

WORKING CAPITAL MANAGEMENT AND PERFORMANCE OF DEPOSIT MONEY BANKS: EVIDENCE FROM NIGERIA

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Abstract

The study investigated working capital management and the performance of deposit money banks in Nigeria. The time series data collected from the statement of audited financial statement and an annual report and accounts of the banks under study from 2010 – 2017 were estimated using SPSS 22.0 version. The findings revealed a strong positive and statistically significant relationship between CAT, CLY, NWC, and ROA. The study concluded that working capital in these five (5) deposit money banks will be managed within the period of study and has improved the profitability of the banking sector in Nigeria and working capital variables CAT, CLY, and NWC were seen to have significantly weighted on the performance of the deposit money banks under study except for UBA. The study, therefore, recommended that serious attention should be channel to the working capital of the banks under study so as to uphold an adequate working capital level.

Keywords: Working Capital Management, Deposit Money Banks, Performance, Current Assets, Current Liabilities, Net Working Capital

Introduction

Working capital management is a part of financial management which is necessary for the survival of business activities all over the world. It represents the resources of a firm's financial resources for the everyday execution of business and also represents the excessive current assets over current liabilities. It is the amount of capital that is available to an organization which is used in transacting its daily business activities (Akinlo, 2011).

Working capital is part of financing consideration that a finance manager needs to determine the capital structure and capital budgeting of a firm (Ross, Waterfield and Jordan, 2010). The importance of working capital mechanism of a business are stressed as maximizing profitability which can be generated and this assertion cannot be disallowed because it has an important impact on the prosperity, success, and power of profitability and liquidity.

Maintaining working capital level serves as the signs of the healthiness of business organization for any given nation (Adamu, 2016). Current assets according to Osiegbu, Onuorah and Nwakanma (2013) is a capital engrossed in cash, bank balances, inventory turnover (stock) trade debtors (account receivables), marketable securities, short-term investment and prepaid expenses while current liabilities is capital tied up in short-term loan, creditors (account payables), accrued expenses, bills payable, proposed dividends, accrued income tax, interest payment, bank overdraft etc. If Working capital components are not adequate, it may lead to difficulties in undertaking its daily business operations. Such situation results in declining sales and reduction in profitability.

In Nigeria, firms have been witnessing distressed disorder due to poor management of working capital. In this premise, most scholars have noted that firms

have working capital problems. Some have gone into mergers and acquisitions due to liquidity problem disorder (Salawu & Alao, 2014; Lawal & Oyewole, 2015). On this note, Eya (2016) posited that working capital is an essential aspect of business investment which is necessary if a firm can continue in business. Working capital is the running of investments or divestment in current assets and increase or decrease in current liabilities. It entails short-term decisions generally relating to the next one year period (Nwude, 2012). It represents current asset levels and arrangement of short-term credit to finance current investment. Akinlo (2011) in his view noted that an inefficient or poor working capital management leads to accumulating funds in unused assets and thereby reducing the profitability and liquidity of a company.

Eya (2016) in his work defines working capital as the fund incarcerated in materials, work in progress, finished goods, cash and cash equivalent, receivables etc. Falope and Ajilore (2009) opined that working capital is the surplus of current assets that has been provided by the stockholders and the long-term creditors. In a related study, Sunday, Abiola, and Lawrencia (2012) posit that working capital management is a process of preparing for the buying and usage of short-term assets and liabilities. Working capital has been observed as a flow of readily available funds essentially required for incessant operations of an enterprise. In the world, every business needs working capital for its survival, growth and profitability, so firms with a high sum of working capital are competent to meet their short-term demand easily thereby reducing their default risk and improve their borrowing capability. Thus, the two objectives of profitability and liquidity are essential in business organizations.

In Nigeria, many industries are working under severe conditions because of lack of access to fund and high-interest rates on bank loans among other business destroyer factors which continued to hinder the growth of the sector (Salawu & Alao, 2014).

With all the effects put up by some firms, it still seems to believe that nothing has been done by firms to improve their working capital. The problem of illiquidity among manufacturing companies in Nigeria is disturbing due to credit restriction and economic recession. Evidence from financial reports also indicates that most of the organizations could not pay dividend due to a liquidity problem. From the above view, it signifies that a gap in literature still exists on the effective management of working capital with a better impact on the financial performance of the manufacturing industry.

It is on this background that the objectives of the study sought to investigate working capital and the financial performance of five (5) deposit money banks in Nigeria.

Review of Related Literature

The review of this study has been a focus of substantial amount of empirical research for many years. Pandey (2011), Osiegbu, Onuorah, and Nwakanma (2013) identifies two (2) concepts of working capital; gross working capital and net working capital. The gross working capital is the quantitative concept while net working capital is the qualitative concept. According to Osisioma (1997), company's working capital requirements are determined largely by the length of the operating cycle and the rate of flow of costs within the operating cycle. The rate of flow of the costs, in turn, depends on the volume of production and sales, and the costs associated with the production and sales activities. Maintaining working capital

level according to Osiegbu, Onuorah, and Nwakanma (2013) is very necessary for organizational growth to avoid disruption in the production plan and maintain sales, as this requires funds to finance receivables and inventories (stock).

Osiegbu et al, (2013) in their book stated the dangers of excessive working capital as (i) weighty investment in fixed assets (ii) careless purchase of materials (iii) speculative tendencies (iv) liberal credit (v) carelessness and (vi) paucity of working capital. They also observed that some dangers of inadequate working capital could lead to short of fund, company may be regarded not creditworthy; not able to pay short-term maturity obligation; other competing company may not like to do business with them and will involve the company to go for loan at a higher interest rate.

The Concept of Profitability

According to Adamu (2016), profitability means the capability to generate profit from all the business operations of an organization in Nigeria. This is the ability of

the enterprise to get an adequate return on the capital and employees used in the business activities.

Osiegbu et al (2013) rightly noted that financial management profit is a means of profitability ratio and a measure of efficiency ratio using du-pont analysis model to form return on assets (ROA) whereby ROA is net profit margin multiply by assets turnover. Where net profit margin is a measure of profitability and assets turnover is a measure of efficiency which is known as two-step du-pont analysis measure of profitability. Financial ratios are grouped into seven (7) fundamental types viz – a – viz; Liquidity ratios, Leveraged or gearing ratios, Activities ratios, Profitability ratios, Growth ratios, Market value ratios and Dupont model analysis ratios.

But the most useful ratio to compute working capital is the liquidity ratio. Liquidity ratio is also referred to as short-term solvency ratio. Liquidity ratio consists of current ratio, quick or acid test ratio, cash ratio and networking capital to total assets ratio.

Current ratio

Ajie and Egai (2004) stated that it is otherwise called working capital ratio and is normally presented as a real ratio. It is one of the best known and most widely used ratio. Current ratio is presented as:

$$\text{Current ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

Quick or Acid-Test Ratio

Inventory is often the slightest liquid current asset.

$$\text{Quick ratio} = \frac{\text{Current Asset} - \text{Inventory}}{\text{Current Liabilities}}$$

Cash Ratio

This ratio is investing to very short-term creditors. This is defined as:

Cash and Cash Equivalents

Cash ratio =

Current Liabilities

Theoretical Review

Beranek Model

Baranek hypothesizes firms where the cash inflows were stable, but the outflows were seasonal. Bhalla (2005) noted that “this is the mirror image of the time guide of cash flows within the Baumol model, where inflows were periodic and outflows were steady. In the Beranek model, the cash is accumulated gradually, so that the transactions blueprint would engross a series of investments followed by one disinvestment at the end of the period.

In using this, the firm must use a hedging strategy. A firm facing cash flow pattern in the Beranek model might keep reserve cash. If cash inflows then turned out to be less than expected for a particular part of the period, the firm could temporarily draw from the cash reserve to make deposits of economical size.

Trade off Theory of Liquidity

The trade-off theory of liquidity implies that firms target the finest level of liquidity to balance the advantage and cost of holding cash to the best practice of keeping the finest level of liquidity (Raheman, Afza, Qayyum and Bodla, 2010).

Baumol Model

In this model, the firm is said to receive cash at regular intervals but to pay out cash incessantly at a stable rate. That is to say that the firm’s inflows are lumpy but its outflows are not. When the cash inflow is received, the firm puts enough cash in its disbursement account to cover outflows until the next inflow is received. The Baumol model also makes several assumptions about the firm’s situation. It assumes that investment yields a fixed rate of return per period, regardless of the length

of the investment. The model also assumes that the transaction cost of investing and disinvesting is a fixed cost that is independent of the amount of the investment.

Miller-Orr Model

This model assumes that the yield curve for investments made via their model is flat and that there is a fixed cost of investing and disinvestment. They also assume that investments and disinvestments can take place instantaneously and that there is a lower limit below which the firm’s cash balance is not to fall. Miller and Orr assume that net cash flows are normally distributed with a mean of zero, that the standard deviation of the distribution does not vary across time, and that there is no correlation of the cash flows across time. Bhalla (2005) argues that “under these assumptions, cash flows must follow a random walk around a zero average net flow”.

Working Capital Cycle Theory

The theory states that working capital management following a cycle depending on the kind of company under analysis.

Stone Model

The stone model takes a control-limits approach; when cash balances fall outside the control limits, the firm is signaled to do something. To do this, the stone model made use of two sets of control limit- the inner control limits and the outer control limits.

We have observed that all of these models take a similar approach: a time pattern of cash flows, then develop a strategy appropriate for that time pattern.

Empirical Review

Researchers have different opinions on the impact of working capital management on the financial performance of firms in Nigeria.

The studies by Lazaridis and Tryfonidis, 2006; Filbeck and Krueger, 2005 have concentrated on large firms operating in well-developed money and capital markets of developed economies.

Adamu (2016) studied the effects of working capital management on the financial performance of the pharmaceutical firms in Nigeria covering four (4) years spanning from 2006 – 2013. The data for the study was sourced from secondary sources using annual financial reports and bulletins of the Nigeria Stock Exchange (NSE) of the various firms under the period of study. The study proxied working capital by cash conversion cycle, account receivables, inventory, account payables as the independent variables while return on asset (ROA) was proxy for financial performance as the dependent variable.

James, Quadri, and Taiwo (2017) empirically investigated the effect of working capital management on financial performance referenced to Nigerian Breweries Plc. The data for the study were sourced from the audited annual financial reports and accounts of Nigeria Breweries Plc from 2011-2016. They employed descriptive statistics and inferential statistics to analyze the data. Their study reveals that cash conversion cycle (CCC) has a negative and significant relationship with the return on assets (ROA) at 5% level. The study also confirmed a negative and insignificant relationship among inventory conversion period (ICP), debtor conversion period (DCP), creditor conversion period (CCP) and Return on Assets. Therefore, they recommended that the management of Nigerian Breweries Plc should reduce the number of days inventory are hoarded, the number of days accounts receivable are outstanding and the accounts payable should be repositioned in order to reduce the cash conversion cycle. This will not only enhance financial performance but will boost the company's image and maximize returns to shareholders.

Nzioki, Kimeli, Abudho, and Nthiwa (2013) analyze how working capital management affects the profitability of manufacturing firms listed at the NSE between 2006 and 2010. The result shows a positive correlation between gross operating profit with an average collection period and average payment period; however, there was a negative correlation with Cash Conversion Cycle. Gakure et al, (2012) also assess the relationship between working capital management and profitability of 15 manufacturing companies listed at the NSE between 2006 and 2010. The result revealed that there was a strong negative relationship between a firm's liquidity and its performance. Result also shows a negative coefficient relationship between accounts collection period, average payables period, inventories holding period and profitability, while Cash Conversion Cycle exhibits a positive correlation with profitability.

All the above studies showed that there is a significant relationship between working capital management and firm performance.

Methodology

Method and Data

Time series data collected from secondary sources and extracted from the audited financial reports and accounts of the deposit money banks under study spanning from 2010 – 2017 was applied to the study. The sampling technique used is the purposive sampling. Five (5) deposit money banks were sampled for this study.

Measurement of Variables

Five deposit money banks were sampled and these are First Bank Nigeria Plc, First City Monument Bank Plc, Guarantee Trust Bank (GTB), United Bank for Africa Plc (UBA) and Zenith Bank Plc. The data used for this study were extracted from the balance sheet and cash flow statement of the audited financial statement of the annual report and accounts

of the banks from 2010 – 2017. The variables extracted from these banks are independent variables and the dependent variable. The dependent variable is the performance of the deposit money banks which is proxy for

return on asset (ROA) as profitability while the independent variables of working capital are proxy by current assets (CAT), current liabilities (CLY) and net working capital (NWC).

Model Specification

Model specification for this study was derived from the researcher formular efforts of the previous contribution to knowledge in the area of study.

The model is specified as:

Model for Operational Prediction

$$ROA = B_0 + B_1CAT + B_2CLY + B_3NWC + E_t \dots\dots\dots (1)$$

In log transformation at time t

$$\ln ROA_t = B_0 + \ln B_1CAT_t + \ln B_2CLY_t + \ln B_3NWC_t + E_t \dots\dots\dots (2)$$

Where:

ROA_t = Return on Assets at time (t)

CAT_t = Current Assets at time (t)

CLY_t = Current Liabilities at time (t)

NWC_t = Net Working Capital at time (t)

$B_1, B_2,$ and B_3 = Coefficients / parameters

E_t = The residual error term

Data Technique Analysis

The technique used for this study is the Statistical Package for Social Sciences (SPSS) version 22.0. The use of the technique was adopted from Ebie (2014) because it allows short-term period (8 years) of the study than E-view that captures a longer period of years say from 15 years above.

Results and Discussion

The researcher tested three (3) null hypotheses for the five (5) banks: First Bank Nigeria Plc, First City Monument Bank Plc, Guarantee Trust Bank (GTB), United Bank for Africa Plc (UBA) and Zenith Bank Plc. There is no significant relationship between current assets (CAT), current liabilities (CLY), net working capital (NWC) and the performance of deposit money banks in Nigeria and the results are discussed below as follows:

Summary of Regression Coefficient of Working Capital and Deposit Money Banks Performance in Nigeria

S/N	BANKS	R ²	ADJ. R ²	ANOVA f-sign	SIGN LEVEL P-value of t-sign	REMARK	DECISION	Dw	DECISION
1	First Bank Nig. Plc	0.897	0.796	0.041	CAT 0.026 < 0.05 CLY 0.021 < 0.05 NWC 0.032 < 0.05	Significant Significant Significant	Reject null hypothesis Reject null hypothesis Reject null hypothesis	2.170 > 2.0	Accept HO
2	First City Monument Bank Plc	0.827	0.766	0.026	CAT 0.016 < 0.05 CLY 0.011 < 0.05 NWC 0.043 < 0.05	Significant Significant Significant	Reject null hypothesis Reject null hypothesis Reject null hypothesis	2.010 > 2.0	Accept HO
3	Guaranty Trust Bank Plc	0.855	0.796	0.031	CAT 0.040 < 0.05 CLY 0.024 < 0.05 NWC 0.14 < 0.05	Significant Significant Significant	Reject null hypothesis Reject null hypothesis Reject null hypothesis	2.222 > 2.0	Accept HO

4	United Bank for Africa Plc	0.645	0.750	0.041	CAT0.399 >0.05 CLY0.780 >0.05 NWC0.461 >0.05	Not Significant Not Significant Not Significant	Accept null hypothesis Accept null hypothesis Accept null hypothesis	2.468>2.0	Accept HO
5	Zenith Bank Plc	0.778	0.667	0.031	CAT0.032 <0.05 CLY0.024 <0.05 NWC0.012 <0.05	Significant Significant Significant	Reject null hypothesis Reject null hypothesis Reject null hypothesis	2.468>2.0	Accept HO

Source: SPSS Output (22.0)

Discussion of Results of First Bank Nigeria Plc

The results of first bank Nigeria plc reveals the correlation between Current Asset (CAT), current liability (CLY), networking capital (NWC) and profitability performance (ROA) of First Bank Nigeria Plc. The correlation shows a positive relationship between CAT, CLY, NWC, and ROA. This indicates that Current Assets, Current Liability, and Net Working Capital weighs on the performance of First Bank Nig. Plc. The table further shows that the value of R², the coefficient of correlation is 0.897 which revealed that the model is accurate, good and fit at 89.7=90% level. The ADJR², the coefficient of determination is 0.796 (80%) which revealed that the independent variables CAT and CLY and NWC can conveniently explain ROA performance dependent variable with about 70% while the remaining 30% is not accounted for due to financial errors. The Durbin Watson statistics is 2.170 above 2.0 which shows no presence of serial correlation in the series and it is a significant and good model for prediction.

The Coefficient of the series of first bank Nigeria plc shows the level of significance for each of the independent variable. The P-value of the t-statistics for CAT is 0.026 which revealed that there is significant relationship between the current assets, banks performance, and that of p-value of t-statistics for CLY is 0.021 which shows that there is a significant relationship between the current liability and banks performance. The p-value of NWC is 0.032 which also revealed a significant relationship between

NWC and ROA because their values are more than 95% confidence interval and less than 5% significant level.

The Anova test shows the significance of the overall variables. The P-value of the F-statistics is 0.041 which is less than 0.05 means that the overall variable is significant for prediction of profitability performance.

The result shows that the null hypothesis (H₀) for all the variables is nullified because the simple regression analysis shows a significant effect on ROA. We thereby reject the null hypothesis (H₀) for CAT, CLY, and NWC and accept the alternative hypothesis H_A which is significant for profitability performance for first bank Nigeria Plc.

Discussion of Results of First City Monument Bank Plc (FCMB)

The results of first city monument bank plc (FCMB) reveals the correlation between Current Asset (CAT), current liability (CLY), net working capital (NWC) and profitability performance (ROA) of first city monument bank plc (FCMB). The correlation shows a positive relationship between CAT, CLY, NWC, and ROA. This indicates that Current Assets, Current Liability, and Net Working Capital have a direct positive relationship between the independent variables and performance of first city monument bank plc (FCMB). The result further shows that the value of R², the coefficient of correlation is 0.887 which revealed that the model is accurate, good and fit at 88.7 = 90% level. The ADJR², coefficient of determination is 0.766 (80%) which revealed that the independent variables CAT and CLY and NWC

can conveniently explain ROA performance dependent variable with about 80% while the remaining 20% could not be accounted for due to financial errors. The Durbin Watson statistics is 2.010 above 2.00 which shows no presence of serial correlation in the series and it is a significant and good model for prediction.

The Coefficient of the series of first city monument bank plc (FCMB) shows the level of significance for each of the independent variable. The P-value of the t-statistics for CAT is 0.016 which revealed no significant relationship between the current assets, banks performance, and that of the p-value of t-statistics for CLY is 0.011 which shows that there is no significant relationship between the current liability and banks performance. The p-value of NWC is 0.043 which revealed a significant relationship between NWC and ROA because their values are more than 95% confidence interval and less than 5% significant level.

The Anova test shows the significance of the overall variables, and the P-value of the F-statistics is 0.026 which is less than 0.05 means that the overall variable is significant to ROA for prediction of profitability performance.

The result shows that the null hypothesis (H₀) for only NWC is statistically significant to ROA. We thereby reject the null hypothesis (H₀) for NWC and accept the alternative hypothesis H_A which is significant for profitability performance for first city monument bank plc (FCMB).

Discussion of Results of Guaranty Trust Bank (GTB)

The results of guaranty trust bank (GTB) shows a positive correlation between Current Asset (CAT), current liability (CLY), networking capital (NWC) and profitability

performance (ROA) of GTB. The correlation shows a positive relationship between CAT, CLY, NWC, and ROA. This indicates that Current Assets, Current Liability, and Net Working Capital weighs on the performance (ROA) of guaranty trust bank (GTB). The table further shows that the value of R², the coefficient of correlation is 0.855 revealed that the model is accurate, good and fit at 89.7=90% level. The ADJR², coefficient of determination is 0.796 (80%) which revealed that the independent variables CAT and CLY and NWC can conveniently explain ROA performance dependent variable with about 78% while the remaining 22% could not be accounted for due to financial errors. The Durbin Watson statistics is 2.222 above 2.0 which show no presence of serial correlation in the series which is a significant and good model for prediction.

The Coefficient of the series of guarantee trust bank shows the level of significance for each of the independent variable. The P-value of the t-statistics for CAT is 0.040 which revealed that there is significant relationship between the current assets and banks performance (ROA), and that of the p-value of t-statistics for CLY is 0.024 which shows that there is a significant relationship between the current liability and banks performance. The p-value of NWC is 0.014 which also revealed a significant relationship between NWC and ROA because their values are more than 95% confidence interval and less than 5% significant level.

The Anova test shows the significance of the overall variables, where the P-value of the F-statistics is 0.031 which is less than 0.05 means that the overall variable is significant for prediction of profitability performance.

The result shows that the null hypothesis (H₀) for all the variables is nullified because

the simple regression analysis shows a significant effect on ROA. We thereby reject the null hypothesis (H_0) proposed for CAT, CLY, and NWC and accept the alternative hypothesis H_A which is significant for profitability performance for guarantee trust bank plc (GTB).

Discussion of Results of United Bank for Africa Plc (UBA)

The results of the united bank for Africa Plc (UBA) reveals the correlation between Current Asset (CAT), current liability (CLY), networking capital (NWC) and profitability performance (ROA) of united bank for Africa Plc (UBA). The correlation shows a positive relationship between CAT, CLY, NWC, and ROA. This indicates that Current Assets, Current Liability, and Net Working Capital weighs on the return on assets of UBA. The table further shows that the value of R^2 , the coefficient of correlation is 0.645 which revealed that the model is accurate, good and fit at 65% level. The ADJR², coefficient of determination is 0.750 which revealed that the independent variables CAT and CLY and NWC can conveniently explain ROA performance dependent variable with about 75% while the remaining 25% could not be accounted for due to financial errors. The Durbin Watson statistics is 2.468 above 2.00 which shows no presence of serial correlation in the series and it is a significant and good model for prediction.

The Coefficient of the series of UBA Nigeria plc shows the level of significance for each of the independent variable. The P-value of the t-statistics for CAT is 0.399 which revealed no significant relationship between the current assets, banks performance, and that of the p-value of t-statistics for CLY is 0.780 which shows that there is no significant relationship between the current liability and banks performance. The p-value of NWC

is 0.461 which revealed that there is no significant relationship between NWC and ROA because their values are more than 95% confidence interval and less than 5% significant level.

The Anova test shows the significance of the overall variables, where the P-value of the F-statistics is 0.041 which is less than 0.05 means that the overall variable is significant to ROA for prediction of profitability performance.

The result shows that the null hypothesis (H_0) for the only NWC is statistically significant to ROA. We thereby reject the null hypothesis (H_0) for NWC and accept the alternative hypothesis H_A which is significant for profitability performance for united bank for Africa plc (UBA).

Discussion of Results of Zenith Bank Nigeria Plc

The results of zenith bank Nigeria plc reveals the correlation between Current Asset (CAT), current liability (CLY), networking capital (NWC) and profitability performance (ROA) of zenith bank Nigeria plc. The correlation shows a positive relationship between CAT, CLY, NWC and ROA. This indicates that Current Assets, Current Liability and Net Working Capital has direct relationship to profitability performance (ROA) of zenith bank Nigeria plc. The table further shows that the value of R^2 , the coefficient of correlation is 0.778 which revealed that the model is accurate, good and fit at 80% level. The ADJR² coefficient of determination is 0.667 (70%) which revealed that the independent variables CAT and CLY and NWC can conveniently explain ROA performance dependent variable with about 70% while the remaining 30% could not be accounted for due to financial errors. The Durbin Watson statistics is 2.468 above 2.00 which

shows no presence of serial correlation in the series and it is a significant and good model for prediction.

The Coefficient of the series of zenith bank Nigeria plc shows the level of significance for each of the independent variable. The P-value of the t-statistics for CAT is 0.032 which revealed no significant relationship between the current assets, banks performance. The p-value of t-statistics for CLY is 0.024 which shows that there is no significant relationship between the current liability and banks performance. The p-value of NWC is 0.012 which revealed a significant relationship between NWC and ROA because their values are more than 95% confidence interval and less than 5% significant level.

The Anova test shows the significance of the overall variables, where the P-value of the F-statistics is 0.031 which is less than 0.05 means that the overall variable is significant to ROA for prediction of profitability performance.

The result shows that the null hypothesis (H₀) for the only NWC is statistically significant to ROA. We thereby reject the null hypothesis (H₀) for NWC and accept the alternative hypothesis H_A which is significant for profitability performance for zenith bank Nigeria Plc.

Conclusion and Recommendations

The regression results in the study provided evidence for the period of 2010 – 2017. The study found a strong positive relationship on the profitability of five (5) deposit money banks. The study did not only found the relationship but also confirmed the level of significance among the independent variables to the dependent variable. It also concluded that working capital in these five (5) deposit money banks will be managed within the period of study and has improved

the profitability of the banking sector in Nigeria and working capital variables CAT, CLY, and NWC have significant aided and weighted on the performance of the deposit money banks under study except for United Bank for Africa Plc (UBA). This study is in line with the study of Hussaini (2015), James, Lawal & Illori (2018) and Adamu (2016) who studied the same and came out with the same result. The study, therefore, recommended that more attention should be channeled to the working capital of the deposit money banks under study in order to maintain an adequate working capital level.

References

- Adamu, Y. (2016). Working capital on the financial performance of the pharmaceutical firms in Nigeria. *International Journal of Economics, Commerce and Management*, 4(4).
- Ajie, H. A. & Egai, N. A. (2004). *Corporate Finance Principles and Concepts*. Owerri: Corporate Impressions Publishers.
- Allen, D. E. (1993). The pecking order hypothesis: Australian evidence', *Applied Financial Economics*, 3 (2), 101-112.
- Bhalla, V. K. (2005). *Working Capital Management: Text and Cases*, (7th ed.) New Delhi: Arimol Publications PVT Ltd.
- Brealey R. A. & Myers. S. C. (1996). *Principles of Corporate Finance*. New York: The McGraw-Hill Companies, Inc.
- First Bank Nig Plc. Annual Report and Accounts 2010 – 2017.
- First City Monument Bank Plc. Annual Report and Accounts 2010 – 2017.
- Gakure, R., Cheluget, K. J., Onyango, J. A. & Keraro, V. (2012). Working capital management and profitability of manufacturing firms listed at the

- Nairobi stock exchange. *Prime Journal of Business Administration and Management*, 2(9), 680-686.
- Guaranty Trust Bank Plc. Annual Report and Accounts 2010 – 2017.
- Gujarati, D. N. & Porter, D. C. (2008). *Basic Econometrics. 5th edition*. New York: McGraw-Hill.
- Harward & Upton (1961). *Introduction to Business Finance*, Mc Graw Hill, NewYork.
- Lawal, A. A., Abiola, B. I & Oyewole, O. M . (2015). Effect of working capital management on the profitability of selected manufacturing companies in Nigeria. *International Journal of Sciences: Basic and Applied Research*. 19(2), 370-386.
- Lazaridis, I. & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed firms in the Athens stock Exchange. *Journal of Financial Management*, 26-35.
- Manzoor, H. (2013). Working capital management and profitability. *Journal of Business Administration and Management Science Research*, 2(10), 177-185.
- Nwude, E. C. (2012). Working capital management in agro-allied firms. *The Nigeria Stock Brocker*, 5-22.
- Nzioki, P. M., Kimeli, S. K., Abudho, M. R. & Nthiwa, J. M. (2013). Management of working capital and its effects on profitability of manufacturing companies listed at NSE, Kenya. *International Journal of Business and Financial Management Research*, 1, 35 - 42.
- Ojeani, N. R. (2014). Working capital management and profitability of listed pharmaceutical firms in Nigeria. M.sc Thesis of Ahmadu Bello University, Zaria, Nigeria.
- Osiegbu, P. I., Onuorah, A. C. & Nwakanma, C. P. (2013). *Financial Management: A managerial approach*. Most Virture Publishers, Benin City, Edo State, Nigeria. ISBN: 978 – 2734 – 37 – 9.
- Osisioma, B. C. (1997). Sources and management of working capital. *Journal of Management Sciences*, Awka: 2.
- Oyedele, O., Adeniran, O. J. & Oluwatosin, E. O. (2017). Working capital management and financial performance: evidence from Nigerian breweries plc. *International Journal of Innovative Finance and Economics Research*, 5(3): 29 – 36.
- Pandey, I. M. (2011). *Working Capital Management*. In I. M. Pandey, *Financial Management*, 657-658. New Delhi: Vikas Publishing House PVT Ltd.
- Sanusi, M. S. (2006). An Evaluation of Working Capital Policies and their impact on Profitability of Firms. M.sc Thesis of Ahmadu Bello University, Zaria, Nigeria.
- Statistical Package for Social Science test version 22.0 model.
- Sunday, E. O., Abiola I. & Lawrencia, O. O. (2012). Working capital management, firms' performance and market valuation in Nigeria. *World Academy of Science, Engineering and Technology*. 2, 20-29.
- United Bank for Africa Plc. Annual Report and Accounts 2010 – 2017.

Van Horne, J. C. & Wachowicz, J. M (2004).
*Fundamentals of Financial
Management* (12th ed.). New York:
Prentice Hall.

Zenith Bank Plc. Annual Report and Accounts
2010 – 2017.