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EFFECT OF WORKING CAPITAL MANAGEMENT ON FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

Mshelia, Akilahyel Hamman
Sterling Bank Plc, Jimeta-Yola, Adamawa State, Nigeria.
akilahamman@yahoo.com

Polycarp, Saman Udi
Federal University Wukari, Taraba State, Nigeria.
polycarpudi@gmail.com

Abstract

This study assessed the effect of working capital management on financial performance of deposit money banks listed in the Nigerian Stock Exchange for a period of five (5) years from 2018 to 2021. The total population was twenty-seven (27) banks and ample size of ten (10) banks was simply and randomly selected from the population. The data for the study were collected from annual reports and accounts of the banks and were analyzed using descriptive statistics, correlation coefficient and multiple regressions using STATA software version 14.00. The study revealed that working capital management has significant effect on financial performance of deposit money banks in Nigeria. Specifically, it discovered that return on assets, capital adequacy ratio, and cash conversion circle have significant effect on financial performance of listed deposit money banks in Nigeria but net working capital has not significantly affected financial performance of deposit money banks in Nigeria. The study recommends that deposit money banks should optimize return on assets by continuing to focus lending and investments towards their highest risk-adjusted performing options, maintaining adequate regulatory capital levels and active monitoring and optimizing of cash conversion cycle by improving receivables collection periods and stretching payables without affecting operations. It equally recommends that hence no evidence that simply minimizing net working capital needs boosts profitability, banks should pursue efficiencies to balance prudence and flexibility based on the Nigeria operating environment.

Keywords: Working Capital Management, Financial Performance, ROA, CAR, CCC.

Introduction

Due to poor working capital management and inability to assess how the working capital component affects an organization's performance, many corporate bodies are forced to deal with difficulties in running their businesses or corporations, (Fernandez-Lopez, Rodeiro-Pazos and Rey-Ares, 2020). Any firm or corporation, whether it is in finance, banking, manufacturing, or commerce sector, depends on its working capital of the corporation in order to function or perform. This is the case because improper management of a company's or firm's working capital might result in the organization's complete merge, collapse and closure. The banking sector is crucial to the growth of the economy of a nation because it provides a practical means of transferring excess cash from the surplus sector to the deficit sector in order to balance the economy. By pooling resources in the form

of savings and deposits and hence making the money accessible to the sector(s) in need in the form of loans and advances, performing these duties are through intermediation. When corporations give loan to their clients undoubtedly have a positive effect on the economy since they allow the businesses to enhance their output, strengthening the economic foundation's productive basis, (Oluitan, 2017). This goal is especially biased in favor of financial houses or entities such as banks in a country. Being profitable and liquid is non-negotiable and cannot be compromised in the banking industry of any country, at least for two reasons: to satisfy regulatory requirements and to have enough liquidity to handle clients' unforeseen withdrawals of their accounts. Since strong profitability and good liquidity are necessary for guaranteeing effective and efficient client services, appropriate and proper working capital management will enable banks to continue expansion. Profitability as opined by Adamu and Hussaini, (2015), is the capacity of a business to generate revenue from all of its operations. It shows how well the performances of an organization's management produces declare profits by utilizing the resources at its disposal. It is made out of the phrase's ability and profit.

In order to establish its liquidity requirements and, consequently, the amount of liquidity to inject into or remove from the economy, it depends on the daily evaluation of the liquidity circumstances in the banking system. Banking sector in Nigeria are categorized into commercial, non-interest, and merchant banks in Nigeria. Commercial banks are separated further into three categories: commercial banks with national permission, commercial banks with international authority, and commercial banks with regional license. As of December 31, 2022, there are twenty-seven (27) deposit money banks listed on the Nigeria Stock Exchange, Nigerian Stock Exchange, (2022).

The banking industry has established itself as a major participant in Nigeria and the global economy at large, doing its various function(s) as provided law to boost employment and the nation's financial system. Due to the sector's failure to achieve maximum profitability, it has become difficult for it to generate jobs or if at all it generates jobs, staff are mostly contracted and this make an insignificant positive effect to economic contribution in Nigeria given the country's present and developing economic trend. Therefore, in order to achieve the necessary increase in their profitability, banks must make proactive decisions to manage their assets, particularly their loan portfolio.

Presently in the country's banking sector, there are factors make it difficult to coordinate operations and make it impossible to meet the overall organizational goals and its performances, (Eya, 2016). Deposit money Banks in the country are frequently struggling with the issue of how to select and determine the level at which they may preserve their assets while still achieving the specified goals, (Ajibike and Aremu, 2015). One of such factors is that a bank's failure inherently implies a failure of its working capital, which might be very infectious and result in a bank run on the troubled

bank, which could cause a panic in its stake holders, throughout the banking industry and the economy at large, (Osuma, et al; 2017). Secondly, the lack of suitable and sufficient operating capital to continue or operates with the day-to-day operation of the corporation or firm was the primary factor in the internal liquidation of the electronic bank (e-banking).

Return on assets (ROA) is now one of the most used measures used to assess bank profitability. The return on assets is calculated as net income after taxes divided by total assets. The main measure of management efficacy is ROA. It demonstrates the ability of the bank management to turn the assets of the bank into net income. First and foremost, return on assets is the return on the bank's total assets used to gauge its operational efficiency; it reflects the bank's operating revenue and profit margin. It involves managerial choices about the amount of money received and invested, bank size, cost control, service and product pricing, and tax obligations in the background. Profitability ratios are those that show the overall outcome of a bank or firm's financial activities and policies. Ratios measuring liquidity, asset management, and debt management only provide a narrow picture of the bank's performance; ratios measuring profitability show how all of these factors work together to affect the bank's overall operational performance. In the event that profitability ratios unexpectedly shift, the bank or business responds promptly. Intentionally taking on a lot of debt might lead to a low ROA. In this instance, very low net income will be the consequence of significant interest expenditures. Naturally, a variety of ratios must be considered when assessing a business's success and performance and choosing its future course of action, (Karadayi, 2023).

The ratio of a bank's capital to its risk-weighted assets and current liabilities is known as the capital adequacy ratio, or CAR. Central banks and bank regulators make the decisions to stop commercial banks from taking on too much leverage and going bankrupt in the process. A bank that has a high CAR is seen to be above the minimal standards required to imply solvency. A bank is generally thought to be secure and likely to fulfill its financial commitments if it has a high capital adequacy ratio, (Hersugondo, et al., 2021; and Dabo, et al., 2018). Within the banking industry, bankruptcy risk refers to the likelihood that a bank would be unable to continue meeting its financial commitments to its depositors. According to Tan, (2016), the most frequent reason for bank failure is when the assets of the bank are worth less than the market value of the liabilities of the bank, which are its debts to depositors and creditors. A bank's capital to risk-weighted assets and current liabilities is measured by its CAR.

Corporate finance has historically placed a higher priority on the long-term goal of raising shareholder wealth. Capital planning, dividend decisions, capital structure decisions, and other related strategies are essential for accomplishing this long-term company objective. It is certain, nonetheless, that a bank's short-term strategies enable it to achieve its long-term objectives. Working capital

management (WCM), also known as liquidity management, is one of the most important decisions a bank will make in the near future, (Karim, et al; 2023). Based on the traditional currency conversion cycle (CCC) models, Richards and Laughlin, (1980), sighted in (Karim, et al; 2023), presented the WCM hypothesis. The most crucial factors in guaranteeing the business's liquidity, solvency, and profitability are WCM components, especially CCC, (Deepak, 2004). Consequently, the CCC approach was created in 1976, (Hager, 1976), and later supported as one of the quantitative indicators that aid in understanding the firm's operational and managerial efficiency by a number of academics, (Kamath, 1989; and Largay and Stickney, 1980). When evaluating and contrasting the risks and rewards of liquidity management, the CCC measure is most frequently utilized, (Appuhami, 2008; Jose et al; 1996; Keown et al., 2003; Moss and Stine, 1993; and Prasad et al; 2019). As a result, managers rely heavily on this to understand the relevance of the CCC metric and how effectively it is calculated from a financial and supply chain perspective, (Farris II and Hutchison, 2002; and Karim, et al; 2023).

Working capital management (WCM) has a direct impact on a bank's performance and profitability. It is a truly significant component of commercial finance. One of the prerequisites for a bank's success is the efficient use of working capital. In order to maintain an appropriate level of working capital for the efficient running of an institution and the achievement of profitability targets, it is necessary to operate the various components of working capital in an effective manner, (BPP Learning Media, 2010). In order to run its daily activities, a bank must maintain a balance in its working capital option, (Oza and Desar, 2023). This is because working capital focuses on the combination of short-term assets and liabilities held on a daily basis in order to assess the bank's short-term financial health. Working capital specifically aims to resolve the bank’s conundrum of how much a bank has to keep at any given time to optimize returns on short-term assets like inventories, receivables, and cash, or short-term obligations like account payables. Management may adopt an aggressive policy of keeping a big volume of short-term liabilities or a small amount of short-term assets for strategic objectives, (Braimah, et al; 2021). However, management of a bank could take a more permissive stance and decide to retain a sizable investment in working capital, (Altaf and Shah, 2018; Ukaegbu, 2014 and Gorondutse, et al; 2017.).

Consequently, in assessing one of the key metrics for a financial success of a bank is return on equity (ROE). Over the past several years, there has been a favorable trend in the development of ROE in banking industries. Because a business may make more money from greater assets, higher asset growth can benefit ROE, (Avalina et al., 2023). In times of emergency financial need, the internal sources of income of a bank may become less accessible and liquid. In order to lower liquidity risk, bank must thus balance the usage of internal and external financing sources. An indicator of an

effective use of capital is Return on Equity (ROE), which is the rate of return on the owner's investment in the banking industries. The capacity of the bank to make money off of its own capital, the proportion of total equity to net income accessible to business owners. According to Avalina, et al; (2023), a high current ratio (CR) indicates having more cash or other current assets than are needed at the moment or having less liquidity than current assets. It is for reason that this paper was carried out to investigate the nexus between these four variables namely; ROA, CAR, CCC, and NWC on how it impacts on the financial performance of deposit money banks in Nigeria.

The study's primary goal was to investigate the impact of working capital management on the financial performance of Nigeria's listed deposit money banks. The significance of the research is the fact that working capital is crucial to both internal and external analysis because of its connection to organizations' ongoing daily operational activity. Working capital management issues or inadequacy is the main cause of business failure or under performance, (Ahmed, et al; 2022). The significance of this study may be seen from two distinct viewpoints, namely, the practical and the academic point of view, since many scholars have written on working capital management and profitability.

Concept of Working Capital Management

Working capital management is an accounting technique that focuses on maintaining adequate levels of both current assets and current liabilities. It provides a firm with enough cash to pay its short-term obligations. Working capital management is concerned with the administration of all current assets, including cash, marketable securities, shares, and current obligations. It is the functional area of finance that covers all of the firm's current accounts. It is concerned with both the sufficiency of current assets and the level of risk posed by current liabilities. Working capital management is a subset of financial management that finds appropriate policies for managing current assets, liabilities, and, more practically, optimizing the benefits of working capital management. The primary goal of working capital management is to handle a firm's current financial resources in such a way that a balance is created between the firm's profitability and the risk associated with that profitability (Bordeleaui & Graham, 2017). Working capital management plays a significant role in the liquidity of banks and other businesses. According to Okonjo (2015), working capital management is important for a firm's profitability, risk management, and value, as noted in (Bassey, 2015). Working capital management (WCM) and management of working capital (MWC) are terms that can be used interchangeably.

Concept of Capital Adequacy

The CAMEL approach was developed and put into use by the Federal Financial Institutions Examination Board in 1979 as a means of evaluating the safety and soundness of every US bank, (Dang, 2011). It is implemented by other financial regulators overseas as well as by all US banks and

credit unions. In essence, CAMEL is a ratio-based system for evaluating and classifying bank performance. In recent times, the framework has become a widely used technique for examining the financial stability of commercial banks, (Roman and Sargu, 2013; and Rose and Hudgins, 2010). The profit objective is the main indicator that Ongore and Kusa, (2013), utilized to evaluate the financial performance of Kenya's commercial banks. Using CAMEL ratios, this study investigated the financial performance of Kenyan banks. Three indices were used: net profit difference (NIM), return on total assets (ROA), and return on capital (ROE). Using regression models and a survey of five Kenyan banks, the authors have determined the relationship between the financial performance of banks and the factors impacting financial performance. The following formula can be used to compute ROE, according to Ongore and Kusa, (2013): Net Income / Average Tax / Total Equity. This ratio illustrates the rate of return on shareholder capital and provides insight into the efficient use of capital by bank management.

Consequently, greater ROE is linked to more efficient shareholder capital management. In their 2016 study, Ishaq, Karim, Ahmed, and Zaheer, (2013), examined 10 commercial banks that operated in Pakistan between 2007 and 2013. Their results showed that the CAMEL technique of assessing bank performance at the time of the research had a beneficial effect on bank performance. Zedan and Daas, (2017), used the CAMEL evaluation methodology to assess the performance and financial standing of Palestinian commercial banks in 2015.

In order to study asset quality criteria and look into liquidity management, it is not expensive to evaluate capital adequacy, return on equity and assets, or capital adequacy ratio. You can also look at data about capital adequacy and bad debts for the entire amount of existing loans. The study's conclusions showed that the capacity of Indian commercial banks to lend money was influenced by a number of factors, including capital size, profitability, liquidity, asset quality, and management. The research then used the downgrading approach to predict the likelihood of future commercial bank collapse.

Concept of Cash Conversion Cycle

The Cash Conversion Cycle (CCC) is one of the best tools available for analyzing how commercial organizations manage their liquidity, and a number of empirical studies show that the CCC is responsible for fluctuations in corporate profitability. The CCC approach is found to be one of the factors affecting the firm's profitability using a number of proxies, (Anser and Malik, 2013; Deloof, 2003; Gill et al., 2011; Nobanee, et al., 2011; and Panigrahi, 2013). Two basic approaches are usually used to analyze a company's liquidity management: the static ratio analysis method and the dynamic approach, which is often referred to as the CCC methodology, (Lancaster and Stevens, 1999). Static ratios that measure liquidity at a specific point in time, such as the CR, quick ratio, QR ratio,

etc., are computed using financial statement data in a static viewpoint. On the other hand, the business can monitor ongoing liquidity over a longer period of time by utilizing the CCC, or dynamic technique. Studies have indicated a noteworthy inverse relationship between profitability and the CCC.

Concept of Net Working Capital

Making the correct working capital decision is crucial for long-term company success since it minimizes operational expenses and preserves financial liquidity, (Zimon and Tarighi, 2021). Two categories of policies are presented in the working capital literature: working capital finance policies and working capital investment policies. Determining the amounts of current assets is connected to the investment policy. By comparing current assets to total assets, one may determine the amount of current assets, (Ahmad et al., 2022; and Nazir and Afza, 2009). A low ratio shows that current assets are not as heavily invested as total assets. Aggressive and cautious investment policies are subcategories of the working capital investment strategy. According to the trade-off hypothesis, businesses should weigh the advantages and disadvantages of their working capital practices. Businesses are more likely to have a working capital shortage if they implement an aggressive working capital investment policy that promotes cheap investments in current assets. Reduced investment in inventories and receivables might provide the company enough cash to run smoothly, but at the expense of decreased sales. On the other hand, companies will incur a significant cost of liquidity if they choose a conservative working capital investment policy, or one that promotes large investments in current assets, (Ahmad et al., 2022). Investing more in receivables and inventory balances can help avoid production disruptions and foster positive customer relationships, which can boost sales. However, companies may have to pay high interest costs, which could have a detrimental effect on shareholders' value, (Aktas et al., 2015; Banos-Caballero et al., 2014; and Nabi, et al., 2016).

The working capital financing policy is determined by the ratio of total current liabilities to total assets and is associated with the usage of current liabilities to fund current assets, (Koh et al., 2014). Aggressive financing policy and cautious financing policy are other subcategories of this approach. According to Ahmad et al. (2022) and Nabi et al. (2016), an aggressive working capital financing policy uses short-term debt to finance current assets, whereas a cautious working capital financing policy uses long-term debt to fund current assets. Because businesses are compelled to pay off this short-term debt early, using fewer current liabilities is both less expensive and riskier. Long-term liabilities, on the other hand, are less hazardous and provide businesses enough time to resolve, on the other hand, due to high interest costs, (Alrahamneh et al; 2020).

Concept of Financial Performance

In the words of Okere et al; (2021), financial performance is a metric used to evaluate the operational and policy outcomes of a business in terms of money. A company's financial performance

may be used to determine how well it uses its resources to create revenue, (Nworie and Mba, 2022). It is typically expressed in terms of profit, which is the sum of money remaining after all costs associated with generating revenue have been taken into consideration. Financial performance, according to Hacini et al; (2021), is the degree to which a business has met its financial objectives. It is computed over a specific time frame in order to assess the company's overall financial health. A corporation has demonstrated strong financial performance when its income exceeds its operational expenditures, leading to profits, (Aggreh, et al; 2022). As a result, both current and future investors will become more confident in the company's capacity to create, preserve, and grow its revenue, (Olaleye, et al; 2021).

Low profit margins deter investors, whereas strong financial performance draws them in. Generally speaking, financial performance refers to the capacity to bring in more money than is spent. Profitability ratios like Return on Equity (ROE), Return on Assets (ROA), Return on Capital Employed (ROCE), Earnings Per Share (EPS), Net Profit Margin (NPM), and Gross Profit Margin (GPM) are typically used to quantify this. Return on Assets (ROA) was used in this study to assess the financial performance of Nigeria's listed deposit money banks (Ogechukwu, and Chidi, 2023).

Concept of Return on Assets

Return on Asset Return on Asset (ROA) is a profit ratio that shows how much profit a company can make from its assets. It assesses a company's management's efficiency in generating earnings from its economic resources or assets on its statement of financial status (Kehinde, 2018). Return on asset is an important indication of bank performance because it influences the bank's profitability. It is defined as the ratio of net income to total assets (Bordeleau & Graham, 2017). Return on asset (ROA) is an indicator of how lucrative a firm is in relation to its total assets, according to Bassey (2015). ROA indicates how effective management is at generating earnings from its assets. It is calculated by dividing the company`s annual earnings by its total assets, ROA is displayed as a percentage. Sometimes is referred to as Return on Investment. According to Bassey (2015), return on assets (ROA) is a form of return on investment (ROI) metric that assesses a company's profitability in relation to its total assets. This ratio measures a company's performance by comparing its profit (net income) to the capital generated in assets. The greater the rate of return, the more productive and efficient management is in exploiting economic resources. The ROA formula is broken down below. Net Profit Sales ROA = × 100 Sales Total Asset

Concept of Return on Equity

Return on asset (ROE) is a measure of effectiveness and capital efficiency, according to Bordeleau and Graham (2017). ROE is a result of profitability (how much profit a company earns before interest, taxes, and depreciation) and activity (how much money a company has spent in

operating assets to generate that level of profit). This method has the advantage of providing a standard form of evaluation for a corporation to employ when monitoring performance. At the individual business level, ROE: provides for the comparison of business units of varying sizes over time; shows where to invest more and where to cut back; and determines whether it is worthwhile to borrow more to invest: reveals whether or not shareholder expectations are being met; signifies the maximum sustainable expansion of a corporation; and is used to track whether or not a project is working as planned. ROE can be used to analyze corporate performance by testing operational efficiency, balance sheet management efficiency, and the appropriateness of return on capital used (Obiakor & Okwu).

Empirical Review

Uremadu (2017) carried out a study on working capital management and financial performance of manufacturing sectors in Nigeria. The major purpose was to investigate the relationship between working capital management and financial performance of listed manufacturing firms in Nigeria. The study covered a six years' period between 2012-2017. Return on assets was used as a performance measure whereas cash conversion cycle, current assets to total asset and current liabilities to total assets were used as working capital management measures. The study employed correlation and regression analysis models for analysis and the result of the analysis revealed that there is no significant relationship between cash conversion cycle and performance measures and hence the study concludes that, manufacturing firms in Nigeria should follow conservative working capital management policy. The study created an Institutional Gap, because it was carried out in a manufacturing sector, but this study is carried in a banking sector.

Javaid and Kamal (2014) analyzed the determinants of top ten banks' profitability in Pakistan over the period 2009 to 2014. They focused on the internal factors only. They used the Pooled Ordinary Least Square (POLS) method to investigate the impact of assets, loans, equity, and deposits on one of the major profitability indicators of banks which is return on assets (ROA). The empirical results found strong evidence that these variables have a strong influence on profitability. However, the results showed that higher total assets may not necessarily lead to higher profits due to diseconomies of scale. Also, higher loans contribute toward profitability but the impact is not significant. Equity and deposits have significant impact on profitability. Their study was conducted in Pakistan, a country that has a different banking system when compared with Nigeria.

Trade-Off Theory

This study is anchored on the trade-off theory as developed in Myers (1984). The benefit for debt was formed because it provided a tax refuge for earnings in the first version of the theory, which evolved with the addition of corporation income tax to the original irrelevance proposition of

Modigliani miller theorem. Given the firm's objective's linearity, entire debt financing is inferred, as the burden of debt cannot bhe alleviated. The trade-off theory describes the scenario in which a corporation chooses the degree of debt financing and the quantity of equity financing to use by balancing the costs and advantages. According to Myers (1984), an organization that follows this idea produces a standard debt/value ratio and finally moves in the target's direction. According to Murray and Vidhan (2005), the set standard is determined by matching debt tax shields to the corresponding bankruptcy costs. The assumptions of the Myers trade-off theory are: i) A decision maker managing a firm evaluates the alternative leverage plans as par the cost and benefit. ii) That an interior solution is achieved to reach the optimum managerial costs and marginal benefits. Therefore, the trade-off theory defines the scenario in which a corporation chooses the level of debt finance and the quantity of equity finance to use by balancing the costs and advantages. Investors and company managers are primarily concerned with maximizing returns while limiting risk.

Bratland and Hornbrinck (2013) defined the risk-reward trade-off as the amount of risk that one is ready to accept in exchange for the investment's rewards. However, even if the uncertain condition is believed to be normally distributed, the influence of risk is unclear. As a result, Bradley (1984) and Murray and Vidhan (2005) demonstrate that the gearing ratio is adversely connected with volatility. This theory's significance can be determined by linking the risk-return trade-off to Working Capital Management practices. For example, an aggressive working capital policy results in the maximum profitability but the least liquidity, with the associated risk of insolvency, which is usually significant (Weinraub & Visscher, 1998; Chakraborty, 2006). Conversely, a conservative or liberal policy ensures greater liquidity for the corporation but with lower returns (profitability) and related lower risk. According to Ani (2012), the primary goal of a business entity is to maximize the wealth of its shareholders, and this wealth maximization can be accomplished by maximizing the entity's return for the accounting period. This goal can only be met by properly maintaining the working capital components (current assets and current liabilities) while also remaining a way of the risk return trade-off

Methodology

To determine how working capital management affects the financial performance of listed deposit money banks in Nigeria, an ex-post-facto study approach was used. This design was used because it allowed for the retrospective analysis of the independent variables, working capital management (Return on Assets, Capital Adequacy Ratio, Cash Conversion Circle, and Net Working Capital) for any potential relationships with the dependent variables, Financial Performance (Return on Equity), in order to establish a causal relationship between the variables.

Sixteen (16) recognized Deposit Money Banks in Nigeria as of December 31, 2022, make up the study's population of interest. Using the screening criteria to set out, a purposeful sampling technique was adopted; the following 10 samples of the total sixteen Deposit Money Banks shall constitute the sample size for this research. Cross-sectional and time-series data were analyzed quantitatively for the study using Panel data modeling software. On the basis of the research sample, inferential statistics was used to draw conclusions about the sample size, and panel regression was used to estimate the parameter of the model developed for this study.

Table 5.1 List of Sample size of the Study

S/N	Names of Deposit Money Banks	Number
1.	First Bank Plc……..	1
2.	Guaranty Trust Bank Plc……..…	1
3.	United Bank of Africa Plc…...…..….	1
4.	Sterling Bank Plc……..……..	1
5.	Zenith Bank Plc……...……...	1
6.	Fidelity Bank Plc …….……	1
7.	Access Bank Plc….…….……..	1
8.	FCMB…….……	1
9.	Eco Bank Plc……..	1
10.	Stanbic IBTC…….……	1
	Total ……..	**10**

Source: Nigerian Stock Exchange Daily Official List as 31st November, 2022.

The models' specific forms include:

Y= F (ROA, CAR, CCC, NWC)…… Equation

$ROE_{i,t} = \alpha + \beta 1ROA_{i,t} + \beta 2CAR_{i,t} + \beta 3CCC_{i,t} + \beta 4NWC_{i,t} + e_{i,t}$……. Model

5.2 Assessment of the Variables

Return on Equity (ROE) is used to measure the dependent variable (financial performance), whereas Return on Assets, Capital Adequacy Ratio, Cash Conversion Circle, and Net Working Capital are used to measure the independent variable (financial performance).

Table 5.2 Descriptive Statistics

Variable	Observation	Mean	Std. Deviation	Minimum	Maximum
ROE	50	0.1549	0.1186	-0.0012	0.4489
ROA	50	0.1945	0.1273	0.0013	0.4031
CAR	50	0.1895	0.1137	0.0237	0.3923
CCC	50	0.1474	0.1177	-0.0012	0.3964
NWC	50	0.1536	0.1148	0.0170	0.3985

***Source*:** Researcher's computation using STATA 14.

Table 5.3 Correlation Matrix

Variables	ROE	ROA	CAR	CCC	NWC
ROE	1.0000				
ROA	0.5922	1.0000			
CAR	0.6544	0.5668	1.0000		
CCC	0.4310	0.3016	0.2348	1.0000	
NWC	0.0326	0.2582	0.0791	0.2995	1.0000

***Source*:** Researcher's computation using STATA 14.

Table 5.4 Coefficient of Variable from the Test of Hypotheses

	Model	Coefficient	Standard Error	t- Value	Sig.	VIF
1.	(Constant)	-0.0012101	0.0.272377	-0.04	0.965	
	ROA	0.2857148	0.1143922	2.50	0.016	1.61
	CAR	0.4439956	0.1234593	3.60	0.001	1.50
	CCC	0.2904283	0.1058286	2.74	0.009	1.18
	NWC	-0.1722205	0.1071605	-1.61	0.115	1.15
$F = (4, 45) = 15.49$; $(P < 0.0000)$, $R^2 = 0.5793$ and Adj. $R^2 = 0.5419$.						

***Source*:** Researcher's computation using STATA 14.

5.3 Test OF Hypotheses

H_{01}: Return on Assets has no significant effect on Financial Performance of Listed Deposit Money Banks in Nigeria;

H_{02}: Capital Adequacy Ratio has no significantly affected Financial Performance of Listed Deposit Money Banks in Nigeria;

H_{03}: Cash Conversion Circle does not significantly affect Financial Performance of Listed Deposit Money Banks in Nigeria;

H_{04}: Net Working Capital does not significantly affect Financial Performance of Listed Deposit Money Banks in Nigeria;

The R^2 represents the degree to which the explanatory variables explained the result presented. As can be seen in Table 3, the independent variables namely; (Return on Assets, Capital Adequacy Ratio, Cash Conversion Circle, and Net Working Capital) have an overall R^2 of 0.5793 (57%) which highly influence on the financial performance (ROE) of the Listed Deposit Money Banks in Nigeria. The model design fits the variable as per the computation of the results, indicates that the interaction of these factors has an impact on the financial performance of these listed sampled banks. Again, the output of the results shows that these variables (Return on Assets, Capital Adequacy Ratio, Cash Conversion Circle, and Net Working Capital) are all individually 5% significant. Therefore the study rejects the null hypotheses, which states that, Return on Assets has no significant effect on Financial Performance of Listed Deposit Money Banks in Nigeria; Capital Adequacy Ratio has no significantly affected Financial Performance of Listed Deposit Money Banks in Nigeria; Cash Conversion Circle does not significantly affect Financial Performance of Listed Deposit Money Banks in Nigeria; and Net Working Capital does not significantly affect Financial Performance of Listed Deposit Money Banks in Nigeria, and accepts the alternate hypotheses, which states that Return on Assets has significant effect on Financial Performance of Listed Deposit Money Banks in Nigeria; Capital Adequacy Ratio has significant affected Financial Performance of Listed Deposit Money Banks in Nigeria; Cash Conversion Circle do significantly affect Financial Performance of Listed Deposit Money Banks in Nigeria; and Net Working Capital does have significantly affect Financial Performance of Listed Deposit Money Banks in Nigeria. Following the outcome and interpretation of the hypotheses, thus the finding and discussions.

Finding and Discussion of the Results

The result shows relationship between the return on assets on the financial performance of listed Deposit Money Banks in Nigeria, with 28%. This implies that with 1% increase on the return on assets into the bank's capital formation, their will 28% increase of the financial performance the bank's capital assets in its day-to-activities. It also has a positive coefficient of 0.2857148 with the p-value of (0.0016) which fits the study. Again, the result of the capital adequacy ratio revealed a strong relationship with the financial performance of listed deposit money banks in Nigeria with a positively and statistically significant at 5% level owing to the fact that the study result shows a regression

coefficient of 0.4439956 and p-value of 0.001. This implies that profitability and savings mobilization of banks are majorly influenced by CAR. This finding is consistent with the findings in previous studies and findings in the work of Goddard (2004); Francis (2005); Athanasoglou (2005); Kosmidou et al; (2005), and more recently Olalekan and Adeyinka, (2013), who found a significant impact of CAR on financial performance. Functionally, adequate capital is regarded as the amount of capital that can effectively discharge the primary function of preventing bank failures by absorbing losses. This indicates that Capital requirement have an influence on financial performance (return on assets) of the selected deposit money banks in Nigeria.

The cash conversion cycle indicates a positive coefficient of 0.2904283 and a p-value of 0.009. The standard deviation to the cash conversion cycle is focused on the mean, standard deviation, minimum and a maximum level shows a higher value. This higher mean value of cash conversion cycle of 0.1474178 which is significant shows the abilities of the individual banks to be able convert other assets into liquid cash for the businesses or other diversification for the business. At maximum, the banks have the potential in converting these assets. Statistically, the cash conversion cycle shows the range of -0.0129 (-0.0129days) to 0.396437 (396days) approximately to convert the firm's inventory into cash flows from sales. The shorter average cash conversion cycle (the mean) shows that listed deposit money banks in Nigeria manage their working capital efficiently by converting inventory into goods for maximum financial performance for sale as possible and also collecting monies owed by customers quickly but pay their suppliers as late as possible.

Table 4 results shows the estimation models examining the relationship between net working capital and the financial performance of the listed deposit money banks. The table analyses the relationship between net working capital and financial performance; in disagreement with hypothesis 4, the coefficient of net working capital is statistically insignificant. The results support the expectation that banks should increase and build-up their net working capital to manage or beef-up their financial performance and growth.

Conclusion

The study concludes that working capital management has significant effect on financial performance of listed deposit money banks in Nigeria. Specifically, it discovered that Return on Assets has significant effect on Financial Performance of Listed Deposit Money Banks in Nigeria. Also revealed is that Capital Adequacy Ratio, and Cash Conversion Circle have significant effect on Financial Performance of Listed Deposit Money Banks in Nigeria. It equally unveiled that net working Capital has no significant effect on Financial Performance of Listed Deposit Money Banks in Nigeria.

Recommendations

i. Banks should optimize return on assets by continuing to focus lending and investments towards their highest risk-adjusted performing options. Adopting leading efficiency practices on credit decisioning and monitoring leveraging technology can contain operating costs of sustaining asset portfolios to increase returns.

ii. Maintaining adequate regulatory capital levels should remain a priority for Nigeria Banks. As the capital adequacy ratio exerted significant influence, continuing to meet risk-based capital needs ensures buffers against uncertainty. This provides stability to expansionary efforts.

iii. Banks should actively monitor and optimize their cash conversion cycle. Since CCC significantly impacts financial performance, improving receivables collection periods and stretching payables without affecting operations, can free up capital for more productive investments.

iv. The fact that no evidence that simply minimizing net working capital needs boosts profitability implies that aggressive lean policies could be counterproductive thus, pursuing efficiencies should balance prudence and flexibility based on the operating environment given Nigeria's demographics, transactional and digital banking present growth areas to offset margin compression.

References

Abiri, J.O.O. (2007). *Elements of evaluation, measurement and statistical techniques in education. Ilorin: Unilorin Library and Publication committee*. ISBN578-58291-2-2.

Aborode, R. (2005). *Strategic Financial Management* (pp. 150-156). Lagos: Masterstroke Consulting.

Adagye, I. D. (2015). Effective working capital management and the profitability of quoted banks in Nigeria. *European Journal of Accounting Auditing and Finance Research*, 3(2), 97-107. Retrieved from http://www.eajournals.org/ wp content/uploads/EffectiveWorking-Capital-Managementand-the-Profitability-of-QuotedBanks-in-Nigeria.pdf.

Aggreh, M., Nworie, G. O., & Abiahu, M. F. C. (2022). Debt structure and financial performance: evidence from listed construction firms in Nigeria. *Journal of Banking, 10*(2), 145-195. https://www.researchgate.net/publication/368246184.

Ahmad, M; Bashir, R; & Waqas, H. (2022). Working capital management and firm performance: are their effects same in covid 19 compared to financial crisis 2008?, *Cogent Economics & Finance*, 10:1, 2101224, DOI: 10.1080/23322039.2022.2101224.

Ahmad, M; Bashir, R; & Waqas, H. (2022). Working Capital Management and Firm Performance: Are their effects same comapared to Financial crisis 2008? *Cogent Economics & Finance,* 10: 2101224 https://doi.org/10.1080/23322039.2022.2101224.

Ajibike, J. O & Aremu, O. S (2015). The Impact of Liquidity on Nigerian Bank Performance: A Dynamic Panel Approach. *Journal of African Macroeconomic* Review 5(2).

Akgün, A. I., & Karataş, A. M. (2021). Investigating the relationship between working capital management and business performance: Evidence from the 2008 financial crisis of EU-28. *International Journal of Managerial Finance*, *17*(4), 545–567. https://doi.org/ 10.1108/IJMF-08-2019-0294.

Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance, 30*, 98–113. https:// doi.org/ 10. 1016/j. jcorp fin. 2014. 12. 008.

Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, *30*, 98–113. https://doi.org/10.1016/j.jcorpfin. 2014.12.008

Ali, M. B. & Shadrach, M. (2023). Impact of Board Composition on Financial Performance of Listed Deposit Money Banks in Nigeria. *African Scholar Publications & Research International*. (JBDMR-7).

Alnajjar, M. I. M. (2017). Impact of accounting information system on organizational performance: A study of SMEs in the UAE. *Global Review of Accounting and Finance*, 8(2), 20-38.

Anarfi, D., Abakah, E.J.A. & Boateng, E. (2016). Determinants of Bank Profitability in Ghana: New Evidence. *Asian Journal of Finance&Accounting*, *8*(2), 194-204.http://dx.doi.org/10.5296/ajfa.v8i2.10274.

Anthony W, Shanise C (2018). The impact of time factors on the financial performance of the commercial banking sector in Barbados. *Journal of Governance and Regulation* 7(1):20-25.

Avalina, V; Lismart, J. B P; Aprilyani, Nico, C.A. & Trito, B. S. (2023). The influence of Current Ratio, Debt to Equity Ratio, Total Assets Turn Over, and Firm Size on Return on Equity in Property Companies. *Research of Applied Science and Education*, Vol. 7, i2 (357-365).

Baños-Caballero, S., García-Teruel, P. J., & Martínez- Solano, P. (2014). Working capital management, corporate performance, and financial constraints. *Journal of Business Research*, *67*(3), 332–338. https:// doi.org/10.1016/j.jbusres.2013.01.016

Bassey, G. E., & Moses, C. E. (2015). Bank Profitability and liquidity management: A case of selected Nigerian deposit money banks. *International Journal of Economics, Commerce and Management,* 3(4), 1-24. Retrieved from http://ijecm.co.uk/wp-content/uploads/2015/04/3467a.pdf.

Besley, S. and Meyer, R.L. (1987), "An empirical investigation of factors affecting the cash conversion cycle", *Annual Meeting of the Financial Management Association, Las Vegas, Nevada.*

Boateng, K. (2018). Determinants of Bank Profitability: A Comparative Study of Indian and Ghanaian Banks. *Journal of EmergingTechnologies and InnovativenResearch*, 5(5), 643-654.https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3358818.

Boisjoly, R. P., Conine, T. E., & McDonald, M. B. (2020). Working capital management: Financial and valuation impacts. *Journal of Business Research, 108*, 1–8. https:// doi. org/ 10. 1016/j. jbusr es. 2019.09. 025.

Cashmere. (2015). Financial Statement Analysis (1 ed., Vol. 8). Jakarta:Rajawali Press.

Dabo, Z., Andow, H. A., & James, H. K. (2018). Solvency Risk and Financial Performance: Efidences from Listed Insurance Firm in Nigeria. *Crawfor Journal of Business & Social Sciences*, VIII(II), 125–133.

Deepak, M. (2004), "Working capital management in heavy engineering firms-A case study", Management Accountant-Calcutta, Vol. 39, pp. 317-323.

Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance Accounting, 30*(3-4), 573–588. https:// doi. org/ 10. 1111/ 1468- 5957. 00008.

Deloof, M. (2003). Does Working Capital Management Affect Profitability of Belgian Firms? Journal of Business and Accounting, 30(3-4), 573-588. https://doi.org/10.1111/1468-5957.00008.

Doan, T.T. & Bui, T.N. (2021). How does liquidity influence bank profitability? A panel data approach. *Accounting*, *7*, 59 64.http://dx.doi.org/10.5267/j.ac.2020.10.014.

Eya, C.I. (2016). Effect of working capital management on performance of food and beverage industries in Nigeria, *an Arabian journal of business and management review*, 6(5),1-7.

Eze, C.U; Okwo, M. I; & Onyemenam, C. M. (2023). Ontology of Knowledge-Based Capital Management and Performance of Deposit Money Banks (DMBs) in Nigeria. *European Journal of Science, Innovation and Technology*, ISSN: 2786-4936.

Fernandez-Lopez, S., Rodeiro-Pazos, D., & Rey-Ares, L. (2020). Effects of working capital management on firms' profitability: Evidence from cheese-producing companies. *Agribusiness, 36*(4), 770–791. https:// doi. org/ 10. 1002/ agr. 21666.

Gitman. (2012). Principles of Managerial Finance (10 ed.). Massachusetts: Addison Wesley.

Godswill, O., Ailemen, I., Osabohien, R., Chisomand, N., & Pascal, N (2018). Working Capital Management and Bank Performance: *Empirical Research of Ten Deposit Money Banks in Nigeria. Banks and Bank Systems*, 13(2), 49-61. doi:10.21511/bbs.13(2).2018.05.

Gormsen, N. J., & Koijen, R. S. (2020). Coronavirus: Impact on stock prices and growth expectations. *The Review of Asset Pricing Studies*, *10*(4), 574–597. https://doi. org/10.1093/rapstu/raaa013.

Habib, A. M. (2022). Does the efficiency of working capital management and environmental, social, and governance performance affect a firm's value? Evidence from the United States. *Financial Markets, Institutions and Risks, 6*(3), 18–25. https:// doi. org/ 10. 21272/ fmir. 6(3). 18- 25. 2022.

Hacini, I., Boulenfad, A. & Dahou, K. (2021). The impact of liquidity risk management on the financial performance of Saudi Arabian banks. *Emerging Markets Journal, 11*(1), 68-75.

Hager, H.C. (1976), "Cash management and the cash cycle", Management Accounting, Vol. 57 No. 9, pp. 19-21.

Harahap, S. S. (2016). Critical Analysis of Financial Statements (13th ed.). Jakarta:Raja Grafindo Persada.

Haruna, A. M. (2016). Effects of working capital management on both the performance of small and medium enterprises in Nigeria. Doctorate's thesis submitted to Jomo Kenyatta University of agriculture and technology Juja, Kenya.

Hersugondo, H; Anjani, N; & Pamungkas, D.I. (2021). The Role of Non-Performing Asset, Capital, Adequacy and Insolvency Risk on Bank Performance: A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business Vol 8 No 3 (2021) 0319–0329*.

Honda, T., & Uesugi, I. COVID-19 and Precautionary Corporate Cash Holdings: Evidence from Japan (2021). *RCESR Discussion Paper Series DP21-2, Research Center for Economic and Social Risks, Institute of Economic Research, Hitotsubashi University*.

Imola DS (2017). Financial risk analysis for a commercial bank in the Romanian banking system. *Journales' Annales universitatis Apulensis Series Oeconomica* 14(1):20-47.

Iyke, B. N. (2020). The disease outbreak channel of exchange rate return predictability: Evidence from COVID-19. *Emerging Markets Finance Trade Finance*, *56*(10), 2277–2297. https://doi.org/10.1080/ 1540496X.2020.1784718.

Kamath, R. (1989), "How useful are common liquidity measures", *Journal of Cash Management*, Vol. 9, pp. 24-28.

Karadayi, N. (2023). Determinants of Return on Assets. *European Journal of Business and Management Research*. www.ejbmr.org.http://dx.doi.org/10.24018/ejbmr.2023.8.3.1938 Vol 8. Issue 3.

Karim, R; Abdullah, M. A; & Sadeque, A. M.K. (2023). Cash Conversion Cycle and Financial Performance: Evidence from Manufacturing firms of Bangladesh. *Asian Journal of Economics and Banking.* https://www.emerald.com/insight/2615-9821.htm.

Kawshala, H. & Panditharathna, K. (2017). The Factors Effecting on Bank Profitability. *International Journal of Scientific and Research Publications*, *7*(2), 212-216. https://www.researchgate.net/profile/BaHirinduKawshala/publication/313530386_The_Factors_Effecting_on_Bank_Profitability/links/589d9186a6fdcc3e8beea0e4/The-Factors-Effectingon-Bank-Profitability.pdf.

Keovongvichith, P. (2012). An analysis of the recent financial performance of the Laotian banking sector during 2005–2010. *International Journal of Economics and Finance*, 4(4), 148-162. https://doi.org/10.5539/ijef.v4n4p14.

Keown, A., Martin, D.J. and Scott, D.F. (2003), Foundations of Finance: The Logic and Practice of Financial Management, 4th ed., Pearson Education, New Jersey.

Kirkpatrick, G. (2019). The corporate governance lessons from the financial crisis. *OECD Journal: Financial Market Trends, 2019*(1), 61-87.

Koh, A, Ang, S. K., Brigham, E. F., & Ehrhardt, M. C. (2014). Financial Management: Theory and Practice. Singapore: Cengage Learning Asia Pty Ltd.

Largay, J.A. III and Stickney, C.P. (1980), "Cash flows, ratio analysis and the W.T. Grant company bankruptcy*", Financial Analysts Journal*, Vol. 36 No. 4, pp. 51-54.

Lazaridis, I. and Tryfonidis, D. (2006), "The relationship between working capital management and profitability of listed companies in the Athens Stock Exchange", *Journal of Financial Management and Analysis*, Vol. 30 No. 76, pp. 1-12.

Li, X., & Cui, J. (2008). A comprehensive Dea approach for the resource allocation problem basedon scale economies classification. *Journal of Systems Science and Complexity, 21*(4), 540–557. https:// doi. org/ 10. 1007/ s11424- 008- 9134-6.

Lipunga, A.M. (2014). Determinants of Profitability of listed commercial banks in developing countries:Evidence from Malawi. *Researches Journal of Finance and Accounting*, *5*(6), 41-49.

Liu, L., Wang, E.-Z., & Lee, -C.-C. (2020). Impact of the COVID-19 pandemic on the crude oil and stock markets in the US: A time-varying analysis. *Energy Research Letters*, *1*(1), 13154. https://doi.org/10. 46557/001c.13154.

Long, M.S., Malitz, I.B. and Ravid, S.A. (1993), "Trade credit, quality guarantees, and product marketability", Financial Management, Vol. 22 No. 4, pp. 117-127.

Lovy, O. I. (2016). Effects of Micro finance Banks Liquidity on working capital of small and medium scale enterprises. *International Journal of Business & Law Research*, 4(24), 53-59.

Luo, M.M., Lee, J.J. and Hwang, Y., 2009. Cash conversion cycle, firm performance and stock value. Retrieved from www90. homepage. villanova. edu/Michael.../ML_CCC_20090420.pdf,(accessed on 2/5/2021).

Mabandla, Z. N. (2018), The Relationship Between Working Capital Management and Financial Performance of Listed Food and Beverage Companies in South Africa, University of South Africa, Department of Business Management.

Mamduh, M., Hanafi, &; Halim, A. (2014). Financial Statement Analysis (4th ed.). Yogyakarta: UPP STIM YKPN.

Mathai, A. N. (2010). The Relationship Between Working Capital Management and Profitability of Rtail Supermarkets in Kenya. Nairobi University Keya. Unpublished MBA Project. http://erepository.uonbi.ac.ke/handle/11295/5675.

Mekonnen, M. (2011). "The Impact Of Working Capital Management On Firms Profitability" Unpublished Master Thesis, Addis Ababa University: Ethiopia.

Mohamad, N.E.A.B. and Saad, N.B.M., (2010). Working capital management: The effect of market valuation and profitability in Malaysia. *International journal of Business and Management,*5(11), (accessed on 1/5/2021).

Mohamed, A.H. & Dalwai, T. (2023). Does the Efficiency of a Firm's Intellectual Capital and Working Capital Management Affect Its Performance*? Journal of the Knowledge Economy*, https://doi.org/10.1007/s13132-023-01138-7.

Mutai, G., Miroga, J. (2023) Financial management practices and financial performance of commercial banks in Kenya. *International Academic Journal of Economics and Finance, 3(9), 31-78.*

Nabi, G., Yousaf, M. S., Ali, I., & Najaf, R. (2016). Impact of working capital management approaches (aggressive/conservative) on the profitability and shareholder's worth: Comparative analysis of cement and sugar industry. *Research Journal of Finance Accounting*, *7*(5), 60–65.

Nabonee, M. (2009). Working Capital Management and Firms Profitability: An Optimal Cash Conversion Cycle. SSRN Electronic Journal. https://dx.doi.org/10.2139/ssrn.1471230.

Narayan, P. K. (2020). Oil price news and COVID-19—Is there any connection? *Energy Research Letters*, *1*(1), 13176. https://doi.org/10.46557/001c.13176

Nazir, M. S., & Afza, T. (2009). Impact of aggressive working capital management policy on firms' profitability. *IUP Journal of Applied Finance*, *15*(8), 19–30.

Nazir, M.S. and Afza, T., 2009. Impact of Aggressive Working Capital Management Policy on Firms' Profitability. *IUP Journal of Applied Finance,* 15(8), pp. 19-30.

Nduta, M. W. (2015). The effect of working capital management on financial performance of manufacturing firms listed in Nairobi security exchange. Master's thesis submitted to the University of Nairobi School of business, Kenya.

Nworie, G. O. & Mba, C. J. (2022). Modelling financial performance of food and beverages companies listed on Nigerian exchange group: the firm characteristics effect. *Journal of Global Accounting, 8*(3), 37 - 52. https://journals.unizik.edu.ng/index.php/joga/article/view/1418/1142.

Ogechukwu, G. N; & Chidi, J. A. (2023). Determining the Financial Performance of Tier-1 Deposit Money Banks in Nigeria Using Bank Liquidity. *International Journal of Academic Management Science Research (IJAMSR)* ISSN: 2643-900X Vol. 7 Issue 2, Pages: 166-181.

Okere, W., Okeke, O., Emili, E. & Rufai, O. (2021). Liquidity management: implications for financial performance of deposit money banks (DMBs) in Nigeria. *Journal of Asian Business Strategy, 11*(1), 24-32.

Olaleye, O. I., Adesina, M. A. & Sulaiman, A. Y. (2021). Effect of liquidity management on profitability of commercial banks in Nigeria. *American Journal of Finance, 6*(2), 25-34.

Oloye, M. I., & Osuma, G.(2015). Impacts of Mergers and Acquisition on the Performance of Nigerian Banks (A Case Study of Selected Banks). *Pyrex Journal of Business and Finance Management Research*, 1(4), 23-40. Retrieved from http://www.pyrexjournals.org/pjbfmr/pdf/2015/november/oloye-and-osuma.pdf.

Oluitan, R. O. (2017). The effect of working capital management on profitability of Deposit Money Banks in Nigeria: A case study of First Bank Plc. *Research Journal of Finance and Accounting*. Vol.8 No 24, 54-59.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252. Retrieved from https://www.econjournals.com/index.php/ijefi/article/view/334/pdf.

Osuma, G., Ikpefan, A., Romanus, O. & Emoarechi, E. (2017). Working capital management and profitability of selected deposit money banks in Nigeria. *Journal of Association of Professional Bankers in Education*. Vol. 1, No. 1, 211-231.

Osuma, G., Ikpefan, A., Romanus, O. Ndigwe C. & Nkwodimmah, P. (2018). Working capital management and bank performance: empirical research of ten deposit money banks in Nigeria. Banks and Banks Systems. 13(2), 49-61.

Oza, S; & Desar, M. (2023). Impact of Working Capital On Financial Performance: A Case of Cement Companies in Gujarat. *International Journal of Enhanced Research in Management & Computer Applications*. ISSN: 2319-7471, Vol. 12 Issue 6.

Peprah, W. K. & Riziki, A. (2019). The relationship between working capital and profitability: A confirmatory study from selected banks in Ghana. A paper presented at the 1st International Research Forum on fire: Excellence in Research, Adventist University of the Philippines. https://www.researchgate.net.

Peterson K. V (2017). An empirical inquiry into the relationship between asset liability management and financial performance of sampled commercial banks in America. *International Journal of Portfolio Management*, 17(9).

Prasad, P., Sivasankaran, N., Paul, S. and Kannadhasan, M. (2019), "Measuring impact of working capital efficiency on financial performance of a firm: an alternative approach", *Journal of Indian Business Research*, Vol. 11 No. 1, pp. 75-94.

PricewaterhouseCoopers, (2019). *Working capital report 2019/20: Creating value through working capital (Unlocking cash in digital age)*. P. w. h http:// www. pwc. com/ gx/ en/ worki ng- capit al- manag ement- servi ces/ assets/working- capital- report- final. Pd.

Raheman, A., Afza, T., Qayyum, A. and Bodla, M.A., (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. *International Research Journal of Finance and Economics,* 47(1), pp. 156-169.

Rahman, M.M., Hamid, K. & Khan, A.M. (2015). Determinants of Bank Profitability: Empirical Evidence from Bangladesh. *International Journal of Business and Management*, *10*(8), 135-150.
https://www.researchgate.net/profile/MohammadRahman96/publication/280554575_Deter

minants_of_Bank_Profitability_Empirical_Evidence_from_Bangladesh/links/56b03acd08ae8e37214d1c1d /Determinants-of-Bank-Profitability-Empirical-Evidence-from-Bangladesh.pdf.

Raji, S., Adebayo, I., & Folarin, O. (2017). Impact of working capital on firms' performance in Nigeria. *Osogbo Journal of Management* (OJM), 2(3), 47 – 64.

Ramachandran, A. and Janakiraman, M., 2009. The relationship between working capital management efficiency and EBIT. *Managing Global Transitions: International ResearchJournal,* 7(1), pp. 61-74.

Ravinder, D., & Muskula, A. (2013). Financial Analysis – A Study. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 2(3), 10-22. https://doi.org/10.9790/5933-0231022.

Shen, H., Fu, M., Pan, H., Yu, Z., & Chen, Y. (2020). The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance Trade Finance*, *56*(10), 2213–2230. https://doi.org/10.1080/ 1540496X.2020.1785863.

Shin, H. H., & Soenen, L. (1998). Efficiency of working capital management and corporate profitability. *Financial Practice and Education, 8*(2), 37–45.

Simon, S., Sawandi, N., & Abdul-Hamid, M. A. (2017). The quadratic relationship between working capital management and firm performance: Evidence from the Nigerian economy. *Journal of Business Retail Management Research*, *12*(1), 94–108. https://doi.org/ 10.24052/JBRMR/V12IS01/TQRBWCMAFPEFTNE.

Tan, Y. (2016). The impacts of risk and competition on bank profitability in China. *Journal of International Financial Markets, Institutions and Money*, 40, 85–110. https://doi.org/ 10.1016/j.intfin.2015.09.003.

Tran, H., Abbott, M., & Jin Yap, C. (2017). How does working capital management affect the profitability of Vietnamese small- and medium-sized enterprises? *Journal of Small Business and Enterprise Development, 24*(1), 2–11. https:// doi. org/ 10. 1108/ JSBED- 05- 2016- 0070.

Umoren, A. & Udo, E. (2015). Working Capital Management and the Performance of selected deposit money banks in Nigeria. *British Journal of Economics, Management and Trade,* 7(1), 23-31.

Virandani, S.M. (2023). The Effect of Cash Ratio, Debt to Equity Ratio, Total Assets Turnover, Return on Assets and Firm Size on Dividend Payout Ratio at Bank Persero Listed in IDX High Dividend 20 for the 2018-2021 period. *Synergy International Journal of Management and Business* 1(1) 17-43.

Wang, Z., Akbar, M., & Akbar, A. (2020). The interplay between working capital management and a firm's financial performance across the corporate life cycle. *Sustainability, 12*(4), 1661. https:// doi.org/ 10. 3390/ su120 41661.

Yusuf, B., Onafalujo, A., Idowu, K., & Soyebo, Y. (2018). Capital structure management and profitability of quoted firms: The Nigerian perspective (2000-2011). In Proceedings of International Academic Conferences. *International Institute of Social and Economic Sciences.* (5) 17-22.

Zimon, G., & Tarighi, H. (2021). Effects of the COVID-19 global crisis on the working capital management policy: Evidence from Poland. *Journal of Risk Financial Management*, *14*(4), 169. https://doi.org/10.3390/ jrfm14040169.