

Working Capital Management and Financial Performance of Selected Quoted Firms in Nigeria

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Abstract: - This study examines the impact of Working Capital Management on Financial performance of selected quoted firms in Nigeria. The study has been conducted in different parts of the globe and in Nigeria with different findings which are mixed and inconclusive. The population of the study consists of ten (10) firms quoted on the Nigerian stock exchange as at 31st December 2019 out of which ten (10) firms were selected as samples for a period of seven (11) years from 2009 to 2019 based on purposeful sampling technique. The study uses multiple regressions as a tool for analysis. The proxy for working capital management were cash conversion period, debt equity ratio and inventory conversion period while the proxy for financial performance was Return on Equity (ROE). The study reveals that Cash Conversion Cycle showed a positive significant impact on financial performance of selected quoted firms in Nigeria while Debt Equity Ratio and Inventory Conversion Period have no significant impact on financial performance of selected quoted firms in Nigeria.

Keywords: Working Capital Management, Financial performance, Debt Equity Ratio, Cash Conversion Cycle, Firm Size.

I. INTRODUCTION

Working capital, also known as Net Working capital, is the difference between a company's current assets and its current liabilities. Net operating working capital is a measure of a company's liquidity and refers to the difference between operating current assets and operating current liabilities. Working capital is a measure of a company's liquidity, operational efficiency and its short-term financial health. If a company has substantial positive working capital, then it should have the potential to invest and grow. If a company's current assets do not exceed its current liabilities, then it may have trouble growing or paying back creditors, or even go bankrupt. Working capital is also seen as a financial metric which represents operating liquidity available to a business, organization, or other entity, including governmental entities. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. Gross working capital is equal to current assets. Working capital is calculated as current assets minus current liabilities. If current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit. A company can be endowed with assets and profitability but may fall short of liquidity if its assets cannot be readily converted into cash. Positive

working capital is required to ensure that a firm is able to continue its operations and that it has sufficient funds to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable and payable, and cash. Working capital management is a business strategy designed to ensure that a company operates efficiently by monitoring and using its current assets and liabilities to the best effect. The primary purpose of working capital management is to enable the company to maintain sufficient cash flow to meet its short-term operating costs and short-term debt obligations. Working capital management can improve a company's earnings and profitability through efficient use of its resources. Management of working capital includes inventory management as well as management of accounts receivables and accounts payables. The objectives of working capital management, in addition to ensuring that the company has enough cash to cover its expenses and debt, are minimizing the cost of money spent on working capital, and maximizing the return on asset investments. Efficient working capital management helps maintain smooth operations and can also help to improve the company's earnings and profitability. Management of working capital includes inventory management and management of accounts receivables and accounts payables. The main objectives of working capital management include maintaining the working capital operating cycle and ensuring its ordered operation, minimizing the cost of capital spent on the working capital, and maximizing the return on current asset investments. Working capital management is essentially an accounting strategy with a focus on the maintenance of a sufficient balance between a company's current assets and liabilities. An effective working capital management system helps businesses not only cover their financial obligations but also boost their earnings.

Empirical studies have been conducted on Working Capital Management and financial performance like Ajayi, Abogun and Taiwo (2017), Melita, Maria and Petros (2010), Frank, Joachim, Irene and Nicholas (2019), Uwaoma and David (2017), Godswill *etal* (2018), Mabandla (2018), Oseifuah (2018), Kibet Kiptoo, Kariuki and Maina (2017), Oloruntoba, Olusegun and Ezekiel (2017) which are African base and have provided mixed and inconclusive findings due to the data collected, methodology used and the industry used

and to the best of our knowledge, among studies conducted in Nigeria, we have not seen a study that took into consideration the selected quoted firms from food and beverage and agricultural industries. To this end, this study attempt to fill the gap by examining the impact of Working Capital Management on Financial performance of selected quoted firms in Nigeria. The main objective of the study is to examine the impact of Working capital management on financial performance of quoted selected firms in Nigeria. Specific objectives are: to determine the extent to which Debt-Equity ratio impact on financial performance of quoted selected firms in Nigeria, to determine the extent to which cash conversion cycle impact on Financial performance of quoted selected firms in Nigeria, to determine the extent to which inventory conversion period impact on Financial performance of quoted selected firms in Nigeria. In line with the specific objectives, three hypotheses are formulated which are: H_{O1} Debt-Equity ratio has no significant impact on financial performance of quoted selected firms in Nigeria. H_{O2} Cash conversion cycle has no significant impact on financial performance of quoted selected firms in Nigeria. H_{O3} Inventory conversion period has no significant impact on financial performance of quoted selected firms in Nigeria.

II. LITERATURE REVIEW

Ajayi, Abogun and Taiwo (2017) examined the impact of working capital management on financial performance of quoted consumer goods manufacturing firms in Nigeria. Secondary Data were obtained from annual financial statements over a period of ten (10) years from 2005 to 2014 on purposively sample basis arriving at a sample of fifteen (15) firms. In order to measure variations in statistical inferences drawn through correlation and panel regression analysis. Descriptive statistics were employed. The study showed that efficient working capital management increased financial performance. Melita, Maria and Petros (2010) examined the effect of working capital management on firm financial performance in an emerging market. Data set of the study consisted of firms listed in the Cyprus Stock Exchange for the period 1998-2007. Multivariate regression analysis was used. The results of the study revealed that the cash conversion cycle and all its major components; namely, days in inventory, day's sales outstanding and creditors' payment period were associated with the firm's profitability. Mike (2014) examined whether the internal financial activity of working capital management affects the performance of Nigerian manufacturing companies. Data covering 2002-2011 from published financial statements of a panel of 75 manufacturing firms quoted on the Nigerian Stock Exchange (NSE) are analyzed using three alternative regression methods; namely fixed effect, random effect, and one-step difference GMM. The findings of the study showed that receivable conversion period and inventory conversion period are directly or positively related to manufacturing performance while payable deferral period, cash conversion cycle and the debt-equity ratio period are inversely or

negatively related to manufacturing performance. Liquidity (measured as quick ratio) has no significant relationship with manufacturing performance.

Frank, Joachim, Irene and Nicholas (2019) examined the contribution made by the internal control systems and working capital management on financial performance of supermarkets. They used cross-sectional and co relational. Firm-level data that were collected by means of a questionnaire survey from a sample of 110 supermarkets in Uganda. The study findings showed that working capital management is a significant predictor of financial performance. Uwaoma and David (2017) examined the impact of Working Capital Management on Financial Performance of Oil companies in Nigeria. The Quasi-Experimental design was employed. The Pearson Product Moment Correlation was used to test the hypotheses. The results of the study showed a progressive and perfectly substantial relationship amongst investing and financing rules and Return on Assets (ROA), a neutral and minor relationship amid both financing and investing policies and earnings per share (EPS) exists. Furthermore, there was an insignificant but undesirable relationship amongst investing and financing rules and return on equity (ROE).

Godswill *et al* (2018) examined the impact of Working Capital Management on bank performance. Panel data of ten (10) deposit money banks in Nigeria for seven years (2010–2016) was employed and Panel fixed effect, Panel random effect and the Pooled OLS for the two models were used as proxies for bank profitability. Return on Asset (ROA) and return on equity (ROE) were used to measure bank profitability, with the indicators of working capital; net interest income, current ratio, profit after tax, and monetary policy rate. Results of the study showed that working capital management had a significant effect on the profitability of the selected banks and that return on asset was a better measure for bank profitability. Mabandla (2018) examined the relationship between working capital management and the financial performance of listed food and beverage companies in South Africa. Data from a sample of 12 food and beverage companies listed on the JSE during the period 2007 to 2016 were collected from *ires* McGregor databases. Econometric regression analysis was then conducted on the data to determine the magnitude of relationships between working capital components and the financial performance of these companies. They found out that adopting an aggressive working capital management strategy assists in creating shareholder wealth through improved financial performance of the firm. The shorter the cash conversion cycle, the more profitable the firm. Oseifuah (2018) examined the Global financial crisis, working capital management and profitability of non-financial firms. Sample of 75 non-financial firms listed on the JSE over the 10-year period, 2003 to 2012. Panel data regression was used. The results of the study revealed a significant negative relationship between RCP and profitability during the financial crisis only. Second, during the crisis period, the relationships between

profitability and both cash conversion cycle and ICP, and also between profitability and PDP are negative and positive respectively; however, the relationships are insignificant. On the basis of the above findings this study recommends that corporate managers must adopt efficient working capital management policies during non-crisis periods in order to withstand liquidity constraints in the likely event of a sudden economic downturn. KibetKiptoo, Kariuki and Maina (2017) opined the effect of working capital management practices on the financial performance of the tea processing firms in Kenya. Cross-sectional Descriptive research design was employed. The population of 54 tea processing firms in Kenya managed by KTDA was used out of which 48 tea processing firms was used as sample for the study. Stratified random sampling method was used to select the sample. Primary data was collected by use of a questionnaire whereas the secondary data was collected by use of a record survey sheet. Pretesting was done to determine the reliability and validity of the questionnaire. The data collected was analyzed using Statistical Package for Social Sciences (SPSS). The study found that tea processing firms have established an inventory and payment management policies to guide the firms in managing their inventory. The Pearson correlation and ANOVA results showed that inventory management has a negative significant relationship with the financial performance of tea processing firms. The study therefore recommends tea processing firms to ensure the total numbers of days taken before inventories are sold is minimized in order to boost the returns of the firms. The longer the period taken to settle account payables therefore increased profitability of a firm. The firms should also prepare inventory budgets and review the budgets in order to maintain adequate inventory for smooth operations of the firm. In addition, the inventory level should be reviewed regularly to ensure optimal stock is maintained at all times. Firms should also set the level of economic order quantity to ensure sufficient inventory is ordered at minimal costs and establish an inventory control system to assist in efficient management of inventory. Firms should regularly review payables management policies to ensure optimal credit is maintained at all times. Oloruntoba, Olusegun and Ezekiel (2017) investigated the effect of working capital management on financial performance with specific reference to Nigerian Breweries Plc. Data collected for the study was extracted from the audited annual financial reports and accounts of Nigeria Breweries Plc from 2011-2016. Descriptive statistics and inferential statistics were employed to analyze that data. The study revealed that cash conversion cycle has negative and significant relationship with the return on assets (ROA). The study also confirms that there is negative but insignificant relationship between inventory conversion period (ICP), debtor conversion period (DCP), creditor conversion period (CCP) and Return on Assets. Kazimoto (2016) examined working capital management on financial performance of selected companies in Kampala. Quantitative approaches with descriptive and correlation designs were employed. They used simple random

techniques and 63 respondents were selected to respond to questions administered for data collection. The study concluded that the level of working capital management was low as well and the level of financial performance of selected companies was also low. Results of the study revealed a positive and moderate significant relationship between Working Capital Management and financial performance of the selected companies in Uganda. Nyakundi *et al* (2016) assessed the influence of Working Capital Management Practices on Financial Performance of SMEs in Machakos Sub-County, Kenya. They assessed the influence of cash management practices on financial performance, determination of the influence of receivables management practices on financial performance and the analysis of the extent to which inventory management practices influences financial performance of SMEs. The study adopted a cross-sectional survey research design which allowed the collection of primary quantitative data through structured questionnaires and interview methods. The target population was 159 Owners / Managers of SMEs trading in Machakos Sub-County. Random sampling technique was used to obtain a sample of 22 SMEs trading in Machakos Sub-County. The data was analyzed using both descriptive and inferential statistics. The results of the study showed that working capital management practices were low amongst the SMEs, since majority had not adopted formal Working Capital Management Practices and there Financial Performance was on a low average. The study further revealed that SMEs financial performance was positively related to efficient cash management, efficient receivable management and efficient inventory management. The coefficient of determination (R^2) indicated that 0.507 or 50.7% of the variables in F.P could be explained by the changes ECM, ERM and EIM. This study concluded that WCMPs have an influence on the F.P of SMEs; therefore, there is need for SMEs owners / managers to embrace EWCMPs as a strategy to improve their F.P in order to survive in the turbulent business environment. This study corroborates extant literature findings that established a positive relationship between WCMP and F.P. Kaur and Singh (2013) examined efficient working capital management on financial performance by increasing the profitability of 164 manufacturing BSE 200 companies classified into 19 industries over the period of 2000-2010 based on working capital score calculated by using normalized values of Cash Conversion Efficiency, Days Operating Cycle and Days Working Capital. The study explores abundant scope to increase the efficiency of 145 companies by improving the parameters of analysis. The study tests the relationship between the working capital score and profitability measured by Income to Current Assets and Income to Average Total Assets. The results of the study support earlier studies revealing that efficient management of working capital significantly affects profitability. Taani (2012) examined the impact of working capital management policy and financial leverage on financial performance of Jordanian companies measured in terms of net income, return on equity (ROE) and

return on asset (ROA). Pearson's rank correlation test, ANOVA F- test, and multiple regression analysis were used on 45 companies included in the industrial sector in Jordan ranked in terms of gross revenues. Results of the study showed that firm's working capital management policy, financial leverage, and firm size have significant relation to net income. Working capital management policy has no significant impact on return on equity (ROE) and return on assets (ROA). Madugba and Ogbonnaya (2016) opined the impact of working capital management on financial performance of manufacturing companies in Nigeria. They employed multiple regressions in analyzing the data sourced from the published financial statement of the firms under the study. A significant outcome of the study is that Average Payment Period and Average Collection Period impacts on both Earnings per share and Return on capital employed.

III. METHODOLOGY

This research adopted correlation research design and was considered adequate and appropriate for this study because it describes the statistical relationship between independent variables of the study (Debt Equity ratio, Cash Conversion Period, Inventory Conversion Period) and the dependent variable (Return on Equity). The population consists of selected firms namely Ellah Lakes Plc, FTN Cocoa Processing Plc, Livestock Feeds plc, Okomu Oil Palm Plc, PrescoPlc, Nestle Nigeria Plc, Unilever Nigeria Plc, Cadbury Nigeria Plc, Seven Up Nigeria Plc quoted on the Nigerian Stock Exchange as at 31st December 2019 and covered a period of Eleven (11) years (2009-2019). Purposeful sampling technique was employed to select the sample. The sample selected are: Ellah Lakes Plc, FTN Cocoa Processing Plc, Livestock Feeds plc, Okomu Oil Palm Plc, Presco Plc, Nestle Nigeria Plc, Unilever Nigeria Plc, Cadbury Nigeria Plc, Seven Up Nigeria Plc In line with this, the sample size are all the ten (10) selected quoted firms on the Nigerian stock exchange.

The study employed panel data using statistical package for social sciences (SPSS 25) and Ordinary Least Square (OLS) method adopted in this study is a parametric statistical test that is based on a number of assumptions, the violation of which could affect the reliability of the results. The Pearson correlation and t-test statistics were used for inferential analysis. Two of the most commonly encountered problems addressed in this study relate to normal distribution of the variables and descriptive statistics was used to test for normality of data.

Model Specification

The model that was used to test the hypothesis formulated for this study is presented below. The null Hypothesis is tested considering the results for the P-values at 1%, 5% and 10% level of significance. The first model is the functional model from which the second model Ordinary Least Square (OLS) was derived that is firm performance model.

$$ROE = f(\beta_1 CCC + \beta_2 DEBT + \beta_3 INVTCP + \beta_4 FSIZE)$$

$$ROE = \alpha + \beta_1 CCC + \beta_2 DEBT + \beta_3 INVTCP + \beta_4 FSIZE + \epsilon_i$$

Where

α = the intercept

ROE = Return on Equity measured by profit after tax divided equity in book value

CCC = Cash Conversion Cycle measured as Days of Inventory Outstanding + Days of Sales Outstanding – Days of Payables Outstanding.

DEBT = Debt Equity ratio measured as the ratio of Total debts to Total Equity

INVTCP = Inventory Conversion Period measured as Inventory divided by cost of goods sold * 365 days.

FSIZE = Measured as natural log of total Assets.

ϵ_i = error term

Firm Size is a control variable.

IV. DATA PRESENTATION

This part presents the results of the Descriptive statistics and Regression results on the impact of Working Capital Management on Financial performance of selected quoted firms in Nigeria. Three explanatory variables and a control variable are employed for the purpose of explaining and predicting the impact of Working Capital Management on Financial performance of selected quoted firms in Nigeria.

Test of Normality

The normality tests are supplementary to the graphical assessment of normality. For this study, Z Skewness and Z kurtosis are used to test for normality of the three (3) independent variable; namely Cash Conversion Cycle, Debt Equity ratio and Inventory Conversion Period. The Z skewness was computed as skewness divided by Standard error of skewness and the Z kurtosis was computed as kurtosis divided by Standard error of kurtosis.

Table 4.1.1 shows Z Skewness and Z kurtosis.

Table 1 Descriptive Statistics Table For The Variables

| Variables | Skewness | Standard Error | Z Skewness | Kurtosis | Standard Error | Z Kurtosis |
|-----------|----------|----------------|------------|----------|----------------|------------|
| CCC | 1.437 | 0.230 | 6.248 | 2.976 | 0.457 | 6.512 |
| DEBT | 1.813 | 0.230 | 7.883 | 4.889 | 0.457 | 10.698 |
| INVTCP | 3.710 | 0.230 | 16.130 | 17.437 | 0.457 | 38.155 |

This table shows the normality test for cash conversion cycle, debt equity and Inventory conversion period

In small samples like that of this study which the number of observations is 110, values of Z skewness and Z kurtosis greater or lesser than 3.29 are sufficient to establish normality of the data. The result of Skewness for Cash Conversion Cycle, Debt Equity and Inventory Conversion Period are 1.437, 1.813 and 3.710 respectively and the Z skewness of Cash Conversion Cycle, Debt Equity and Inventory Conversion Period are 6.248, 7.883 and 16.130 respectively which are greater than 3.29 shows that the data is normal which indicates that the data for Cash Conversion Cycle, Debt Equity and Inventory Conversion Period relates linearly to the dependent variable (Return on Equity). The results of the Z Kurtosis Cash Conversion Cycle, Debt Equity and Inventory Conversion Period are 6.512, 10.698 and 38.155 respectively are greater than 3.29 and therefore are normal which indicates that the data for Cash Conversion Cycle, Debt Equity and Inventory Conversion Period relates linearly to the dependent variable (Return on Equity). Ghasemi and Zahediasl (2012).

TABLE 2 WORKING CAPITAL MANAGEMENT IMPACT ON FINANCIAL PERFORMANCE

| Variable | Coefficient | T – value | P – value |
|--------------------|-------------|-----------|-----------|
| Constant | 1.278 | 0.523 | 0.602 |
| CCC | 0.148 | 6.778 | 0.000 |
| DEBT | 0.275 | 1.587 | 0.115 |
| INVTCP | 0.024 | 0.595 | 0.553 |
| FSIZE | .131 | 0.621 | 0.536 |
| R | 0.582 | | |
| R ² | 0.339 | | |
| Adj R ² | 0.314 | | |
| F stat | 13.464 | | |
| F-Sig | 0.000 | | |

Source: Author’s computation using SPSS 25

The estimated equation of the study is presented as follows:

$$ROE = 1.278 + 0.148 (CCC) + 0.275(DEBT) + 0.024 (INVTCP) + 0.131(FSIZE)$$

The financial performance of firms measured by Return on Equity would be equal to 1.278 when all other variables are held to zero. A one unit change of Cash Conversion Cycle all other variables remain constant, Cash Conversion Cycle would increase by 0.148. The regression result of the study shows that the beta coefficient in respect of

Cash Conversion Cycle is (0.148) and the t-value is (6.778) and it is significant at 1%. This means that, Cash Conversion Cycle has a positive significant impact on the performance of quoted selected firms in Nigeria.

A one unit change of Debt Equity ratio all other variables remain constant, Debt Equity ratio would increase by 0.275. The regression result of the study shows that the beta coefficient in respect of Debt ratio is (0.275) and the t-value is (1.587) and is significant at 11.5%. This means that Debt Equity Ratio has no significant impact on the financial performance of quoted selected firms in Nigeria

A one unit change of Inventory Conversion Period all other variables remain constant, Inventory Conversion Period would increase by 0.024. The regression result of the study shows that the beta coefficient in respect of Inventory Conversion Period is (0.024) and the t-value is (0.595) and it is significant at 55.3%. This means that Inventory Conversion Period has no significant impact on the performance of quoted selected firms in Nigeria

The total impact of the Working Capital Management is able to explain the dependent variable up to (58%). and the remaining (42%) are controlled by other factors. Similarly, the result of the F- statistic shows the overall fitness of the model. The F- statistic has a value of (13.464) and is significant at 1% which implies that the model is fit because it is significant at all levels of significant. (Gujarati, 2004).

Findings of the Study

Cash Conversion Cycle has a strong positive significant impact on financial performance of quoted selected firms in Nigeria.

Debt Equity ratio has no significant impact on financial performance of quoted selected firms in Nigeria.

Inventory Conversion Period has no significant impact on financial performance of quoted selected firms in Nigeria.

V. CONCLUSION

This study has contributed to findings on accounting research in Nigeria. From the findings of the study, the study concludes that Inventory conversion period and Debt Equity ratio have no impacts on financial performance of quoted selected firms in Nigeria.

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