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

By

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ABSTRACT

Working capital management is very crucial in this period of global financial turmoil. Working capital is regarded as the lifeblood and nerve of a business concern, it is therefore essential to accommodate the smooth operations of any organization, but Studies in working capital management have provided inconclusive results. The objective of this study is to examine the effect 0f Working Capital Management on Financial Performance of Selected Deposit Money Banks in Nigeria. The study covers the period of thirteen years (2007 to 2019). Data for the study were extracted from the Deposit Money Banks' Annual Reports and Accounts. After running the Ordinary Least Square (OLS) regression, a robustness test was conducted for validity of statistical inferences; the data was empirically tested between the regressors and the regressed. The results from the analysis revealed that Working Capital Management has no significant effect on Earnings per Share (EPS) of selected Deposit Money Banks in Nigeria, but Working Capital Management has significant effect on Return on Asset (ROA) and Return of Equity (ROE) of selected Deposit Money Banks in Nigeria. In line with the above findings, the study recommended that the management should put more attention on their liquidity in order to maintain an adequate liquidity as the study has empirically proved that higher liquidity signifies more profitability; the listed Deposit Money Banks in Nigeria should try and maintain a higher quick ratio as it will have a positive effect on their profitability. Finally, the management should reduce holding too much amount of cash in current asset as it constitutes idle cash, instead the firm should invest the cash so that it could yield higher returns.

Key words: Working capital management, financial performance, current ratio, profitability ratio

1.0 INTRODUCTION

Working capital management is a delicate component of financial management, and it is critical to the existence of any organization. The ability of a company to use its current or short-term assets to satisfy its short-term liabilities is one of several elements that influence its growth. Working capital management is concerned with maximizing liquidity, profitability, and shareholder value (Muniraju & Kumar, 2018). Working capital management, along with capital structure and capital budgeting, is one of the financial concerns that a corporation's finance manager must determine (Naceur, 2017).

Working capital management is critical in managing the bank's current account, which comprises both current assets and current liabilities. This section covers the various types of current asset and current liability adjustments that a bank might make in order to meet its working capital requirements. Working capital is classified into two types: gross and net. The gross type refers to the bank's investments in current assets, which are assets that can be turned into cash during the accounting year, such as short-term securities, debtors' bills receivable, inventories, and cash and cash equivalents (Saleem & Rehman. 2016).

The primary goal of establishing deposit money institutions is to profit the shareholders. In this sense, banks and other profit-seeking organizations attempt to improve their net income and asset presence value. While acknowledging this, the bank manager's immediate priority is to offer appropriate returns to shareholders, which necessitates keeping a significant number of safe and productive assets as well as getting funds from the quickest volatile and expensive accessible sources (Naceur, 2017). According to Barth, Caprio, and Levine (2016), a bank does not have complete control over its assets and a large portion of its liabilities; rather, it has partial control over some current assets and current liabilities, entire control over others, and total control over others. Banks must make numerous modifications to meet their long-term goals within the context of their business environment limits and prospects.

The management of working capital affects the financial performance of a firm especially the deposit money banks. This is because working capital shows the strength and degree of solvency of the business. The ratio shows the extent to which the claim of creditors can be quickly meet. A low ratio indicates that two much capital is tied up in stocks. Abah (2018) opined that, the consideration of the level of investment in current assets should avoid two danger points, the excessive and inadequate investment on assets. Current asset investments should be in good condition in order to improve performance. Excessive investment in current assets should be avoided since it reduces a bank's profitability because idle investment pays no dividends to the owner.

Inadequate availability of operating capital, on the other hand, can jeopardize the bank's viability if it fails to satisfy its existing obligations. As a result, financial managers should be aware of the sources of working capital funds as well as investment outlets where idle cash can be temporarily invested. The net working capital, on the other hand, indicates a bank's liquidity position and suggests that current assets should be sufficiently greater than current liabilities to provide a margin for maturing obligations within the normal operation cycle of the bank's company (Adam, 2015).

As a result, working capital ratios, particularly the current ratio, liquidity ratio to asset ratio, loan to deposit, cash to deposit, quick ratio, cash ratio, and monetary rate, are important for planning and making successful decisions in the banking business (Graham, 2017). Furthermore, Heibati, Nourami, and Dadkhah (2019) stated that financial performance is a scientific measure of a bank's profitability and financial soundness. However, some of these financial performance statistics include I Earnings Per Share, I Return on Assets, Return on Equity, Return on Capital Employed, and Profit Margin.

This study is motivated by the fact that there have been cases of working capital management problem in some corporate entities in Nigeria. Situations exist where some promising investments with high rate of return had turned out to be failures and the companies became distressed because of inadequacy of working capital (Abah, 2018). Although, too much capital on the other head, results in idle cash and reduces profitability. The efficiency in the management of working capital will affect any entities liquidity and financial performances (Naceur, 2017).

1.1 Statement of the Problem

The need for working capital to run the day to day activities of a bank business cannot be over-emphasized. We will hardly find a bank or other firm which does not require any amount of working capital. Banks should earn enough return from their operations in order to be able to achieve their set goals, which of course includes the maximization of shareholders' wealth and as such to avoid the recent distress problems in today's banks which has its root basically from inadequate working capital caused by inefficient working capital management. The banks have to invest enough in current assets for success of their business (Agbada & Osuji, 2018). However, the bank's inability to honor claims from individuals/customers demand begins a spiral of technical insolvency. It was to avoid such embarrassing situations as liquidity, technical insolvency, high risk, and low profit that such theories, the profit ability theory, and the liability management theory, were developed in banking to guide bankers in their decision-making process (Idowu & Babatunde, 2017).

Despite the crucial nature of working capital management, many promising and viable investment with high rate of return had turned out to be failures and went down (Ogunleye, 2016). In Nigeria, many banks have been short down owing to wrong working capital management. Failure of a bank automatically connotes its working capital failure which could be highly contagious leading to a bank run on the distressed bank which may commensurate to a bank panic in the banking sector. The major cause of the bank's liquidation internally was as a result of the unavailability of sufficient working capital to carry on with the day to day running of the business. Therefore it is against this background that this paper seeks to examine the working capital position and performance of the selected deposit money banks.

The effects of working capital management on financial performance have been a focus of substantial amount of empirical research for many years. For instance, Ibe (2018), Okoye and Eze (2018), olayinka and Farouk (2018), Owulabi and Ogunlalu (2019) carried out study on similar topic. Their studies focused on the Nigerian Deposit Money Banks' Liquidity (proxied by Liquidity Ratio, Current Ratio, Quick Ratio, Cash Ratio, Account Payables, Account Receivables, Money Policy Rate, Bank Capitalization, and Bank Lending Rate); and Nigerian Deposit Money Banks' Profitability (proxied by Net Margin Ratio, and Return on Employed).

No study combines all the operational variables in a single study that this current research work focused., which are Nigerian Deposit Money Banks' working capital (proxied by Current Ratio, Liquidity to Asset Ratio, Loan to Deposit, and Cash to Deposit), and Nigerian Deposit Money Banks' Financial Performance (proxied by Earnings per Share, Return on Asset, and Return on Equity).

Furthermore, their research concentrated on industrial enterprises that did not operate in well-developed money and capital markets. Findings from these researches are difficult to generalize for Nigeria's relatively small banking system, which operates in a financial market where enterprises rely primarily on owner financing, trade credit, and short-term bank loans to fund critical working capital investments. However, studies on the effect of working capital management on the financial performance of Nigerian deposit money banks have remained a largely unexplored area of empirical research. These arguments have serious shortcomings of existing literature. In spite of the touted impact efficient working capital management may have on business survival and growth, not much has been done in the area of the provision of empirical evidence in support of the claims of working capital management on the financial performance of deposit money banks quoted in Nigerian stock exchange. Given this paucity of empirical studies, it is hoped that this study will fill a gap and provide useful support for understanding the determinants of financial performance of deposit money banks quoted in the Nigerian stock exchange.

1.2 Objective of the Study

The main objective of this study is to evaluate the Effect of Working Capital Management on Financial Performance of Selected Deposit Money Banks in Nigeria. The specific objectives are to:

i) examine the extent Current Ratio, Liquidity Ratio, Loan to Deposit, and Cash to Deposit affect Earnings per Share (EPS) of selected Deposit Money Banks in Nigeria;

ii) assess how Current Ratio, Liquidity Ratio, Loan to Deposit, and Cash to Deposit affect Return on Asset (ROA) of selected Deposit Money Banks in Nigeria; and,

iii) examine the effect of Current Ratio, Liquidity Ratio, Loan to Deposit, and Cash to Deposit on the Return on Equity (ROE) of selected Deposit Money Banks in Nigeria.

1.3 Hypotheses of the Study

Hypotheses tested in this study are:

Ho_1: Current Ratio, Liquidity Ratio, Loan to Deposit, and Cash to Deposit have no significant effect on Earnings per Share (EPS) of selected Deposit Money Banks in Nigeria.

Ho_2: Current Ratio, Liquidity Ratio, Loan to Deposit, and Cash to Deposit have no significant effect on Return on Asset (ROA) of selected Deposit Money Banks in Nigeria.

Ho_3: Current Ratio, Liquidity Ratio, Loan to Deposit, and Cash to Deposit have no significant effect on Return on Equity (ROE) of selected Deposit Money Banks in Nigeria.

2.0 LITERATURE REVIEW

2.1 Conceptual Framework

This section conceptualized the working capital management, financial performance and their proxies.

2.1.1 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.

Working capital management (MWC) is concerned with the disparities that develop in the management of current assets, current liabilities, and the interdependence that exists between them. Muniraju and Kumar (2018) defined working capital management (MWC) as "all management actions and decisions that usually influence the size and efficacy of working capital." As a result, the goal of working capital is to best manage current assets and current liabilities in order to attain an acceptable amount of net-working capital. Thus, net working capital (NWC) is the mathematical difference between an organization's current assets and current liabilities. If a company cannot maintain a reasonable level of net working capital, it is insolvent and, if not addressed, will go bankrupt. According to Kehinde (2014), working capital is divided into two concepts: gross working capital and net working capital. He went on to say that gross working capital refers to a company's current assets, whereas net working capital refers to the difference between a company's current assets and current liabilities.

2.1.2 Current Ratio

The current ratio is a measure of an entity's liquidity on the balance sheet. It reflects a company's ability to meet short-term obligations. The current ratio assesses whether a corporation has sufficient resources to pay its debts over the next 12 months (Idowu & Babatunde). The current ratio is defined as the ratio of current assets to current liabilities. The current ratio, commonly known as the working capital ratio, assesses a company's capacity to satisfy its short-term obligations due within a year. The ratio takes into account the weight of total current assets versus total current liabilities; it reflects an entity's financial health by measuring its capacity to pay down short-term commitments with current assets (Naceur, 2017). According to experts, the optimal ratio is a 2:1 relationship; hence it is called a 2:1

ratio. This indicates that for every Naira current liability, there are two Naira current assets available to meet it when it matures. This can be calculated using the following formula:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

2.1.3 Liquidity to Asset Ratio

A company's liquidity to asset ratio is the ratio of its cash and liquid assets to its total liabilities. This ratio assesses a company's liquidity and its ability to service debt and cover short-term liabilities if necessary. As a result, potential creditors consider this ratio when deciding whether to offer a short-term loan. According to Agbada and Osuji (2014), the liquidity to asset ratio is the ratio of a company's cash and cash equivalent assets to its liabilities. The cash ratio is a development of the quick ratio that measures the amount to which readily accessible and ready funds are used to pay off current liabilities. This ratio is used by potential creditors to assess a company's liquidity and how readily it can be served.

The cash ratio is a liquidity statistic that compares a company's total cash and cash equivalents to its current obligations. The indicator determines a company's ability to pay short-term debt using cash or near-cash resources, such as easily marketable securities. This information is helpful to creditors when determining how much money, if any, they are willing to provide to a company. The cash ratio, on the other hand, is almost like a business indication. It informs creditors and analysts about the value of current assets that can be converted to cash rapidly, as well as the percentage of the company's current liabilities that can be covered by near-cash assets (Bordeleu & Graham, 2017).

2.1.4 Loan to Deposit Ratio

According to Fadare (2011), loan-to-ratio (LDR) issued to analyze a bank's liquidity by comparing a bank's total loans to total deposits for the same period. The LDR is expressed as a percentage; if the ratio is too high, it indicates that the bank may not have adequate liquidity to meet any unexpected fund requests. In the opposite case, if the ratio is too low, the bank may not be earning as much as it could. A loan-to-deposit ratio demonstrates a bank's ability to cover loan losses and customer withdrawals. Investors keep an eye on banks' LDRs to ensure that there is enough liquidity to cover loan defaults in the case of an economic downturn.

In addition, the LDR serves to demonstrate how well a bank attracts and retains clients. When a bank's deposits grow, it attracts fresh money and clients. As a result, banks will most likely have money to lend, which should boost profits. Despite the fact that it may seem counterintuitive, loans are assets for banks because banks get interest income from lending. Deposits, on the other hand, are liabilities since banks must pay interest on them, although at a modest rate. The LDR can assist investors in judging if a bank is appropriately managed. If the bank's deposits do not increase, the bank will have less money to lend. In some circumstances, banks will borrow in order to increase their interest income. However, if a bank is suing debt to finance its lending operations instead of deposit, the banks will have debt servicing costs since it will need to pay interest on debt (Ibe, 2018).

2.1.5 Cash to Deposit Ratio

A bank's cash to deposit ratio is equal to (total cash) / (total deposits). The bank must maintain liquidity in order to operate and will keep a certain amount of cash on hand to service net withdrawals from consumer activities such as checking and savings accounts. This is the amount of money that a bank should have as a proportion of the total amount of money that its customers have deposited with the bank. This amount is established so that consumers can be confident that they will be able to withdraw their funds from the bank if they so desire (Saleem & Rehman, 2016).

According to Barth, Carprio, and Levine (2016), the cash Deposit Ratio (CDR) is the ratio of how much a bank lends out of the deposit it has mobilized. It reveals how much of a bank's core funds are being used for lending, which is the primary banking activity. It can alternatively be defined as the sum of cash on hand and RBI balances divided by total deposits. The data provides CDR by bank class, i.e. scheduled and non-scheduled. Scheduled commercial banks are those banks that conduct banking operations in India and are included in the second schedule to the Reserve Bank of India Act, 1934.

2.1.2 Concept of Financial Performance

Heibati, Nourani and Dadkhah (2019) opined that financial performance is scientific evaluation of profitability and financial strength of any business concern" according to Kennedy and Macmillan financial statement analysis attempt to unveil the meaning and significance of the items composed in profit and loss account and balance sheet. The assists are the management in the formation of sound operating and financial policies. According to accounting point of view financial statement are prepared by a business enterprise at the end of every financial year. "Financial statements are end products of financial accounting." They are capsulated B periodical reports of financial and operating data accumulated by a firm in its books of accounts- the General Ledger.

2.1.2.1 Earnings per Share

Earnings per share (EPS) are the fraction of a company's earnings that is distributed to each share of common stock after taxes and preferred stock dividends. The statistic is easily determined by dividing net income earned during a certain reporting period (generally quarterly or annually) by the total number of shares outstanding during the same period. Because the number of shares outstanding can fluctuate, a weighted average is usually utilized (Okafor & Okwu, 2017).

$$EPS = \frac{\text{Net Income - Dividend on Preferred Stock}}{\text{Average Outstanding Shares}}$$

Earnings per share are widely regarded as the most essential factor in determining a share's price. It is also an important factor in calculating a price-to-earnings valuation ratio (Okafor & Okwu, 2017). EPS is a closely watched indicator that is frequently used as a barometer to gauge a company's profitability per unit of shareholder ownership. As a result, earnings per share are a major driver of stock prices. It is also the denominator in the commonly used P/E ratio. EPS can be calculated in two ways: basic and fully diluted.

Fully diluted EPS, which takes into account the potentially dilutive effect of warrants, stock options, and instruments convertible into common stock, is typically seen as a more accurate statistic and is more frequently cited (Kehinde, 2018). EPS can be further segmented according on the time period concerned. Prior (trailing) earnings, recent (current) earnings, or expected future (forward) earnings can all be used to determine profitability. Though earnings per share are usually regarded as the most essential metric, keep in mind that earnings can easily be manipulated through accounting changes and restatements. As a result, some consider free cash flow to be a more trustworthy predictor than EPS.

2.1.2.2 **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.

$$ROA = \frac{\text{Net Profit}}{\text{Sales}} \times 100 \quad \frac{\text{Sales}}{\text{Total Asset}}$$

2.1.2.3 **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).

The basic goal of investing in any firm is to achieve a reasonable return on investment (Gupta, 2004). As a result, to assess the total profitability of the relationship between profit and capital employed, divide the net profit by the capital employed.

$$ROE = \frac{\text{Net Profit (Before Interest and Tax)}}{\text{Gross Capital Employed}} \times 100$$

2.2 Theoretical Framework

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 be 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 aware of the risk/return trade-off.

2.3 Empirical Review

This section reviewed some of the work done by researchers in the past and recent times.

2.3.1 Working Capital Management and Earnings per Share (EPS)

Daniel and Ambrose (2018) investigated the impact of working capital management on Earnings per Share (EPS). Empirical Evidence from Deposit Money Banks listed on the Nairobi Securities Exchange, Kenya. The challenge of the study was to find out the relationship between Working Capital Management and Earnings by Share. The study employed a balanced panel data of five Deposit Money Banks which are listed on the Nairobi Securities Exchange (NSE). Pearson's correlation and ordinary least squares regression models were used. The study covers a period of 10 years that is 2009 –2018. The study finds out that a negative relationship exists between Working Capital Management and Earnings per Share. According to the study, current ratio has no any significant effect on the Deposit Money Banks' Earnings per Shares. The researchers concluded that banks can create value for their shareholders by improving on their working capital management. The study created a vacuum by studying only one independent variable (current ratio), but this study will fill the cap by looking at the banks' current ratio and quick ratio. Besides, their study looked at the Deposit Money Banks listed on the Nairobi Securities Exchange, Kenya, but this study looks at the Deposit Money Banks listed on the Nigeria Stock Exchange.

Uremadu (2011) carried out a study on the effect of Capital Structure and Liquidity on the Earnings per Share of selected Nigerians banks. Time series data for the 1980 to 2006 period was used for the study. The data was analyzed using descriptive statistics and regressive distributed lag (ARDL) model. The empirical results indicated a positive and significant relationship between cash reserve ratio, liquidity ratio, corporate income tax and banks' Earnings per Share. On the other hand, there was negative and significant relationship between savings deposit rate, gross national savings, balances with the central bank, inflation rate, foreign private investment and bank earnings per share. The data used for study were outdated and inadequate, because the data were used two decades ago, in the era where Nigerian Banking System was poor and inefficient. But the data used for this study are from 2007 to 2019, era where there is an improvement in Nigerian Banking System because of the banking reforms that have to do with the consolidation and recapitalization of banking sector.

2.3.2 Working Capital Management and Return on Asset (ROA)

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 bank.

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.

2.3.3 Working Capital Management and Return on Equity (ROE)

The relationship between Liquidity and the Return on Equity of banks listed on the Ghanaian Stock Exchange was investigated by Lartey and Boadi (2018). The study was carried out on seven of the nine listed banks. The researchers made use of the longitudinal time dimension model. Specifically, the panel method time series analysis and return on equity were computed from the annual financial reports of the seven banks. The trend in Liquidity and Return on Equity were determined by the use Student 'T' Test of time series analysis. It was revealed that for the period 2013 to 2018, both liquidity and profitability had a downward trend. The main Liquidity ratio was regressed on the Return on Equity. The result revealed that there was a positive and statistically significant relationship between Liquidity and Return on Equity of the listed banks. Their study looked at the Deposit Money Banks listed on the Ghanaian Stock Exchange, but this study looks at the Deposit Money Banks listed on the Nigeria Stock Exchange. The two countries have different banking operations. Besides, their study used Student 'T' Test to analyze the data collected, but this study however, uses Ordinary Least Square in analyzing the data collected.

Finally, Imad, Kilani and Kaddumi (2011) studied a balanced panel data set of Jordanian banks for the purpose of investigating the nature of the relationship between the working capital management of banks and their liquidity level for ten banks over the period 2001 to 2010. Using two measures of bank's profitability: the rate of return on assets (ROA) and the rate of return on equity (ROE), the results showed that the Jordanian bank's liquidity explain a significant part of the variation in banks' profitability. High Jordanian bank profitability tends to be associated with well-capitalized banks, high lending activities, low credit risk, and the efficiency of credit management. Results also showed that the estimated effect of size did not support significant scale economies for Jordanian Banks. The study was carried out in Jordan using the data of Jordanian banks from 2001 to 2010, but this study uses data from Nigerian banks from 2007 to 2019.

3.0 METHODOLOGY

3.1 Research Design

This study employs an ex-post facto methodology, with a particular emphasis on the longitudinal Panel Series design, which is a quasi-experimental study exploring how an independent variable existent in the participants previous to the study impacts a dependent variable. This is "an after-the event" research. It involves carrying out research on something that has occurred. It is a systematic empirical study in which the researcher does not have

direct control over independent variable because they have already occurred or they cannot be manipulated.

3.2 Sources and Nature of Data

Secondary data were collected from Annual Reports of the sampled banks and from Central Bank of Nigeria Statistical Bulletin covering the period 2007 to 2019. The variables that were used in the study are financial performance (profitability) indicators which were used as dependent variable and are proxy by Earnings per Share (EPS), Return on Assets (ROA) and Return on Equity (ROE). The independent variables are Current Ratio, Liquidity to Assets Ratio, Loan to Deposit, and Cash to Deposit.

3.3 Population and Sample Size

The population of this study consists of all Deposit Money Banks (DMBs) listed on the Nigeria stock from 2007 to 2019. The study population is 18 Deposit Money Banks listed on the Nigerian Stock Exchange. These periods are considered long enough for the variables to form a pattern in combination with economic activities of the industries. The periods of the study also envelop economic activities before, during and after the Nigerian economic recession; also, because of the consolidation and recapitalization exercise that reduced the number of Deposit Money Banks from 21 to 18 in 2019. Thei Convenience Sampling Technique wasi utilizedi ini thisi studyi toi determinei thei samplei size.i Thei samplei sizei fori thisi studyi isi fivei (5)i Depositi Moneyi Banksi listedi oni thei Nigeriani Stocki Exchange.iThese banks were selected based on the fact that they are among the 10 top Nigerian deposit money banks and because of the availability of their accounting records and annual financial reports from 2007 to 2019. They include; UBA, FBN, Zenith, GTB, and UBN.

3.4 Data Analysis Technique

The method of data analysis used in this study is the Ordinary Least Squares (OLS) regression method. This is because of the following reasons: The computational procedure of OLS is fairly simple as compared with other econometric techniques, OLS technique has been used in a wide range of economic relationship with satisfactory coefficients; and OLS is an essential component of most other econometric techniques. Also, in the analysis of this study, E-views version 10 was utilized.

3.5 Model Specification

Subsequent to hypotheses setting to provide an analytical basis to test their validation, we reduce them to mathematical statements. However, in specifying the mathematical models, we relied on the theories of the link between working capital management and financial performance line with Gomez (2015) and Shapiro (2015).

The mathematical representations of the functional form that represent our stated hypotheses are expressed as follows:

Model 1: Working Capital Management and Earnings per Share (EPS)

$EPS = \beta_{01} + \beta_2 CR + \beta_3 LTAR + \beta_4 LTD + \beta_5 CTD + \varepsilon_1$ ---------- (1)

Where:

β_{01} = is the intercept of the regression model of Earnings per Share and Working Capital Management variables.

CR = Current Ratio

LTAR = Liquidity to Asset Ratio

LTD = Loan to Deposit

CTD = Cash to Deposit

$\beta_1, \beta_2, \beta_3, \beta_4 \; and \; \beta_5$ are rates of change of the Working Capital Management variables with respect to EPS

ε = is the error term associated with the model of the Working Capital Management variables with respect to EPS

Model 2: Working Capital Management and Return on Asset (ROA)

$ROA = \beta_{01} + \beta_2 CR + \beta_3 LTAR + \beta_4 LTD + \beta_5 CTD + \varepsilon_2$ ---------- (2)

Where:

β_{01} = is the intercept of the regression model of Return on Assets and Working Capital Management Variables.

$\beta_1, \beta_2, \beta_3, \beta_4 \; and \; \beta_5$ are rates of change of the Working Capital Management variables with respect to ROA

ε_2 = is the error term associated with the model of the Working Capital Management variables with respect to ROA

Model 3: Working Capital Management and Return on Equity (ROE)

$ROE = \beta_{01} + \beta_2 CR + \beta_3 LTAR + \beta_4 LTD + \beta_5 CTD + \varepsilon_3$ ---------- (3)

Where:

β_{01} = is the intercept of the regression model of Return on Equity and Working Capital Management Variables.

$\beta_1, \beta_2, \beta_3, \beta_4 \; and \; \beta_5$ are rates of change of the Working Capital Management variables with respect to ROE

ε_3 = is the error term associated with the model of the Working Capital Management variables with respect to ROE

Apriori Expectation:

It is expected *that* $\beta_1 \beta_2 \beta_3 \beta_4 \beta_5 > 0$

Table 3.6.1: Definition of Variables in the Model

Earnings per Shares	Net Income divided Preferred Dividend	Uremadu (2011)
Return on Equity	Net Income divided Average Total Assets	Eric (2018)
Return on Assets	Earnings Before Interest and Tax divided by Capital Employed	Eric (2018)
Current Ratio	Current Assets divided by Current Liabilities	Shah, Butt, and Saeed (2017)
Liquidity to Assets Ratio	Cash and Cash Equivalent divided by Total Assets	Shah, Butt, and Saeed (2017)
Loan to Deposit	Total Loan Divided by Total Deposit	Wamba and Bengono (2019)
Cash to Deposit	Cash and Cash Equivalent divided by Total Deposit	Wamba and Bengono (2019)

Source: Author's Compilation, 2020

4.0 DATA PRESENTATION AND ANALYSIS

The data sources are mainly from banks Financial Annual Reports and Accounts and are placed as Appendices 1, 2, 3, 4,5,6, and 7.

4.1 Graphical Presentation of Data

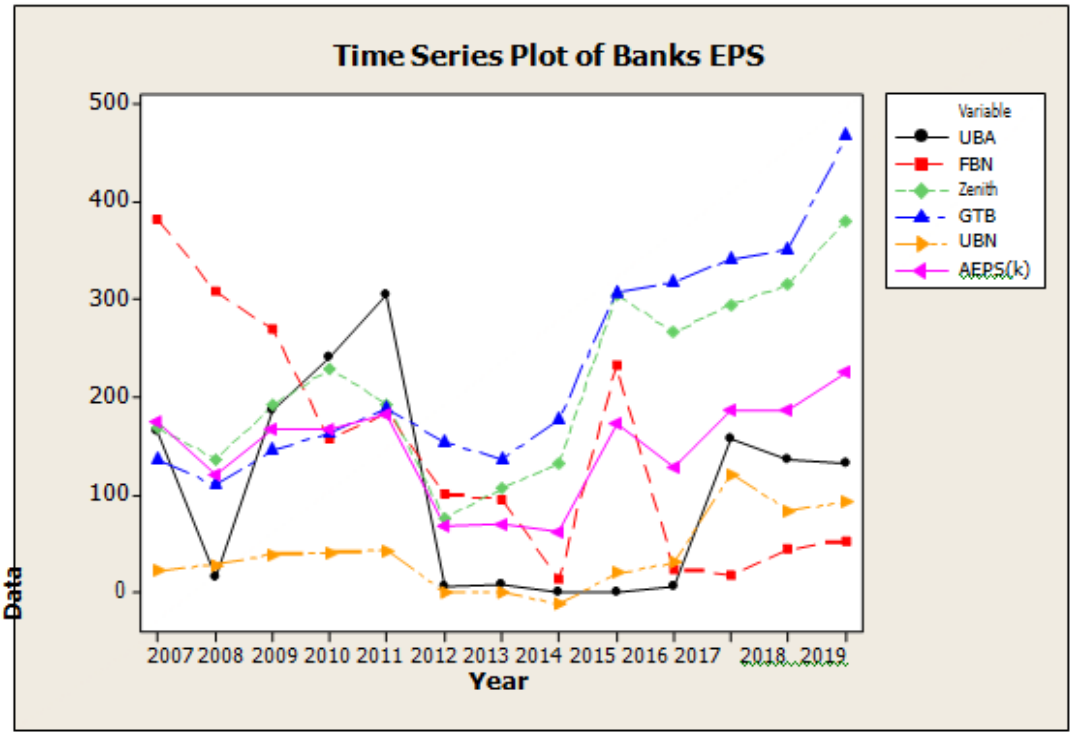

Figure 1: Time Series Plot of Selected Banks EPS

The graph above indicates that in 2007, First Bank of Nigeria has the highest Earnings per Share of 381K while Union Bank of Nigeria has the lowest Earnings per Share of 22K. Also, in 2019, Guaranty Trust Bank has the highest Earnings per Share of 467K while First Bank of Nigeria has the lowest Earning per Share of 53K.

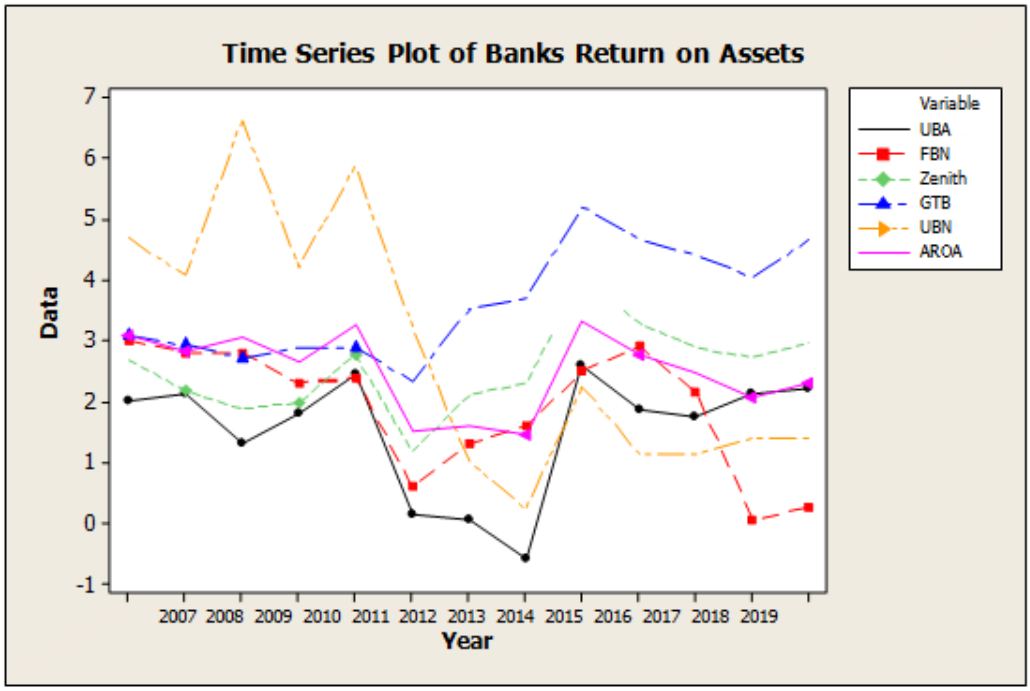

Figure 2: Time Series Plot of Selected Banks Return on Assets

The above graph shows that in 2007, Union Bank of Nigeria has the highest Return on Asset of 4.68% while United Bank of Africa has the lowest Return on Asset of 2.00%. Also, in 2019, Guaranty Trust Bank has the highest Return on Asset of 4.66% while First Bank of Nigeria has the lowest Return on Asset of 0.26%.

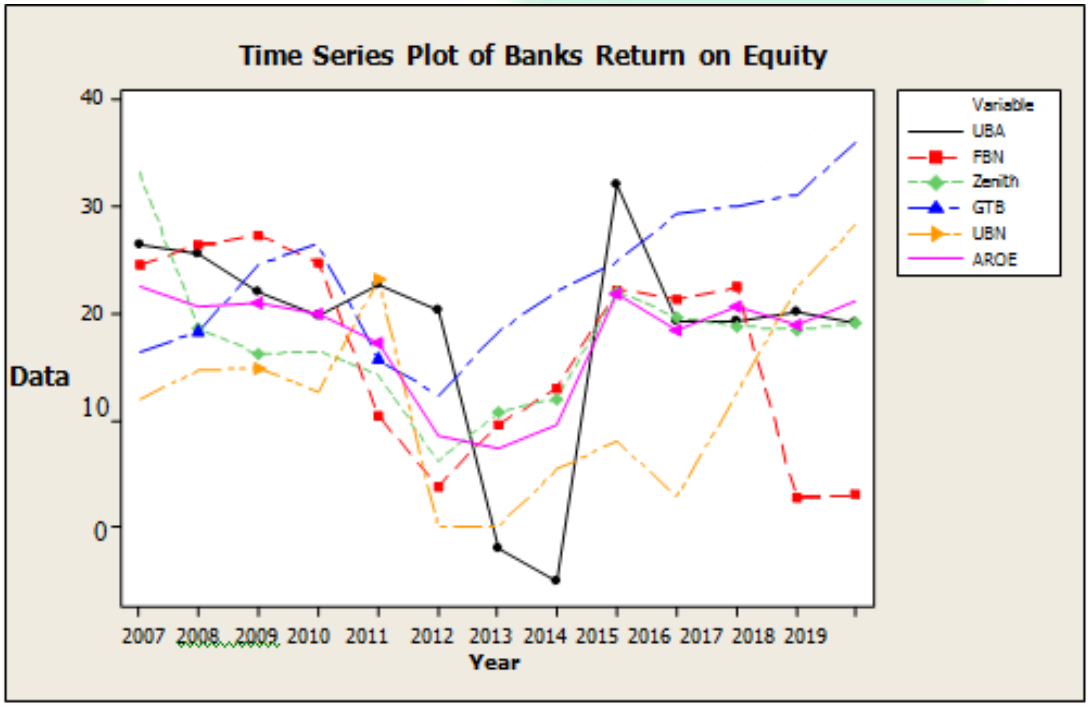

Figure 3: Time Series Plot of Selected Banks Return on Equity

The above graph shows that in 2007, Zenith Bank has the highest Return on Equity of 33.12% while Union Bank of Nigeria has the lowest Return on Equity of 12.00%. Also, in 2019, Guaranty Trust Bank has the highest Return on Equity of 35.96% while First Bank of Nigeria has the lowest Return on Equity of 3.00%.

4.2 Data Analysis and Findings

4.2.1 Test of Hypotheses

The results of various texts of hypotheses are presented in this section.

Decision Rule

The hypotheses are tested using Least Square of the Regression model. The significance of the variables tested in the model is assessed by comparing the p-value against the level of significance (0.05). The H_0 is rejected if the p-value is less than the level of significant and we thus conclude that the variable under consideration is significant. Otherwise we accept the null hypothesis and conclude that the independent variable under consideration does not have significant effect on the dependent variable.

Hypothesis I

Working Capital Management has no significant effect on Earnings per Share (EPS) of selected Deposit Money Banks in Nigeria.

Table 4.2.1

Dependent Variable: EARNINGS_PER_SHARE
Method: Least Squares
Date: 05/05/20 Time: 16:06
Sample: 2007 2019
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	279.0866	204.0111	1.367997	0.2085
CURRENT_RATIO	476.3500	223.2442	2.133762	0.0254
LIQUID_ASSET_RATIO	0.478002	3.952937	0.120923	0.9067
LOAN_TO_DEPOSIT	34.56151	317.5196	0.108848	0.3160
CASH_TO_DEPOSIT	137.9014	563.3002	0.244810	0.0028

R-squared	0.432538	Mean dependent var	146.4538
Adjusted R-squared	0.438807	S.D. dependent var	52.61306
S.E. of regression	48.54089	Akaike info criterion	10.88641
Sum squared resid	18849.74	Schwarz criterion	11.10370
Log likelihood	65.76168	Hannan-Quinn criter.	10.84175
F-statistic	1.524463	Durbin-Watson stat	0.973161
Prob(F-statistic)	0.283097		

Source: Compilation of the author, based on the analysis results using Eviews

The R-square value is 0.43; it means that the model has not been able to successfully predict the variables. This implies that only 43% changes in the banks' Earnings per Share are explained by the changes in Working Capital Management of the banks. The value of 44% of the Adjusted R-squared value indicates that there is a weak relationship between the banks' Earnings per Share and Working Capital Management. Also, the P-value of 0.0254 indicates that the banks' Current Ratio has a significant effect on the banks' Earnings per Share, 0.9067 implies that the banks' Liquid Asset Ratio has no any significant effect on the banks' Earnings per Share, 0.3160 shows that the banks' Loan to Deposit has no any significant effect on the banks' Earnings per Share, and 0.0028 indicates that the banks' Cash to Deposit has a significant effect on the banks' Earnings per Share.

Finally, the P-value (Probability F-statistic) is 0.283097, greater than 0.05. We therefore, accept the null hypothesis and conclude that Working Capital Management has no any significant effect on Earnings per Share (EPS) of selected Deposit Money Banks in Nigeria.

Hypothesis II

Working Capital Management has no significant effect on Return on Asset (ROA) of selected Deposit Money Banks in Nigeria.

Table 4.2.2

Dependent Variable: RETURN_ON_ASSET
Method: Least Squares
Date: 05/05/20 Time: 17:16
Sample: 2007 2019
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.757139	2.885759	0.262371	0.0797
CURRENT____RATIO	3.893251	3.157813	1.232895	0.0036
LIQUID_ASSET_RATIO	0.032084	0.055915	0.573795	0.0219
LOAN_TO_DEPOSIT	0.081362	4.491348	0.018115	0.9860
CASH_TO_DEPOSIT	8.280693	7.967941	1.039251	0.0001

R-squared	0.884715	Mean dependent var	2.488462
Adjusted R-squared	0.889928	S.D. dependent var	0.663799
S.E. of regression	0.686616	Akaike info criterion	2.369640
Sum squared resid	3.771533	Schwarz criterion	2.586928
Log likelihood	10.40266	Hannan-Quinn criter.	2.324977
F-statistic	0.803928	Durbin-Watson stat	1.492839
Prob(F-statistic)	0.000720		

Source: Compilation of the author, based on the analysis results using Eviews

The R-square value is 0.88; it means that the model has successfully predicted the variables. This implies that 88% changes in the banks' Return on Asset are explained by the changes in Working Capital Management of the banks. The value of 89% of the Adjusted R-squared value indicates that there is a strong relationship between the banks' Return on Asset and Working Capital Management. Also, the P-value of 0.0036 indicates that the banks' Current Ratio has a significant effect on the banks' Return on Asset, 0.0219 implies that the banks' Liquid Asset Ratio has a significant effect on the banks' Return on Asset, 0.9860 shows that the banks' Loan to Deposit has no any significant effect on the banks' Return on Asset, and 0.0001 indicates that the banks' Cash to Deposit has a significant effect on the banks' Return on Asset.

Finally, the P-value (Probability F-statistic) is 0.000720, less than 0.05. We therefore, reject the null hypothesis and conclude that Working Capital Management has a significant effect on Return on Asset (ROA) of selected Deposit Money Banks in Nigeria.

Hypothesis III

Working Capital Management has no significant effect on Return on Equity (ROE) of selected Deposit Money Banks in Nigeria

Table 4.2.3

Dependent Variable: RETURN_ON_EQUITY
Method: Least Squares
Date: 05/05/20 Time: 16:23
Sample: 2007 2019
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.463630	25.60485	0.252438	0.8071
CURRENT____RATIO	29.92355	28.01875	1.067983	0.0067
LIQUID_ASSET_RATIO	0.000276	0.496122	0.000556	0.9996
LOAN_TO_DEPOSIT	2.068453	39.85098	0.051905	0.0099
CASH_TO_DEPOSIT	29.19962	70.69820	-0.413018	0.0004

R-squared	0.942013	Mean dependent var	17.48446
Adjusted R-squared	0.946981	S.D. dependent var	5.370196
S.E. of regression	6.092229	Akaike info criterion	6.735628
Sum squared resid	296.9220	Schwarz criterion	6.952916
Log likelihood	38.78158	Hannan-Quinn criter.	6.690966
F-statistic	0.331037	Durbin-Watson stat	0.730087
Prob(F-statistic)	0.000735		

Source: Compilation of the author, based on the analysis results using Eviews

The R-square value is 0.94; it means that the model has successfully predicted the variables. This implies that 94% changes in the banks' Return on Equity are explained by the changes in Working Capital Management of the banks. The value of 95% of the Adjusted R-squared value indicates that there is a strong relationship between the banks' Return on Equity and Working Capital Management. Also, the P-value of 0.0067 indicates that the banks' Current Ratio has a significant effect on the banks' Return on Equity, 0.9996 shows that the banks' Liquid Asset Ratio has no any significant effect on the banks' Return on Equity, 0.0099 shows that the banks' Loan to Deposit has a significant effect on the banks' Return on Equity, and 0.0004 indicates that the banks' Cash to Deposit has a significant effect on the banks' Return on Equity.

Finally, the P-value (Probability F-statistic) is 0.000735, less than 0.05. We therefore, reject the null hypothesis and conclude that Working Capital Management has a significant effect on Return on Equity (ROE) of selected Deposit Money Banks in Nigeria.

4.3 Discussion of Findings

This section discussed the major findings of the study.

4.3.1 Working Capital Management and Earnings per Share (EPS)

The study established that only 43% changes in the banks' Earnings per Share are explained by the changes in the bank's Working Capital Management; also, that there is a weak relationship between the banks' Earnings per Share and Working Capital Management. Besides, the study revealed that Nigerian Deposit Money Banks' Current Ratio and Cash to Deposit have significant effects on the banks' Earnings per Share, while the banks' Liquid Asset Ratio and Loan to Deposit have no any significant effect on the banks' Earnings per Share. However, Guaranty Trust Bank has the highest Earnings per Share while Union Bank of Nigeria has the least. Finally, the study established that Working Capital Management has no any significant effect on Earnings per Share (EPS) of the Nigerian Deposit Money Banks.

However, these results are consistent to the study conducted by Daniel and Ambrose (2018) who investigated the impact of working capital management on Earnings per Share (EPS). Empirical Evidence from Deposit Money Banks listed on the Nairobi Securities Exchange, Kenya. The study employed a balanced panel data of five Deposit Money Banks which are listed on the Nairobi Securities Exchange (NSE). Pearson's correlation and ordinary least squares regression models were used. The study covers a period of 10 years that is 2009 – 2018. The study finds out that a negative relationship exists between Working Capital Management and Earnings per Share. According to the study, current ratio has no any significant effect on the Deposit Money Banks' Earnings per Shares.

Besides, the results are inconsistent to the study conducted by Uremadu (2011) who carried out a study on the effect of Capital Structure and Liquidity on the Earnings per Share of selected Nigerians banks. Time series data for the 1980 to 2006 period was used for the study. The data was analyzed using descriptive statistics and regressive distributed lag (ARDL) model. The empirical results indicated a positive and significant relationship between cash reserve ratio, liquidity ratio, corporate income tax and banks' Earnings per Share.

4.3.2 Working Capital Management and Return on Asset (ROA)

This study revealed that 88% changes in the banks' Return on Asset are explained by the changes in Working Capital Management of the banks; also, that there is a strong relationship between the banks' Return on Asset and Working Capital Management. Besides, the study established that Nigerian Deposit Money Banks' Current Ratio, Cash to Deposit, and Loan to Deposit have significant effects on the banks' Return on Asset. But however, the banks' Liquid Asset Ratio has no any significant effect on the banks' Return on Asset. Consequently, Guaranty Trust Bank has the highest Return on Asset, while United Bank of Africa has the least Return on Asset. Finally, the study established that Working Capital Management has a significant effect on Return on Asset (ROA) of the Nigerian Deposit Money Banks.

Furthermore, these results are inconsistent to the study conducted by Kehinde (2017) who 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 Return on Asset.

In the same vein, the finding is also consistent to Javaid and Kamal (2014) who 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 Asset (ROA). The empirical results found strong evidence that these variables have a strong influence on profitability (Return on Asset).

4.3.3 Working Capital Management and Return on Equity (ROE)

This study established that 94% changes in the banks' Return on Equity are explained by the changes in Working Capital Management of the banks; also, that there is a strong relationship between the banks' Return on Equity and Working Capital Management. Besides, the study established that Nigerian Deposit Money Banks' Current Ratio, Loan to Deposit, and Cash to Deposit have significant effects on the banks' Return on Equity. But however, the banks' Liquid Asset Ratio has no any significant effect on the banks' Return on Asset. However, Guaranty Trust Bank has the highest Return on Equity, while Union Bank of Nigeria has the least Return on Equity. Finally, the study established that Working Capital Management has a significant effect on Return on Equity (ROE) of the Nigerian Deposit Money Banks.

These findings corroborate the findings of Lartey and Boadi (2018) in the research titled the relationship between Liquidity and the Return on Equity of banks listed on the Ghanaian Stock Exchange. The study was carried out on seven of the nine listed banks. The researchers made use of the longitudinal time dimension model. Specifically, the panel method time series analysis and return on equity were computed from the annual financial reports of the seven banks. The trend in Liquidity and Return on Equity were determined by the use Student 'T' Test of time series analysis. The main Liquidity ratio was regressed on the Return on Equity.

The result revealed that there was a positive and statistically significant relationship between Liquidity and Return on Equity of the listed banks.

In the same vein, the finding is also consistent to Imad et al. (2011) who studied a balanced panel data set of Jordanian banks for the purpose of investigating the nature of the relationship between the working capital management of banks and their liquidity level for ten banks over the period 2001 to 2010. Using two measures of bank's profitability: the rate of Return on Assets (ROA) and the rate of Return on Equity (ROE)**;** the results showed that the Jordanian bank's liquidity explain a significant part of the variation in banks' profitability. High Jordanian bank profitability tends to be associated with well-capitalized banks, high lending activities, low credit risk, and the efficiency of credit management.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The major findings made from conducting the study are outlined below:

i) the R-square value of the first model is 0.43; it means that the model has not been able to successfully predict the variables. This implies that only 43% changes in the bank's Earnings per share are explained by the changes in working Capital Management of the banks, the values of 44% of the adjusted R-square value indicates that there is a weak relationship between the banks' Earnings per share and working capital management. Also, the P-value of 0.0254 indicates that the banks Current Ratio has a significant effect on the banks Earnings per share 0.9067 implies that the banks Liquid Asset Ratio has no significant effect on the banks Earnings per share 0.3160 shows that the banks' Loan to Deposit has no significant effect on the banks Earnings per share and 0.0028 indicates that the banks Cash to Deposit has a significant effect on the banks Earnings per share. However, the P-value (Probability F-statistics), Working Capital has no any significant effect on Earnings per share (EPS) of selected Deposit Money Bank in Nigeria.

ii) the R-square value of the second model is 0.88 it means that the model has successfully predicted the variables. This implies that 88% changes in the banks Return on Asset are explained by the changes in Working Capital Management of the banks. The value of 88% of the Adjusted R-square value indicates that there is a strong relationship between the banks Current Return on Asset and Working Capital Management. Also the P-value 0.0036 indicates that the banks' Loan to Deposit has no any significant effect on the banks Return on Asset, 0.0219 implies that the Liquid Asset Ratio has a significant effect on the banks Return on, 0.9869 shows that the banks' Loan to Deposit has no significant effect on the banks Return on Asset and 0.0001 indicates that the banks Cash to Deposit has a significant effect on the banks Return on Asset. However, the P-value (Probability F-statistics) is 0.000720 less than 0.05. We therefore reject the null hypothesis and conclude that Working Capital Management has a significant effect on the Return on Asset (ROA) of selected Deposit Money Banks in Nigeria.

iii) the R-square value of third model is 0.94; it means that the model has successfully predicted the variables. This implies that 94% changes in the banks Return on Equity are explained by the changes in Working Capital Management of the banks. The value of 94% of the Adjusted R-square value indicates that there is a strong relationship between the banks Return on Equity and Working Capital Management. Also the P-value 0.0067 indicates that the banks Current Ratio has a significant effect on the banks Return on Equity and 0.9996 shows that the banks Liquid Asset Ratio has no any significant effect on the banks Return on Equity 0.0099 shows that the bank's Loan to Deposit has a significant effect on the banks Return on Equity and 0.0004 indicates that the banks Cash to Deposit has a significant effect on the banks Return on Equity. However, the P-value (Probability F-statistics) is 0.0000735, less than 0.05. We therefore reject the null hypothesis (ROE) of selected Deposit Money Banks in Nigeria.

5.2 Conclusion

Effective bank working capital management entails delicate balancing of the liquidity and profitability trade-off. This is because excessive liquidity reduces profitability while excessive liquidity risks exposure. In pursuit of maximum profitability could lead to the insolvency of a bank. This study was carried out to empirically examine the relationship between liquidity and profitability of five banks in Nigeria. The empirical results indicated that there is a statistical significant relationship between financial performance and working capital management when earnings per share, return on assets, and return on equity are used as a measure of financial performance. The study also concludes that working capital management has no significant effect on Earnings per share (EPS) of selected Deposit Money Banks in Nigeria.

It was also shown from the analysis that the return on asset (ROA) and return on equity (ROE) are better measures of performance. This paper has shown that there is a significant relationship between working capital management and bank performance from the afore-shown analysis. Therefore, this implies that Working Capital Management has a significant effect on Return on Asset (ROA) and on Return on Employed (ROE) of selected Deposit Money banks in Nigeria.

5.3 Recommendations

i) Instead of keeping excessive liquidity as a provision for unexpected withdrawal of the customer, the deposit money banks should find it reasonable to adopts other measures of meeting such requirements which can include borrowing and discounting bills. In addition, the surplus funds of the Nigerian deposit money bank should be seasonally invested in short-term instruments of the money market. Banks should use sweep account that transfer funds into higher interest rate accounts when they are needed, and back to readily accessible accounts when necessary. Paying off liabilities also quickly improves the liquidity ratio, as well as cutting back on short- term overhead expenses such as rent, labuor, and marketing. Besides, banks should build ads for each deposit service. They should focus on individual deposit services and choose target keywords that deliver those ads for relevant searches. The ads should always align with the keywords they are targeting. Also, banks should have decrease in the total count of shares so as to increase EPS. This is because each bank has a certain number of outstanding shares. The count of

the shares may always change throughout the lifespan of a company. Since EPS represents the earnings share, a decrease in the total amount of shares results in a higher EPS.

ii) Nigerian deposit money banks should use thoughtful geo-targeting: Specific targeting is the key to driving qualified traffic and conversions. This is because if the banks targeting area is too broad, then they may wind up with a rapidly-diminishing budget that is wasted by users who are not part of your target audience. Since the survival of deposit money banks depend on working capital management and profitability, they should not solely concentrate on the profit maximization concepts but also adopts measures that ensure effective, liquidity management. The measures will help to maximize or avoid cases of excessive and deficient liquidity as their effects are negative. Banks should increase their net income, decrease total assets, and improve the efficiency of current Assets, improve the efficiency of fixed assets to improve their return on Assets.

iii) The liquidity management of Nigerian banks should be more proactive than reactive as it is presently practiced. The current conservative approach than reactive as it is presently practiced. The conservative approach of keeping to a tight liquidity, management, although producing good profitability in terms of return on equity, but only produces modest profitability in terms of return on asset. Banks should use more financial leverage to improve their ROE. They should finance themselves with debt and equity capital. By increasing the amount of debt capital relative with debt and equity capital, a company can increase is return on equity. Similarly, banks should distribute idle cash in order to improve their ROE. This is becoming a common problem among corporate giants, particularly those in the technology industry: idle cash in excess of what the business needs to continue operations reduces the apparent profitability of the company when measured by return on equity.

6.0 CONTRIBUTION TO KNOWLEDGE

This study has contributed to knowledge in the following ways:

6.1 To Literature

The research study provides a valuable collection of ideas, facts and figures that can be of importance to other researchers, entrepreneurs, lecturers, and students in comprehending the effect of working capital management on financial performance of selected deposit money banks in Nigeria. And this study can be used as reference from by others.

6.2 To Empiric

The empirical review into the relevant research on effect of working capital management on financial performance of selected deposit money banks in Nigeria showed that Working Capital Management is very significant to financial performance (Return on Asset). Most of these Studies conducted in various nations around the globe all posited that working capital is essential in improving financial performances of banks. This study therefore provides a basis for research works and findings in these nations to be applied in banks, businesses, other financial institutions, and organizations alike in Nigeria.

6.3 **To Policy**

Government, banks, businesses, other financial institutions, and organizations can use the results, conclusion, and recommendations of this study in the formulation of their policies. According to the panel regression model, Working Capital policy recorded a positive effect on Return on Asset and Return on Equity.

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APPENDICES

Appendix I: Banks EPS (K)

Year	UBA	FBN	Zenith	GTB	UBN	AEPS(k)
2007	164	381	168	135	22	174
2008	15	308	136	110	28	119.4
2009	186	269	191	145	39	166
2010	241	156	229	163	41	166
2011	305	184	192	188	43	182.4
2012	6.00	100	76	153	0.00	67
2013	8.00	95	106	136	0.00	69
2014	0.00	14	132	177	-12	62.2
2015	0.50	233	305	307	19	172.9
2016	5.00	24	266	317	30	128.4
2017	156	17	295	341	121	186
2018	136	44	315	351	84	186
2019	131	53	380	467	92	224.6

Source: Banks Annual Report 2007-2019

Appendix II: Banks Returns on Assets (%)

Year	UBA	FBN	Zenith	GTB	UBN	AROA
2007	2.00	2.99	2.69	3.08	4.68	3.088
2008	2.13	2.81	2.17	2.93	4.08	2.824
2009	1.31	2.80	1.88	2.71	6.62	3.064
2010	1.80	2.30	1.98	2.89	4.21	2.636
2011	2.46	2.40	2.77	2.88	5.86	3.274
2012	0.15	0.60	1.17	2.34	3.24	1.50
2013	0.04	1.30	2.11	3.51	1.02	1.596
2014	-0.59	1.60	2.29	3.69	0.23	1.444
2015	2.59	2.50	4.06	5.20	2.24	3.318
2016	1.87	2.90	3.29	4.67	1.14	2.774
2017	1.74	2.15	2.88	4.40	1.14	2.462
2018	2.13	0.06	2.72	4.04	1.40	2.07
2019	2.22	0.26	2.96	4.66	1.40	2.30

Source: Banks Annual Report 2007-2019

Appendix III: Banks Return on Equity (%)

Year	UBA	FBN	Zenith	GTB	UBN	AROE
2007	26.30	24.50	33.12	16.42	12.00	22.468
2008	25.50	26.40	18.5	18.28	14.60	20.656
2009	22.00	27.20	16.12	24.50	14.89	20.942
2010	19.80	24.70	16.42	26.40	12.61	19.986
2011	22.60	10.40	14.20	15.64	23.20	17.208
2012	20.20	3.70	6.10	12.32	0.00	8.464
2013	-2.00	9.60	10.70	18.19	0.00	7.298
2014	-5.00	13.00	12.00	22.05	5.38	9.486
2015	31.90	22.20	22.00	24.80	8.02	21.784
2016	19.20	21.30	19.60	29.32	2.86	18.456
2017	19.20	22.40	18.80	30.02	12.53	20.59
2018	20.00	2.80	18.40	31.00	22.40	18.92
2019	19.00	3.00	19.00	35.96	28.24	21.04

Source: Banks Annual Report 2007-2019

Appendix IV: Current Ratio

Year	UBA	FBN	Zenith	GTB	UBN	AROE
2007	0.86	1.04	1.10	1.07	0.77	0.968
2008	1.06	1.07	1.09	1.02	0.96	0.828
2009	1.01	1.13	1.11	0.93	1.04	1.044
2010	1.04	1.11	1.10	1.09	0.73	1.014
2011	1.10	1.15	1.12	0.91	0.83	1.022
2012	1.03	1.10	1.16	0.96	0.35	0.92
2013	1.08	1.14	1.17	0.95	0.52	0.972
2014	1.00	1.09	1.06	1.12	0.83	1.02
2015	0.97	1.12	1.14	1.03	1.02	1.056
2016	1.11	1.07	0.95	0.89	0.91	0.986
2017	1.18	1.17	1.13	1.11	0.97	1.112
2018	1.20	1.12	1.18	1.09	1.03	1.124
2019	1.17	1.18	1.14	1.13	1.01	1.126

Source: Banks Annual Report 2007-2019

Appendix V: Liquid to Asset Ratio

Year	UBA	FBN	Zenith	GTB	UBN	AROE
2007	0.61	0.83	0.79	0.71	0.73	0.734
2008	0.73	0.81	0.97	0.74	0.71	0.792
2009	0.69	0.96	1.04	0.69	0.64	0.804
2010	093	0.94	0.91	0.89	0.69	19.286
2011	0.95	1.00	0.93	0.78	0.66	0.864
2012	0.82	0.94	0.95	0.80	0.69	0.84
2013	0.85	1.07	1.02	0.87	0.73	0.908
2014	0.73	1.02	0.94	0.91	0.88	0.896
2015	1.03	0.92	0.86	0.84	0.82	0.894
2016	0.96	0.84	1.00	0.82	0.74	0.872
2017	0.88	1.00	0.98	0.93	0.69	0.896
2018	0.92	0.81	1.06	0.90	0.83	0.904
2019	0.97	0.98	1.01	0.92	0.81	0.938

Source: Banks Annual Report 2007-2019

Appendix VI: Loan to Deposit

Year	UBA	FBN	Zenith	GTB	UBN	AROE
2007	0.51	0.83	0.60	0.49	0.31	0.548
2008	0.57	0.81	0.59	0.57	0.29	0.566
2009	0.43	0.92	0.57	0.66	0.30	0.576
2010	0.48	1.09	0.64	0.78	0.27	0.652
2011	0.44	0.80	0.68	0.67	0.36	0.59
2012	0.57	0.78	0.61	0.67	0.28	0.582
2013	0.50	0.83	0.73	0.64	0.44	0.628
2014	0.64	0.88	0.69	0.73	0.41	0.67
2015	0.71	1,03	0.81	0.71	0.39	0.524
2016	0.88	1.01	0.77	0.84	0.41	0.782
2017	0.82	0.89	0.79	0.75	0.43	0.736
2018	0.85	0.88	0.83	0.78	0.48	0.764
2019	0.79	1.04	0.81	0.82	0.42	0.776

Source: Banks Annual Report 2007-2019

Appendix VII: Cash to Deposit

Year	UBA	FBN	Zenith	GTB	UBN	AROE
2007	0.39	0.08	0.16	0.26	0.08	0.194
2008	0.40	0.07	0.11	0.31	0.19	0.216
2009	0.37	0.10	0.14	0.29	0.20	0.22
2010	0.31	0.05	0.12	0.35	0.08	0.182
2011	0.30	0.08	0.13	0.35	0.21	0.214
2012	0.40	0.12	0.17	0.28	0.29	0.252
2013	0.43	0.15	0.19	0.32	0.28	0.274
2014	0.49	0.07	0.16	0.31	0.31	0.268
2015	0.36	0.11	0.21	0.36	0.27	0.262
2016	0.51	0.09	0.32	0.33	0.31	0.312
2017	0.53	0.13	0.24	0.29	0.37	0.312
2018	0.49	0.26	0.26	0.38	0.41	0.36
2019	0.50	0.31	0.25	0.42	0.45	0.386

Source: Banks Annual Report 2007-2019