Impact of Liquidity Management on Profitability in Nigeria's Banking Sector

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Abstract— *This paper seeks to analyse the impact of liquidity management on profitability within the Nigerian deposit money banks. This will cover the period of ten years (2007-2016). Five banks have been chosen to represent the population of the twenty-four deposit money banks in Nigeria. The liquidity indicators square measure quick ratio, cash ratio, current ratio and liquidity coverage ratio, whereas return on equity (ROE) and return on assets (ROA) were proxies for profitability. Regression analysis was used to test the hypothesis. The findings indicate that liquidity management considerably impact on the performance of deposit money banks The empirical results additionally shows that a rise within the quick ratio of accessible funds results in a rise within the profitability, whereas a rise within the cash ratio and the liquidity coverage ratio results in decrease within the profitability of the deposit cash banks in Nigeria. Recommendation therefore is that for economic, effective, efficient management of liquidity, the banks ought to adopt a general framework for liquidity management, additionally competent personnel's ought to be used to enable them get optimum result for profitability.*

Keywords: liquidity; profitability; return on asset; return on equity

1 INTRODUCTION

Generally, the maintenance of adequate liquidity level plays a really vital role within the effective operations of all organisations all over the globe; liquidity management could be a notion that's obtaining serious attention above all thanks to the present financial situations and the state of the global economy, (IBE 2013). Some of the outstanding corporate goals embody the necessity to maximise profit, sustain a high level of liquidity so as to ensure safety, reach the best level of owner's internet value as well as the attainment of alternative company objectives. The importance of liquidity management as it affects the company gain in today's business can't be over stressed. Liquidity plays a serious role within the effective functioning of a business organisation. Therefore, a firm ought to make sure that it doesn't suffer from lack of or excess liquidity to fulfil its short compulsions.

The Basel committee, in response to the worldwide monetary crisis of 2007 – 2010, has projected a replacement set of liquidity needs to enhance its revised framework of capital needs (Calomiris et al 2012). As a results of the significant reliance of banks on financial organisation loaning throughout the crisis, policy manufacturers clearly would love to scale back the dependence of deposit cash banks on the investor of expedient, and therefore encourage banks to limit or self-insure (through money asset holdings) a number of their liquidity risk. In every system, there are major elements that are vital for the survival of the system; this is also applicable to the financial system. The financial institution have contributed vastly to the growth of the entire financial system, as they provide an efficient institutional method through which resources can be mobilized and directed from less productive uses to more productive uses.

Deposit money banks have become a very necessary establishment within the financial system as it helps in facilitating the movement (of financial/ monetary/economic) assets that are less desirable to the more desirable public who requires the financial assets. An adequate financial intermediation needs the attention and focus of the bank management to the profitability and liquidity, which are the two conflicting objectives of the deposit money banks. These objectives are parallel in the sense that an attempt for a bank to attain higher profitability can bit by bit destroy its liquidity and solvency position and contrariwise (Eljelly 2004).

Practically, profitability and liquidity is an effective indicator of the company wealth and performance of not solely deposit money bank but to all or any profit orienting venture. These performance indicators are vital to the shareholders and depositors who are major publics of a bank. because the shareholders expect the bank to extend loaning so as to grant them maximum return in money invested with whereas the investor expect the bank to keep abundant idle cash in order to fulfil their demand. With the conflict arising between profitability and liquidity, shareholders and depositors interest, there is a need for reconciliation and harmonization through effective and efficient liquidity management to ensure the survival and growth of deposit money banks.

Deposit money banks that aim to survive must be aware of the challenges of its liquidity and profitability as both factors can affect a bank's growth and sustainability. Therefore, the main purpose of this study is to examine the relationship between liquidity and profitability on deposit money banks in Nigeria.

From the roles of the financial institution, the deposit money banks make use of idle funds borrowed from the lenders (those who deposit their money into the bank) by investing such funds in other classes of financial assets investment for profit purposes. However, they can be faced with problems, since these deposits which have been invested by the banks for profit maximization can be demanded for at any time by the owners. When the bank is not able to meet their financial obligations, the public begins to lose confidence and these will cause lot of competition to the financial sector. With the increasing level of competition in the banking industry (currently twenty-four deposit money banks in Nigeria), every deposit money bank would strive to operate on profit and at the same time meet the financial demand of its depositors by maintaining adequate liquidity. The question then becomes; what is the best optimum solution to maintain proper profitability and liquidity in the banking sector? Where is the breakeven point between the two objectives? These questions have become a problem in the financial world as large number of banks are basically concern with profit maximization and tend to neglect the importance of liquidity management and these can lead to technical and legal financial condition.

For the fact that the deposit money banks operate on liquidity and profitability motives in the mind to satisfy their major publics, the shareholders and depositors, the stakeholders in all, the need arise for them to bring into agreement these two motives. With this the deposit money bank need effective and efficient liquidity management approaches and principles that will help them realize these motives. The result gotten form this study will reveal the level of attachment of the deposit money banks to the monetary policies (liquidity ratios) established by the government and these will help the government to set appropriate liquidity ratio's and cash ratio's that will not be harmful to the operation and survival of the deposit money banks.

The outline of the paper are as follows: Section one is the introduction, section two reviews related literature, section three is the research methodology and section four is the summary, conclusion and recommendations of the paper.

1.1 Research Question

The study seeks to answer the question below:

- Is there any significant relationship between liquidity and profitability on deposit money banks in Nigeria?

2 LITERATURE REVIEW

This chapter presents the literature review and it is subdivided into different sections namely: conceptual framework (this review different authors' definitions related to the studies); theoretical review (this review the theories related to work); and the empirical review (this section review other past literature as well to the relation to the work.

2.1 Conceptual Framework

Liquidity is the rapidity and ease at which assets and be turned into cash without loss of interest and capital to meet financial obligations. Examples include: cash reserves, government debts securities etc. Liquidity is an important factor in order to meet everyday withdrawal demands at all times (Francis 2016). Banks should have sufficient number of profitable assets in order to pay dividends to their shareholders and still be able to transfer to reserve. Samiksha (2013) noted that it is important in order to meet everyday withdrawal demands at all times. Therefore for any bank to survive successfully and subsequently maintain the public trust and confidence in banking operations, it has to adopt liquidity management measures that shall put in place an adequate liquidity so that the various demands of customers shall always be met. If a bank refuses to maintain adequate liquid assets in their banking management, it stands the risk of endangering its existence by losing its various customers and public confidence in its operations. Profitability is the basic objective of any business and that is why shareholders always ask for returns on their investments. The opportunity cost of remaining liquid is returns foregone by not investing in assets with higher rate of return.

The conflict between the need for banks to remain liquid and the need to pursue profitability work in different directions to resolve this conflict, the bank management should be able to satisfy the demands of the opposing group which are shareholders whom are concerned with profitability and depositors whom are concerned with liquidity.

2.1 Theoretical Literature

There are several theories that have been put forward which seek to provide insight into the underlying relationship between liquidity and profitability of deposit money banks. Some of which includes:

- **Deposit money Loan Theory**

This theory maintains that a deposit money bank's liquidity would be assured as long as assets were held in short term loans that would be liquidated in the normal course of business. Banks are expected to finance the movement of goods through the successive stages of production to consumption or what would be called today as inventory or working capital loans.

- **The Shift Ability Theory**

The shift ability theory is based on the proposition that the assets the banks hold are either to be sold to other lenders or investors or shifted to central bank which stands ready to purchase assets offered for sale.

- **The Anticipated Income theory**

This theory holds that liquidity can be ensured if scheduled loan payments are made on future income of the borrower. This theory relates loan repayment to income than rely on collateral. This theory also holds that a banks liability can be influenced by the maturity pattern of loans and investment portfolios.

- **The Liability Management Theory**

The liability management theory holds that banks can meet their liquidity requirement by bidding in the market for additional funds to meet loan demand and deposit withdrawal.

2.2 Empirical Literature

Andrew and Osuji (2013) analysed the efficiency of liquidity management and banking performance in Nigeria using a survey design. The findings showed that there is a significant relationship between efficient liquidity management and banking performance.

Francis, Frank and Raymond (2013) examined liquidity management and the performance of banks in Nigeria within the period 2000-2010. It studied the relationship between the variables of bank performance and those of liquidity management using bank deposit, cash reserve requirement, bank investment, and cash ratio as indicators. The sources of data were mainly collected from CBN's statistical bulletin. The data sourced were analyzed using simple percentages and simple regression model. However, findings from the study indicated that a strong relationship exists between bank deposit and bank reserve requirement, and bank investment and cash ratio. The study recommended that banks should not focus purely on deposits but rather other measures be adopted to reduce illiquidity in this sector.

Godwin Bassey (2015) investigated the liquidity-profitability trade off of deposit money banks in Nigeria by carrying out a study on fifteen deposit money banks in Nigeria and covered a panel data of 2010 to 2012. The study adopted the Ordinary Least Squares (OLS) method of analysis to analyse the data. The outcomes gotten from this study discovered that there may be a statistically relationship between financial institution liquidity measures-current ratio, liquid ratio, cash ratio, loans to deposit ratio, loans to asset ratio- and return on equity.

Uremadu (2012) examined the effect of capital structure and liquidity on the profitability of selected Nigerian banks within the period 1980-2006. The method of analysis adopted was the descriptive statistics and regressive distributed lag (ARDL) model. The results showed there is a positive and significant relationship between cash reserve ratio, liquidity ratio, corporate income tax and banks' profitability

3 RESEARCH METHODOLOGY

Research is conducted on five deposit money banks in Nigeria which include UBA, ACCESS, ZENITH, ECO and FIRST Bank. The reason for this study is to decide the impact of liquidity administration on productivity in deposit money bank performance. Data is taken from financial annual reports of banks for the period of 10 years 2007-2016. It is Descriptive in nature and makes use of quantitative analysis. Our main focus is Profitability and Liquidity.

Profitability: There are various methods used for measuring profitability of an organisation. For the purpose of this study, the profitability of these banks will be determined using the return on asset and return on equity (ROA and ROE)

Liquidity: The liquidity will be calculated using Quick ratio, capital ratio, net credit facilities to total assets and liquid assets ratio

Population: It covers the 24 deposit money banks in Nigeria

Sample size: For the purpose of this study, the sample size is the five selected banks; UBA, ACCESS, ZENITH, ECO and FIRST Bank.

Data Analysis: To understand approximately the connection between dependent proxies of profitability and independent proxies of liquidity variables of banks, a pooled analysis will be used. This will help us find the correlation and regression between profitability (dependent variable) and liquidity (independent variable).

ROAit=β0+β1QR. +β2CRi+β3LCRi+εi………………...1
ROEit=β0+β1QR. +β2CRi+β3LCRi+εi…………...……2

4 RESULTS

Table 1 shows the mean, standard deviation, count, minimum and maximum qualities of data.

TABLE 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	50	.009	.250	.06116	.076999
ROE	50	.060	1.290	.16812	.165386
QR	50	.130	1.500	1.25620	.194158
CR	50	.220	.660	.49620	.086753
LCR	50	.390	1.050	.57330	.222028
Valid N	50				

TABLE 2: Correlation

Correlation	ROA	ROE	QR	CR	LCR
ROA	1	-.021	.073	-.312*	-.358*
ROE	-.021	1	.178	-.083	-.280*
QR	.073	.178	1	-.099	-.187
CR	.312*	-.083	-.099	1	.308*
LCR	-.358*	-.280*	-.187	.308*	1

Correlation[1] is significant at the 0.05 level (2-tailed)

a. Dependent Variable: ROA

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.416[a]	.173	.119	.072255

b. Predictors: (Constant), LCR, QR, CR

The R square from the table is at 17.3%. This shows the level of dependence on the independent variable. The dependent variables have a strong relationship with the independent variables. The dispersion of data is at 11.9%.

The Analysis of Variance (ANOVA as shown in Table 4 shows significant level of 0.031; hence, we accept H1 and reject H0. There is a significant level of relationship between Return on asset and liquidity.

Table 4: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.050	3	.017	3.215	.031[b]
Residual	.240	46	.005		
Total	.291	49			

Table 5: Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.219	.097		2.259	.029
QR	-.001	.054	-.003	-.022	.983
CR	-.198	.125	-.223	-1.584	.120
LCR	-.101	.050	-.290	-2.029	.048

Likewise the ROE,

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.308[a]	.095	.036	.162388

a. Dependent Variable: ROE

b. Predictors: (Constant), LCR, QR, CR

Table 7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.127	3	.042	1.609	.200[b]
Residual	1.213	46	.026		
Total	1.340	49			

Table 8

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.130	.218		.595	.554
QR	.111	.122	.131	.914	.366
CR	.019	.281	.010	.067	.947
LCR	-.193	.111	-.259	-1.731	.090

4. ANALYSIS AND DISCUSSION OF RESULTS

From the table, the relationship between the variables are been shown, the cash ratio has a negative relationship with the ROE and quick ratio but has a positive relationship with ROA, cash ratio and the liquidity coverage ratio. Also the Return on asset has a positive relationship with ROA and quick ratio but has a negative relationship with ROE, cash ratio and LCR. The R square also shows a high level of dependence on the independent variable. Based on the research findings, it can be concluded that there is an effect of the liquidity management on profitability as measured by return on asset or equity (ROE or ROA), where the effect of the quick ratios on the profitability is positive when measured by ROA and ROE, and the effect of cash ratio on profitability is positive as measured by ROA.

5. CONCLUSION AND RECOMMENDATION

This research aims at investigating empirically the impact of liquidity management on profitability of Nigerian deposit money banks, and how these banks can keep balance between liquidity and profitability. It is recommended that there is a need to invest the excess of liquidity available at the banks, in various aspects of investments in order to increase the banks' profitability and to get benefits from the time value of the available money, also the banks should adopt a general framework for liquidity management to assure a sufficient liquidity for executing their works efficiently.

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