



Gusau Journal of Accounting and Finance (GUJAF)

Vol. 5 Issue 2, October, 2024 ISSN: 2756-665X

A Publication of
Department of Accounting and Finance,
Faculty of Management and Social Sciences,
Federal University Gusau, Zamfara State -Nigeria

© Department of Accounting and Finance

Vol. 5 Issue 2
October, 2024
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Published and printed by:

Ahmadu Bello University Press Limited, Zaria
Kaduna State, Nigeria.

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WORKING CAPITAL MANAGEMENT AND MANUFACTURING PERFORMANCE IN NIGERIA

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DOI: <https://doi.org/10.57233/gujaf.v5i2.22>

Abstract

Effective working capital is necessary for financial growth, sustainability, reliable liquidity and profitability of a firm. Management working capital involve the optimization of inventory, debtors and creditor to ensure profitability and liquidity of a firm. The paper aims to show how working capital management affect the performance of manufacturing firms in Nigeria during 2013 and 2022. For this, the paper tests two hypotheses: The first is that it assumes no significant relationship between working capital management and return on assets. The second assumes that working capital management does not significantly impact on return on equity of the companies in Nigeria. To evaluate this, we the study examines the relationship between working capital management variables, including stock turnover, debtor collection period, creditor collection period, and current ratio and performance indicators (return on assets and return on equity). The findings suggest that efficient management of these components enhances performance since stock turnover, debtor collection period, and creditor collection period are positively associated with financial performance. Because this has implication for future performance, the paper offers, amongst others that to enhance the profitability firms in Nigeria, there is the need to adopt more financial technologies can streamline working capital management processes, such as automating inventory and receivables tracking. Also, should be strategic extension of creditor collection periods without compromising supplier relationships to improve cash flow management. For instance, stricter credit control measures can be implemented to reduce the debtor collection period and can improve cash availability and profitability.

Keywords: Financial performance, return on assets, return on equity. working capital Management,

1.0 Introduction

Effective working capital is necessary for financial growth, sustainability, reliable liquidity and profitability of a firm. Management working capital involve the optimization of inventory, debtors and creditor to ensure profitability and liquidity of a firm (Uremadu et al., 2018). Firms maintain optimal inventory levels, by providing sufficient stocks needed to meet customer satisfaction, and simultaneously ensuring that the cost of holding excess stocks is minimized. Firms need to have an effective and efficient debtors' balances, to have enough cash at hand to meet up with its financial obligations at the same time make it comfortable for their customers who rely on credit sales. They need to have optimal creditor balance, to have access to raw material at credit while using funds to carry out other day-to-day operations and as well maintain the relationship between the firm and their suppliers and their financial reputation in the eyes of their supplies (Adekola et al., 2017). Working capital strategies that are more aggressive relate to higher returns and risk, whereas conservative working capital strategies are concerned with reduced risk and lower return (Carpenter & Johnson, 1983). Companies need to manage their current assets and current liabilities effectively and efficiently to ensure that they cater for their day-to-day expenses. This is because, many business failures have been

attributed to inability of financial managers to plan and control properly the current assets and current liabilities of their respective organizations (Aggarwal & Chaudhary, 2015).

There is evidence that effective management of working capital is essential for improving a firm's financial performance (Dyllick & Muff, 2016). Several studies investigate the link between working capital management and financial performance. Uremadu et al. (2018) determine the effect of working capital management and liquidity on profitability and discovered a negative relationship between cash conversion cycle, creditors' payment period and profitability but a positive link between inventory conversion period debtors' collection period and profitability. He noted that cash conversion cycle is the most significant precision variables in influencing profits. Umenzekwe et al. (2021) show that investing policy has no significant effect on the earnings per share in Nigeria. Previous research lapses due to scope and approaches. This paper is motivated to carry out this study to fill this gap.

The study focuses primarily on manufacturing sector in Nigeria. The paper seeks two aims: first is to evaluate the impact of working capital management on profitability in Nigeria and the second is to determine the impact of working capital management on profitability in Nigeria. The paper tests two null hypotheses: The first is that it assumes no significant relationship between working capital management and return on assets. The second assumes that working capital management does not significantly impact on return on equity of the companies in Nigeria.

We apply panel data analysis and show relationship between working capital management variables, such as stock turnover, debtor collection period, creditor collection period, and current ratio and two main indicators of financial performance return on assets and return on equity. The findings suggest that efficient management of these components enhances performance since stock turnover, debtor collection period, and creditor collection period are positively associated with financial performance. Because this has implication for future performance, the paper offers, amongst others that to enhance the profitability firms in Nigeria, there is the need to adopt more financial technologies can streamline working capital management processes, such as automating inventory and receivables tracking. Also, should be strategic extension of creditor collection periods without compromising supplier relationships to improve cash flow management. For instance, stricter credit control measures can be implemented to reduce the debtor collection period and can improve cash availability and profitability.

2.0 Empirical Review

Several studies have attempted to investigate the link between working capital management and financial performance, which includes liquidity and profitability (Deloof, 2003; Akintola et al., 2019; Raheman & Nasr, 2007). Akintola et al. (2019) note indicated that inventory days had a positive and significant influence on Nigerian manufacturing firm profitability. Umeoji, Ogochukwu and Nwakanma (2020) find that working capital management has a significant effect on firm performance, suggesting that effective management of working capital is necessary for improving a firm's financial performance. Oladimeji & Aladejebi (2020) who also found out that receivable days was negative and significant with profitability when proxied by Return on Asset (ROA). Their studies were done on 5 SMEs from Nigeria for the period of 2014-2018 and they used to ordinary least square estimation methods. Golas (2020) use generalized method of moments to estimate the relationship between working capital management and financial performance for 76 industrial firms in Poland for the period of 2008-

2017 and found out that receivable days had a negative and significant relationship with firm profitability.

Akingunola et al. (2020) investigates the relationship between working capital management and firm performance and finds that working capital management has a significant effect on firm performance. Abdullahi (2020) finds that working capital management has a positive and significant effect on firm performance, indicating that efficient working capital management can improve a firm's financial performance. Balogun and Adeyeye (2021) find that working capital management has a positive and significant effect on firm performance, suggesting that effective management of working capital is crucial for improving a firm's financial performance. Kolapo, Ayeni and Oke (2020) find that working capital management has a significant effect on firm performance, indicating that efficient management of working capital is crucial for improving a firm's financial performance. Igbinsa and Akintoye (2020) investigates the impact of working capital management on firm performance in the food and beverage industry and find that working capital management has a positive and significant effect on firm performance, suggesting that efficient management of working capital is important for improving a firm's financial performance.

Oyetunji (2021) examines the impact of working capital management on firm performance of Nigerian consumer goods firms. Using panel data from 20 consumer goods firms for the period 2010-2018, the study finds that working capital management has a positive and significant effect on firm performance, indicating that efficient management of working capital is important for improving a firm's financial performance. Onyebuchi and Nwachukwu (2021) investigates the relationship between working capital management and firm performance of Nigerian manufacturing firms. Using panel data from 100 manufacturing firms for the period 2010-2018, the study finds that working capital management has a significant effect on firm performance, indicating that effective management of working capital is necessary for improving a firm's financial performance. Salaudeen et al. (2021) investigates the relationship between working capital management and firm performance of Nigerian listed firms. Using panel data from 50 listed firms for the period 2010-2018, the study finds that working capital management has a significant effect on firm performance, suggesting that effective management of working capital is necessary for improving a firm's financial performance. Sanusi (2021) examines the relationship between working capital management and firm performance of Nigerian oil and gas firms. Using panel data from 10 oil and gas firms for the period 2010-2018, the study finds that working capital management has a positive and significant effect on firm performance, indicating that efficient management of working capital is essential for improving a firm's financial performance.

Chukwu (2024) explores the relationship between working capital management and financial performance in the Nigerian oil and gas sector during 2016-2023. The results indicate that companies with lower debtor collection periods and higher inventory turnover ratios tend to achieve better financial performance, emphasizing the critical role of efficient working capital management in this capital-intensive industry. Eze (2024) assesses the influence of working capital management on the performance of agricultural firms in Nigeria for 30 agricultural firms from 2017 to 2023. They show a positive and significant relationship between working capital components, such as inventory management and creditor collection period, and the overall performance of the firms. Oladipo (2024) examines the effect of working capital management on the performance of manufacturing firms in Nigeria for 40 manufacturing firms for the period 2015-2023. They obtain a significant positive relationship between efficient

working capital management and firm performance. The research suggests that firms with optimized inventory levels and shorter debtor collection periods tend to perform better financially. Adeniyi (2024) data for 100 SMEs during period 2018-2023 to investigate the impact of working capital management on the profitability of small and medium-sized enterprises (SMEs) in Nigeria. He finds that effective management of accounts receivable and payable significantly enhances the profitability of these firms, highlighting the importance of maintaining a balanced working capital cycle. Afolabi (2024) analyzes the effect of working capital management of Nigerian retail companies for 20 retail firms for the period 2015-2023 and find that firms with efficient cash conversion cycles and better liquidity management practices exhibit higher financial performance.

3.0 Methods

To investigate how working capital management impact performance of manufacturing firms in Nigeria, we follow the optimal inventory level should be determined by looking at the trade-off between the costs of inventory and the benefits associated with the levels of inventory. According to the model, inventory costs include ordering costs and carrying costs. Ordering cost includes the cost of purchasing order preparations, receiving, requisition, inspecting, and recording the received goods. The carrying cost involves storing and opportunity costs. The motive to maintain a higher or lower inventory depends on the type of business. The most widely and simple motives of managing inventories are the cost motives (Emery & Marques, 2011). For the company to be competitive they must reduce their cost therefore the company should work on keeping the cost of inventory stocking reasonably low. The working capital of the firm consists of short-term assets (current assets) and short liabilities (current liabilities), whereby short-term asset is made of accounts receivables, trade credit, customer credit, inventories, raw materials, work in progress, and finished items, that is all cash and receipts that fall due within a year. Current liabilities are made of accounts payables, overdraft, loan repayments which fall due within a year, and other payables that fall due within a year. Component of working capital a firm invest in is a function of operating factors of a firm (Barine, 2012).

Depending on the company's credit policy, investments in AR may be made. Investment in accounts receivable will increase proportionally with the length of the credit duration extended to a credit customer (Barine, 2012). The rate of return on other investments with a similar level of risk, as well as the opportunity cost of investing in inventories, are all factors that influence the decision to invest in stockpiles. When the firm's inventory holding cost rises, it reduces the level of inventory it maintains. To put it another way, a drop in the cost of capital and a growth in firm value are the direct effects of a company's capacity to satisfy its short-term obligations thanks to well-managed working capital (Samiloglu & Dermirgunes, 2008).

In line with the theory, the empirical aspect which examines the effect of working capital on the performance of non-financial firm estimate the model.

$$ROA_{i,t} = \alpha_0 + \alpha_1 STV_{i,t} + \alpha_2 DCP_{i,t} + \alpha_3 CCP_{i,t} + \alpha_4 CUR_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$ROE_{i,t} = \alpha_0 + \alpha_1 STV_{i,t} + \alpha_2 DCP_{i,t} + \alpha_3 CCP_{i,t} + \alpha_4 CUR_{i,t} + \varepsilon_{i,t} \quad (2)$$

ROA is return on asset, STV is stock turnover, DCP is debtor collection period, CCP is creditor collection period and CUR is current ratio. β_0 , and β_i 's, respectively, represent the intercept and parameters of the regression estimation, which expectation are highlighted. A positive relationship is expected between stock turnover and return on assets. A higher stock turnover indicates efficient inventory management, leading to higher sales and profitability, improving

the return on assets. A negative effect is anticipated between the debtor collection period and ROA. A shorter debtor collection period means the firm collects its receivables faster, improving cash flow and reducing the risk of bad debts, which enhances profitability and the return on assets. For the creditor collection period, a positive effect with ROA is expected, within reasonable limits. A longer creditor collection period may indicate that a firm is managing its payables, utilizing credit terms, which improve liquidity and profitability. However, excessively long periods may signal financial distress. The current ratio would have a positive effect since a higher current ratio implies good liquidity management, where the firm has a sufficient balance of current assets to meet its short-term liabilities leading to higher profitability. The paper uses samples of ten (10) quoted non-financial companies in NGX from 2013 to 2022. The data are sourced from published annual financial statements of the firms.

4.0 Results and Discussion

Table 1 shows the basic descriptions, including the simple statistic (Panel A) and the correlation amongst variables (Panel B). The maximum values for the return on asset (ROA) and return on equity (ROE), stock turnover (STV), debtor collection period (DCP), credit collection period (CCP) and current ratio (CUR) are 24.21, 107.01, 906.49, 129.69, 68.39 and 65.44. The variables ROA, ROE, STV, DCP, CCP, CUR, respectively, have mean values of 5.033, 13.465, 50.607, 17.864, 17.043 and 2.522. The ROE, ROE, CCP and CUR were negatively skewed which indicates a skew, while STV, DCP, and CCP are asymmetrical. All variables' distributions are leptokurtic.

There is a positive correlation ($r = 0.2563$) between stock turnover and return on asset, and a positive relationship ($r = 0.2168$) between debtor collection period and return on assets. The correlation ($r = 0.106029$) between creditor collection period and return on asset is positive. There is a negative correlation ($r = -0.218$) between current ratio and return on asset. The implication of this correlation result is that stock turnover, debtor collection period, creditor collection period are positively correlated with return on asset while current ratio is negatively associated with return on asset. Moreso, the output shows a positive correlation ($r = 0.1129$) between stock turnover and return on equity, and a positive relationship ($r = 0.0730$) between debtor collection period and return on equity. The correlation between creditor collection period and return on equity is positive. There is a positive correlation ($r = 0.1676$) between current ratio and return on equity. The implication of this correlation result is that stock turnover, debtor collection period, creditor collection period, current ratio are positively correlated with return on equity.

Table 1: Basic Descriptions

	Mean	Max	Min	SD	JB	Prob (JB)
Sample Statistics						
ROA	5.033	24.21	-55.62	9.738	950.44	0.0000
ROE	13.46	107.01	-91.09	26.754	79.227	0.0000
STV	50.61	906.49	-39.32	146.071	2376.5	0.0000
DCP	17.87	129.69	-39.0	29.996	55.876	0.0000
CCP	17.04	68.39	-77.770	24.557	6.562	0.0375
CUR	2.522	65.44	-78.04	14.959	580.67	0.0000
Correlation Matrix						
	ROA	ROE	STV	DCP	CCP	CUR
ROA	1	1				
STV	0.256	0.112	1			
DCP	0.216	0.073	0.578	1		
CCP	0.106	0.352	-0.071	-0.057	1	
CUR	-0.219	0.167	-0.022	0.049	0.439	1

Note: return on asset (ROA) and return on equity (ROE), stock turnover (STV), debtor collection period (DCP), credit collection period (CCP) and current ratio (CUR)

Source: STATA Output, 2024.

The paper applies the Hausman test which uses the null (H_0) of random effects (RE) model and alternative (H_1) of fixed effects (FE) model, at 5% significant level is 0.05. The outcomes are represented in Table 2. Panel A shows the test has a p-value of 0.0183 which is less than the acceptable 0.05 level of significance. The null that random effect is suitable is rejected, hence, the ROA model is estimated using FE. Panel B shows the has a p-value of 0.087, which is greater than 0.05. The null is accepted, indicating the ROE model should be fitted with RE.

Table 2: Hausman Test

Test Summary	Chi-Sq. Stat.	Prob.
Panel A		
Cross-section random	11.872795	0.0183
Panel B		
Cross-section random	8.127256	0.087

Note: Test cross-section random effects

Source: STATA Output, 2024.

Table 3 shows the outcome of the FE Regression for the ROA Model. The result is applied to test the relationship between working capital management and return on asset. It evaluates the first null hypothesis of the paper that (H_{01} :) There is no significant relationship between working capital management and return on assets in the listed companies in Nigeria. From the panel least square results shown in Table 5 above, coefficient of determination (R^2) for the model is 0.449 indicating the strength of the explanatory variables to explain changes/variations that take place in the dependent variable. It implies that, the explanatory variables explain or account for 44.9 percent of variation in the dependent variable. That is, 44.9% of the variations in return on asset are explained by stock turnover, debtor collection

period, credit collection period and current ratio. In other words, about 55.1percent of variation in the dependent variable is caused by other factors not included in the model.

The coefficient of stock turnover assumes a negative and statistically insignificant value. This implies that a unit change in stock turnover increases return on asset by 0.0017. The coefficient of debtor collection period assumes a positive and statistically insignificant value. This implies that a unit change in debtor collection period will increase return on asset by 0.032. The coefficient of credit collection period assumes a positive and statistically significant value. This implies that a unit change in credit collection period increases return on asset by 0.665. The coefficient of current ratio assumes a negative and statistically significant value. This implies that a unit change in current ratio decreases return on asset by 0.757. The robustness of this result is further buttressed by an F-statistic of 5.264 while the Durbin-Watson statistic of 1.94 clearly indicates that there is no effect of serial correlation among the variables used in the study. With the Probability of F-statistic of 0.000002, it is significant enough to conclude that the model has performed well and that stock turnover, debtor collection period, credit collection period and current ratio jointly influenced return on asset.

Table 3: ROA Model (Fixed Effect Regression)

Variable	Coeff	Std. Er	t-Stat.	Prob.
Const.	-5.0687	3.6082	-1.4048	0.1648
STV	0.0017	0.0220	0.0775	0.9385
DCP	0.0325	0.0596	0.5451	0.5875
CCP	0.6657	0.1945	3.4223	0.0011
CUR	-0.7575	0.1756	-4.3128	0.0001
Effects Specification				
R-squared (Adjusted)	0.4494			
F-statistic	5.2646			
Prob (F-statistic)	0.0000			
Durbin-Watson stat	1.9454			

Source: STATA Output, 2024.

Table 4 shows the outcome of the RE Regression for the ROE Model. The result is applied to test the relationship between working capital management and return on equity. It evaluates the study’s null hypothesis that (H₀₂:) working capital management does not significantly impact on return on equity. The coefficient of determination (R²) for is 0.271 indicating the strength of the explanatory variables to explain changes/variations that take place in the dependent variable. The explanatory variables explain or account for 27.2% of variation in the dependent variable. That is, 27.2% of the variations in return on equity are explained by stock turnover, debtor collection period credit collection period and current ratio. In other words, about 72.9% of variation in the dependent variable is caused by other factors not included in the model. The stock turnover assumes a positive and statistically insignificant value. This implies that a unit change in stock turnover increases return on equity by -9.818. The coefficient of debtor collection period assumes a negative and statistically insignificant value. This implies that a unit change in debtor collection period will decrease return on asset by 0.236. The coefficient of credit collection period assumes a positive and statistically significant value. This implies that a unit change in credit collection period increases return on equity by 1.764.

The coefficient of current ratio assumes a negative and statistically significant value. This implies that a unit change in current ratio decreases return on equity by 1.168. The robustness

of this result is further buttressed by an F-statistic of 5.493 while the Durbin-Watson statistic of 2.445402 clearly indicates that there is no effect of serial correlation among the variables used in the study. With the Probability of F-statistic of 0.002, it is significant enough to conclude that the model has performed well and that stock turnover, debtor collection period, credit collection period and current ratio significantly impact return on equity.

Table 4: ROE Model (Random Effect Regression)

Variable	Coeff	Std. Er	t-Stat.	Prob.
Const.	-9.8183	11.3998	-0.8613	0.3922
STV	0.0070	0.0695	0.1000	0.9207
DCP	-0.2345	0.1884	-1.2442	0.2178
CCP	1.7643	0.6146	2.8708	0.0055
CUR	-1.1685	0.5549	-2.1058	0.0390
Effects Specification				
R-squared (Adjusted)	0.2718			
F-statistic	5.4933			
Prob (F-statistic)	0.0023			
Durbin-Watson stat	2.4454			

Source: STATA Output, 2024.

Discussions and Significance

This study adopts panel data analysis using the random effect model to test the research hypotheses, the result of hypothesis one shows that there is significant relationship between working capital management and return on assets. The regression result further shows that working capital variables (stock turnover, debtor collection period and creditor collection period) are positively associated with return on asset while current ratio was found to be negatively associated with return on asset. This finding support that of Paul et al (2013) study analyzed the effects of working capital management on the profitability of 9 manufacturing firms listed on the Nairobi Securities Exchange. The result of multiple regression and correlation analyses revealed that gross operating profit was positively correlated with average collection period and average payment period but negatively correlated with cash conversion cycle. The relationship between inventory turnover in days and gross operating profit was insignificant.

The result also shows that Working capital management significantly impact on return on equity in Nigeria. The regression result further shows that working capital variables (stock turnover and creditor collection period) are positively associated with return on equity while current ratio and debtor collection period were found to be negatively associated with return on equity. This finding corroborates that of Mohammad and Mahum (2014), explores working capital management and corporate performance using 2007-2011 annual reports of cement, chemical and engineering sectors of Pakistan. The results of Pooled ordinary least squares method indicate that average payment period negatively related to performance while cash conversion cycle has a positive significant association with return on equity. However, average collection period, operating cycle and age of inventory have no significant association with return on equity.

The findings reveal several important patterns in working capital management's influence on profitability. The significance of this study cannot be over emphasized, because working capital management which plays a critical role in the short-term liquidity position of

companies. The findings of this study may be useful to oil and gas firms in Nigeria and other companies in general to improve on their financial decision making, maximize shareholders wealth and increase profitability of the firm. This study could act as a yard stick for managers in choosing accurate working capital strategies that would improve their efficiency. The study could be beneficial to Creditors/prospective creditors who may be interested in ascertaining the credit worthiness of the firms. This is because the credit worthiness of a firm is about meeting financial obligations as and when due. This can only be established through efficient and effective management of working capital of a firm. This study is also going to add to the existing literature for the fact that it has employed two different dependent variables (Return on Assets and Return on Equity) to proxy profitability which has not been found in any of the early work. Lastly, this study is significant to the Nigerian government, the Nigerian economy which is a monoculture economy depends mostly on the oil and gas sector for its source of revenue.

5.0 Conclusion

The paper shows how working capital management effect on the profitability of ten listed non-financial companies in Nigeria. The panel regression technique was employed to test the hypotheses. The negative relationship between the current ratio and ROA suggests that excessive liquidity might be counterproductive, potentially indicating idle resources or inefficient asset use. The positive associations between stock turnover, debtor collection period, and creditor collection period with ROA indicate that efficient management of stocks and receivables, along with extending payable periods, can significantly enhance asset returns. The positive impact of stock turnover and creditor collection periods on returns highlights the benefits of efficient inventory management and favorable credit terms with suppliers, respectively. In contrast, the negative associations of current ratio and debtor collection period with ROE underscore challenges with liquidity and receivables management that may detract from shareholder value. The findings underscore the critical role of precise working capital management in enhancing the profitability of firms, suggesting that companies can achieve superior financial performance through strategic management of working capital components.

Accordingly, to enhance the profitability firms in Nigeria through better working capital management, the paper offer as follows. First, there is the need to adopt more financial technologies can streamline working capital management processes, such as automating inventory and receivables tracking. Second, there should be strategic extension of creditor collection periods without compromising supplier relationships could improve cash flow management. For instance, stricter credit control measures can be implemented to reduce the debtor collection period can improve cash availability and profitability. Moreso, firms must ensure optimal liquidity levels to ensure enough cash flow for operations without tying up excessive capital in non-productive assets. In addition, management should adopt robust inventory management techniques to minimize holding costs and maximize stock turnover. Financial managers must be engaged on regular training programs to learn the latest trends in working capital management which can enhance their decision-making capabilities.

References

- Abdullahi, M. (2020). The relationship between working capital management and firm performance of Nigerian companies. *Journal of Business Management*, 12(3), 345-359.
- Abdullahi, Y. (2020). Working capital management and firm performance: Evidence from Nigeria. *Journal of Accounting and Finance*, 20(1), 84-97. doi: 10.5897/JAF2020.0878

- Adekola, A., Samy, M., & Knight, D. (2017). Efficient working capital management as the tool for driving profitability and liquidity: a correlation analysis of Nigerian companies. *International journal of Business and Globalisation*, 18(2), 251-275.
- Adeniyi, K. (2024). Impact of working capital management on the profitability of small and medium-sized enterprises in Nigeria. *Nigerian Journal of Economic Studies*, 10(1), 112-130.
- Afolabi, B. (2024). Effect of working capital management on the financial health of Nigerian retail companies. *Retail Business Review*, 9(2), 66-80.
- Afrifa, G. A., Tauringana, V., & Tingbani, I. (2014). Working capital management and performance of listed SMEs. *Journal of Small Business & Entrepreneurship*, 27(6), 557-578.
- Aggarwal, A., & Chaudhary, R. (2015). Effect of working capital management on the profitability of Indian firms. *IOSR Journal of Business and Management*, 17(8), 35-43.
- Akingunola, R. O., Adigun, O. O., & Ajibola, M. A. (2020). The impact of working capital management on firm performance: A study of Nigerian manufacturing firms. *European Journal of Accounting, Auditing and Finance Research*, 8(3), 15-29. doi: 10.24018/ejafr.2020.8.3.469
- Anusi, A. O., & Nduka, A. J. (2022). Effect of Working Capital Management On Performance Of Basic Materials Firms In Nigeria. *Journal of Emerging Trends In Management Sciences And Entrepreneurship*, 4(1), 186-203.
- Asika, N. (2007). *Research Methodology in the Behavioural Sciences*. Lagos: Longman Nigeria.
- Atrill, P., & McLaney, E. (2009). *Management accounting for decision makers*. Pearson Education.
- Balogun, O. F., & Adeyeye, A. O. (2021). Working capital management and firm performance: Evidence from Nigerian firms. *Journal of Finance and Investment Analysis*, 10(1), 1-10. doi: 10.13106/jfia.2021.vol10.no1.1
- Bhattacharya, H. (2021). *Working capital management: Strategies and techniques*. PHI Learning Pvt. Ltd..
- Chukwu, E. (2024). Working capital management and financial performance in the Nigerian oil and gas sector. *Energy Economics Review*, 15(4), 87-102.
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms?. *Journal of business finance & Accounting*, 30(3-4), 573-588.
- Dyllick, T., & Muff, K. (2016). Clarifying the meaning of sustainable business: Introducing a typology from business-as-usual to true business sustainability. *Organization & Environment*, 29(2), 156-174.
- Eze, F. (2024). Influence of working capital management on the performance of agricultural firms in Nigeria. *Agricultural Economics Journal*, 14(3), 197-215.
- Gull, A. A., & Arshad, M. (2013). Influence of working capital management and liquidity on financial soundness of firms listed at Karachi stock exchange. *IOSR Journal of Business and Management (IOSR-JBM)*, 11(2), 52-57.
- Igbinsola, S. O., & Akintoye, I. R. (2020). Working capital management and firm performance in Nigeria: Evidence from the food and beverage industry. *International Journal of Finance and Accounting*, 9(3), 124-135. doi: 10.5923/j.ijfa.20200903.02
- Kolapo, T. F., Ayeni, R. K., & Oke, M. O. (2020). The impact of working capital management on firm performance: Evidence from listed Nigerian firms. *International Journal of Financial Research*, 11(1), 37-48. doi: 10.5430/ijfr.v11n1p37

- Lyngstadaas, H. (2020). Packages or systems? Working capital management and financial performance among listed US manufacturing firms. *Journal of Management Control*, 31(4), 403-450.
- Mathuva, D. (2015). The Influence of working capital management components on corporate profitability.
- Mugenda, O. M., & Mugenda, A. G. (2010). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: African Centre for Technology Studies.
- Neuman, W. L. (2000). *Social Research Methods: Qualitative and Quantitative Approaches* (4th ed.). Boston: Allyn and Bacon.
- Ogare, E. O. (2013). The relationship between working capital management and firm profitability: Evidence from listed firms in Kenya. *International Journal of Finance and Accounting*, 4(4), 234-245.
- Oladipo, A. (2024). Effect of working capital management on the performance of manufacturing firms in Nigeria. *African Journal of Finance and Management*, 18(2), 210-225.
- Olaoye, S. A., & Okunade, R. A. (2020). Working capital management and profitability of listed manufacturing firms in Nigeria. *Journal of Economics, Management and Trade*, 26(7), 63-69.
- Onyebuchi, I. I., & Nwachukwu, T. O. (2021). Working capital management and firm performance: Empirical evidence from Nigerian manufacturing firms. *International Journal of Business and Management Review*, 9(3), 39-48. doi: 10.11648/j.bmr.20210903.11
- Owolabi, A. B., & Olawale, L. S. (2020). Working capital management and firm performance: Evidence from Nigerian listed firms. *Journal of Management and Strategy*, 11(4), 57-67. doi: 10.5430/jms.v11n4p57
- Oyelere, P., & Osho, A. (2021). Impact of working capital management on firm performance: Evidence from Nigerian banks. *Journal of Accounting and Financial Management*, 7(1), 12-24. doi: 10.11648/j.jafm.20210701.12
- Pandya, B. H. (2016). The Relationship between Operating Cycle Ratios and Market Value Added (MVA): An Empirical Analysis of Listed Companies of India. *Amity Journal of Finance*, 1(1), 107-116.
- Ponsian, N., Chrispina, K., Tago, G., & Mkiibi, H. (2014). The effect of working capital management on profitability. *International Journal of Economics, Finance and Management Sciences*, 2(6), 347-355.
- Raheman, A., & Nasr, M. (2007). Working capital management and profitability—case of Pakistani firms. *International review of business research papers*, 3(1), 279-300.
- Rey-Ares, L., Fernández-López, S., & Rodeiro-Pazos, D. (2021). Impact of working capital management on profitability for Spanish fish canning companies. *Marine Policy*, 130, 104583.
- Sadiq, A. M., & Oluseye, O. O. (2020). Working capital management and firm performance: Evidence from Nigerian non-financial firms. *Journal of Accounting and Financial Management*, 6(2), 68-78. doi: 10.11648/j.jafm.20200602.12
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Harlow: Pearson Education.
- Shapiro, A. C., & Balbirer, S. D. (2000). Modern corporate finance: a multidisciplinary approach to value creation. *Journal of Public Administration, Finance and Law*, (07), 62-70.

- Shehu, U. H., & Bello, A. A. (2013). Firm characteristics and financial reporting quality of listed manufacturing firms in Nigeria. *International Journal of Accounting and Taxation*, 1(1), 13-34.
- Twahirwa, E., Tobias, O. & Mbabazi, M.P. (2016). Effect of Working Capital Management on Organizational Performance, *International Journal of Thesis Projects and Dissertations (IJTP D)*, 4(2), 143-151
- Uguru, L. C., Chukwu, U. C., & Elom, J. O. (2018). Effect of working capital management on the profitability of brewery firms in Nigeria. *Journal of Economics and Finance*, 9(2), 9-20.
- Umenzekwe, P. C., Okoye, E. I., & Aggreh, M. (2021). WORKING CAPITAL MANAGEMENT AND FINANCIAL PERFORMANCE: EVIDENCE FROM SELECTED NIGERIAN MANUFACTURING FIRMS. *Journal of Contemporary Issues in Accounting*, 2(1), 141-156.
- Uremadu, S. O., Egbide, B. C., & Enyi, P. E. (2012). Working capital management, liquidity and corporate profitability among quoted firms in Nigeria evidence from the productive sector. *International journal of academic research in accounting, finance and management sciences*, 2(1), 80-97
- Uremadu, S. O., Egbide, B. C., & Enyi, P. E. (2018). Working capital management, liquidity and corporate profitability among quoted firms in Nigeria: Evidence from the productive sector. *International journal of academic research in accounting, finance and management sciences*, 2(1), 80-97.
- Uwuigbe, U., Iteboje, O. J., & Akinnibosun, F. I. (2020). Working capital management and firm performance: Evidence from Nigerian SMEs. *Journal of Accounting and Financial Management*, 6(1), 24-34. doi: 10.11648/j.jafm.
- Vahid, T. K., Mohsen, A. K., & Mohammadreza, E. (2012). The impact of working capital management policies on firm's profitability and value: Evidence from Iranian companies. *International Research Journal of Finance and Economics*, 88(1), 155-162.
- Van Horne, J. C., & Wachowicz Jr, J. M. (2008). *Fundamentals of Finance Management*. YD Williams, Moscow.
- Wambia, W. O., & Jagongo, A. (2020). The effects of working capital management practices on the financial performance of insurance companies in Kenya. *International Academic Journal of Economics and Finance*, 3(5), 103-120.