

Working Capital Management Policy and Financial Performance in the Nigerian Foods and Beverages Industry: A Study of Nestle Nigeria Plc (2008-2012)

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Abstract

This study empirically evaluated the relationship of working capital management policy and financial performance of Nigerian foods and beverages industry, using Nestle Nigeria Plc as case study within the period of 2008-2012. However, the need for this study arises as a result of persistent wind-up of most Nigerian manufacturing firms, of which a greater proportion of the firm's capital is made up of fixed assets rather than working capital which theoretically have direct effects on profitability and liquidity of business enterprises irrespective of their sizes. The study employed the use of descriptive analysis, accounting ratios and simple correlation analysis to test the formulated hypotheses respectively. The findings revealed that working capital management policy have relationship with the firm's financial performance. Specifically, a negative significant relationship existed between WCM and profitability performance while a negative insignificant relationship do exist between WCM and liquidity performance of Nestle Nigeria Plc within the period covered by the study. Based on this result, it is recommended that the company should adopt aggressive investment working capital policy as well as aggressive financing working capital policy as against the conservative working capital policy used in Nestle Nigeria Plc within the period of the study which hampered their financial performance.

Keywords: Working Capital Management Policy, Financial Performance, Profitability, Liquidity and Accounting ratios

1. Background to the study

In recent time, the issue of raising and utilizing capital have been the heartbeat of all financial managers and entrepreneur both in the corporate world and the public sector. Therefore, a firm is required to maintain a balance between liquidity and profitability while conducting its day to day operations (Kesseven, 2006 and Lakshan, 2007).

However, the need for working capital management became prominent among small, medium and large sized manufacturing firms due to mismatch of assets-liability which leads to increasing firms' profitability in the short-run but at a risk of its insolvency. On the other hand, too much focus on liquidity at the expense of profitability. Thus, every manager is concerns on achieving desired trade-off between liquidity and profitability in order to maximize the value of a firm.

The term Working capital simply means the ability of a firm to meet its short-term financial obligations of the business, without selling any of its long term assets (Olowe, 2000). Hence, there are two main types of working capital policies of the firm viz: aggressive and conservative working capital policies (Pandey, 2007). Therefore, the need for adequate working capital in any business organization is prerequisite for profitability, liquidity, survival and growth because it is likening as the circulating blood which maintains the human body life.

Working capital management efficiency is vital especially for manufacturing firms, irrespective of their size, because the major part of their assets is composed of currents assets as cited in the works of Abdul, Talat, Abdul & Mahmood (2010); Horne and Wachowitz (2000). Therefore, it directly affects the profitability and liquidity of business firms (Raheman and Nasr, 2007).

In Nigeria context, the need for a sound working capital management in the manufacturing sectors of Nigeria became imperative due to internal and external factors that hampered the financial performance of most manufacturing firms in the country. In addition, the persistent wind-up of most manufacturing sectors in Nigeria necessitated the need to understudy the role working capital management could do to apprehend the unfortunate trends. Profitability over the years soon nosedived and this affect the liquidity of these industries, hence a

profitable or illiquid firm could be bankrupt within days (see Dunlop Nigeria Plc) subsequently, throughout the periods of its operation inefficient cash management or storage of capital to finance company operation led to some negative multiplier effects.

Following the ugly experiences witnessed in Nigeria food and beverage industry, the study aims to identify the problem and main causes of poor working capital management among the foods and beverage sectors in Nigeria and how it had contributed to mass wind-up of these companies in the country.

In this study, the researcher is interested to address the following problems associated with working capital management and poor financial performance in the foods and beverage manufacturing sectors of Nigeria as listed below:

- ❖ Incompetent finance manager to determine the source of financing working capital.
- ❖ Unfavourable working capital management policies.
- ❖ Unstable economic and political policies or decisions could make the working capital unpredictable which affects the liquidity or profitability level
- ❖ Foreign exchange volatility

Therefore, the aim of this study is to find out “*the nature and degree of relationship between working capital management policy and financial performance of Nestle Nigeria Plc in the Foods and Beverage sector of Nigeria*”

2. REVIEW OF LITERATURE

Working capital management can be considered as an important source of profitability of a firm. Many researchers investigated the impact of working capital management on profitability. This past research demonstrated that efficient working capital management leads to greater profitability.

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 net trade cycle increases then it affects the return on investment negatively.

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 Soenen (1998) conducted an expanded study by taking a large sample of 58985 firms of US. Their study was based on a longer time phase of 1975-1994. 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.

Lyroudi 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) analyzed 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) discovered that the profitability and cash gap have a significant negative relationship with each other.

Mallik, Sur, and Rakshit (2005) evaluated Indian pharmaceutical industry. They discovered that profitability and liquidity do not have any significant relationship for these firms.

The study of S.M.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, quick 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 associated 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 examining a sample of manufacturing firm of Mauritius. Period of the study was six years i.e. 1998-2003. He used days of receivables, 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 amongst 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 lower.

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 & 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.

Raheman and Nasr (2007) performed an analysis on 94 firms listed at KSE, based on a time span of 6 years from 1999 to 2004. They have taken different working capital ratios such as Net Operating Profitability, Debt ratio, current assets to total assets ratio, cash conversion cycle, average collection period, inventory turnover, average payment period, current ratio and natural logarithm of sales. They suggested that profitability and working capital management are negatively related to each other.

Afza and Nazir (2007) studied 263 firms of Pakistan for a time phase of six years i.e. 1998-2003. They stated that adopting inefficient working capital management policies affects the profitability negatively.

Afza and Nazir (2008) reviewed their previous study to estimate the impact of different types of working capital management policies on financial performance of firms in different sectors. For this they used a sample of 263 non-financial firms belonging to 17 different sectors listed at KSE from 1998 to 2003. The secondary data was collected from the financial reports of selected companies and also from the publications of State Bank of Pakistan. There are two types of working capital management policies namely aggressive working capital management policy and conservative working capital management policy. In aggressive working capital management policy a firm places less amount of capital in current assets to earn more profit from fixed assets, whereas in conservative working capital management policy firms use more capital as current assets. For the measurement of the degree of aggressiveness they used current liabilities to total assets ratio (CLTAR) and current assets to total assets ratios (CATAR). To locate the impact of these policies on the performance of firms they used Return on Equity (ROE) and Return on Assets (ROA). Results were found by using regression analysis. They found an inverse relationship between degree of aggressiveness of these policies and profitability. 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 Binti Mohamad and Mohd Saad (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 these working capital components on financial performance they used Tobin's Q (TQ), return on 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. Raheman, Afza, Qayyum, and Bodla (2010) studied 204 manufacturing firms of Pakistan to explore the impact of working capital management on the performance of a firm. The study was based on 10 years i.e. 1998-2007. They took average age of inventory, average payment period, average collection period, current ratio (CR), current liabilities to total

assets ratio (CLTAR), gross working capital turnover ratio (GWCTR), current assets to total assets ratio (CATAR), sales growth (SG), size of the firm as natural logarithm of sales (LOS) and debt ratio (DR) as independent variables. In contrast, Net Operating Profitability (NOP) was taken as a dependent variable. Results of their study demonstrated that performance of firms is significantly related to cash conversion cycle and average age of inventory. They also described that Pakistan firms normally follow conservative policy for management of working capital i.e. they prefer to place more capital in liquid assets to avoid the risks of less availability of funds for daily operations. Finally they suggested that these firms need effective management and proper financing as well.

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.

Gill, Biger, 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.

Ikram ul Haq, Sohail, 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 (AOD), Current assets to total sales ratio (CTSR) and Age of Creditors (AOC) as predictors and Return on investment (ROI) as dependent variable Impact of Working 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.

Following the review literatures above, it is concluded that a lot of work is available on working capital management and effects on profitability and liquidity but very few examined specifically the effects on profitability and liquidity on food and beverage sector in Nigeria. This food and beverage sector contributes a larger market size in Nigeria.

Therefore, the food and beverage sector can play a major role in the future growth of economy of Nigeria. So, this sector requires considerable attention. This study aims to fill this gap of non-availability of research work on food and beverage sector of Nigeria, in respect of working capital management policy and their effects on the sector financial performance for the past five years annual time series.

3. RESEARCH HYPOTHESES

Based on the above inconclusive effects of working capital policy on firm's profitability and liquidity level respectively from the background to the study and reviewed literatures, the following null hypotheses are formulated and tested.

H₀: There is no relationship between Working Capital Management Policy and profitability performance of Nestle Nigeria Plc

H₀: There is no relationship between Working Capital Management Policy and liquidity performance of Nestle Nigeria Plc

4. RESEARCH METHODOLOGY

This study made use of secondary data and sample period range from 2008 to 2012. The data are sourced from CBN statistical bulletin as well as from Annual reports of Nestle Nigeria Plc. The research design employed is an ex-post facto design for the researchers are interested to evaluate the working capital management policy on financial performance of the Nestle Nigeria Plc, without any manipulation to the variables found in the prepared balance sheet for those periods of study.

The study employs the use of accounting ratios, descriptive and inferential statistic to test the formulated hypotheses. A simple random sampling technique was used to select Nestle Nigeria Plc out of the population of the Nigerian Food and Beverage industry. The descriptive statistics involves the use of frequencies, mean percentage and charts while the accounting ratio used the profitability and liquidity ratios to achieve the objective of the study. Furthermore, the inferential statistics used to empirically test the hypotheses tested is a single linear correlation statistical test. The objective of this study is to empirical measure the nature and degree relationship between the working capital management policy and financial performance of Nestle Nigeria plc for the period of 2008-2012.

4.1 Model Specification

The simple linear correlation model used in this study is to measure the relationship between working capital management and financial performance of Nestle Nigeria Plc within 2008-2012. This is expressed in the functional and mathematical equation respectively as follows:

Financial performance = f (working capital management policy)

Where

Financial performance is proxies as Returns on Assets (ROA) as the dependent variable for the time series equation study.

Working capital management policy consist of the components of working capital including Current Ratio (CR), Quick Ratio (QR); Inventory Turnover Ratio (ITR), Average Collection Period (ACP); Average Payment period (APP) .

However in this study, the working capital ratio is proxies as Cash Conversion cycle (CCC) as the independent variable as against other literatures.

5. DATA PRESENTATION

In this section, the data for the study are presented for the period of 2008 – 2012 respectively. In order to draw an inference from the findings, the study presents the financial Statement trends of Nestle Nigeria Plc to measure profitability ratios, Liquidity ratios and Working Capital ratios using accounting ratios principle as stipulated by GAAP.

5.1 Data presentation of Nestle Nigeria Plc

The table below shows the five year summary of financial statements of Nestle Nigeria Plc between 2008 and 2012.

Table 1: Five-year Annual Financial Statements Summary of Nestle Nigeria Plc (In naira).

YEARS	2008 (#)'000	2009 (#)'000	2010 (#)'000	2011 (#)'000	2012 (#)'000
Profit After Tax (PAT)	8332	9784	12,602	16,496	21,137
Changes in percentage	-	+17%	29%	30%	28%
Turnover	51,742	68,317	82,726	97,961	111,707
Changes in percentage	-	32%	21%	18%	19%
Gross Profit Before Tax	11,862	13,783	18,244	18,199	25,050
Changes in percentage	-	16%	32%	-2%	37%
Total Assets	29,160	47,253	60,347	77,728	88,963
Changes in percentage	-	62%	27%	28%	14%
Shareholder's Fund	9,031	10,544	14,865	23,210	34,186
Changes in percentage	-	10%	41%	56%	47%
Current Assets	15,342	21,844	20,105	22,210	26,356
Changes in percentage	-	42%	-8%	10%	18%
Current Liabilities	11,094	22,012	19,455	24,815	25,180
Changes in percentage	-	98%	-12%	27%	1%
Inventories	-	10,698	8,494	9,902	8,785
Changes in percentage	-	-	-21%	16%	-12%
Debtors	-	4,503	7,499	10,983	13,457
Changes in percentage	-	-	66%	46%	22%
Creditors	-	4,114	4,085	10,289	6,177
Changes in percentage	-	-	-1%	151%	-40%
Cost of Sales	-	39,957	46,496	57,368	66,539
Changes in percentage	-	-	16%	23%	15%

Source: Annual report of Nestle Nigeria Plc, 2008-2012

6. RESULT AND DISCUSSION

6.1 Accounting Ratios and Descriptive Statistics of Profitability Ratios of Nestle Nigeria Plc

The profitability ratios and the descriptive statistics results of Nestle Nigeria Plc for the period of 2008-2012 as presented in table 2:

Table 2: Profitability Ratios and Descriptive Result for Nestle Nigeria Plc in 2008 -2012 (in percent and decimal).

Profitability Ratios	Measuring Indicators	2008	2009	2010	2011	2012	Average Ratios
Net Profit After Tax to sales	NPM	16%	14%	15%	17%	18%	16%
	Changes %	-	-13%	7%	13%	5%	12%
Gross Profit to sales	GPM	22%	20%	22%	19%	21%	
	Changes %	-	-10%	10%	-14%	10%	
Net Profit After Tax to Total Assets	ROA	29%	21%	21%	21%	24%	23%
	Changes %	-	28%	0%	0%	14%	
Net Profit After Tax to Shareholders Equity	ROE	92%	93%	85%	71%	62%	
	Changes %	-	1%	-9%	-17%	-13%	

Source: Researcher's Computation (2014)

Profitability ratios are important measures of the ability of a business to turn its sales into profits and also to earn profits on assets and owner's equity commitment. Investors, creditors and shareholders all consider profitability to confirm the returns on their investment (ROI) or return on total assets (ROA). They may also assess the financial risks associated with their investment. In this study the following four profitability ratios are used to measure the business financial performance in terms of profitability: Net Profit Margin (NPM), Gross Profit Margin (GPM), Return on Asset (ROA) and Return on Owner Equity (ROE) respectively

6.1.1 Net Profit Margin (NPM)

Net profit margin is one of the profitability ratio which is widely used as a measure of management efficiency.

However, a low net profit margin ratio may indicate that expenses are too high relative to sales revenues. Net Profit Margin is computed by dividing the net profit after tax by total sales (i.e. cash and credits). The higher the NPM, the greater the management's efficiency in reducing the operating cost and guaranteed satisfactory return on shareholders' fund.

The table 2 is demonstrated in the chart below as follows:

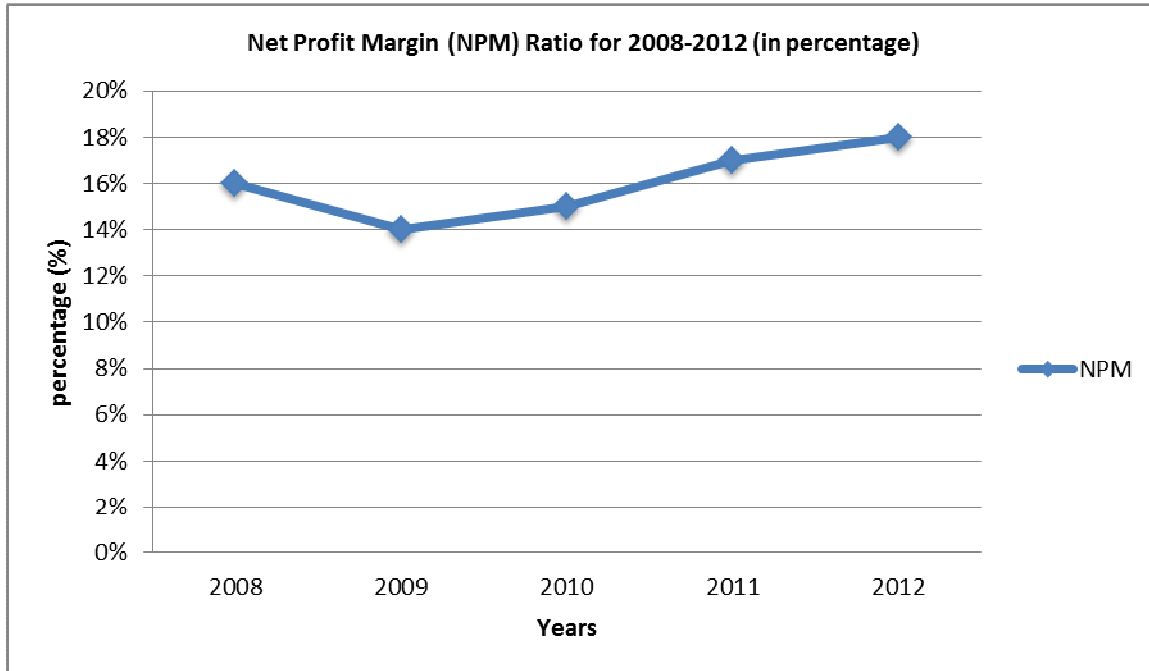


Figure 1: Net Profit Margin Ratio of Nestle Nigeria Plc

From the table and diagram above, the NPM ratios of NPM between 2008 – 2012 shows an average low value of 16 per cent. From 2008, NPM ratio recorded a value of 16 per cent and declines to 14 per cent in 2009 by 13 per cent negative changes. However, from 2010 to 2012, NPM ratio of Nestle Nigeria Plc shows a slight progressive increased from 15 per cent in 2010 to 17 per cent in 2011 as well as 18 per cent in 2012 respectively and also increased growth rate was inconsistent and retrogressive. This low Net profit after tax to sales indicates that Nestle Nigeria PLC had been challenged with an increased operating cost for the past five years of the study of 2008-2012 respectively. With this result, it is concluded that the study shows an inverse relationship between the working capital management policy and profitability of Nestle Nigeria Plc within the period of study.

6.1.2 Return on Assets (ROA)

The return on asset ratio (ROA) or return on investments (ROI) indicates the business's effectiveness in generating profits from its available assets. Return on Assets is literally used to assess the profit-earning performance of the business's assets. It relates the net profit after tax in the income statement to the assets in the business's balance sheet. A high ratio on return on asset shows effective management and good opportunities for future business growth.

In this study, the table 2 which shows the five year trends analysis of ROA of Nestle Nigeria Plc are demonstrated in the chart below:

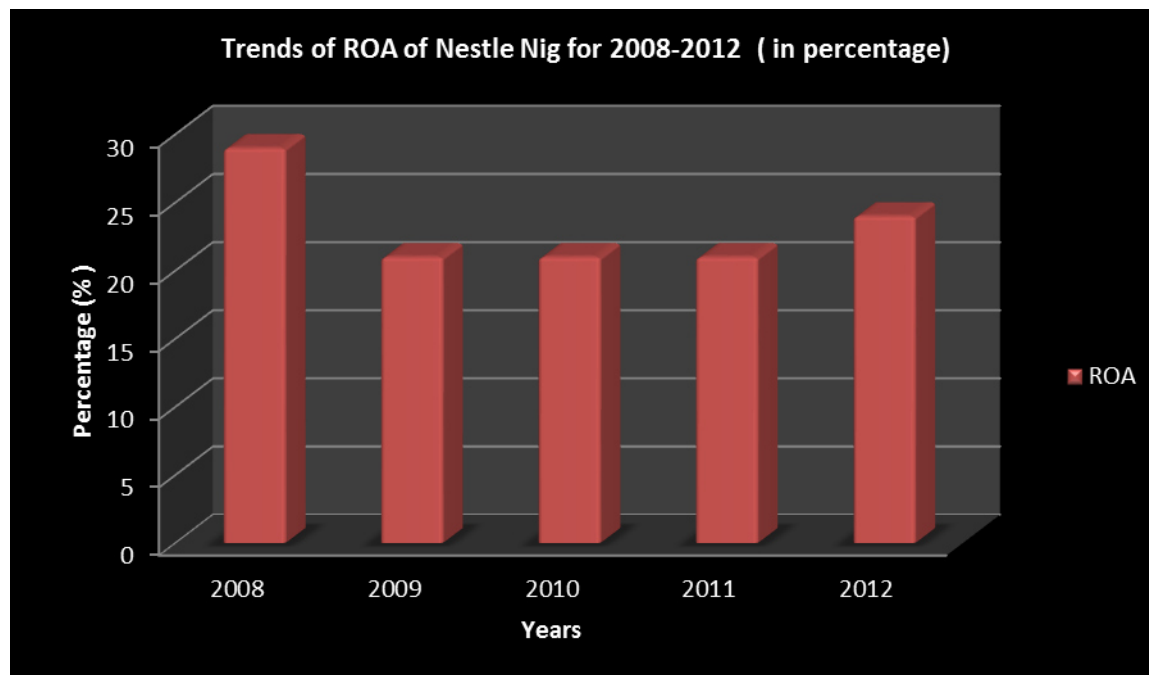


Figure 2: Return on Assets (ROA) Ratio of Nestle Nigeria Plc.

From the Bar chart above and table 2, it could be deduce that for the past five years of the study from 2008 to 2012, the average return on assets for the five years of study is relative very low of 23 per cent. Also, the trend analysis shows that from 2008 the ROA recorded a 29 percent and subsequently recorded a constant performance of 21 percent from 2009 to 2011. While 2011 shows an insignificant increase from 21 percent to 24 percent. This profitability ratio trend implies that Nestle Nigeria Plc had not effectively managed the resources of the firm for greater efficiency and optimum economic value for the shareholder's returns due to poor working capital management policy for the period of study.

6.2 Liquidity Ratios and Descriptive Statistics for Nestle Nigeria Plc(2008-2012)

The liquidity and descriptive statistics results of Nestle Nigeria Plc for the period of 2008-2012, using both Current ratio and Quick ratio for this study are presented below:

6.2.1 Current Ratio (CR) and Quick Ratio (QR):

The current ratio is one of the commonly cited financial ratios as it measures the firm's ability to meet its short-term obligations. This process is done by dividing the business's current assets by its current liabilities. Current ratio assumes that both account receivables and inventory can be easily converted to cash. A current ratio of 1:1 or less is considered to be low and indicative of financial difficulties. A current ratio of 2:1 is recommended to be a desirable minimum. A current ratio that is more than 2:1 often suggests excessive liquidity that may be adverse to the business's profitability (Boone & Kurtz, 2010; Gitman, 2009; Hatten, 2008).

The quick-ratio (acid test) is similar to the current ratio except that it excludes inventory, which is the least liquid current asset. It measures the business's ability to meet its current obligations with the most liquid of its current assets (Boone & Kurtz, 2010; Brealey et al., 2006; Gitman, 2009; Hatten, 2008).

The chart below demonstrates the trend analysis of current ratio and quick ratio for Nestle Nigeria within 2008 and 2012 shown in table 2 as follows:

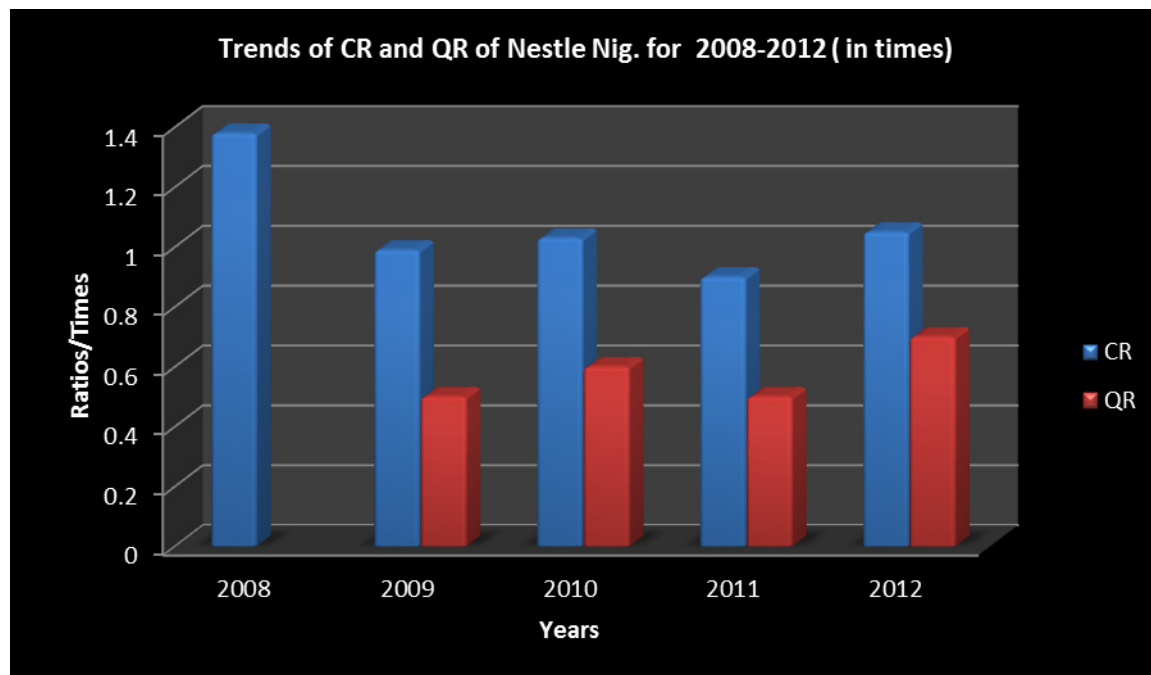


Figure 3: Return on Assets (ROA) Ratio of Nestle Nigeria Plc.

From the graph and table 2 above, it could be deduced that the liquidity ratios of the firm had being inconsistent from 2008 to 2012. From 2008, there was a sharp reduction from 1.38 times and nil for both current ratio and quick ratio to 0.99 and 0.51 times in 2009. However, from 2009 to 2010, there was a slight increase in the liquidity ratios from 0.99 and 0.51 times to 1.03 and 0.60 times for current and quick ratios respectively. Also a decline was recorded in the liquidity ratio from 2010 to 2011 by 13 percent and 17 percent negative decreased. And by 2012, the firm also experienced an upward increase in the liquidity ratio from 0.9 and 0.5 to 1.05 and .7 times respectively. In conclusion, it was deduced that for the period of 2008 to 2012, Nestle Nigeria Plc did not meet both the minimum accounting standard of 2:1 and 1:1 for current ratio and quick ratio respectively. This shows that the company is financially illiquid and have had liquidity challenges for the period of study. This provides the reason why poor illiquidity problem had also contributed also to poor profitability performance of Nestle Nigeria Plc within 2008 -2012 respectively. Therefore, it is concluded that the low liquidity policy of Nestle Nigeria Plc to meet short term obligations had adversely reduce the profitability level within the period of study.

6.3 Descriptive Analysis of Working Capital Ratios of Nestle Nigeria Plc

Working Capital ratio is otherwise known as Activity ratio. It measure how a firm' capital or resources are converted into sales or cash. These ratios are frequently used to measure how efficiently a business uses its assets to generate sales or cash. It also provides a measure of how effectively an organisation is using its assets to generate net income.

This study analyses working capital ratio using three components of working capital such as Inventory Turnover in Days (ITID), Average Collection Period (ACP) and Average payable Period (APP). The summation of these three components is called Cash Conversion Cycle (CCC). The CCC means the number of days it takes for the company to receive cash after cash outlay. Hence, CCC is used in this study to measure the level of working capital as against the traditional method of Net working capital and Current ratio used in the liquidity ratios.

The chart below demonstrates the components of working capital ratios, using Cash Conversion Cycle as follows:

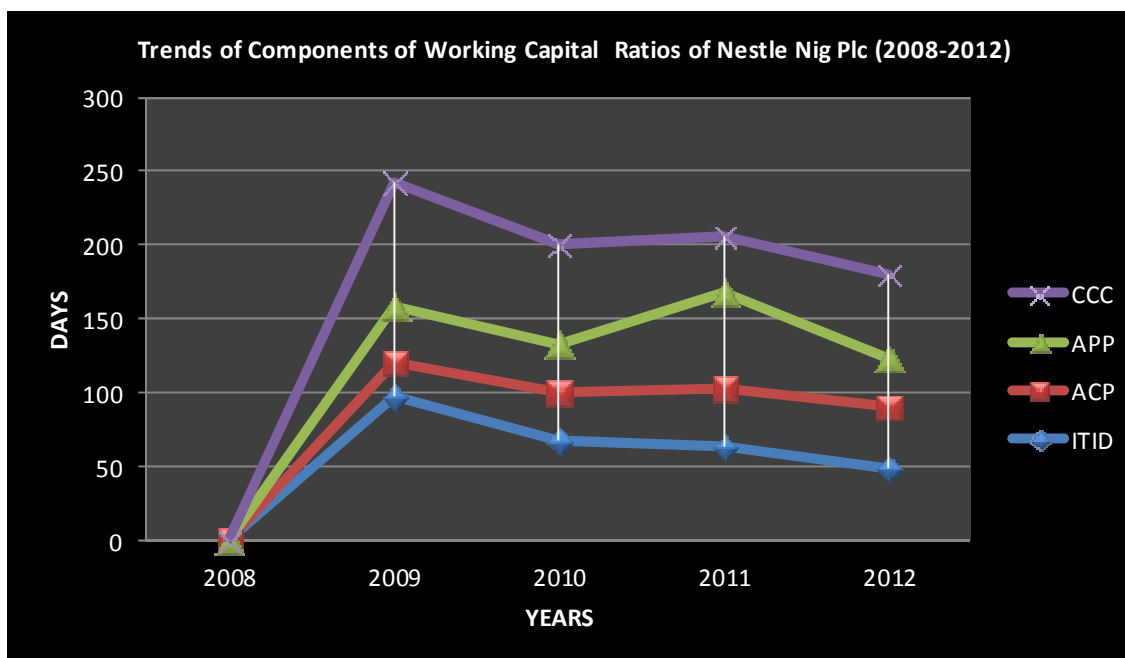


Figure 4: Component of Working Capital Ratios

The graph shown above demonstrates the components of working capital ratios to measure how firm's uses all of its assets to generate sales for each financial period. Based on the figures given on the graph mentioned above, between 2008 and 2010 all have a sharp fall in the days of net flows of cash receivables and cash paid out from 83 days to 68 days respectively. Furthermore, it revealed that the days of receivable cash increases largely from 24 days to 33 while the days of payable for the firm reduces, hence it reduces the drastically the days of CCC from 83 days to 68 days respectively. However, between 2010 and 2012, the ACP also recorded progressive increases from 33 in 2010 to 40 days in 2011 as well as 42 in 2012 respectively. While a geometric reduction occur in the APP and ITID from 2010 to 2012 by 33 per cent and 25 per cent respectively. In conclusion, the average CCC of 62 days implies that it takes greater number days for Nestle Nigeria Plc to receive cash after cash outlay. Hence, the firm employs a high working capital policy which had resulted in low profitability of the NPM and ROA respectively as shown in the profitability ratios above within the period of study.

7. TESTING OF HYPOTHESES: RESULTS AND INTERPRETATIONS

This section is aimed at drawing an inference on each hypothesis statement made for the study. Each of the hypothesis statement is tested by simple correlation formula:

Hypothesis I

Ho: There is no relationship between Working Capital Management Policy and profitability performance of Nestle Nigeria Plc

Ho: There is a relationship between Working Capital Management Policy and profitability performance of Nestle Nigeria Plc

Table 3: Computation of Simple Correlation between WCM and Profitability

Variables	2008	2009	2010	2011	2012
CCC	-	83	68	38	57
ROA	29	21	21	21	24

Source: Authors' computation from the Annual Report of Nestle Nigeria

Model: Functional Model

Profitability = f (Working Capital Management)

Where

Profitability is proxies as Return on Assets (ROA) and represented as Y

Working Capital Management is proxies as Cash Conversion Cycle (CCC) and represented as X variable

Table 4: Computation of Simple Correlation coefficient

YEARS (N)	Y	X	XY	X ²	Y ²
2008	29	-	0	0	841
2009	21	83	1743	6889	441
2010	21	68	1428	4624	441
2011	21	38	798	1444	441
2012	24	57	1368	3249	576
	116	246	5337	16206	13456

$$R_{xy} = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \cdot n \sum Y^2 - (\sum Y)^2}}$$

$$R_{xy} = \frac{5(3325.36) - (246)(116)}{\sqrt{5(16206) - (246)^2 \cdot 5(3126.29) - (102.9)^2}}$$

$$R_{xy} = \frac{26,685 - 28536}{2,237.2}$$

$$R_{xy} = -0.827$$

$$R_{xy} = -0.83$$

Conclusion

With the correlation co-efficient value of -0.83 (83%), it implies that there exist a negative significant relationship between working capital management policy and profitability performance of Nestle Nigeria Plc within 2008 and 2012. This inferred that Nestle Nigeria Plc within the period of study had embarked on conservative working capital management policy which had impeded the profitability performance of the firm. This finding is similar to Amir, S.M. & Sana (2006); Raheman & Nasr (2007); Afza & Nazir (2008) and Binti Mohamad & Mohd Saad (2010). They all employed an annual time series studies with different methodology and similarly concluded that there exist a negative relationship between working capital management and organizational profitability.

In sum, this study was an improvement over similar studies for it established that a high negative relationship existed between WCM and profitability performance of Nestle Nigeria Plc within 2008-2012.

Hypothesis II

H₀: There is no relationship between Working Capital Management Policy and liquidity performance of Nestle Nigeria Plc

H₁: There is a relationship between Working Capital Management Policy and liquidity performance of Nestle Nigeria Plc

Table 5: Computation of Simple Correlation between WCM and Liquidity

Variables	2008	2009	2010	2011	2012
CCC	-	83	68	38	57
CR	1.38	0.99	1.03	0.90	1.50

Source: Source: Authors' computation from the Annual Report of Nestle Nigeria

Model: Functional Model

Liquidity performance = f (Working Capital Management)

Where

Liquidity performance is proxies as Current Ratio and represented as Y variable

Working Capital Management is proxies as Cash Conversion Cycle (CCC) and represented as X variable

Table 6: Computation of Simple Correlation and Regression Analysis

YEARS (N)	Y	X	XY	X ²	Y ²
2008	1.38	-	0	1.90	0
2009	0.99	83	82.17	.98	6,889
2010	1.03	68	70.04	1.06	4,624
2011	.90	38	34.2	.81	1,444
2012	1.5	57	85.5	2.25	3,249
	5.8	246	271.91	7	16,206

$$R_{xy} = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2 \cdot n \sum Y^2 - (\sum Y)^2}}$$

$$R_{xy} = \frac{5(271.91) - (246)(5.8)}{\sqrt{5(7) - (5.8)^2 \cdot 5(16206) - (246)^2}}$$

$$R_{xy} = \frac{1,359.55 - 1426.8}{167}$$

$$R_{xy} = -0.40$$

$$\therefore R_{xy} = -0.40$$

Conclusion:

With the correlation co-efficient value of -0.40 (40%), it implies that there exist a negative insignificant relationship between working capital management policy and liquidity performance of Nestle Nigeria Plc within 2008 and 2012.

This finding was also supported by Ganesan (2007) who concluded that there exist an inverse association between Working Capital Management (WCM) and liquidity. However, other studies like Mallik, Sur and Rakshit (2005) they concluded that there exist no significant relationship between WCM and liquidity. In sum, the study was similar with previous studies for it established that an inverse associated existed but an insignificant negative relationship existed between WCM and liquidity performance of Nestle Nigeria Plc within 2008-2012.

8. SUMMARY AND RECOMMENDATIONS

The summary of the empirical findings reveals that there is a negative relationship between working capital management policy and financial performance of Nestle Nigeria Plc within 2008 and 2012. Furthermore, the outcomes of statistical test reveal that there is a negative significant relationship between working capital management policy and profitability performance of Nestle Nigeria Plc while a negative insignificant relationship existed between WCM and liquidity performance of Nestle Nigeria Plc in the Nigerian foods and beverages industry, using accounting ratios and correlation analysis respectively for the period of 2008 -2012.

8.1 Recommendations

Based on these findings the following recommendations are proffered:

- ❖ Foremost, the firm needs to embrace aggressive working capital investment by reducing the capital invested on inventories and invest a larger portion of the capital on fixed assets to increases profitability of the firm.
- ❖ Secondly, it is recommended for the management of Nestle Nigeria Plc to reduces the days of trade receivables as well as increases the payable days in order to attained a minimum reduced cash conversion cycle days, hence contributes to increased profitability and liquidity level of the firm respectively.
- ❖ Furthermore, it is advisable for Nestle Nigeria Plc to embrace aggressive financing working capital policy as opposed the conservative policy adopted in the firm which hindered their profitability growth and expansion. Therefore, the company should aimed to finance their short term obligations through the use of short term debt financing rather than long term debt that crippled investment capacity or growth.
- ❖ Finally, the company should employed modern accounting techniques in assessing the effectiveness of

working capital management policy such as cash conversion cycle as well as Net Trade cycle (NTC) rather than the use of traditional techniques of current ratios or quick ratios which might be deceitful in management decision.

9. STUDY LIMITATIONS AND SUGGESTION FOR FURTHER RESEARCH

The scope of this study is limited to the relationship of working capital management policy and profitability and liquidity performance of Nestle Nigeria Plc, which is major player in the Nigerian foods and beverage Industry. Our study employs descriptive statistics, accounting ratios and simple correlation analysis for the period 2008 - 2012 respectively.

The future research directions of this study include the following; first, the period of the study can be expanded to start from 2000-2014. Second, the future researchers can sample more firms in the Nigerian foods and beverage industry. Third, other sophisticated statistical techniques can be used for this study. Finally, the study also suggests that researchers can undertake inter-firm comparison of sampled firms' working capital management vis-à-vis profitability and liquidity performance.

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