port Harcourt Flour Mills Limited. FMN's shares were listed on The Nigerian Stock Exchange in 1978 and had a paid-up Share Capital of N1.193 billion and Market Capitalization of N155.1billion on 31st March 2014. With the current ownership structure of 55.73% overseas shareholders and 44.27% Nigerian and institutional investors, there is a broad ownership base with over 77,500 shareholders. The Group employs over 12,000 direct and indirect employees with diverse ethnic, cultural and religious background who work harmoniously together to deliver superior value to customers and other stakeholders.

Recently, the Company's flour operations witnessed major strategic investments in milling technology and gained accreditation to the Quality Standard ISO 9001:2008 recognizing that its flour manufacturing facilities are world class and operating within an internationally recognized Quality System. The Company which delivered N246 billion Revenue for the year ended 31st March, 2014 and posted an After Tax Profit of N10.47billion is poised to continue to deliver meaningful top and bottom line growth.

Meaning and Concept of Working Capital Management

Working capital refers to money utilized by business firms in their daily activities or operations. Working capital is the available capital for conducting day-to-day operations of an organization represented by its net current assets (Adeniji, 2008). In the same vein, Akinsulire (2008) described working capital as the items that are required for the day-to-day production of goods to be sold by a company. Working capital is the total of the amounts invested in current assets of the company. Generally, it is assumed that the current liabilities must be met by current assets. Due to the fact that maturity date of current assets coincides with maturity date of current liabilities (maximum maturity date is one year). Of course, some of the firms may try to secure a part of their current assets through shareholders' rights which is called fixed working capital. Working capital is one of the

most important problems that firms' managers may face. It plays an important role for the firms' maintenance and growth. Working capital is the stock stored that has a conversion or resale value in order to gain profit. It represents the largest cost of a firm especially the manufacturing firms. In normal circumstances, working capital consists of about 30% - 40% of a firm's total investment.

Investment in working capital to a large extent determines the returns earned by a firm. Nevertheless, excessive levels of current assets can easily result in a firm realizing a substandard return on investment while firms with too few current assets may incur shortages and difficulties in maintaining smooth operations (Van Horne and Wachowicz, 2000 cited in Ani, Okwo and Ugwunta, 2013). It centers on current assets and current liabilities of a firm. For one thing, the current assets of a typical manufacturing firm accounts for over half of its total assets (Abdul and Mohamed, 2007). One reason why managers spend considerable time on day-to-day management of working capital is that current assets are short-lived investments that are continually being converted into other asset types (Rao, 1989). Liquidity for the on-going firm is not reliant on the liquidation value of its assets, but rather on the operating cash flows generated by those assets (Soenen, 1993). Working Capital Management is therefore a sensitive area in the field of financial management (Joshi, 1994). It involves the decision of the amount and composition of current assets and the financing of these assets.

Efficient working capital management involves planning and control of current assets and current liabilities in a manner to strike a balance between liquidity and profitability. Harris (2005) pointed out that working capital management is a simple and straightforward concept of ensuring the ability of the firm to fund the difference between the short term assets and short term liabilities. The ultimate objective of any firm is to maximize shareholders wealth and maximizing shareholders wealth can be achieved by a firm maximizing its profit. A firm that wishes to maximize profit must strike a balance between current assets and current liabilities and hence keeping abreast of the liquidity and profitability trade-off. Preserving liquidity and profitability of the firm is an important objective as increasing profit at the expense of liquidity can bring serious problems to the firm and vice-versa. Working capital management is considered to be a very important element to analyze the firm's performance while conducting day to day operations. There are chances of imbalance of current assets and current liability during the life cycle of a firm and profitability will be affected if this occurs. In this study element of working capital management are account receivable period; inventory collection period and account payable period (Falope and Ajilore, 2009).

Accounts receivable period measures the average number of days that accounts receivable are outstanding. It measures the average number of days between sending invoices to customers and collecting payments from them. The lower the accounts receivable period ratio the more liquid is the firm. Stock holding period or Inventory Days, or Days Inventory Outstanding (DIO), measures how quickly stocks flow in a firm from production to sale. It is an excellent measure of how efficiently a company is managing its inventory (Christopher, 2009). The trade-off comes in deciding how little cash is tied up in inventory while still meeting the needs of the customer. Accounts payment period compare creditors with the total credit purchases. It signifies the credit period enjoyed by the firm in paying creditors. Accounts payable include both sundry creditors and bills payable. The longer the period the more advantageous for the firm as such fund can be put to other uses. However, longer accounts holding period can erode a firm's credit worthiness. It is expected that accounts payable days should relate positively with firm profitability. This is because, as accounts payable days increase, the firm tends to have more time to reinvest, acquire other short-term assets, and turn them over, before repaying their creditors.
Gross Profit Margin is a measure of profitability. It is normally calculated as gross profit divided by total gross earning. In the study, gross profit margin is the researcher' proxy for the firm profitability.

EMPIRICAL REVIEW
Zariyawati, Annuar and Rahim (2009) investigated the relationship between working capital management and profitability of Malaysian firms, using cash conversion cycle as a measure of working capital management. The researchers used panel data of 1628 firm-year for the period of 1996-2006 from six different economic sectors which were listed in Bursa, Malaysia. Their findings revealed that the coefficient results of regression analysis provided a strong negative significant relationship between cash conversion cycle and firm profitability. Therefore, a firm's manager can increase profitability by reducing cash convention cycle.

In another study by Ali and Hassan (2010), a sample of 37 listed companies on OMX Stockholm stock exchange during a period of 2004 to 2008 was used to investigate the relationship between working capital policy and profitability of Swedish firms. Cash convention cycle and gross profit were used to measure the aggressiveness of working capital management and profitability respectively. In this study, six regressions analysis where tested

on 185 observations which showed that managers cannot increase profitability by adopting a relaxed working management capital policy.

Abdulrasheed, Khadijat,Sulu and Olanrewaju (2011) assessed inventory management in selected small businesses in Kwara State, Nigeria. Using a regression model to explain the effect of inventory value on performance proxy by profit over a period of ten years, the study revealed that a Naira change in stock would cause almost a 92 Kobo change in profitability of selected businesses. This result indicated a strong positive relationship between inventory and profitability of small businesses in Kwara State of Nigeria. They thus concluded that small businesses are likely to generate higher profit if an effective inventory management is put in place.

Hassan, Liaqat, Abdul and Muhammad (2011) examined the impact of working capital management on the profitability of the firm without compromising the liquidity of the firm. Using data for sixty five companies randomly selected from Karachi Stock Exchange, and a set of variables Tobin's Q, proxy used for determining the market value of the firm, return on assets & return on invested capital, were used to measure financial performance of the firm. Five financial ratios, cash conversion cycle, current ratio, current asset to total asset ratio, current liabilities to total asset ratio and debt to asset ratio, were used as variables against which changes in dependent variables were measured by applying correlation and multiple regression techniques. Their findings revealed that significant correlations exist between working capital components with firms' market value and firms' profitability.

Ahsen, Faisal and Muhammad (2011) investigated the relationship between profitability and working capital management. The study sampled 60 textile companies listed at Karachi Stock Exchange (KSE) for the period of 2001-2006 and the firms observations were 360. The purpose of the study was to establish a relationship that is of statistical significant between profitability, the cash conversion cycle and its components (Number of days Accounts receivables, Number of days Accounts payables and Number of days Inventory). The data collected was analyzed using Pearson correlation, Model Summary and ANOVA. The results of the research showed that there is statistically negative significance between profitability, measured through Return on Asset, and the cash conversion cycle. The study concluded that managers can create profits for their companies by handling correctly the cash conversion cycle and keeping Number of days Accounts receivables, Number of days Accounts payables and Number of days Inventory to an optimum level.

Waweru (2011) carried out a study on the relationship between working capital management and the value of companies quoted at the NSE. The study used secondary data obtained from annual reports and audited financial statements of companies listed on the NSE. A sample of 22 companies listed on the NSE for a period of seven years from 2003 to 2009 was studied. The average stock price was used to measure the value of the firm. The regression models indicated that there was some relationship between working capital management and the firm‘s value while the result of the Pearson correlation indicated a negative relationship between average cash collection period, inventory turnover in days, cash conversion cycle and the value of the firm.

Okwo, Ugwunta and Agu (2012) examined the factors that determine the profitability of the Nigerian beer brewery firms. Multiple regressions were applied to annual data generated from the annual reports of the sampled beer brewery firms covering a period of 2000 to 2011.The results show that the ratios of inventory to cost of goods sold, account receivable to sales, and sales and general expenses to sales have significant impact on gross profit margin. Ogundipe, Idowu and Ogundipe (2012) examined the impact of working capital management on firms' performance and market value of the firms in Nigeria. A sample of fifty four non-financial quoted firms in Nigeria listed on the Nigeria Stock Exchange was used for this study. Data were collected from annual reports of the sampled firms for the period 1995-2009. The result showed that there was a significant negative relationship between cash conversion cycle and market valuation and firm's performance. It also showed that debt ratio was positively related to market valuation and negatively related firm's performance. The study concluded that Nigeria firms should ensure adequate management of working capital especially cash conversion cycle, components of account receivables, account payables and inventories, as efficiency working capital management is expected to contribute positively to the firms' market value.
Ani, Okwo and Ugwunta (2013) examined effects of working capital management on profitability: evidence from the top five beer brewery firms in the world. The study focusing on working capital management (as measured by the cash conversion cycle (CCC) and its influence on profitability aimed at establishing a relationship between firms' management of the liquidity - profitability trade-off for the world leading beer brewery firms. Multiple regression equations were applied to a cross sectional time series data of five world leading beer brewery firms after ensuring that the data are stationary and co-integrated. The outcome of the

analysis clearly pinpoint that working capital management as represented by the cash conversion cycle, sales growth and lesser debtors' collection period impacts on beer brewery firms' profitability. The study recommended that Stock holding period should be reduced to a maximum of thirty days and debtors' collection period reduced to a maximum of fifteen days. These will surely enhance brewers' profitability and aid the maximization of firm's shareholders wealth. This was imperative as some of the sampled firms recorded stock holding period of close to ninety eight days and debtors' collection period of close to thirty days.

Asefi, Bandarian and Ghatebi (2013) examined the effect of working capital management on the profitability of listed companies in Tehran Stock Exchange. The main goal of the study was to investigate the relationship between working capital management and profitability of listed companies in Tehran Stock Exchange. Research data was analyzed using population of 116 listed companies in Tehran Stock Exchange for the period of 2006-2011 by applying combination method of all data (pooled data) and ordinary least squares regression (OLS). The research results indicated that, there was a significant inverse relationship between cash conversion cycle and its components, including the collection period, inventory turnover period and accounts payable turnover period, and profitability of the firms. The study recommended that corporate managers can increase the profitability of their company desirably by reducing the collection period and inventory turnover period.

Solabomi and Oboh (2013) studied working capital management and financing decision: synergetic effect on corporate profitability. A pool of time series and cross-sectional data set was constructed from the annual audited financial results of 35 manufacturing companies listed on the Nigeria stock exchange for a two-year period (2011 - 2012). Panel exploration and Factorial-ANOVA estimation techniques were used to estimate the econometric models developed for the study. The results suggested a significant negative relationship between firm's working capital composition and their debt structure choice. Additionally, on individual basis, the study found a positive significant relationship between debt structure and profitability but no significant relationship between firm's working capital composition and profitability. The results, however, showed that as the firm's working capital composition synchronously interacts with the debt structure, corporate profitability is positively affected. The study therefore recommends that, for firms to optimize profitability and to maintain good liquidity position, corporate financing decision should be considered side by side with their working capital composition.

Akoto, Awunyo-Vitor and Angmor (2013) investigated working capital management and profitability: evidence from Ghana listed manufacturing firms. The purpose of the study was to examine the relationship between working capital management practices and profitability of listed manufacturing firms in Ghana. The study used secondary data collected from all the 13 listed manufacturing firms in Ghana covering the period from 2005-2009. Using panel data methodology, the study found a significantly negative relationship between profitability and accounts receivable days. However, the firms' cash conversion cycle, current asset ratio, size, and current asset turnover significantly and positively influenced profitability. The study suggests that managers can create value for their shareholders by creating incentives to reduce their accounts receivable to 30 days. It was further recommended that, enactments of local laws that protect indigenous firms and restrict the activities of importers are eminent to promote increase demand for locally manufactured goods both in the short and long runs in Ghana.

Oladipupo and Okafor (2013) examined the implications of a firm's 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.

Daniel and Ambrose (2013) analyzed the effect of working capital management on firm's profitability in Kenya for the period 2003 to 2012.Balanced panel data of five manufacturing and construction firms each which were listed on the Nairobi Securities Exchange (NSE) is used. Pearson's correlation and Ordinary Least Squares regression models were used to establish the relationship between working capital management and firm's profitability. The study found a negative relationship between profitability and number of day's accounts receivable and cash conversion cycle, but a positive relationship between profitability and number of days of inventory and number of day's payable. Moreover, the financial leverage, sales growth, current ratio and firm size also have significant effects on the firm's profitability. Based on the key findings from the study it has been concluded that the management of a firm can create value for their shareholders by reducing the number of day's

accounts receivable. The management can also create value for their shareholders by increasing their inventories to a reasonable level. Firms can also take long to pay their creditors in as far as they do not strain their relationships with these creditors. Firms are capable of gaining sustainable competitive advantage by means of effective and efficient utilization of the resources of the organization through a careful reduction of the cash conversion cycle to its minimum. In so doing, the profitability of the firms is expected to increase.

Enow and Brijlal (2014) investigated the effect working capital management on profitability, using fifteen South African SMMEs, listed on the Alt-X on the JSE, from 2008-2012, using a multiple regression analysis computed with the aid of SPSS. The results showed a positive relationship between number of days account receivable, number of day's inventory and negative relationship between number of days payable and cash convention cycle. Thus minimizing working capital and decreasing the cash conversion cycle increases profitability and hence shareholder value. Samuel and Fidelis (2015) investigated the effect of working capital management on profitability of Nigerian listed companies during the period 2000-2009. The study utilized panel data, pooled OLS regression and fixed effects. The results showed that there was a strong negative relationship between working capital management and profitability. Liquidity had a positive and strong significant relationship with return on assets. Age also had a positive relationship with profitability while accounts receivable had a negative significant relationship with return on assets as to increase firms' profits. On the basis of these findings, the study recommended among others that, managers and indeed organizations should concentrate on the proper management of each working capital components and keep them at optimal levels, as this will go a long way to enhance profitability and create value for their companies.

THEORETICAL FRAMEWORK

The study is anchored on Trade-off theory of capital structure. Trade-off theory of capital structure was propounded by Myers in 1984. The theory refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. The theory explained that holding a firm's investment plans and assets constant, its optimal leverage ratio is obtained by trading off between the tax benefits and the consequences of using debt instruments. According to this theory, debt financing is attractive, in that , the benefits tax savings from debt payments shields a number of cost debt financing, thus high profit firms will have higher benefits from debt financing company from lower level of financial distress costs, this makes higher leverage attractive to higher profit making firms (Lawal, 2014). In evaluating a firm's net working capital position, an important consideration is the trade-off between profitability and risk. The term risk is the probability that a firm will become technically insolvent such that it will not be able to meet its obligations when they become due for payment. This risk is measured using net working capital. The greater the net working capital, the more liquid is the firm and therefore, the less likely it is to become technically insolvent and vice versa.

Trade-off Theory claims that firms have an incentive to turn to debt as the generation of annual profits allows benefiting from the debt tax shields. Therefore, according to the Trade-Off approach, large firms tend to increase their level of debt as a consequence of the lesser likelihood of bankruptcy, and also as a way to increase the debt tax shields. The trade-off theory assumed that capital structure in companies with important growth prospects includes a small proportion of liabilities because managers are rewarded when the cost of financial leverage is at minimum and no agency conflict exists to affect future growth (Drobetz and Fix, 2003). The Trade-Off Theory, also assume that there is an optimal debt ratio, which is the ratio where tax benefits are equal to the bankruptcy and agency costs associated with debt. Whenever firms deviate from their debt ratio, the existence of adjustment costs prevents firms from making a total adjustment to that ratio, and so Trade-Off Theory forecasts that firms make a partial adjustment of debt towards the optimal debt ratio (Lopez-Gracia and Sogorb-Mira 2008). The relevance of this theory is that it will enable flour mills on Nigeria Plc to adjust their level of debt towards the optimal debt ratio in order to take advantage of the trade-off between costs of financing working capital and the benefit of optimal level of debts in its operation

DISCUSSION

Discussion on Strategies for achieving the stated Objectives

In order to achieve objective 1 to 3, co relational descriptive non-experimental research design approach was used to measure the degree in which working capital management indicators can be used to analyze profitability. Secondary data were sourced from annual reports of Flour Mills of Nigeria Plc using their websites. Data collected was analyzed using Pearson correlation technique. This was obtained through the Statistical Package for Social Science (SPSS) version 20. In the case of the study, it was done using the annual time series pooled data of the variables contained in the model with Flour Mills of Nigeria Plc gross profit margin as dependent variable and was correlated against the Number of Days of Accounts Receivable; Number of days of Inventory;

and Number of Days of Accounts payable as independent or explanatory variables. The sign and significant level of each of the hypothetical independent variables formed the basis for testing the affected hypotheses. Beta coefficients of the respective independent variables were used to test at significant level of 5%. The decision rule is to accept the Null Hypothesis (H_o) if the t-values obtained for the parameter estimates are greater than 0.05, otherwise reject the Null Hypothesis.

Discussion on Empirical Review

Although studies on working capital management have been carried out by various scholars such as Zariyawati, Annuar and Rahim (2009); Falope and Ajilore (2009); Gill, Biger and Mathur, (2010); Ali and Hassan (2010); Abdulrasheed, Khadijat, Sulu and Olanrewaju (2011); Hassan, Liaqat, Abdul and Muhammad (2011); Mohammad (2011); Ahsen, Faisal and Muhammad (2011); Waweru (2011); Okwo, Ugwunta and Agu (2012); Ani, Okwo and Ugwunta (2013); Asefi, Bandarian and Ghatebi (2013); Solabomi and Oboh (2013); Akoto, Awunyo-Vitor and Angmor (2013); Oladipupo and Okafor (2013) ; Daniel and Ambrose (2013); and Enow and Brijlal (2014), it is instructive to note that there is still ambiguity regarding the effect of working capital management on profitability. These studies do not provide clear-cut direction of the effect of working capital management on firm's profitability. Further examination of these studies reveals that there is bearing of empirical evidence on the working capital and its effect on the profitability of Flour Mills Firms in Nigeria. Therefore, the present study is an attempt to fill this gap and investigate the effect of working capital management variables such as Number of Days of Accounts Receivable; Number of Days of Inventory; and Number of Days of Accounts Payable on gross profit of Flour Mills of Nigeria Plc.

METHODOLOGY

The study is anchored on trade-off theory of capital structure and uses a simple function in the estimation of the model as;

GPM = f (NDAR, NDI, NDAP)

This function is specified in a linear form as;

GPMt = a 0 +a1NDARt + a2NDIt + a3NDAP

Where,

GPM = gross profit margin

NDAR = Number of days of account receivable

NDI = Number of days inventory

NDAP = Number of days of account payable

t = Time period

 = Estimation parameter

DISCUSSION OF FINDINGS

The positive influences of number of days of account payable on gross profit margin shows that Flour Mills of Nigeria Plc does not take longer time to settle payment to creditors. The positive influence found between gross profit margin and number of day of inventories shows that reducing the number of days of inventory by Flour Mills of Nigeria Plc will increase their profitability. The result also showed a positive influence of number of days of account receivable period on gross profit margin. This might be due to the fact that customers do not require more time to assess quality of products they buy from firms with increasing profitability. This means that the more the time taken for customers to pay their bills, the less the sales realized leading to lower profitability of the firm. In order words a more restrictive credit policy such as giving customers less time to make payments, improves profitability. The implication of the result which showed a positive impact of working capital management variables on gross profit margin of FMN indicates that the longer the number of days it takes a firm to be paid for sales made and inventory held, the less profit it is expected to make. The result was as attached as appendix.

CONCLUSION

The study investigates the effect of working capital management on the profitability of Flour Mills of Nigeria Plc. The study employed Pearson correlation technique via the Statistical Package for Social Science (SPSS) version 20 to determine the extent to which Number of Days of Accounts Receivable; Number of Days of Inventory; and Number of Days of Accounts Payable influenced the gross profit margin of Flour Mills of Nigeria Plc. The study reports a positive and significant influence of Number of Days of Accounts Receivable; Number of Days of Inventory; and Number of Days of Account Payable on gross profit margin (GPM) of Flour Mills of Nigeria Plc

RECOMMENDATIONS

The study recommended that Flour Mills of Nigeria Plc should be very apt in reducing the number of days of account receivables and inventories to a reasonable minimum in order to boost profitability.

REFERENCES

Abdul, R. & Mohamed, N. (2007). Working Capital Management and Profitability – Case of Pakistani Firms. *International Review of Business Research Papers*, 3(1): 279 – 300.

Abdulrasheed, A., Khadijat, A. Y., Sulu, I. & Olanrewaju, A. A. (2011). Inventory Management in Small Business Finance: Empirical Evidence from Kwara State, Nigeria. *British Journal of Economics, Finance and Management Sciences*, 2(1): 49 – 57.

Ahsen S., Faisal, M. H., & Muhammad, N. H. (2011). Working Capital Management and Profitability:Evidence from Pakistan Firms. *Interdisciplinary Journal of Contemporary Research in Business*, 3(8): 1092-1105.

Ajibolade, S. O. & Sankay, O. C. (2013). Working Capital Management and Financing Decision: Synergetic Effect on Corporate Profitability. *International Journal of Management, Economics and Social Sciences*, 2(4): 233 –251.

Akinlo, O.O. (2011). The Effect of Working Capital on Profitability of Firms in Nigeria: Evidence from General Method of Moments (GMM). *Asian Journal of Business and Management Science*, 1(2): 130-135.

Akoto, R. K., Awunyo-Vitor, D., & Angmor, P. L. (2013). Working Capital Management and Profitability: Evidence from Ghanaian Listed Manufacturing Firms. *Journal of Economics and International Finance*, 5(9): 373-379.

Ali, W. U., & Hassan, S. (2010). Relationship between the Profitability and Working Capital Policy of Swedish Companies. Master Thesis. Umea University.

Ani, W. U., Okwo, I. M., & Ugwunta, D. O. (2013). Effects of Working Capital Management on Profitability: Evidence from the Top Five Beer Brewery Firms in the World. *Asian Economic and Financial Review*, 2(8): 966-982

Asefi, N. D., Bandarian, A. & Ghatebi, M. (2013). A Study on the Effect of Working Capital Management on the Profitability of Listed Companies in Tehran Stock Exchange. *Academic Journal of Accounting and Economics Researches*, 2(4): 1-10.

Besley, S. & Eugene, F. B. (2005). Essentials of Managerial Finance. 13th ed., Thomson South-Western: USA.

Christopher, G. G. (2009). The Cash Conversion Cycle; White paper. www.BluePointStrategies.com. Accessed 27/07/2014.

Dash, Mihir & Rani, H. (2009). A Liquidity-Profitability Trade-Off Model for Working Capital Management. Available at http://ssrn.com/abstract=1408722 accessed at 11 April 2014.

Daniel, M. M. & Ambrose, J. (2013). Working Capital Management and Firm Profitability: Empirical Evidence from Manufacturing and Construction Firms Listed on Nairobi Securities Exchange, Kenya. *International Journal of Accounting and Taxation*, 1(1): 1-14.

Deloof, M. (2003). Does Working Capital Management Affect Profitability of Belgian Firms? *Journal of Business Finance and Accounting*, 30(3/4): 573-587.

Eljelly, A. M. A. (2004). Liquidity-Profitability Trade-Off: An Empirical Investigation in an Emerging Market. *International Journal of Commerce and Management*, 14 (2): 48-61.

Enow, S. T., & Brijlal, (2014). The Effect of Working Capital Management on Profitability: The Case of Small Medium and Micro Enterprises in South Africa. *Journal of Accounting and Management*, 4(2): 7-15.

Esu, B. B. & Inyang, B. J. (2009). A Case for Performance Management in the Public Sector in Nigeria. *International Journal of Business and Management*, 4(1)

Falope, O. I. & Ajilore, O. T. (2009). Working Capital Management and Corporate Profitability: Evidence from Panel Data Analysis of Selected Quoted Companies in Nigeria. *Research Journal of Business Management*, 3: 73-84.

Gill, A., Nahum, B, & Neil, M. (2010). The Relationship between Working Capital Management and Profitability: Evidence from the United States. *Business and Economic Journal* 1-9.

Harris, A. (2005). Working Capital Management: Difficult but Rewarding. *Financial Executive Journal*, 21(4), 52-53.

Hassan, M. A., Liaqat, A., Ch. Abdul, R. & Muhammad, A. (2011). Impact of Working Capital Management on Profitability and Market Valuation of Pakistani Firms. *European Journal of Economics, Finance and Administrative Sciences*, 1(32): 49 – 54.

Joshi, P. V. (1995). Working Capital Management under Inflation. 1st Ed. New Delhi Anmol Publishers.

Lamberson, M. (1995). Changes in Working Capital of Small Firms in Relation to Changes in Economic Activity. *Mid-American Journal of Business*, 10(2): 45-50.

Lopez-Gracia, J; & Sogorb-Mira, F. (2008). Testing Trade-Off and Pecking Order Theories Financing SMEs, *Small Business Economics* 38: 117–136.

Lazaridis, I. & D. Tryfonidis, (2006). The Relationship between Working Capital Management and Profitability of Listed Companies in the Athens Stock. *Journal of Financial Management and Analysis*, 19(l): 26-35.

Mohammad, A. (2011). Working Capital Management and CorporateProfitability: Evidence from Iran. *World Applied Sciences Journal*, 12 (7): 1093-1099.

Nobanee, H. & AlHajjar, M. (2009). Optimizing Working Capital Management. Available at http://ssrn.com/abstract=1528894 accessed at 11 April 2014.

Nwankwo, O. & Osho, S. G. (2010). An Empirical Analysis of Corporate Survival and Growth: Evidence from Efficient Working Capital Management. *International Journal of Scholarly Academic Intellectual Diversity*, 12(1): 1-13.

Oladipupo, A. O., & Okafor, C. A. (2013). Relative Contribution of Working Capital Management to Corporate Profitability and Dividend Payout Ratio: Evidence from Nigeria. *International Journalof Business and Finance Research*, 3(2): 11-20.

Ogundipe, S. E., Idowu, A. & Ogundipe, L. O. (2012). Working Capital Management, Firm's Performance and Market Valuation in Nigeria. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 6(1): 1196-1200.

Okwo, I. M., Ugwunta, D. O. & Agu, S. U. (2012). An Examination of the Factors that Determine the Profitability of Nigerian Beer Brewery Firms. *Asian Economic and Financial Review*, 2(7): 741-750.

Owolabi, S. A. & Obida, S. S. (2012). Liquidity Management and Corporate Profitability: Case Study of Selected Manufacturing Companies Listed on the Nigerian Stock Exchange. *Business Management Dynamics*, 2: 10-25.

Rao, R. K. S. (1989). Fundamentals of Financial Management, 3rd Ed. Macmillan publishers, 550-644.

Raheman, A., & Nasr, M. (2007). Working Capital Management and Profitability Case of Pakistan Firms. *International Review of Business Research Papers, 3* (1): 279-300.

Samuel**,** M. T. & Fidelis, A. A. (2015). Effect of Working Capital Management on Firm Profitability in Selected Nigerian Quoted Companies. *International Journal of Economics, Commerce and Management, United Kingdom,* 3(10): 414-438.

Soenen, L. A. (1993). Cash Conversion Cycle and Corporate Profitability. *Journal of Cash Management,* 13(4): 53-58.

Mith, K. (1980). Profitability versus Liquidity Trade-offs in Working Capital Management, in Readings on the Management of Working Capital. New York: St. Paul, West Publishing Company.

Sunday, K.J. (2011). Effective Working Capital Management in Small and Medium Scale Enterprises. *International Journal of Business and management*. 6(9): 217.

Waweru, C.G. (2011). The Relationship between Working Capital Management and Value of Companies Quoted at the NSE. *Unpublished MBA Research project,* University of Nairobi.

Zariyawati, M. A., Annuar, M. N., Taufiq, H. & Rahim, A. S. A. (2008). Working Capital Management and Corporate Performance: Case of Malaysia. *Journal of Modern Accounting and Auditing, 5*(11): 47-54.