

## **Does Working Capital Management Drive Firm Financial Performance? Evidence from Developing Nation**

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### **ABSTRACT**

This study examines the impact of working capital management on the financial performance of Nigerian businesses. Working capital management (WCM) is an integral part of corporate finance and has a direct impact on a company's liquidity and profitability. The study utilized panel data. Companies' data were analyzed utilizing proper statistical method. The findings show that effective working capital influence a firm's financial performance in Nigeria. The study concluded that management should create a strong and effective working capital management strategy that ensures maximum return, increases firm share value, and maximizes shareholders' wealth.

**Keywords** : **Working Capital Management; Firms; Financial Performance; Liquidity; Inventory**

### **ABSTRAK**

*Penelitian ini menguji dampak manajemen modal kerja pada kinerja keuangan bisnis Nigeria. Manajemen modal kerja (WCM) merupakan bagian integral dari keuangan perusahaan dan memiliki dampak langsung pada likuiditas dan profitabilitas perusahaan. Penelitian ini menggunakan data panel. Data perusahaan dianalisis menggunakan metode statistik yang tepat. Temuan menunjukkan bahwa modal kerja yang efektif mempengaruhi kinerja keuangan perusahaan di Nigeria. Studi menyimpulkan bahwa manajemen harus menciptakan strategi manajemen modal kerja yang kuat dan efektif yang memastikan pengembalian maksimum, meningkatkan nilai saham perusahaan, dan memaksimalkan kekayaan pemegang saham.*

**Kata Kunci** : **Manajemen Modal Kerja; Perusahaan; Kinerja Keuangan; Likuiditas; Persediaan**

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## INTRODUCTION

Working capital management is one of the most puzzling issues for financial managers because its success or failure directly impacts the organisation, either positively or negatively (Takon & Atseye, 2015). Inability to meet financial obligations is one of the consequences of weak working capital management, according to Kamanga & Ismail (2016). Every year, businesses around the world lose billions of dollars due to poor working capital management. For businesses, maintaining a strong cash position is essential because the risk of bankruptcy increases during times of credit constraints and economic downturns. In spite of this, businesses continue to have difficulty accurately predicting their cash needs (Mohammad & Mahum, 2014).

Working capital management is a strategy of managerial accounting that emphasises maintaining optimal levels of both current assets and current liabilities (Inyiama, 2014). The most important purpose of a business is to maximise profit or wealth for all of its stakeholders. To be effective, a company's overall business strategy and objectives must be integrated with its working capital management (Ironkwe & Wokima, 2017). Ogundipe, Idowu, & Ogundipe (2014) concur that a company must have methods and instruments for measuring and monitoring working capital components.

When establishing a company's long-term survival, the management of its working capital is one of the most crucial variables to examine (Walter & Runesu, 2014). According to Oladipupo & Okafor (2013), ongoing business activities should generate sufficient positive working capital (cash) to cover both debt payments and operating expenses. Working capital management's primary objective is to maintain efficient levels of both components of working capital, current assets and current liabilities, in relation to one another to ensure the business's survival and growth (Syed, Mawih, & Faris, 2015).

According to Uremadu, Egbide, & Enyi (2012), improving the management of working capital requires the management of discrete but interrelated operations. Due to the interconnection of these processes, actions taken in one of these disciplines can impact a business's total financial success. Adarquah & Korankye (2013) define working capital to include cash, marketable securities, debtors, and inventories. They are considered short-term or current assets. Working capital management is when a corporation makes decisions regarding its current assets and current liabilities (Walter, et al, 2014). It is possible to use future gains from investments in current assets to purchase additional current assets (Angahar & Alematu, 2014).

The objectives of working capital management are to maintain a healthy asset-to-debt ratio and to maximise profits (Gill & Mathur, 2010). The success of a business depends on the efficient management of working capital components (Kajola, Nwaobia, & Adedeji, 2014). A company can achieve this objective by taking either an aggressive or a conservative strategy to managing working capital (Vahid, Moshen & Mohammadreza, 2012). According to Twahirva, Tobias, & Mbabazi (2017), the frequency of working capital choices has increased, and it is crucial to keep adequate working capital. A company's survival is as dependent on the flow of money as a person's survival is on the flow of blood (Kolapo & Ajayi, 2015).

Managing a company's working capital can be a challenge for certain financial managers particularly in a developing nation because of concerns about sales and costs (Dong & Su, 2010). Onodje (2014) notes that asset and liability mismatches typically arise when a firm seeks to maintain liquidity in its everyday activities in order to pay short-term obligations. This improves the company's financial performance briefly but puts it at risk of bankruptcy. Having trouble paying short-term obligations, such as debts, salaries, and

operating expenses, is a sure sign that a business is heading toward bankruptcy, according to Ray (2012). Working capital can have a detrimental impact on profitability if a company is overly conservative.

It is because of these worries that the working capital, management and operational efficacy of Nigerian companies has been seriously affected, and they are now in a state of operational embarrassment (Ironkwe & Wokoma, 2017). It is imperative that working capital managers avoid the challenges of retaining idle money (create no profit) and insufficient working capital (which diminishes the firm's profitability as well as causes production delays and inefficiencies) by acquiring an appropriate amount of working capital (Salman, Folajin, & Oriowo, 2014).

Nigerian businesses face additional challenges in managing their working capital because of the country's strict lending policies. If the company has a flexible credit strategy in place, a substantial percentage of bad debts can be written off, whereas a stringent credit policy has the opposite effect (Iyewumi, Remy & Omotayo, 2015). As a result of these circumstances, Nigerian firms are susceptible to operational embarrassment, say Kajola, Nwaobi, & Adedeji (2014), who claim that working capital management is crucial to a company's financial performance and survival. For Nigerian companies, fraud is a major issue. Working capital managers face a major challenge due to the fact that working capital management requires a considerable portion of the firm's capital to be in liquid cash for daily operations.

Companies are tasked with the responsibility of ensuring that the company's finances are not misused. A lack of resources, a small market, a lack of capital, inadequate physical infrastructure, intermittent power and low production capacity to meet demand increase the importance of working capital management for Nigerian businesses (Ibrahim & Isiaka, 2021). Low investment, low sales and a lack of resources are all contributing factors. In addition, Nigerian businesses lack access to finance and an understanding of how to profit from the financial sector (Onodje, 2014). This research aims to find out what effect working capital management has on the financial performance of a company.

The trade-off and pecking order models can be used to justify advancing the working capital management in order to improve firm financial performance. According to the trade-off model, firms establish target leverage ratios and the financial structure gradually approaches the costs and benefits. On the basis of the Economic Order Quantity, Baumol (1952) devised an inventory model (EOQ). The ultimate goal is to identify the ideal level of cash on hand. The following assumptions were made by Baumol in his model. It is possible for businesses to accurately estimate their cash needs and to receive and pay cash inflows and outflows on a regular basis, and the opportunity cost of holding cash is known and does not change over time. Converting securities to cash has the same transaction costs and an opportunity cost as missed opportunities as cash holdings do for the company. Both the fixed and variable costs are involved in every transaction (Barine, 2012).

Theoretical discussions on the impact of working capital management on the financial performance of organisations have led to empirical investigations aimed at establishing an economic connection and identifying causative factors influencing working capital management and company financial performance. Numerous studies, for example, have examined the connection between specific (functional) categories of working capital management and the financial performance of firms. Using a panel research design, Ibrahim & Isiaka (2021) investigate the effect of working capital management on the financial performance of non-financial enterprises between 2014 and 2018. The outcomes of the study support the concept that all aspects of working capital management influence

financial performance. While ITP and ACP were adversely connected with EPS, APP was positively correlated. While all control variables were significant, only the firm's age was positively connected to EPS, according to the study.

Basyith, Djazuli, & Fauzi (2021) analysed the profitability impact of working capital management and the working capital conditions of a number of Indonesian-listed companies (IDX). From 2000 to 2019, 135 publicly traded companies throughout the agricultural, pharmaceutical, telecommunications, investment, retail, cement, and metal industries were chosen. The finding indicate that the working capital investment strategy has a favourable and substantial impact on return on assets (ROA).

Olabisi, Oladejo, Oworu, & Abioro (2020) analysed the impact of working capital management on the profitability of consumer product manufacturing firms in Nigeria from 2009 to 2018. The study collected data from the audited financial accounts of the selected organisations using an ex post facto design. The independent variables were Inventory Turnover Period (INVTP), Cash Conversion Cycle (CCC), and Account Payable Period (APP) (ROA). The data was analysed using multiple regressions and descriptive and inferential statistics. Random Effects Generalized Least Square uncovered a connection between ARP, INVTP, CCC, and ROA.

## RESEARCH METHOD

The study conducts an empirical investigation using panel data from firms listed on the Nigerian Stock Exchange (NSE). The data was derived from the firms' audited financial statements. Secondary sources were chosen because of their track record of consistently providing adequate, accurate, and reliable data over time. Additionally, the study examined the relationship between independent and dependent variables using descriptive analysis and econometric techniques. A descriptive analysis of the study's numerous variables was conducted using the summary of statistics in conjunction with the e-views software. Multiple regression analysis was used in conjunction with the Ordinary Least Squares (OLS) method.

The functional relationship between working capital management and financial performance are as follows:

$$ROA = f(ADP + ADR + CCP + INT) \quad \text{equ 1}$$

$$ROE = f(ADP + ADR + CCP + INT) \quad \text{equ 2}$$

Where ROA= Return on Assets, ROE= Return on Equity, ADP= Average Days Payable, ADR= Average Days Receivable, CCP= Cash Conversion Period, INT=Inventory Turnover,  $\beta_0$  = Constant,  $\beta_1 + \beta_3$  = parameters,  $\mu$  = error term

$$\text{Performance variables} = \beta_0 + \beta_1 (\text{Working Capital variables}) \quad \text{equ 3}$$

$$ROA_{it} = \beta_0 + \beta_1 ADP_{it} + \beta_2 ADR_{it} + \beta_3 CCP_{it} + \beta_4 INT_{it} + \Sigma_{it} \quad \text{equ 4}$$

$$ROE_{it} = \beta_0 + \beta_1 ADP_{it} + \beta_2 ADR_{it} + \beta_3 CCP_{it} + \beta_4 INT_{it} + \Sigma_{it} \quad \text{equ 5}$$

## RESULTS AND DISCUSSION

Model 1 displayed the correlated random effects using the Hausman Test as displayed in table 1.

**Table 1. Correlated Random Effects - Hausman Test**

| Test Summary         | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob.  |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 11.872795         | 4            | 0.0183 |

Source: Author's computation using E-views, 2022

According to Table 1, the Hausman test result is less than the permissible significance level of 0.05 (p-value 0.0183). We must rule out random effects as a viable option for our model. As a result of this finding, the model was estimated using fixed effect, and the regression estimate is shown in Table 2.

**Table 2. Fixed Effect Regression Estimates for Model 1**

| Dependent Variable: ROA |                  |                    |                  |               |
|-------------------------|------------------|--------------------|------------------|---------------|
| Variable                | Coefficient      | Std. Error         | t-Statistic      | Prob.         |
| C                       | -6.426303        | 5.690671           | -1.129269        | 0.2854        |
| INT                     | 0.148900         | 0.044764           | 3.326337         | 0.0085        |
| ADR                     | -0.045125        | 0.053906           | -0.837105        | 0.3577        |
| CCP                     | 0.665704         | 0.194519           | 3.422303         | 0.0011        |
| ADP                     | <b>-0.757479</b> | <b>0.175634</b>    | <b>-4.312821</b> | <b>0.0001</b> |
| Effects Specification   |                  |                    |                  |               |
| R-squared               | 0.570098         | Durbin-Watson stat |                  | 1.945391      |
| Adjusted R-squared      | 0.526654         |                    |                  |               |
| F-statistic             | 5.633221         |                    |                  |               |
| Prob(F-statistic)       | <b>0.000002</b>  |                    |                  |               |

Source: Author's computation using E-views, 2022

For the model in Table 2, Adjusted  $R^2 = 0.526654$ , suggesting that the explanatory variables can sufficiently explain changes or fluctuations in the dependent variable. This is based on the panel least squares results. There are 52.7 percent of the variance in the dependent variable explained by the explanatory variables. That is, inventory turnover (INT), average days payable (ADP), credit collection period (CCP), and average days receivables (ADR) contribute for 52.7 percent of the variance in return on asset (ROA). Furthermore, non-model factors account for 47.3 percent of total variation in dependent variable variance.

The inventory turnover coefficient (INT) is assumed to be negative and statistically significant. This translates into a 0.148900 increase in return on asset (ROA) for every unit change in inventory turnover (INT). The average days payable (ADP) coefficient is assumed to be positive and statistically insignificant. This implies that a unit change in average days payable (ADP) results in a 0.032515 increase in return on asset (ROA). The credit collection period (CCP) coefficient is assumed to be positive and statistically significant. This implies that a unit increase in CCP results in a 0.665704 increase in return on asset (ROA). It is assumed that the average day's receivables (ADR) coefficient is negative and statistically significant. This suggests that for every unit rise in average day's receivables (ADR), the return on asset (ROA) is reduced by 0.045125. An F-statistic of 5.264613 further demonstrates the robustness of this conclusion, while the Durbin-Watson statistic of 1.945391 unequivocally demonstrates that serial correlation has no influence on the variables utilized in the study.

Model 2 displayed the correlated random effects using the Hausman Test as displayed in table 3.

**Table 3. Correlated Random Effects - Hausman Test**

| Test Summary         | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob.  |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 8.127256          | 4            | 0.0870 |

Source: Author's coputation using E-Views, 2022

There is a p-value of 0.0870 in Table 3, which is higher than the 0.05 criterion of significance. As a result, the random effect is regarded as appropriate for this model's null hypothesis. Table 4 shows the regression estimate based on the assumption that the model should be estimated using random effects.

**Table 4. Regression estimates for Model 2**

| Dependent Variable: ROE |             |                    |             |          |
|-------------------------|-------------|--------------------|-------------|----------|
| Variable                | Coefficient | Std. Error         | t-Statistic | Prob.    |
| C                       | -5.818342   | 11.39980           | -0.510389   | 0.5612   |
| INT                     | 0.026950    | 0.069521           | 0.387653    | 0.9678   |
| ADR                     | -0.224460   | 0.188449           | -1.191091   | 0.3578   |
| CCP                     | 1.738971    | 0.620670           | 2.807164    | 0.0045   |
| ADP                     | -1.150675   | 0.574411           | -2.003225   | 0.0483   |
| Effects Specification   |             |                    |             |          |
| R-squared               | 0.553877    | Durbin-Watson stat |             | 2.045402 |
| Adjusted R-squared      | 0.501836    |                    |             |          |
| F-statistic             | 6.493269    |                    |             |          |
| Prob(F-statistic)       | 0.000072    |                    |             |          |

Source: Author's coputation using E-views, 2022

Model 2 Adjusted  $R^2$  is 0.501836, which indicates that explanatory factors are capable of effectively explaining changes/variations in the dependent variable, as shown by the panel least squares findings in Table 4. Explanatory variables explain 50.2% of the variation in the dependent variable, according to this result. Inventory turnover (INT), average days payable (ADP), credit collection period (CCP), and average days receivables (ADR) account for 50.2% of the variance in return on equity (ROE). 49.8 percent of this variation can be accounted for by factors that are not included in the model.

The inventory turnover coefficient (INT) is assumed to be positive and statistically insignificant. This suggests that a unit increase in inventory turnover (INT) results in a -0.026950 rise in return on equity (ROE). The average days payable (ADP) coefficient is assumed to be negative and statistically insignificant. This suggests that a unit change in average days payable (ADP) results in a 1.150675 decrease in return on equity (ROE). The credit collection period (CCP) coefficient is assumed to be positive and statistically significant. This means that a unit increase in credit collection period (CCP) results in a 1.738971 increase in return on equity (ROE).

It is believed that the average day receivables (ADR) coefficient is negative and statistically significant. This suggests that increasing the average days' receivables (ADR) by one unit reduces the return on equity (ROE) by -0.224460. The F-statistic of 5.493269 demonstrates the robustness of this conclusion, while the Durbin-Watson statistic of 2.045402 demonstrates categorically that serial correlation has no effect on the variables used in the study.

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## CONCLUSION

The study revealed that working capital management has significant influence on financial performance of firms in Nigeria or drive firm financial performance in Nigeria. One of the first things a lender or investor looks at on a balance sheet is working capital. Working capital performance is a critical indicator of financial soundness. Thus, a business's short-term viability may be determined by its ability to manage its current assets and liabilities or current responsibilities effectively. As a result, a fundamental finding of the research was the importance of working capital in boosting a company's performance and generating profit for investors. Managers in charge of WCM should try to reduce cash conversion cycle days and inventory holding days to increase performance. They should continually strive to lower their working capital ratio, which is inevitably a liquidity ratio, in order to increase performance. Effective working capital management and financing not only improve operational profitability, but also maximise shareholder profits. There is a need to create a strong, effective and efficient working capital management strategy that ensures maximum return and enhancement of shareholders wealth.

## RECOMMENDATION

The study recommends repositioning accounts payable in order to further shorten the cash conversion cycle, as it represents a significant source of working capital for businesses. This will assist firms in strengthening their cash position and decreasing their reliance on high-interest loans to finance daily operations. This can be accomplished by renegotiating terms of payment with firms' regular and significant suppliers.

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