Working Capital Management And Firms' Profitability In Emerging Markets: The Case Of Nigerian Listed Consumer Goods Companies

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Abstract: Detrimental impact of various global financial crises on manufacturing enterprises' ability to meet their financial obligations as well as recover money from customers has rendered numerous businesses inoperable. This study examined working capital management and firms' profitability in emerging market, Nigeria listed consumer goods companies for the period 2011-2021. Data were extracted from the financial statement of the sampled companies with the use of purposeful sampling technique. Using the GMM estimator technique, the finding revealed that account payable has positive and statistically significant effect on return on equity while cash conversion circle has negative and insignificant effect at 5% level of significant respectively. The study concluded that accounts payable was found to increase the likelihood of profitability. Therefore, governments should make efforts to provide adequate infrastructure, such as a constant and stable electricity supply, a good road network, and a rail system, to facilitate cost-effective production and the movement of goods.

Keywords: "Account Payable", "Cash Conversion Circle", "Working Capital", "Operating Cycle", "ROE"

1. Introduction

The success of every organization today depends critically on its capacity to take advantage of every opportunity and pursue practical business tools and approaches to improve profitability. Effective resource management is a requirement of sound business judgment. One of the primary objectives of managers around the world is to increase the profitability of their organizations. Without a sufficient level of profitability, firms will struggle mightily to endure over the long term. Recently, profitability has become ever more imperative for businesses as stakeholders are turning their focus towards the critical role of performance (Nacasius, Augustine & Collins, 2020).

Businesses occasionally use their short-term assets and short-term finance sources to run their daily operations. Working capital management is the term used to describe the management of

such assets and liabilities. A fundamental component of management of finance is working capital management. Because both areas are focused with measuring a company's financial success, they can be compared to the long-term decision-making process (Martin, 2019). The capacity and efficient use of a firm's financial management function is critical to the firm's long-term viability (Bakare, Aliyu, & Salman, 2022; Bakare, 2023; Nwachukwu, Odo & Nwachukwu, 2016).

Proper planning and effective capital management are crucial to manage the outcome pressure from Nigeria's fiercely competitive listed manufacturing businesses. This is because it influences a company's sustainability, working capital is the most important resource that must be efficiently managed by a corporation on a worldwide scale (Korode, 2017). As a result, managers of businesses constantly adopt and modify tactics to enhance their financial success. Working capital management enables adaptation and planning.

Working capital is a crucial part of every organization that requires immediate attention as well as solid planning and administration, according to Bakare (2023). Piloting the affair of an organization's working capital must be a crucial component of achieving the financial performance of the business because resources accessible to companies are limited (David, 2010). Working capital deals with liquidity which makes it an important concern of the financial manager as the upkeep of excessive levels of current assets can easily result in dissatisfactory returns on a firm's financial performance (Alshubiri, 2011; Tracey, 2020).

The need for discreet working capital management among international firms has never been greater than it is right now, during the worst financial crisis to ever hit the world's economies, when liquidity crises have impacted almost all corporate entities worldwide (Akbar, Jiang & Akbar, 2020; Ali & Ayyuce, 2020; Nacasius, Augustine & Collins, 2020). Working capital management is an example of combining liquidity with financial performance, typically from two separate angles: inventory (stock) management and cash (liquidity) management, in an effort to ensure that the survival of corporate enterprise is achieved.

Effective working capital management calls for managers to monitor their cash holdings in the same way they monitor their inventory holdings in order to sustain continuous, uninterrupted operations (Muhammad, 2017). As the financial markets have become more volatile in recent decades, a growing number of businesses have turned to their working capital for liquidity in funding their initiatives. Liquidity companies have more cash on hand, which allows them to pay their debtors on time and lower their net financial costs. Furthermore, a corporation with more liquidity can invest in profitable prospects more quickly (Kenn-Ndubuisi & Nweke, 2019). Managing working capital includes keeping an eye on a variety of discrete but related operations (cycles). Because these processes are intertwined, actions made within one discipline can have

The alarming rate of the squeeze on cash and credits is being threatening the survival of industries in Nigeria. The fact that corporations could not exist without receivable collection is thus, undeniable (Himanshu, Saurabh, Namita, Puneet, & Satyendra, 2020). The global financial crisis, which has wreaked havoc on financial markets worldwide, has crushed companies in Nigeria. Production, sales, and the availability of money for a company have all dropped as a

an impact on the others, affecting an organization's total financial success.

result of the credit crunch. The detrimental impact of various global financial crises on consumer enterprises' ability to meet their financial obligations as well as recover money from customers has rendered numerous businesses inoperable. Companies that used to be able to pay their invoices on time are now experiencing cash flow problems. Low-risk debtors are now more likely to default on payments, causing a significant disruption in cash flow (Nacasius, Augustine & Collins, 2020; Tracey, 2020).

Businesses are now facing months of unfavorable trading circumstances. For most businesses, the revenue lost during this period is a one-time loss rather than a timing differential, putting unexpected and unplanned strain on cash. Businesses across a range of sectors are realizing that they must approach their clients, customers, and lenders to develop temporary fixes that will keep their cash flows in check (LCCI, 2020; Manufacturing Association of Nigeria, 2020; Muda, 2020).

Local manufacturers have already voiced concerns about the rising cost of manufacturing brought on by the government's erratic policies and a waning confidence in the economy (Manufacturing Association of Nigeria, 2020; LCCI, 2020). Poor performance in the economy's productive sector is attributed to the rising cost of production, according to MAN (2020).

The justification for linking the working capital management with profitability has become necessary because corporate businesses are been established to maximize profit and this can only be achieved through functional and sound working capital management to increase the profitability of listed consumer goods companies. Several studies including Elias and Nwankwo (2018); Uguru, Chukwu, and Elon (2018); Bakare (2023); Oladejo, Akande, and Yinus (2017); Edem (2017); Korede (2017); Muhammad (2017); Ojeani (2014); Soyemi and Olawale (2014); Criscent (2016); Ikpefan, Bakare, Aliyu and Salman (2022); Owolabi, Edwin and Adetula (2014); Haruna (2016) to mention a few concentrates on account payable, account receivable, cash conversion circle and their effect on the financial performance of either brewery companies, foods and beverages, conglomerates or pharmaceutical companies but this study concentrates on industrial goods firms with the used of generalized method of moments and expand the scope of the study to 2021 which was lack in the previous studies conducted in Nigeria

Research Questions

- i. How does account payable affect the profitability of listed consumer goods companies in Nigeria?
- ii. In what way does the cash conversion affect the profitability of listed consumer goods companies in Nigeria?

The justification for this study emanates from the fact that there is a consistent change in the dynamics of the consumer goods sector as well as the constant introduction of policies by the government which may make or mar the consumer goods sector of the economy as a result of unstable policies. Financial managers now understand that their role goes beyond simply determining the ideal levels of working capital and its components. Additionally, the recent global depression that devastated the manufacturing sector's work-in-progress, liquidity position, and overall business activities of consumer goods firms as a result of numerous policies put in

place by the government to stop the spread of the coronavirus pandemic served as the inspiration for this study.

2. Literature Review

The phrase "working capital" is frequently used to refer to the money needed for daily operations in a firm, such as purchasing raw materials or covering daily expenses for workers, salaries, rent, and other costs. However, there is still a lot of debate among financial experts (financiers, accountants, businesses, and economists) over what exactly the phrase "working capital" means. Working capital is used to address industry's short-term financial requirements. It is the amount of money needed to run the firm on a daily basis (Bakare, 2023; Adeniyi, 2008; Olaoye, Akintola & Ogundipe, 2019). It results from the lag in payments for raw material purchases and receipts for sales of finished goods. Working capital includes items like inventory, bills owed to suppliers, and payments that will be received from clients after sales.

Working capital is the process by which a firm finances its long-term and short-term current assets. In essence, working capital management seeks to increase shareholder value while promoting happy profitability. working capital is defined as the money that is available for a firm's immediate use. It includes a choice involving the money available to conduct a firm's day-to-day operations, such as acquiring raw materials, paying wages and salaries, and settling short-term expenditures, among other things (Bakare, 2023). The working definition of working capital refers to an amount or liquidity that can be easily converted to cash in order to run day-to-day activities of business enterprise.

Working Capital Management (WCM): According to James and Nilesh (2018), is the process of managing and controlling current assets and liabilities in order to, on the one hand, reduce the risk of being unable to meet short-term obligations and, on the other hand, avoid making excessive investments in current assets.

WCM, according to Habib and Mourad (2022), includes all significant facets of business operations. It is evident that bad account management in this cycle could cause the non-living object some considerable issues and perhaps result in its death. For the business to run smoothly, WCM and the balance of its many components are therefore essential. Similar to this, financial management's main objective is to expand shareholder wealth, and in order to accomplish this, enough sales and profit must be produced.

Therefore, working capital management is thus the remedy for a firm's ability to meet short-term commitments due for payment, and it is a condition that must be met in order for the entity's operations to continue (Bakare, 2023). Working capital management, according to Le, (2019), is concerned with the efficient use of cash required for the business' continuous activities in order to achieve its objectives.

Operating Cycle: When deciding on the ideal level of working capital, the cost of liquidity and the cost of illiquidity must be balanced. The best level of working capital is therefore achieved when the cost of liquidity is equal to the cost of illiquidity (James & Nilesh, 2018). When the cost of the liquidity curve equals the cost of the illiquidity curve, resulting in the minimum point

of the total cost curve, the optimal amount of working capital is obtained. The cost of liquidity rises with increased liquidity. Similarly, when the value of present assets declines, the cost of illiquidity also decreases.

Thus, the operating cycle begins with inventory, which is then changed into accounts receivables when it is sold, and lastly, cash when sales are collected. The gross operational cycle, according to Pandy (2005), is made up of the Inventory Conversion Period (ICP) and the Debtor's Conversion Period (DCP). ICP + DCP is thus the operating cycle. The inventory conversion period is the average time it takes for products to be acquired and sold. The conversion period of the debtors is the average number of days between the sale of products and the collection of the resulting receivables. Jaworski and Czerwonka (2022) views the operating cycle as a trading cycle which is the period between the acquisition of inventory and the collection of cash from receivables.

Empirical Review

Ali and Ayyuce (2020) evaluated the impact of WCM on the financial performance of EU-listed companies. The findings demonstrate that current ratio-estimated liquidity measures have a statistically significant detrimental impact on ROA across the board for EU member states. Similar to this, Amer (2020) investigates the effects of WCM on chosen countries' profitability for the years 2019–2020 while taking the relationship between accounting and finance into account. With the help of Skype interviews performed in Arabic and English, the study included Austria, Bangladesh, Hungary, Jordan, Qatar, and Turkey. Sixteen financial managers participated in semi-structured interviews for the study. The study's conclusions showed that while finance provides the accountant with essential knowledge and abilities, their connection is complementary.

Fahmida and Ye (2019) looked at the effects of WCM on the corporate performance with limits of listed firms in China from 2005 to 2015. The study made use of the GMM estimator, which controls unobserved firm heterogeneity. The study's findings demonstrated that the ideal working capital level for financially restricted firms is significantly lower since debt rationing and high-cost leverage borrowing are present. The study finds that active WCM has benefits and is strongly associated with higher corporate values.

Muhammad (2017) discovered a strong positive association between the cash conversion cycle and profitability in Nigeria as well as a negligible positive relationship between the profitability and the inventory turnover ratio. In a different study, Crescent (2016) found a statistically significant relationship between working capital and firms' performance. According to a study by Haruna (2016), working capital management has a favorable impact on SMEs' performance. Ikpefan, Owolabi, Edwin, and Adetula (2014) discovered a positive correlation between Cadbury Nigeria Plc's liquidity, efficiency ratios, and return on equity while finding a negative correlation between Nestle Nigeria Plc's liquidity, efficiency ratios, and return on equity.

Resource-Based Theory: When scholars became dissatisfied with the structure-conduct-performance paradigm established in earlier study (Porter, 1985), they began

to evaluate internal sources of competitive advantage rather than external ones, and the theory gained traction in the early 1990s. Indeed, in the industrial orientation perspective, sector characteristics (the five forces defined by Porter in 1979) determine performance, and enterprises can obtain a competitive advantage by choosing between price-leadership and differentiation tactics.

One of the most widely accepted ideas for determining a firm's competitive advantage is the resource-based approach. Essentially, resource-based theory introduces a significant new component to the field of strategic management: a focus on firm-internal resources for obtaining long-term competitive advantages and earning rents, emphasizing companies' uniqueness. These general claims form the foundation of what is now known as resource-based thinking.

Firms, according to Barney (1991), can be thought of as a collection of resources that determine preferred strategies in accordance with their ability to exploit these resources and generate competitive advantage and rents. The goal of this theory is to prove that a firm's resources, which are distributed in a variety of ways, are the foundation of competitive advantage and higher performance.

The resource must be valuable because it must be able to guide the company toward developing a strategy that would boost efficiency and usefulness while lowering costs and increasing revenues. Resources are essential for a company's survival and prosperity. You could employ either human or material resources. Making the distinction between resources and capabilities is crucial when evaluating a company's resources. Since resources are used as inputs during the production process, they serve as the fundamental analytical unit.

A capability is the ability or capacity of a collection of resources to carry out a certain task, and team coordination and cooperation are essential components of any productive activity. As a result, it is presumed that a firm's capability derives from its resources (Grant, 2001). In order to ensure optimal management of the company's short-term asset (working capital), resource-based theory is used in this context to take into account the cognitive abilities of individual business managers (Alvarez & Busenitz, 2001). To effectively manage working capital and, ultimately, the profitability of the company, managers must have access to individual-specific resources that facilitate and ensure the identification of new opportunities, efficient resource gathering, and the spirit of timely payment and receivables recovery. The resource-based theory centered on the effective utilization of resources increase revenue which is organizational performance.

3. Methodology

The study employed an ex-post facto research design, which assists in the investigation of potential cause and effect relationships among the variables. For the time period (2011-2021), a sample of twelve (12) consumers goods firms listed on the Nigerian Exchange Group's floor was chosen. Purposive sampling procedures were used to determine the study's sample size out of the population of twenty-eight (28) companies that comprise of consumer goods sector. the sampled firms are: Dangote Flour mills Plc; Dangote sugar refinery plc; flourmills Nig. Plc; Nestle Nig. Plc; Nascon Allied Ind.; Unilever Nig. Plc; PZ Cussons Nig. Plc; Honeywell Flour mill plc; Vital

foam Nig. Plc; Champion Brewery plc; Cadbury Nig plc; Vono product plc. The Generalized Method of Moments (GMM) estimator was used in the study, which is suitable for the study. This is so because GMM dynamic estimator has the highest power to deal with endogeneity which standard econometric techniques such as OLS do not provide unbiased estimates, due to the presence of the lagged dependent variable among the explanatory variables (Bakare, 2023; Bakare, Aliyu & Salman, 2022; Fan, Gentry & Li, 2011; Masoud, 2014). Noting that GMM dynamic estimator was used by Fahmida and Ye (2019), Stata version 14.5 was used as the software for analyzing the data of this study. Specification model is of the following form:

 $ROE_{it} = \alpha + \beta_1 ACP_{it} + \beta_2 CCC_{it} + \mu_i$

Where:

ROE = Return on Equity; ACP = Account Payable; CCC = Cash Conversion Circle.

4. Data Analysis and Discussion of Findings

When employing the GMM estimation method, it is implicitly assumed that correlation analysis would be conducted to determine whether there is a relationship between the variables and how strong it might be. Table 1 uses pairwise correlation to show the relationship between the variables.

Variabl			
e	ROE	ACP	CCC
ROE	1		
ACP	-0.0962	1	
	(0.060)		
CCC	-0.0269	-0.2586	1
	(0.583)	(0.000)	

Table 1: Correlation Analysis Results

Source: Author's Computations, 2023.

Note: ROE return on equity; ACP is account payable; CCC is cash conversion circle.

Return on equity (ROE) has statistically significant positive correlation coefficients with the account payable (-0.0962 with p-value of 0.060) and the cash conversion circle (-0.2586 with p-value of 0.000). This implies that return on equity of sampled firms has significant positive relationship with return on equity but a significant negative correlation with account payable. It also implies that return on equity moves in the same direction with the account payable, higher level of return on equity are associated with higher level of account payable of sampled firms and vice versa.

The results of the inferential analysis, which was carried out primarily to address the research questions, meet the goals of this study, and validate its assumptions, are presented in this section. Regression analysis was primarily performed and reported here for these reasons. In order to

examine the time series properties of the panel data variables used in the study and make a decision regarding the appropriate method of estimation, additional pre-estimation tests, such as the unit root test, arellano-bond test of auto correlation, sargan test, and variance inflation factor (VIF) test, were also conducted and presented prior to the major results.

4.1 Panel Unit Root Test

Fisher-type augmented Dickey-Fuller (Fisher-ADF) and Fisher-type Phillips-Perron (Fisher-PP) unit root tests were also performed for robustness purposes, and the results are shown in Table 2. The p-values and t-statistic for each test are shown. To determine whether the variables were stationary, each was first evaluated at its level series. The first-differenced series of variables, which are not stationary at their level series, were tested.

Table 2: Unit Root Test Results

	Fisher-ADF		Fisher-PP	
Variable	Statistic	p-value	Statistic	p-value
ROE	9.549	0.000	12.902	0.000
ACP	14.5	0.000	34.13	0.000
CCC	1.32	0.093	17.88	0.000

Source: Author's Computations, 2023.

Note: ROE return on equity; ACP is account payable; CCC is cash conversion circle.

The results of the unit root test are shown in Table 2. The p-values for the Fisher-type ADF and Fisher-type PP test statistics for return on equity, account payable, and cash conversion circle of the listed consumer goods firms are less than 0.1 level of significance, indicating that the results are statistically significant. This indicates that these variables are stationary and that there is no unit root in them. All of the study's variables can therefore be deemed stationary. As a result, estimate techniques like the (GMM) regression can be used without risk of producing false regression results.

		Windmeijer-Corrected Standard							
Variable	Coefficient	Errors	Ζ	p-value					
ROE(lag)	0.000556	0.000457	1.22	0.223					
ACP	0.00026	0.057244	-10.74	0.000					
REC	-0.00067	0.031371	0.22	0.934					
Constant	0.146047	0.036029	4.05	0.000					
Wald									
Chi-squared	53100.0			0.000					
AR test (1)	-1.473			0.140					
AR test (2)	-1.046			0.295					
Sargan test	24.68			0.101					
Mean VIF	1.15								

Table 3: Two-Step System GMM Regression Result

Source: Author's Computations, 2023.

The Wald Chi-squared statistic value for the regression model is 53100.0, and the p-value for the regression model is 0.000, which is less than 0.05 (the 5% significant threshold), according to the data on the fitness of the regression model shown in Table 3. This suggests that the model has a strong fit and is statistically significant.

The results in Table 3 also include the Arellano-Bond test of autocorrelation (AR), which has a null hypothesis of no autocorrelation. This test evaluates the model of this study in terms of autocorrelation (or serial correlation). First-order autocorrelation may be acceptable in the GMM result, according to the test's main premise, but second-order autocorrelation raises severe questions about the validity of the result. The result in Table 3 demonstrates that the p-value is much higher than 0.05 and the first-order autocorrelation statistic value is quite high (i.e., -1.473). This satisfies the test's requirement and suggests that there is no first-order autocorrelation. The outcome also demonstrates that the p-value is significantly higher than 0.05 and the second-order autocorrelation statistic value is extremely high (i.e., -1.046). This shows that the second-order test cannot reject the null hypothesis, satisfying the test's requirement. As a result, the model passes both first order and second order tests without having any autocorrelation issues.

The validity of the tools used to develop this model was assessed using the over-identifying restriction test developed by Sargan. This was done in order to verify the accuracy of the restrictions placed on the tools used to prevent over-identification. The null hypothesis of this test is that over-identifying constraints are valid. Given that the statistic value of this test result is 24.68 and its p-value is greater than 0.05, the results show that the null hypothesis of the test could not be rejected for the model. This suggests that the model can tolerate the over-identifying constraint. The model's computed variance inflation factor (VIF) showed a mean value of 1.15, which is less than the threshold value (10) used to determine if the variables will cause a multicollinearity issue (Asteriou & Hall, 2016). This indicates that the model does not have high multicollinearity.

According to the results of examining the significance of each explanatory variable in the model, account payable has a positive and statistically significant effect, with a coefficient of 0.00026 and a p-value of 0.000, while the cash conversion circle has a negative and insignificant effect, with a coefficient of -0.00067 and a p-value of 0.934 at 5% level of significant respectively.

The substantial positive account payable coefficient indicates that an increase in account payable of 1% will result in an increase in return on equity of 0.00067% points. Additionally, the negligible coefficient of the cash conversion circle indicates that a 1%-point rise in the cash conversion circle will result in a -0.00067% point decline in the listed consumer products companies in Nigeria's return on equity. Considering the results of the regression estimate shown in Table 4. GMM-based regression models that were used to examine the data suggest that the working capital of the listed consumer goods products can influence the profitability activities of enterprises. The first regression result shows a significant and significant association between working capital and the profitability of listed consumer goods companies in Nigeria. This research demonstrates that an increased account payable and discounts on early payments take precedence when a company's working capital falls below the desired level. The findings of this

study are aligned with the study by Le (2019); Habib and Mourad (2022) and Bakare, Almustapha and Salman (2022) but contradict the study by Fahmida and Ye (2019).

5. Conclusion and Recommendations

The study concludes that working capital management has a significant effect on the profitability of listed consumer goods companies in Nigeria. Specifically, when individual working capital management variables are considered, account payable was found to increase the likelihood of profitability. The study found evidence in the results to support the idea that accounts payable with a minimum holding period can increase the profitability of sampled firms. Based on this conclusion, the following recommendations were made:

- i. Management of consumer goods enterprises should cut back on excessive investments in current assets to decrease excess cash and account receivables, as well as high inventory expenses. To avoid incurring unnecessary additional expenditures. The longer the inventory holding duration, which is linked to greater storage and carrying costs and more susceptible to stock spoiling, the worse the impact on inventory turnover. Due to this, managers of consumer goods companies should provide an inventory turnover strategy that reduces the amount of time that inventory is held.
- ii. Governments should endeavor to provide adequate infrastructure such as constant and stable electricity supply, good road network and rail system to facilitate the cost of production at minimum cost and movement of goods. Steady production has become challenging due to the rising price of diesel, with 70% of manufacturing firms relying on it, and frequent electricity supply disruptions.

6. Limitation of the Study

The study is limited to the consumer goods sector of the manufacturing companies quoted in Nigerian Exchange Group for the period between 2012 to 2021 and this render the results of the study applicable mainly to these sectors.

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