

Effect Of Inventory Retention And Cash Conversion Cycle On The Financial Performance Of Brewery Firms Quoted On The Nigerian Stock Exchange.

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Abstract: *The study investigated the relationship between working capital management and the financial performance of brewery firms quoted on the Nigerian Stock Exchange. Average Period of Inventory Retention (APIR) and Cash Conversion Cycle (CCC) are the explanatory variables of the study while Return on Assets (ROA) is the dependent variable. To investigate this, a causal comparative research design involving trend analysis of eleven years (2002 to 2012) annual reports of three brewery firms quoted on the NSE, was carried out using the purposive sampling technique. Data obtained were analyzed with the use of regression analyses. The result indicated that each working capital components affected the companies level of profitability at varying rates, the findings of the study reveals a significant negative impact of APIR and a statistically significant relationship between CCC on the financial performance of these brewery firms quoted on NSE. These findings suggests that managers should identify an inventory level that will not make production processes ineffective and managers should make effective management of working capital continuously to strike a balance between liquidity and performance.*

Key Words: *Working Capital Management, Cash Conversion Cycle, Financial Performance and Average Period of Inventory Retention*

1.0 INTRODUCTION

The research on the effect of cash conversion cycle and average period of inventory retention on a firm's financial performance is numerous. Authors such as Deloof (2003), Laziridis & Tryfonidis (2006), Elijelly (2004), Abdurashed et al (2011) and Uyar (2009), who did research severally, all found a negative relationship between Working Capital Management, using CCC, and firm's profitability. This signifies that having a WCM policy that maintains the shortest accounts receivable period as well as the shortest inventory period.

Uremadu (2004) sees the capital of an organization as "those pool of funds that the company commits to its fixed assets, to inventories, to account receivables and to cash or marketable securities to lead to corporate growth". Gross working capital refers to the firms current assets used in its business operations, which includes items such as inventory, prepaid expenses, cash, marketable securities, accounts receivable and other current assets. Net working capital can be determined by deducting current assets of a firm from its current liabilities. Management of working capital is also considered as one of the most essential components in managerial structure.

Every established business existing in a competitive economy needs funds to function effectively and efficiently without inconveniences for two reasons; (1) to carry out its business operations on a daily bases (2) for development. When invested funds are properly managed in a business, it results to effective financial management. Effective management of working capital on the other hand consists of two steps which are planning for proper utilization of scarce resources and as well as effectively controlling them. Both of these are required to facilitate the firm in meeting its short term obligations and also to let the firm avoid wastage of resources by over investing in current assets (Elijelly, 2004). There is need for financial managers to be able to plan and control current assets as well as current liabilities in a manner that eliminates the risks of inability to meet due short term obligations (Chakraborty, 2008). Short-term sources of finance include overdraft, short-term bank loans and trade credit.

Profitability can also be seen as the rate of return on investment of a firm. To Piven (2008), profitability is the ability to create an excess of revenue over expenses. It measures the extent to which a business generates profit from the factors of production, labour management and capital. Profitability as well as desirable level of liquidity is required to be maintained for progress and survival of a company, for the purpose of settling liabilities on maturity and using the investment opportunities

that are the indicative of the flexibility of economic entity. The way working capital is managed has a significant impact on the profitability and cash holding of firms (Deloof, 2003). As stated by Padachi, (2006) efficient management of working capital is vital for success and survival of companies to enhance performance and contribution to economic growth. Thus, managers need to know how to utilize an efficient working capital management policy to guarantee the growth, profitability and long term success of their companies (Abbasali & Milda, 2012).

In practice working capital management has become one of the most important issues in the organization where many financial executives are struggling to identify the basic working capital drivers and the appropriate level of working capital (Lamberson, 1995). Inadequate working capital leads the company to bankruptcy. On the other hand, too much working capital results in wasting cash and ultimately the decrease in profitability (Chakraborty, 2008). Insufficient working capital management is a common reason that most small to medium sized business fails in an economic situation. Managers can improve the overall performance of their companies and minimize risk by having a comprehensive knowledge of the role of the various mix of working capital component.

It is based on this backdrop that the present study seeks to ascertain the effect of working capital management on the financial performance of quoted brewery firms on the Nigerian Stock Exchange. Specifically, the study seeks to:

- i. To ascertain the effect of average period of inventory retention on the profitability of brewery firms quoted on the Nigerian Stock Exchange.
- ii. To assess the effect of cash conversion cycle period on the profitability of brewery firms quoted on the Nigerian Stock Exchange.

The study is limited to the effects of working capital management on the financial performance of the brewery firms quoted on the Nigerian stock exchange (NSE). Managers of companies, especially of brewery firms quoted on the Nigerian Stock Exchange will have added knowledge on how best to optimize a balance between liquidity and profitability in carrying out their business operations. The rest of the paper is organized and presented around the following related themes:

- Conceptual Clarification
- Theoretical Framework
- Statement of Hypotheses
- Methodology
- Data Analysis and Discussion of Result
- Conclusion
- Recommendations
- References

1.0 Conceptual Clarification

Current Assets - are those resources of an organization which are either held in the form of cash or are expected to be converted into cash in the ordinary course of business normally within one year. One important component of current assets is account receivable. Current assets include marketable securities, receivables, cash, inventory, prepayments, debtors and other current assets. It is rightly observed that current assets have a short life span (Bhattacharya, 2001).

Current Liabilities - are claims or obligations against the resources of an organization which are normally expected to mature for payment within an accounting cycle. This liability is also known as accounts payable and shown in the balance sheet till the payment has been made to the creditors. Current assets are converted into cash to pay current liabilities. Current liabilities include; creditors, deferred tax, bank overdraft, and accruals expenses.

Principles of Working Capital Management

The following are the principles of working capital management;

- i. **Principles of the Risk Variation:** - Risk refers to the inability of an organization to maintain sufficient current assets to pay up its obligations. If working capital is varied relative to sales, the amount of risk that a firm assumes is also varied and the opportunity for gains or loss is increased. In other words, there is a definite relationship between the degree of risk and the rate of return. As a firm assumes more risk, the opportunity for gain or loss increases. As the level of working capital relative to sales decreases, the degree of risk increases. When the degree of increases the opportunity for gain and loss also increases. Thus, if the level of working capital goes up, amount of risk goes down, and vice-versa, the opportunity for gain is like-wise adversely affected.
- ii. **Principle of Equity Position:** - According to this principle, the amount of working capital invested in each component should be adequately justified by a firm's equity position. Every rupee invested in the working capital should contribute to the net worth of the firm.
- iii. **Principle of Cost of Capital:** - This principle emphasizes that different sources of finance have different cost of capital. It should be remembered that the cost of capital moves inversely with risk. Thus, a sound working capital management should

always try to achieve a proper balance between cost and risk. Generally, lower the risk higher is the cost and higher the risk lower is the cost.

- iv. **Principle of Maturity of Payment:** - The principle deals with the ability of a firm to meet the current liability. According to this principle, a firm attempts to pay matured liabilities from internal funds. Generally, shorter the maturity schedule of current liability in relation to expected cash inflows the greater the inability to meet the obligations in time.

Cash Conversion Cycle: CCC is defined as the number of days between the date the firm must start to pay cash to its suppliers and the date it begins to receive cash from its customers. According to Elijelly (2004), it is the "length of time between actual cash expenditures on productive resources and actual cash receipts from the sale of products or services. CCC is used as a comprehensive measure of working capital as it shows the time lag between expenditure for purchases of raw material and the collection of sales of finished goods.

According to Hutchison et al, (2007), CCC is likely to be positive as well as negative. A positive result indicates the number of days a company must borrow or tie up capital while awaiting payment from a customer. A negative result indicates the number of days a company has received cash from sale before it must pay its supplies. They argued that, the ultimate goal is having a low CCC, and if possible a negative one. Thus, the shorter the CCC, the more efficient the company is in managing its cash flow and the more cash is available for use by organization. To Padachi (2006), the shorter a firm's CCC, the better a firm's profitability. A longer CCC will hurt firm's profitability. This is because low liquidity affects firm's risk.

Inventory Management: Inventories represents a significant portion of most firms' assets and therefore require substantial investments. In order that investments in inventories do not become unnecessarily large, they must be managed efficiently. Inventories provide an important link in the production and sale of a product. Generally, there are three types of inventories namely: raw material, work in progress and finished goods. With raw materials, a firm can often achieve substantial gains by redefining optimal safety stock levels and batch sizes. This requires a thorough analysis of customer demand pattern; customer forecast quality and supplier lead time. By assessing these factors, companies can often sharply reduce inventory levels throughout the supply chain.

Financial Performance Measures

The following financial measures shall be discussed:

- i. **Liquidity:** Piven (2008), defines liquidity as "the ability to convert an asset to cash with relative speed and without significant loss in value". The less liquid assets or liabilities are those that will take longer to be converted to cash.

Liquidity measures the ability of the firm to meet financial obligations as they come due, without disrupting the normal on-going operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to balance sheet measures of the relationship between assets and liabilities and operational liquidity refers to cash flow measures. A frequent cause of liquidity problems occur when debt maturities are not matched with the rate at which the business assets are converted to cash.

- ii. **Solvency:** The ability of an organization to meet financial obligations as they fall due is referred to as solvency (Piven, 2008). Solvency measures the amount of borrowed capital used by the business relative to the amount of owners' equity capital invested in the business. Solvency measures provide an indication of the business ability to repay all indebtedness if all the assets were sold.

- iii. **Profitability:** Profitability is the ability to earn enough income to attract and hold investment capital. It measures the extent to which a business generates a profit from the factors of production, labour management and capital. To Piven (2008) profitability is "the ability to create an excess of revenue over expenses".

Four measures of firm profitability are the rate of return on firm assets (ROA), the rate of return on firm equity (ROE), operating profit margin and net firm income. The ROA measures the return to all firm assets and is often used as an overall index of profitability, and the higher the value, the more profitable the firm. The ROE measures the rate of return on the owner's equity employed in the firm. It is useful to consider the ROE in relation to ROA to determine if the firm is making a profitable return on their borrowed money.

- iv. **Repayment Capacity:** Repayment capacity defined as a measure of the degree to which cash generated from an organization and other sources will be

sufficient to pay principal and interest payment as they come due.

- v. **Financial Efficiency:** Financial efficiency measures the degree of efficiency in using labour. Management and capital efficiency analysis deals with the relationship between inputs and outputs. Five measures of financial efficiency are the assets turnover ratio, operating expense ratio, depreciation expense ratio, interest expense ratio and net income from operations ratio.

2.0 Theoretical Framework

Working capital management involves the process of converting investment in inventories and accounts receivables into cash for the firm to use in paying its operational bills. The choice of financing is a matter of working capital policy. The decision of which asset to finance with short term liabilities and/or long term liabilities will depend on the level of liquidity which the firm aims to attain and the level that will maximize stockholders' wealth (Deloof, 2003). Various models have been postulated to enable the financial manager combine effectively and efficiently, the mix of short-term financing to obtain optimum results.

Liberal Theory

Under this liberal theory, some current assets are financed by short-term while the more permanent current assets and fixed assets are financed by long-term credits (Oviedo, 2004).

Business Cycle Models

Recent business cycle models of emerging economies have relied on working capital as a propagation mechanism to transmit interest rate shocks to real outcomes (Neumeyer & Perri, 2005); Oviedo, (2004). The responses to interest rate shocks are magnified in these models because the need for working capital imposes additional borrowing requirements. In these models, the firm is assumed to always borrow the entire cost of production. Internally generated revenue is not considered as a source of finance.

This study adopts the business cycle model, accounting for the role of internal revenue is critical for understanding working capital, as the delay in revenue is the very mechanism that creates the need for working capital. Allowing for internally generated finance is also important considering that, empirically, the largest source of financing is from internal finance.

Previous research such as those carried out by Eljelly (2004), Lazaridis & Tryfonidis (2006), Abdulrasheed et al, (2011), Falope & Ajilore (2009) & Karaduman et al, (2011), Uyar (2009), reveals that there is a correlation between CCC and APIR and financial performance of firms. Managers can

create profits for their companies by correctly handling the CCC and APIR to a reasonable minimum. Inventory is maintained for generating the revenue from sales, the standard measurement for working capital management is CCC, and this reflects the time span between disbursement and collection of cash. It is in this light that the research adopted the CCC and APIR as the explanatory variable for this study.

3.0 Statement of Hypotheses

In order to ascertain the effect of working capital management on the financial performance of brewery firms quoted on the Nigerian Stock Exchange, the following null hypotheses are stated and would be tested for the study findings.

H₀₁ There is no significant effect of average period of inventory retention on the profitability of brewery firms quoted on the Nigerian Stock Exchange.

H₀₂ There is no significant effect of cash conversion cycle on the profitability of brewery firms quoted on the Nigerian Stock Exchange.

4.0 Methodology

The research design adopted for this study is casual comparative. Casual comparative research design attempts to explore causes that affects relationship where causes already exist and looks backward to explain why. The population of this study comprises all the brewery firms quoted on the NSE as at December 2012. These firms are: (i) Jos International Breweries Plc, (ii) International Breweries Plc, (iii) Champion Breweries Plc, (iv) Golden Guinea Breweries Plc, (v) Premier Breweries Plc, (vi) Nigerian Breweries Plc, (vii) Guinness Nigeria Plc. The sample of the study consisted of three (3) out of the seven (7) Brewery firms quoted on the NSE, which are the Nigerian Breweries Plc, International Breweries Plc and Guinness Nigerian Plc. This sample was drawn using the purposive sampling method. The secondary data were extracted from the audited annual reports and accounts of the sampled brewery firms quoted on the NSE for eleven years (2002 to 2012) financial year. Also, relevant literature on working capital management was extracted from journal articles and periodicals.

4.1 Variables Definition

Dependent Variable: The dependent variable used under investigation in this study was

return on assets (ROA). This variable has been recognized as the dependent variable of the research. **Return on Assets (ROA):** The return on assets measures the return on total assets after interest and taxes. The ratio measures the percentage of the profit earned per naira of assets and thus is a measure of efficiency of the company in generating profits on its assets.

ROA can be measured in any of the two ways:

- 1) Earnings before interest and tax expense to total assets (EBIT/TA)
- 2) Profit after tax (Net come) to total assets multiplied by 100 (PAT/TA*100/1)

The study adopted the second method hence it gives a better explanation of what is due to the shareholders of the firm.

Independent variable: Given the number of factors that affect working capital accumulation decisions by firms and the difficulty in determining the optimal level of working capital a firm should hold, the question arises about whether firms are able to efficiently manage their working capital.

In these research two proxies such as; average period inventory retention (APIR) and cash conversion cycle (CCC) have been investigated as the independent variables of working capital management.

Control Variables: In working capital literature, various studies have used the control variables along with the main variable of working capital in order to have an opposite analysis of working capital management on the profitability of firms (Lamberson, 1995; Deelof, 2003; Eljelly, 2004; Teruel and Solano, 2005 and Lazaridis and Tryfonidis, 2006). On the same line, along with working capital variable, the present study have taken into consideration a control variable relating to firm as the size of the firm. The size of the firm has been measured by the logarithm of its total assets, as the original large value of total assets may disturb the analysis.

Table 1: Measurement of Variables and Abbreviation

Variable	Measurement	Abbreviation
Average period of inventory retention	Inventory/ Cost of Goods Sold*365	APIR
Cash Conversion Cycle	ACPR+APIR-APDS	CCC
Size of firm using log of sales	Natural Logarithm of sales, lagged one year period	LogTA

The study also used correlation analysis model to estimate the relationship between the dependent and explanatory variables, and to investigate the direction of such relationship.

In order to ensure that the results are robust, several diagnostic tests were performed. In attempt to detect multicollinearity, the VIF and TOL statistics was computed. The Variance Inflation Factor (VIF) measures the impact of Collinearity among the variables in a regression model. The Variance Inflation Factor (VIF) is 1/Tolerance, it is always greater than or equal to 1. There is no formal VIF value for determining presence of multicollinearity. Values of VIF that exceed 10 are often regarded as indicating multicollinearity, but in weaker models values above 2.5 may be a cause for concern (A. Koutsoyiannis, 2001; Gujarati and Sangeetha, 2007). This study adopts the "Rule of thumb" of 10, this shows the appropriateness of fitting of the model of the study with the four independent variables.

4.2 Model Specification

Multiple regression analysis was used to analyze the linear relationship between the dependent variable and the independent variable. The main strength of using multiple regressions analysis is its ability to measure the joint effect of any number of independent variables upon one dependent variable. These variables are summarized and analyzed into various components using multiple regression equation.

The model is given as:

$$ROA_i = \beta_0 + \beta_1 CCC_i + \beta_4 APIR_i + \beta_5 SIZE_i + e_i \dots \dots \dots (I)$$

Where;

ROA = Return on Assets (Profitability Measures),

β_0 = Constant of the Model,

$\beta_1-\beta_2$ = Co-efficient of the model,

CCC = Cash conversion cycle,

APIR = Average period of inventory retention,

Size= is the control variable (the firm's size as measured by natural logarithm of sales),

e = is the error term.

5.0 Data Analysis and Discussion of Result

The data were regressed using the SPSS 20.0 and inferences were drawn from it. The summary of the regression result from the SPSS output were presented in a tabular form, from which detailed analysis and discussion shall be given.

Table 2: Descriptive Statistic

	Range	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
ROA	44.8	23.3	68.1	38.691	4.1055	13.6166
APIR	0.7	1.9	2.6	210.0	0.0674	0.2236
CCC	2.1	0.2	2.3	154.5	0.1592	0.5279
logTA	0.41	7.25	7.66	7.4009	0.04048	0.13427

Source: SPSS Statistics version 20

From Table 2 the mean ROA, API, CCC and the control variable logTA of the sampled firm is 38.69%, 133 days, 210 days, 206 days, 154 days and 7.4% respectively. This result indicates that, on the average, for every ₦1 the companies would earn ₦38.69k, for ROA. The 133 days for the APIR implies that the company converts its basic products into finished goods for the ten years under study, averagely after six months approximately. Also, the CCC indicates that it takes up to 154 days from when they purchased inventories, to settle their creditors. In other words, their average number of days between cash receipts and cash disbursements for the ten years is four months.

Table 3: Coefficient Correlations

Source: Computation of Field Data, 2013 via SPSS 20.0

From the table, the Pearson Correlation shows that the control variable logTA is positively correlated with the CCC & APIR. The table also shows that high correlation coefficient indicate a strong relationship between the predictor variables a term called Collinearity. If this happens it will make the isolation of the effect of each variable difficult. The bivariate correlation metrics measures the relationship between the independent variables, it tests whether the relationship between two variables is linear (as one variable increases, the other also increases or as one variable increases, the other variable decreases).

Table 5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	280.493	636.828		0.440	0.678		

APIR	-23.675	52.042	-0.389	3.455	0.002	0.146	6.831
CCC	2.788	12.922	0.108	2.216	0.004	0.426	2.348
logTA	16.384	83.100	-0.162	1.197	0.001	0.159	6.280

Dependent variable: ROA

DW (Durbin-Watson) = 2.696 for the model of the study shows that there is no element of positive autocorrelation meaning that there is a linear relationship between working capital and firm financial performance.

The measures for testing multicollinearity indicate that there is no multicollinearity problem in the model (Table 4). Therefore it is used for our analysis.

The result of the regression analysis is presented in Table 5. The estimation result shows that independent variables APIR and control variable SIZE all shows a significantly negative relationship with profitability (ROA) and CCC indicates a significantly positive relationship with profitability (ROA).

Model	logTA	CCC	APIR
logTA	1.000	0.119	0.658
CCC	0.119	1.000	-0.437
APIR	0.658	-0.437	1.000

The regression coefficients (β_5) for APIR and CCC indicates APIR = -0.389, CCC = 0.108 and SIZE = -0.162 respectively with the dependent variable, ROA.

The t-statistic used to test for statistical significance indicates that all the independent variables have values greater than 2 and associated p-values of less than 0.05 (5% level of significance). The t-statistics and their associated p-values for ACPR, APIR, APDS and CCC are $t = -3.455$ ($p > 0.05$), and $t = 2.216$ ($p > 0.05$) respectively. The control variable equally indicated t-statistics with values greater than 2.

Test of Hypotheses

HYPOTHESIS ONE

H_{01} : There is no significant effect of APIR on the profitability of brewery firms quoted on the Nigerian Stock Exchange.

From the regression analysis result in table 5 indicates that APIR shows a t-ratio = -3.455 and $p < 0.05$, indicating a negative and statistically significant relationship between APIR and ROA at 95% confidence interval. The conclusion is that, the first hypothesis stands rejected.

HYPOTHESIS TWO

H₀₂: *There is no significant effect of CCC on the profitability of brewery firms quoted on the Nigerian Stock Exchange.*

From the regression result in table 5 indicates that CCC shows a t-ratio = 2.216 and $P < 0.05$, indicating that there is a positive and statistically significant relationship between CCC and ROA at 95% confidence interval. The conclusion is that, the second hypothesis stands rejected.

Analysis of Model Summary for Regression Model

The results obtained from the model was analyzed and interpreted on the basis of a priori expectation i.e. making statement based on logical reasoning. The regression results as shown in Table 5 revealed that in the model all variables are statistically significance at 5% level of significance. In the model the coefficient of one of the variables that is average period of inventory retention (APIR), have negative coefficients, while the coefficients of one variables that is cash conversion cycle (CCC) have positive coefficients.

From the equation, the different coefficient of the variables representing working capital management shows the different contributions of the respective variables to firm's financial performance which is being represented by the ROA (return on asset). In this line, using the coefficient from the model ROA is 280.493. This simply means that when all variables are held constant, there will be a positive variation up to the tune of 280.493 units in ROA. Similarly, a unit change in APIR will produce negative in ROA by -23.675. Also, a unit change in CCC will positively increase ROA by 2.788. When taken one at a time, with other variables being held constant, in the model CCC will increase ROA by 2.788, while APIR will reduce ROA by -23.675. The implication is that firm's financial performance has been improved favorably to measures taken to implement working capital management policies.

The R^2 is otherwise known as the measure of the "goodness of fit" or the "coefficient of determination". Therefore, the R^2 is expressed as a percentage, and that part of the variation of the

dependent variable (i.e. $.965-R^2$) which is not explained by the regression line is attributed to the existence of the disturbance term (U_i). The R^2 for the model gives 96.5% meaning that the regression model is approximately 97% i.e. the variations in the dependent variable i.e. Return on Asset (ROA) 97% attributable to the changes in the independent variable i.e. Average period of Inventory retention (APIR) and Cash Conversion Cycle (CCC). This result is also supported by the high value of the adjusted R-Square, in the model which is to the tune of 79.2%.

A. Effect of APIR on firm's Profitability

The first objective of this study was to ascertain the effect of APIR on the profitability of brewery firms quoted on the NSE. The regression analysis indicates that APIR is negative and statistically significant to ROA, which implication is that profitability can be improved by decreasing the APIR. This is in agreement with Deloof (2003), Magpayo (2009) and Danuletiu (2010) who finds inventory turnover to effectively increase profitability.

B. Effect of CCC on firm's Profitability

The second objective was to assess the effect of CCC on the profitability of brewery firms quoted on the NSE. The regression analysis indicates that CCC is positive and statistically significant to ROA. This finding contradicts with that of Eljelly (2004) and Al-Shubiru (2011) who found CCC to be statistically insignificant to firm's financial performance. The findings are in line with Lazaridis & Tryfonidis (2006) and Gill et al, (2010) who found that CCC is positive related with financial Performance.

Conclusion

The major findings of this study are as follows:

- i. Average Period of Inventory Retention has a negative and significant effect on the profitability of brewery firms quoted on the Nigerian Stock Exchange.
- ii. Cash Conversion Cycle has a positive and significant effect on the profitability of brewery firms quoted on the Nigerian Stock Exchange.

The primary aim of working capital management in a firm is to manage short term funds required for daily business activity of a firm. The

firm requires effective working capital management policy for an effective uninterrupted production and sale activity. So far we observed a positive relationship between financial performance (measured through return on asset) and the cash conversion cycle which was used as a measure of working capital management efficacy. Likewise the negative relationship between number of days in inventory and corporate profitability suggests that in the case of a drastic drop in sales accompanied with a mismanagement of inventory will result to tying up excess funds at the expense of profitable operations. Therefore managers can create profits for their companies by handling the best level of cash conversion cycle correctly and keeping inventory to an optimum level that will render effect performance.

From the findings, we can conclude that working capital management has favorably impacted on the financial performance among brewery firms quoted on the Nigerian Stock Exchange.

Recommendations

- i. Managers of these brewery firms should continuously strike a balance between profitability and liquidity in their effort to manage working capital.
- ii. The company should ensure that stocks are sufficient to meet customers' demands at all times while at the same time avoiding holding unnecessary surplus stocks that may increase holding cost.

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