

Liquidity and Performance of Deposits Money Banks in Nigeria

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Abstract: The study examined the relationship between liquidity and performance of deposits money banks in Nigeria. The specific objectives of the study are to: determine the relationship between liquid assets to total assets and performance of deposits money banks; examine the relationship between liquid assets to short-term liabilities and performance of deposits money banks in Nigeria. Ten (10) banks were selected from the Nigeria Stock Exchange (NSE). The data used were secondary data and were drawn from 2009 to 2018. The panel data used were sourced from the bank's annual report and Nigerian Stock Exchange fact book. The panel data collected were analysed using Ordinary Least Square Method. The results show that liquid assets to total assets and liquid assets to short-term liabilities have insignificant relationship with performance of deposits money banks in Nigeria. The study, therefore among others recommends that the Regulatory agency such as the Central Bank of Nigeria and the Nigerian Deposit Insurance Corporation should formulate rules (fiscal policy) that will enable the deposit-taking sector to withstand unexpected financial shocks and also improve their performance.

Keywords: Liquidity, performance, liquid assets, Banks, Nigeria.

I. INTRODUCTION

1.1 Background to the Study

Stability of the banks is provided by high profitability of their activities, and also sufficient liquidity which indicates that banks has a balanced structure of assets and liabilities (Klaas & Vagizova, 2014). Financial stability of the banks in medium term can be reduced because of insufficient quality of capital, assets and liabilities, associated with aggression of their credit policy that increases credit risk, and as a result, probability of losses. Poor quality of credit portfolio indicating that unqualified management approaches of a credit portfolio are used with insufficient capitalization of some of banks. But the size of capital defines ability of bank to maintain stability during the crisis periods, dependence on interbank credit market and significant share of demand liabilities in structure of bank liabilities (Klaas & Vagizova, 2014).

In finance, a company's liquidity is the amount of cash or liquid assets it has easily available; whereas performance of a company measures its improvements over its functioning years. Taking into account the simple substitutability among cash and wide scope of budgetary resources, additionally called close funds, (for example, time stores, different currency market instruments like bills of trade, depository

charges, plated edged protections, money give up estimations of extra security arrangements, sparing securities, stores of building social orders, stores of sparing and different banks, postal sparing stores, and all credit instruments of the monetary area of the economy), in current occasions, the amount of cash gets an optional job and the liquidity of the economy expects more huge situation in the financial examination (Athanasoglou, Brissimis & Delis, 2008).

Other than the financial area, a decent arrangement of liquidity is made by the non-bank money related mediators, for example, insurance agencies, sparing banks, building social orders, and so on, which give fluid resources in return to present moment and long haul claims on the private and public area of the economy. These monetary delegates, by expanding the liquidity in the economy cause the speed of cash and, thus, grow general business movement.

Along these lines, the conventional financial arrangement which impacts just the all-out volume of cash gracefully and not the complete volume of liquidity in the economy (which is substantially more than the cash flexibly) is lacking and inadequate on the grounds that total spending is affected not just by the money and the bank stores yet additionally by the close cash resources as made by the non-bank budgetary organizations. Since the new hypothesis holds that non-bank budgetary establishments can baffle the ordinary financial strategy by changing the speed (liquidity) of cash, a proper meaning of cash must incorporate the liabilities of non-bank money related foundations (Restoy, 2017).

Gurley and Shaw recommend a liquidity meaning of cash in which cash is viewed as "a weighted aggregate of money and request stores and substitutes with loads allocated based on the level of substitutability going from one to zero". The more flawed substitute, the less the weight.

1.2 Statement of the Problems

The global financial crisis (GFC), which arose in 2007, emphasized a number of flaws in the global monetary system, containing: extreme leverage; inadequacy of high-quality capital and liquidity; insufficient assessment and valuation of banks' risk experiences; an extraordinary degree of interconnectedness amongst financial organizations; and a capital context that strengthened the characteristic procyclicality of the financial organization (Restoy, 2017, Athanasoglou et al., 2008).

The role of banks remains vital in the funding economic action in overall, and in diverse sections of the market in specific (Athanasoglou, Brissimis & Delis, 2008). The banks' productivity helps forecasting monetary crises because a gainful banking sector is healthier to withstand negative shocks. In addition, variations of the banks' productivity adversely affect their capacity of supplying fresh equity because of the attendance of agency costs and tax problems (Cornett & Tehranian, 1994; Stein, 1998).

The experimental works focuses on diverse groups of determinants. Numerous studies measure the stimulus of the macroeconomic atmosphere on the banks' performance. While others documents the individual banks' performance to diverse macro-indicators (Pasiouras & Kosmidou, 2007), other studies examined collective bank data to test for the effect of the financial setting (Albertazzi & Gambacorta, 2009). Finally, a previous category of documents examines the role of internal issues, such as non-performing loans (Salas & Saurina, 2002; Louzis et al., 2012), loan loss provisioning (Bikker & Metzmakers, 2005; Bouvatier & Lepetit, 2008), capital (Berger, 1995; Jacques & Nigro, 1997) or interest rate risk (Hmweck & Kilcollin, 1984).

There are similarly studies which inspect the role of diverse classes of issues, such as macroeconomic gauges, banking industry gauges or internal, financial soundness gauges (Pasiouras & Kosmidou, 2007; Athanasoglou et al., 2008). At the same time, one class of works approaches the circumstance of a lone country (Berger, 1995; Pasiouras & Kosmidou, 2007; Kosmidou, 2008; Athanasoglou et al., 2008; Dietrich & Wanzenried, 2011), whereas other studies inspect the performance factors in a panel of republics (Molyneux & Thorton, 1992; Demirgüç-Kunt & Huizinga, 1999; Albertazzi & Gambacorta, 2009).

However, most of these studies focused on developed countries and individual banks. The emerging and transition banking sectors have been less investigated, with few exceptions (Yildirim & Philippatos, 2007; Andrieș, Cocris & Ursu, 2012; Mirzaei et al., 2013; Lee & Hsieh, 2013). Likewise, as far as we know, no econometric study has yet considered the connection between financial soundness indicators and performance of deposits money banks in developing country such as Nigeria. In contrast to this contextual, we contribute to the existing empirical analyses in several ways. First, we option to inspect the association between liquidity and performance of deposits money banks in Nigeria, having in mind the detail that the obtainability of data constitutes a problem for performing time-series analysis. Second, we investigate the incident of ten deposits money banks in Nigeria, for the period 2009 – 2018, using annual report aggregate data. Finally, while considering our explanatory variables from CAMELS (Capital Adequacy, Assets Quality, Management, Earnings, Liquidity and Sensitivity to Market Risk), we excluded those that relate with profitability (performance) thereby considered Liquidity in the study.

1.3 Objectives of the Study

The core objective of this study is to investigate the relationship between liquidity as a proxy of financial soundness indicators and performance of deposits money banks in Nigeria. The specific objectives are to:

1. Investigate the relationship between liquid assets to total assets and performance of deposits money banks in Nigeria.
2. Examine the relationship between liquid assets to short-term liabilities and performance of deposits money banks in Nigeria.

1.4 Research Questions

The following research questions were considered in the study.

1. To what extent do liquid assets to total assets relate with performance of deposits money banks in Nigeria?
2. To what extent do liquid assets to short-term liabilities relate with performance of deposits money banks in Nigeria?

1.5 Research Hypotheses

In order to address the issue raised above, the following hypotheses were formulated:

1. Liquid assets to total assets have no significant relationship with performance of deposits money banks in Nigeria.
2. Liquid assets to short-term liabilities have no significant relationship with performance of deposits money banks in Nigeria.

II. REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Liquidity as a proxy of financial soundness indicators

Financial soundness indicators (FSIs) are indicators accumulated to monitor the fitness and reliability of financial organizations and markets, and of their business and family counterparts (Babihuga, 2007). The objective of the set of financial stability indicators is to offer users with a coarse knowledge of the reliability of the financial segment as a whole.

The essential gauges are based on the CAMELS (Capital adequacy, Asset quality, Management soundness, Earnings, Liquidity, Sensitivity to market risk) rating system, which is a generally used controlling outline for the valuation of individual banks' financial reliability. The liquidity gauges measure banks' resilience to cash flow tremors. Foreign currency exposure is a gauge measuring a bank's risk exposure with respect to movements in asset prices on monetary markets (Sundararajan et al. 2002). The key goal of the FSIs is

worldwide comparability, which should be certain by the fact that all nations issuing FSIs will use the same methodology.

Liquidity indicators designates the deposit customer's ability to meet unexpected demand for cash while sensitivity to market risk measures the ability of capital to cushion exchange rate instability. Financial soundness indicators (FSIs) offer vision into the financial fitness and reliability of a country's financial organizations as well as business and family sectors. It supports financial and monetary stability examination. This study measures financial soundness indicators using non-performing loans to total loans, non-performing loans net of provisions to capital, liquid assets to total assets, capital to total assets and liquid assets to short-term liabilities.

2.1.1.1 *Liquid assets to total assets*

This indicator is to evaluate the liquidity obtainable to meet anticipated and unanticipated demands for cash. Liquid assets to total assets (liquid asset ratio), is computed by using the central measure of liquid assets as the numerator and total assets as the denominator. The level of liquidity specifies the aptitude of the deposit-taking sector to endure tremors to their balance sheets. In this context, on the one hand the liquidity is connected to an improved capacity of yielding loans, and on the other hand, a trade-off may exist between the loans volume and the liquidity volume (Albulescu, 2015). Liquid assets is the fundamental liquid assets including cash, checks for clearing, amounts due from the Central Bank, amounts due from banks, and asset with outstanding maturity of no more than three months, can be rehabilitated into cash rapidly and with negligible influence to the value received.

2.1.1.2 *Liquid assets to short-term liabilities*

This indicator is to analyse the liquidity mismatch of assets and liabilities, and provide an indication of the extent to which banks could meet the short-term withdrawal of funds without facing liquidity problems. Short-term liabilities are liabilities with remaining maturity of no more than one year, including deposits, borrowings, debt securities issued, and the net market value of financial derivatives positions (liabilities less assets). Bowa (2015) asserts that holding assets in highly liquid form tends actually increases income levels. On the contrary, banks with poor asset quality often suffer from high credit risks leading to less profitability.

2.1.2 *Corporate Performance*

The concept of performance is a contentious issue in finance and accounting mainly because of its multidimensional meanings (Ishaya, et al., 2014). The profitability of a company measures its improvements over its functioning years. From the extant literature, researchers have applied several surrogates as metric measures of financial performance of banks. Such metrics according to Buba (2010) include a combination of financial ratios analysis, benchmarking and measuring of performance against budget. Others include return on assets, returns on equity, net interest margin, and a

host of others. However, this study employed Return on equity (ROE) as a metric of financial performance.

2.1.2.1 *Return on equity (ROE)*

Return on equity is also use to measure corporate financial performance in this study. It details how well a company has used the capital from its shareholders to generate profits. Investors use ROE as a measure of how well a company is using its money. Many researched have used it in their study (Onuorah, et.al 2016, Fenty & Rusdiah 2015, Javed, et al. 2014, Olaniyi, et al. 2015, Aymen 2013, Akeem, et al. 2014). In this study, it is calculated as profit after tax divided by shareholder's equity. Onuorah, et.al (2016) is of the view that return on equity (ROE) has not been a major player in the determinant of capital structure performance of firms in Nigeria. Salim and yadav (2012) see no significant relationship between capital structure and ROE.

The interest of shareholders in any corporate body is how their capital employed will yield profit to which will in turn determine the amount to be paid as dividend. Although, the decision of dividend is at the discretion of management to exercise, most times there maybe profit but the management may decide to plough it back to the business as a source of internal equity called retained earnings to boost the future operation of the firm. Hasan et al. (2014) observed that there is no statistically significant relation exists between capital structure and firm's performance as measured by ROE. Ayad, et al. (2015) opined that this type performance ratios measure the financial performance and the managerial efficiency of firm and the higher the ratio, the more efficient is the performance of profitability of a firm.

2.2 *Theoretical Framework*

2.2.1 *Radcliff Liquidity Theory of Money*

The theory explains that the connection among cash and the volume of monetary movement (or the overall value level) can't be clarified either by the old style amount hypothesis or by the Keynesian pay hypothesis, however by the pretended by the entire structure of fluid resources which can fill in as a substitute for cash. It isn't the amount of cash in the economy; however the liquidity of the economy, that is more noteworthy in the financial examination. The meaning of liquidity isn't restricted to the measure of cash in presence. Liquidity comprises of the measure of cash individuals figure they can get hold of whether by receipt of salary, by removal of capital resources, or by acquiring. Total spending in the economy is impacted not by the cash and the bank stores, but rather likewise by the close cash resources as made by the non-bank monetary organizations. The non-bank monetary organizations through their close cash resources increment the liquidity in the economy. Increment in liquidity causes an ascent in the speed of cash which, thus, grows general business action. The conventional financial approach which impacts just the complete volume of cash gracefully and not the absolute volume of liquidity in economy is deficient and

incapable. Non-bank go-betweens are to be treated in the very same manner as business banks if the measure of loaning in the economy (and subsequently the liquidity and financial movement) is to be controlled; the money related power must have direct authority over the non-bank go-betweens.

2.3 *Theoretical Exposition*

2.3.1 *Liquid assets to total assets and Bank Performance*

In the work of Albulescu (2015), using the IMF monthly data for the period 2005-2013 and panel data method to inspect the stimulus of financial soundness indicators on the banks' profitability, at the macro-level, in a set of developing republics. Albulescu (2015) learned that the level of liquidity has a mixed stimulus with the banks' profitability. Almayatah (2018) disclosed that the outcomes of the research displays optimistic influence ratio of Islamic banking on financial soundness indicators signified by the ratio of capital adequacy

2.3.2 *Liquid assets to short-term liabilities and Bank Performance*

Bowa (2015) examined the effect of bank capitalization on liquidity of commercial banks in Kenya. The study asserts that holding assets in highly liquid form tends actually increases income levels. On the contrary, banks with poor asset quality often suffer from high credit risks leading to less profitability. Kayode, Obamuyi and Owoputi (2015) found that total loan has a positive and significant impact on bank performance. Therefore, to stem the cyclical nature of non-performing loans and increase their profits, the banks were advised to adopt an aggressive deposit mobilization to increase credit availability and develop a reliable credit risk management strategy with adequate punishment for loan payment defaults.

2.4 *Empirical Studies*

Empirical studies have showed different outcomes of the association between liquidity and bank performance. For instance, Akosah, Loloh, Lawson and Kumah (2018) computed the aggregate financial stability index (AFSI) for Ghana to measure the performance of the financial organization since the acceptance of inflation directing in 2017. Their metric therefore offers a more powerful measure of financial stability in Ghana and very significant for financial policymaking conclusion.

Fapohunda and Eragbhe (2017) empirically inspect the influence of regulation, financial Progress and financial soundness on bank performance in Nigeria for the period 1985-2015. The research uses two regulatory gauges (cash reserve ratio and monetary policy rate) as measures of regulation; the ratio of broad money supply to Gross Domestic Product (M2/GDP) for financial progress; bank non-performing loans to total gross loans for financial soundness while bank performance was proxy by earnings of bank after tax. It accepted a multivariate OLS analysis for the guesstimate process, co-integration scrutiny for long-run

equilibrium connection and the associated error correction model to ascertain the short-run effect of the variables. The answers of the research are that cash reserve ratio, monetary policy rate, financial progresses and financial soundness mostly influence on bank performance both in the short run and long-run. It is endorses that regulation and direction of banks should be reinforced in other to advance the performance of banks in Nigeria. Also, we endorse that the on-going improvements in the banking system should be strengthened so as to ensure safe, sound and steady banking system that is a sine qua non for long run financial performance of banks in Nigeria.

Albulescu (2015) inspected the stimulus of financial soundness indicators on the banks' profitability, at the macro-level, in a set of developing republics. Dissimilar from preceding studies which evaluate the influence of the banking sector features and of the macroeconomic setting on the profitability. The study emphases on the internal situations of banks. Using the IMF monthly data for the period 2005-2013 and a panel data method, and learn that non-performing loans have an adverse influence on banks' profitability under the fixed effect model. While the level of liquidity has a mixed stimulus, the capitalization and the interest rate margins definitely touch the banks' profitability. As predictable, the non-interest expenses damagingly influence the profitability. The outcomes show robust either if we use the return on assets or the return on equity pointer to measure the level of profitability.

Kremmling (2011) required to find out if regulating financial organizations during financial disaster will affect bank performance by taking into account, deposit insurance schemes, capital regulation and activity limitations. The outcomes presented that capital requirements damagingly influenced the level and change in loan loss provisions during financial disaster and as such, banks with high or low capital ratios still yielded to bank runs during financial disaster. Action limitations elevated the danger profile of banks severely during financial disaster; this is unavoidable as banks with frequent activities from non-financial companies will try to gain returns from loan provisions which will be problematic to receive during financial catastrophe. Thus, Kremmling (2011) declared that banks difficulty can have adverse effect on regulation, which directly touches performance and stability.

Cihak and Schaeck (2010) inspected how financial soundness indicators can offer an accurate indication for the performance of detecting systemic banking susceptibilities. They used an example of 100 countries, the research discloses that a high capital of risk weighted assets and a high return on equity drops the probability of a systemic banking disaster happening. It was exposed that an upsurge in non-performing loans to total loans is revealing of an imminent banking chaos. A low capital adequacy ratio and a high ratio of non-performing loans to total loans decrease the existence time of

the banking system but the influence is not statistically significant.

Babihuga (2007) inspected the association between nominated macroeconomic variables and financial indicators for 96 nations covering the period 1998 – 2005. The study covers key macroeconomic indicators and capital adequacy, asset quality and profitability. The study exposed a negative association with capital adequacy and non-performing loans and a optimistic association with profitability.

Berger and Deyoung (1997) inspected the association between loan quality, cost efficiency and bank capital. They stated a negative association between cost efficiency and non-performing loans. Berger (1995) establishes that US banks with comparatively high capital adequacy were more lucrative than other banks with inferior capital ratio.

Ikpefan (2012) investigated the impact of shareholders' fund on bank performance in the Nigerian deposit money banks for the period spanning 1986 and 2006. The formulated models were estimated using ordinary least square regression method. The study identified a positive relationship between shareholders fund and bank loan. The researcher also found that there is significant relationship between shareholders' fund and banks' liquidity, bank deposits, and bank loans. The study confirmed that the efficiency of management measured by operating expenses is negatively related to return on capital. The implication of the study, among others, is that adequate shareholders fund can serve as a veritable stimulant in strengthening the performance of Nigeria deposit money banks and also heighten the confidence of customers especially in this era of global economic melt-down that has taken its toll in the Nigerian financial system.

Kayode, Obamuyi and Owoputi (2015) investigated the impact of credit risk on banks' performance in Nigeria. A panel estimation of six banks from 2000 to 2013 was done using the random effect model framework. Their findings showed that credit risk is negatively and significantly related to bank performance, measured by return on assets (ROA). This suggests that an increased exposure to credit risk reduces bank profitability. They also found that total loan has a positive and significant impact on bank performance. Therefore, to stem the cyclical nature of non-performing loans and increase their profits, the banks were advised to adopt an aggressive deposit mobilization to increase credit availability and develop a reliable credit risk management strategy with adequate punishment for loan payment defaults.

According to Nawaz and Munir (2012) evaluated the impact of credit risk on the profitability of Nigerian banks. Financial ratios as measures of bank performance and credit risk were the data collected from secondary sources mainly the annual reports and accounts of sampled banks from 2004 - 2008. Descriptive, correlation and regression techniques were used in the analysis. The findings revealed that credit risk management has a significant impact on the profitability of Nigeria banks. Therefore, management need to be cautious in

setting up a credit policy that might not negatively affect profitability and also that they need to know how credit policy affects the operation of their banks to ensure judicious utilization of depositors funds.

Kargi (2011) investigated the impact of credit risk on the profitability of Nigerian banks, using data on six selected banks for the periods of 2004 to 2008. The ratio of non-performing loans to total loans and advances and the ratio of total loans and advances to total deposit were used as indicators of credit risk while return on asset indicates performance. From their findings, it is established that banks profitability is inversely influenced by the levels of loans and advances, non-performing loans and deposits, thereby exposing the banks to great risk of illiquidity and distress. Also, Dietrich and Wanzenried (2011) in their study approximating credit risk by the loan loss provisions over total loans ratio, suggest a negative relationship between credit risk and banks' profitability.

Kaanya and Pastory (2013) studied the relationship between the credit risk and bank performance as measured by return on asset. Regression model was used to develop the relationship between the indicators of credit risk and bank performance, the credit risk indicators have produced negative correlation which indicate the higher the credit risk the lower the bank performance. Regression model was statistically fit producing R square and adjusted R square of 70% and 64% respectively. The study recommended that the banks studied should increase the capital reserve to protect the bank for the future losses and to increase bank credit risk management techniques.

Bowa (2015) examined the effect of bank capitalization on liquidity of commercial banks in Kenya. The regression results showed that size of bank and asset quality have an influence on banks liquidity ratio. However, it was identified that bank size had the highest influence on banks liquidity ratio. This therefore shows that the current held assets by banks that is both fixed and current assets determines the overall stability of banks to a great extent. The results suggested that larger banks essentially enjoy economies of scale which in turn positively influences their profitability. The study further asserts that holding assets in highly liquid form tends actually increases income levels. On the contrary, banks with poor asset quality often suffer from high credit risks leading to less profitability. Banks size therefore determines the banks' ability to remain profitable and sustainable for the foreseeable future. In essence, if a bank cannot be able to utilize its held assets to generate revenues, then it cannot be able to remain stable in the long run as liabilities and other obligations will have to be met as and when they mature.

Pasiouras and Kosmidou (2007) show that banks with higher equity to asset ratios will normally have lower needs for external funding and therefore higher profitability. According to them the performance of domestic and foreign commercial

banks in 15 EU countries during 1995-2001 were affected by bank specific characteristics. Their findings suggest that capital adequacy, credit risk, bank size and liquidity risk have a significant relationship with a bank's profitability, although their impact and relations are not always uniform for domestic and foreign banks. These mixed and conflicting results are not limited only to this research.

Various studies also suggest that banks with higher levels of capital perform better than their under-capitalized peers. Staikouras and Wood (2004) claim that there exists a positive link between greater equity and profitability among EU banks. Abreu and Mendes (2001) also trace a positive impact of the equity level on profitability. Goddard et al., (2004) support a prior finding of a positive relationship between the capital/asset ratio and a bank's earnings.

However, the direction of the relationship between bank capital and bank profitability cannot be unanimously predicted in advance.

In Nigeria, however, there is scanty literature available on capital adequacy with heavy emphasis on CBN's prudential guidelines. Olalekan and Adeyinka (2013) attempted to investigate the impact of capital adequacy on Nigerian banks' performance. They examined the effect of capital adequacy on profitability of deposit taking banks in Nigeria by assessing the effect of capital adequacy of both foreign and domestic banks in the country and their profitability. They collected primary data by a questionnaire involving a sample size of 518.

The questionnaire was distributed to staff members of banks with a response rate of 76 per cent. Their findings revealed a non-significant relationship between capital adequacy and a bank's profitability. This implies that for deposit taking banks in Nigeria, capital adequacy did not play a key role in determining profitability.

Although it is generally agreed that CBN's prudential guidelines were influenced greatly by the Basel Accord, so far only Ezike and Oke (2013) have investigated the impact of the adoption of capital adequacy standards on the performance of Nigerian banks. Their study involved the use of the ordinary least squares (OLS) estimation technique for examining and determining the effect of independent variables – loans and advances (LA), shareholders' funds, total assets and customer deposits – on dependent variables – earnings per share (EPS) and profit after tax (PAT). The results of their analysis showed that capital adequacy standards exerted a major influence on a bank's performance. In addition, the impact of the

Nigerian monetary authority on new capital requirements was complemented by the adoption of the Basel Accord Framework.

Our study builds on these studies by examining relationship between liquidity as a proxy of financial soundness indicators and performance of deposits money banks in Nigeria. Further,

Nigerian secondary environmental data were used to smooth out the methodological constraints of the studies mentioned earlier.

III. METHODOLOGY

3.1 *Research Design*

The study adopted ex post facto research design. The reason for this is because the data used were secondary data. The secondary data used for this study were sourced and obtained from the internet, annual financial reports of the selected banks, Nigerian Stock Exchange, over a period of ten years spanning 2009 to 2018.

3.2 *Population of the Study*

The population of this study consist of all the deposit money banks registered by the central bank of Nigeria. According to the central bank of Nigeria, there are (26) twenty-six licensed deposit money banks in Nigeria which maintained existence to 2018.

3.3 *Determination of Sample Size*

The sample size for this study was determined by the number of deposit money banks currently quoted on the floor of Nigeria stock exchange. Using judgemental sampling method, ten banks that falls within this were selected and they are Access Bank, Fidelity Bank, First City Monument Bank, First Bank of Nigeria, Guaranty Trust Bank, Union Bank of Nigeria, United Bank of Africa, Zenith Bank, Ecobank Nigeria and Stanbic IBTC Bank.

3.4 *Method of Data Analysis*

The secondary data collected were analysed using descriptive statistics and correlation matrix. The descriptive statistics were used to evaluate the features of the data such as Mean, maximum, minimum, and standard deviation and also checks for normality of the data. The correlation analysis was used to evaluate the association between the variables and to check for multi-collinearity. The ordinary regression analysis was used to evaluate the influence of the independent variables on the dependent variable. It reveals the degree of influence and effect the independent variables has on the dependent variable.

3.5 *Model Specification*

This study employs return on equity (ROE) as the dependent variable, which measures banks performance. However, there is no unique measurement of corporate financial performance in extant literature. ROE was chosen because it is to an extent common and important accounting – based and widely accepted measures of financial performance. The independent variables in this study are liquid assets to total assets (LATA) and liquid assets to short-term liabilities (LASTL) as they serve as the proxies for liquidity. Specifically, the study adopted the model of Albulescu (2015) with some modifications to suit this study. The model of Albulescu (2015) are:

$$ROE_{it} = f(NPLGL_{it}, RCRWA_{it}, LATA_{it}, NIEGI_{it}, IMGI_{it}, e_{it}) \dots \dots \dots I$$

Where,

ROE = Return on Equity

NPLGL = Non-performing Loans to Total Gross Loans

RCRWA = Regulatory Capital to Risk-Weighted Assets

LATA = Liquid assets to total assets

NIEGI = Non-interest Expenses to Gross Income

IMGI = Interest Margin to Gross Income

From the above, the model for this study is as follows:

$$ROE_{it} = f(LATA_{it}, LASTL_{it}, e_{it}) \dots \dots \dots I$$

$$ROE_{it} = \beta_0 + \beta_1 LATA_{it} + \beta_2 LASTL_{it} + e_{it} \dots \dots \dots II$$

Where:

ROE = Return on Equity

LATA = Liquid assets to total assets

LASTL = Liquid assets to short-term liabilities

β_0 = Constant term (intercept)

e_{it} = Error term

β_{1-2} = Coefficient of Independent

3.6 Description of Research Variable

Table 3.3: Operationalization of variables

Return on equity (ROE)	net income after tax/shareholders' equity	Albulescu (2015)
Liquid assets to total assets	liquid assets / total assets	Albulescu (2015)
Liquid assets to short-term liabilities	Liquid assets / short-term liabilities	Financial Stability Report (2014)

Source: Researcher's Compilation (2020)

IV. PRESENTATION AND DATA ANALYSIS

The summary of the analysis result and its corresponding interpretations of the relationship between liquidity as a proxy of financial soundness indicators and performance of deposits money banks in Nigeria are presented below.

4.1 Descriptive Statistics

Table 4.1: Descriptive Statistics

VARIABLES	ROE	LATA	LASTL
Mean	0.352200	0.609950	0.177020
Median	0.310000	0.633000	0.150000
Maximum	0.950000	0.945000	0.491000
Minimum	0.150000	0.036000	0.005000
Std. Dev.	0.172554	0.197585	0.089455
Skewness	1.719272	-0.473408	1.128028

Kurtosis	5.595788	2.610486	4.664548
Jarque-Bera	77.34044	4.367425	32.75212
Probability	0.000000	0.112623	0.000000
Sum	35.22000	60.99500	17.70200
Sum Sq. Dev.	2.947716	3.864937	0.792224
Observations	100	100	100

Source: Researcher summary of descriptive statistics (2020)

Table 4.1 above shows the mean (average) for each variable, their maximum values, minimum values, standard deviation. The result provides some insight into the nature of the selected banks' data used for the study. Firstly, it was observed that over the period under review, the sampled banks have positive average return on equity (ROE) is 0.352200, this means that the selected banks has a positive return on equity (performance) in the period of the study. The maximum and minimum value of return on equity (ROE) is 0.950000 and 0.150000 respectively. The large difference between the maximum value and the mean value and between the minimum value and the mean value shows that the sampled firms used for the study are not dominated by either firms with high performance (ROE) or firm with low performance (ROE). Secondly, it was observed that on the average over the period, liquid assets to total assets have a mean value of 0.609950, maximum value of 0.945000 and minimum value of 0.036000. The large difference between the maximum and the minimum liquid assets to total assets reveals that gyrating nature of the bank's liquidity among the selected banks. The table above also shows that the liquid assets to short-term liabilities have a mean value of 0.177020, maximum value of 0.491000 and minimum value of 0.005000. The minimum value reveals the liquidity mismatch of assets and liabilities, and provides an indication of the extent to which banks could meet the short-term withdrawal of funds without facing liquidity problems.

4.2 Correlation Analysis

Table 4.2: Correlation Analysis

VARIABLES	ROE	LATA	LASTL
ROE	1.000000	-0.031780	-0.073032
LATA	-0.031780	1.000000	0.004387
LASTL	-0.073032	0.004387	1.000000

Source: Researcher summary of correlation analysis (2020)

The correlation matrix is to check for multi-collinearity and to explore the association between each explanatory variable and the dependent variable. The findings from the correlation matrix table (table 4.2 above) show that return on equity (ROE) has a negative association with LATA (-0.031780) and LASTL (-0.073032). Liquid assets to total assets (LATA) has a positively association with LASTL (0.004387) In checking

for multi-collinearity, the study observed that no two explanatory variables were perfectly correlated.

4.3 Regression Analysis

Table 4.3: Return on Equity (ROE) Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.254188	0.096196	2.642409	0.0096
LATA	0.025961	0.087690	0.296060	0.7678
LASTL	-0.188659	0.190757	-0.989001	0.3252
R-squared	0.610822	Mean dependent var		0.352200
Adjusted R-squared	0.606079	S.D. dependent var		0.172554
S.E. of regression	0.167227	Akaike info criterion		-0.680803
Sum squared resid	2.628701	Schwarz criterion		-0.524493
Log likelihood	40.04017	Hannan-Quinn criter.		-0.617542
F-statistic	2.281540	Durbin-Watson stat		1.926146
Prob(F-statistic)	0.025664			

Source: Researcher summary of Regression Analysis (2020)

The R-squared which is the co-efficient of determination or measure of goodness of fit of the model, tests the explanatory power of the independent variables in any regression model. From our result, the R-squared (R^2) is 61% in ROE Model. This showed that our model displayed a good fit because the R^2 is closer to 100%, these explanatory variables can impact up to 61% out of the expected 100%, leaving the remaining 39% which would be accounted for by other variables outside the models as captured by the error term.

The F-statistics measures the overall significance of the explanatory parameters in the model, and it shows the appropriateness of the model used for the analysis while the probability value means that model is statistically significant and valid in explaining the outcome of the dependent variables. From table 4.3 above, the calculated value of the f-statistics is 2.281540 and its probabilities are 0.025664 which is less than 0.05. We therefore accept and state that there is a significance relationship between the variables. This means that the parameter estimates are statistically significant in explaining the relationship in the dependent variable.

The t-statistics helps in measuring the individuals' statistical significance of the parameters in the model from the result report. It is observed from table 4.3 above that LATA and LASTL with its values as 0.296060 and -0.989001 respectively are not statistically significant at 5%.

Our model is free from the problem of autocorrelation because the Durbin-Watson value is 1.926146 which is approximated as 2 (that means, the absence of autocorrelation in the model used for the analysis).

The a priori criteria are determined by the existing accounting theory and states the signs and magnitude of the variables from the result. LASTL have negative sign and its values are -0.989001. In ROE Model, this implies that decrease in LASTL will insignificantly decrease the corporate performance by 99%, this conforms to our theoretical expectation. LATA have positive sign and its values are 0.296060. In ROE Model, this implies that increase in LATA will increase the corporate performance by 30%.

4.4 Hypotheses Testing

H₀₁: Liquid assets to total assets have no significant relationship with performance of deposits money banks in Nigeria.

Drawing inference from table 4.3 above, we found out that the analysis result showed a coefficient value of 0.025961, t-value of 0.296060 and a p-value of 0.7678 for liquid assets to total assets. The coefficient value which reveals the degree of variation caused by the individual independent variable to the dependent shows a positive value of 0.025961, this reveals that liquid assets to total assets positively influences the performance of deposits money banks in Nigeria. The t-value of 0.296060 shows that liquid assets to total assets have a positive effect on performance of deposits money banks in Nigeria. The probability value of 0.7678 shows that the effect of liquid assets to total assets on performance of deposits money banks in Nigeria is not statistically significant.

Decision:

Accept null hypothesis if the probability value is greater than the desired level of significant of 5%, otherwise reject.

Therefore, since the probability value is greater than the desired level of significant of 5%, we accept the null and reject the alternative hypothesis; this implies that liquid assets to total assets has no significant relationship with performance of deposits money banks in Nigeria. Thus, liquid assets to total assets is positive and has no significant relationship with performance of deposits money banks in Nigeria at 5% level of significant.

H₀₄: Liquid assets to short-term liabilities have no significant relationship with performance of deposits money banks in Nigeria.

Drawing inference from table 4.3 above, we found out that the analysis result showed a coefficient value of -0.188659, t-value of -0.989001 and a p-value of 0.3252 for liquid assets to short-term liabilities. The coefficient value which reveals the degree of variation caused by the individual independent variable to the dependent shows a negative value of -0.188659, this reveals that liquid assets to short-term liabilities negatively influences the performance of deposits

money banks in Nigeria. The t-value of -0.989001 shows that liquid assets to short-term liabilities have a negative effect on performance of deposits money banks in Nigeria. The probability value of 0.3252 shows that the effect of liquid assets to short-term liabilities on performance of deposits money banks in Nigeria is not statistically significant.

Decision:

Accept null hypothesis if the probability value is greater than the desired level of significant of 5%, otherwise reject.

Therefore, since the probability value is greater than the desired level of significant of 5%, we accept the null and reject the alternative hypothesis; this implies that liquid assets to short-term liabilities has no significant relationship with performance of deposits money banks in Nigeria. Thus, liquid assets to short-term liabilities is negative and has no significant relationship with performance of deposits money banks in Nigeria at 5% level of significant.

V. FINDINGS/CONCLUSION

5.1 Discussion of Findings

Liquid assets to total assets has insignificant relationship with performance of deposits money banks in Nigeria

The regression result in ROE Model shows a positive and statistically insignificant relation between liquid assets to total assets and performance of deposits money banks in Nigeria, with the coefficient value of 0.025961, t-value of 0.296060 and a p-value of 0.7678 for liquid assets to total assets. The coefficient value which reveals the degree of variation caused by the individual independent variable to the dependent shows a positive value of 0.025961, this reveals that liquid assets to total assets positively influences the performance of deposits money banks in Nigeria. The t-value of 0.296060 shows that liquid assets to total assets have a positive effect on performance of deposits money banks in Nigeria. The probability value of 0.7678 shows that the effect of liquid assets to total assets on performance of deposits money banks in Nigeria is not statistically significant. This result supports the previous findings of Almayatah (2018) and Albulescu (2015).

Liquid assets to short-term liabilities has insignificant relationship with performance of deposits money banks in Nigeria

The analysis revealed in ROE Model, a negative but insignificant correlation between liquid assets to short-term liabilities and performance of deposits money banks in Nigeria with a coefficient value of -0.188659, t-value of -0.989001 and a p-value of 0.3252 for liquid assets to short-term liabilities. The coefficient value which reveals the degree of variation caused by the individual independent variable to the dependent shows a negative value of -0.188659, this reveals that liquid assets to short-term liabilities negatively influences the performance of deposits money banks in Nigeria. The t-value of -0.989001 shows that liquid assets to

short-term liabilities have a negative effect on performance of deposits money banks in Nigeria. The probability value of 0.3252 shows that the effect of liquid assets to short-term liabilities on performance of deposits money banks in Nigeria is not statistically significant. This results were in line with the results of Bowa (2015) and Kayode, Obamuyi and Owoputi (2015).

5.2 Conclusion and Recommendations

Based on the result, the study concluded that the regression result in ROE Model shows a positive and statistically insignificant relation between liquid assets to total assets and performance of deposits money banks in Nigeria at 5% level of significant. This implies that liquid assets to total assets positively influence the performance of deposits money banks in Nigeria. Whereas liquid assets to short-term liabilities also have insignificant relationship with performance (ROE) of deposits money banks in Nigeria. The negative effect is also statistically insignificant at 5% level of significant. These therefore conclude that the results prove robust when use the return on assets and return on equity as indicator to measure the level of performance. Our metric also provides a more powerful gauge of financial stability in Nigeria and very relevant for monetary policymaking decision.

The study, therefore recommends that Liquid assets to total assets have negative insignificant relationship with performance of deposits money banks in Nigeria. This indicator is to analyze the liquidity available to meet expected and unexpected demands for cash. The Regulatory agency such as the Central Bank of Nigeria should formulate fiscal policy that will enable the deposit-taking sector to withstand unexpected financial shocks and also improve their performance. Liquid assets to short-term liabilities have negative insignificant relationship with performance of deposits money banks in Nigeria. This indicator is also to analyze the liquidity available to meet expected and unexpected demands for cash. The Regulatory agency in Nigeria should also formulate laws (fiscal policy) that will enable the deposit-taking sector to withstand unexpected financial shocks and also improve their performance.

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