THE EFFECTS OF FINANCIAL ACCOUNTING TOOLS FOR MONITORING LIQUIDITY LEVELS IN BUSINESS ORGANIZATIONS IN NIGERIA

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Abstract

The study sought to establish the effect of liquidity management on profitability of business organizations in Nigeria. Liquid assets are less profitable as compared to long term assets. The dilemma to a finance manager is whether to invest in more profitable long term assets and risk low liquidity or invest in short term assets which are less profitable and therefore reduce return on investment made. The population of the study comprised of all 19 business organizations in Nigeria. For a bank to qualify it needed to have been in operation during the whole period of the study and therefore institutions that merged or were not in operation in the whole period of study were eliminated. The study involved secondary data collection of the return on assets to measure profitability, Cash and cash equivalent to measure liquidity, Capital ratio and Deposit ratio as profitability determinants during a specific year. The study used secondary data obtained from audited financial statements of the banks at the end of the years of study. The study used descriptive statistics and regression analysis to establish the relationship between the study variables. The response rate was 63% that is a total 27 out of 40 that satisfied the data collection criteria. The study found out that there is a positive relationship between profitability and liquidity management of business organizations in Nigeria. Liquidity management is found to be one of the determinants of profitability of business organizations in Nigeria over the years of study. The study recommends that the finance managers of business organizations maintain a balance between the level of liquid assets and long term assets to reinforce each of the conflicting objectives of maintaining adequate liquidity and sustainable profitability. Additionally the liquidity requirements that have been set by CBN need to be maintained and strengthened since liquidity is found to have a positive effect on profitability of business organizations stability and growth of the entire financial and economic.

Keywords: Accounting tools, Liquidity levels, Monitoring, Financial accounting and Business organization.

Introduction

Liquidity is a financial term that means the amount of capital that is available for investment. Today, most of this capital is credit, not cash. Bank Liquidity simply means the ability of the bank to maintain sufficient funds to pay for its maturing obligations. It is the bank's ability to immediately meet cash, cheques, other withdrawals obligations and

legitimate new loan demand while abiding by existing reserve requirements. Nwaezeaku (2008) defined liquidity as the degree of convertibility to cash or the ease with which any asset can be converted to cash sold at a fair market price.

Liquidity management therefore involves the strategic supply or withdrawal from the market or circulation the amount of liquidity consistent with a desired level of short-term reserve money without distorting the profit making ability and operations of the bank. It relies on the daily assessment of the liquidity conditions in the banking system, so as to determine its liquidity needs and thus the volume of liquidity to allot or withdraw from the market. The liquidity needs of the banking system are usually defined by the sum of reserve requirements imposed on banks by a monetary authority (CBN, 2012).

Liquidity management is a concept that is receiving serious attention all over the world especially with the current financial situations and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder's wealth (Don, 2009). Liquidity management, in most cases, are considered from the perspective of working capital management as most of the indices used for measuring corporate liquidity are a function of the components of working capital.

The importance of liquidity management as it affects corporate profitability in today's business cannot be over emphasis. The crucial part in managing working capital is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004). Liquidity plays a significant role in the successful functioning of a business firm.

A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Gapenski, 2010). Dilemma in liquidity management is to achieve desired tradeoff between liquidity and profitability (Raheman, 2007). Liquidity requirement of a firm depends on the peculiar nature of the firm and there is no specific rule on determining the optimal level of liquidity that a firm can maintain in order to ensure positive impact on its profitability.

Business financing, especially at the wake of the global financial crisis, has become a major source of concern for business managers as bank loans are becoming too expensive to maintain as a result of tightening of both the local and international financial market and the reluctance of the public to invest in the share of companies sequel to the crash of the capital market (Bashir, 2006). These situations compel business managers to device various strategies of managing internally generated revenue to enhance their chances of making profit and meeting existing shareholders expectations.

Liquidity is a precondition to ensure that firms are able to meet its short-term obligations. The liquidity position in a company is measured based on the 'current ratio' and the 'quick ratio'. The current ratio establishes the relationship between current

assets and current liabilities. Normally, a high current ratio is considered to be an indicator of the firm's ability to promptly meet its short term liabilities (Berk, 2009). The quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Low liquidity leads to the inability of a company to pay its creditors on time or honour its maturing obligations to suppliers of credit, services and goods. This could result in losses on account of non-availability of supplies and lead to possible insolvency. Also, the inability to meet the short term liabilities could affect the company's operations and in many cases it may affect its reputation as well (Chakraborty, 2008).

Inadequate cash or liquid assets on hand may force a company to miss the incentives given by the suppliers of credit, services, and goods as well. Loss of such incentives may result in higher cost of goods which in turn affects the profitability of the business (Deloof, 2003). Every stakeholder has interest in the liquidity position of a company. Suppliers of goods will check the liquidity of the company before selling goods on credit. Employees should also be concerned about the company's liquidity to know whether the company can meet its employee related obligations, i.e., salary, pension, provident fund, etc. Thus, a company needs to maintain adequate liquidity (Farris, 2002).

Profitability is a measure of the amount by which a company's revenues exceeds its relevant expenses. Profitability ratios are used to evaluate the management's ability to create earnings from revenue-generating bases within the organization. The 'profitability position' of a company is measured using the 'gross profit margin' and the 'net profit margin' (Johnson, 2008). The gross profit margin is an indicator of the profit a business makes on its cost of sales, or cost of goods sold. It is the profit earned before any administration costs; selling costs and so on are removed. The net profit margin is an indicator of the amount of net profit per shilling of turnover a business has earned. That is, after taking account of the cost of sales, the administration costs, the selling and distributions costs and all other relevant costs, the net profit is the profit that is left, out of which the company will have to pay interest, tax, dividends and so on (Keeley, 1990).

A profit ratio indicates how effectively management can make profits from sales. It also indicates how much room a company has to withstand a downturn, fend off competition and make mistakes. Potential investors are interested in dividends and appreciation in market price of stock, so they focus on profitability ratios (Jarvis, 2006). Managers, on the other hand, are interested in measuring the operating performance in terms of profitability. Hence, a low profit margin would suggest ineffective management and investors would be hesitant to invest in the company.

Thus, a financial manager has to ensure, on one hand, that the firm has adequate cash to pay for its bills, has sufficient cash to make unexpected large purchases and cash reserve to meet emergencies, while on the other hand, he has to ensure that the funds of the firm are used so as to yield the highest return (Lamberson, 1995). This poses a dilemma of maintaining liquidity or profitability. The liquidity and profitability goals conflict in most decisions which the finance manager makes. For example, if higher inventories are kept in anticipation of

increase in prices of raw materials, profitability goal is approached, but the liquidity of the firm is endangered. Similarly, the firm by following a liberal credit policy may be in a position to push up its sales, but its liquidity decreases.

Similarly, there is a direct relationship between higher risk and higher return. A company taking higher risk could endanger its liquidity position. However, if a company has a higher return it will increase its profitability. Consequently, a firm is required to maintain a balance between liquidity and profitability in the conduct of its day-to-day operations (Lancaster, 1999).Investments in current assets are inevitable to ensure delivery of goods or services to the ultimate customers. A proper management of the same could result in the desired impact on either profitability or liquidity.

Profitability is the ability to make profit from all the business activities of an organization, company, firm, or an enterprise. It measures management efficiency in the use of organizational resources in adding value to the business. Profitability may be regarded as a relative term measurable in terms of profit and its relation with other elements that can directly influence the profit. Profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets. Irrespective of the fact that profitability is an important aspect of business, it may be faced with some weakness such window dressing of the financial transactions and the use of different accounting principles.

The issue of bank profitability and performance efficiency has been widely discussed in the scientific literature, it has also been considered in a number of theoretical and empirical researches of different kind. However, return on assets (ROA) and return on equity (ROE) have always been mentioned among the main indicators characterizing bank performance. Bourke (1989) was one of the first who discovered in his research that exactly the internal factors of bank performance, such as net income before and after tax against total assets and capital and reserves factors, have the greatest impact on profitability indicators. In turn, the studies conducted in the USA and Europe demonstrate that a great concentration of banks and financial institutions surpass profitability.

Another important decision that the managers of business organizations take refers to the liquidity management and specifically to the measurement of their needs related to the process of deposits and loans. The importance of liquidity goes beyond the individual bank as a liquidity shortfall at an individual bank can have systemic repercussions (CBN, 2009). It is argued that when banks hold high liquidity, they do so at the opportunity cost of some investment, which could generate high returns (Kamau, 2009).

The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short term securities to long term securities or loans raises a banks return but also increases its liquidity risks and the inverse in is true. Thus a high liquidity ratio indicates a less risky and less profitable bank (Hempel et al, 1994). Thus management is faced with the dilemma of liquidity and profitability.

Myers and Rajan (1998) emphasized the adverse effect of increased liquidity for financial Institutions stating that, although more liquid assets increase the ability to raise cash on short-notice, they also reduce management s ability to commit credibly to an investment strategy that protects investors which, finally, can result in reduction of the firm's capacity to raise external finance in some cases (Uzhegova, 2010).

Statement of the Problem

Liquidity management and profitability are very important in the development, survival, sustainability, growth and performance. Profitability does not translate to liquidity in all cases. A company may be profitable without necessarily being liquid. Therefore, liquidity should be managed in order to obtain an optimal level, that is, a level that avoid excess liquidity which may translate to poverty of ideas by management. Also liquidity level should not fall below minimum requirement as it will lead to the inability of the organization to meet short term obligation that are due.

For these reasons banks are developing various strategies to improve their liquidity position. In Nigeria the current squeeze on cash and credit is threatening the survival of many commercial banks. The fact that business organizations cannot exist without working capital is thus, undeniable. Eventually business organizations should recognize the fact that the management of liquidity necessitates short term decisions in working capital and financing of all aspects of both business organizations short-term assets and liabilities with the main objective of ascertaining that the banks has the ability to continue operating with sufficient cash flow for payment of both maturing short-term debt and impending operational expenses.

Although liquidity is an important ingredient in the smooth working of business entities, it has not attracted much attention of scholars. Some worked by Gupta (1999) and Gupta and Huefner (1972) examined the differences in financial ratio averages between industries. Johnson (2008) examined the differences in financial ratio averages between industries. Johnson (2008) extended this work by finding cross sectional stability of ratio groupings for both retailers and primary manufacturers.

It is evident that no study has been done on impacts of financial liquidity on profitability of banks especially those listed in the Security Exchange Commission. This study therefore endeavored to answer the following research question; what are the impacts of financial liquidity on profitability of business organizations in Nigeria?

Objectives of the study

To determine the effect of liquidity management on profitability of business organizations

Research Hypothesis

There is no relationship between liquidity management and profitability in business organizations

Literature Review

Theoretical Framework

The theories and liquidity management are outlined and explained in this section.

Anticipated Income Theory

This theory holds that a bank's liquidity can be managed through the proper phasing and structuring of the loan commitments made by a bank to the customers. Here the liquidity can be planned if the scheduled loan payments by a customer are based on

the future of the borrower. According to Nzotta (1997) the theory emphasizes the earning potential and the credit worthiness of a borrower as the ultimate guarantee for ensuring adequate liquidity. Nwankwo (1992) posits that the theory points to the movement towards self-liquidating commitments by banks. This theory has encouraged many business organizations to adopt a ladder effects in investment portfolio.

Shiftability Theory

This theory posits that a bank's liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash. This point of view contends that a bank's liquidity could be enhanced if it always has assets to sell and provided the Central Bank and the discount Market stands ready to purchase the asset offered for discount. Thus this theory recognizes and contends that shiftability, marketability or transferability of a bank's assets is a basis for ensuring liquidity.

This theory further contends that highly marketable security held by a bank is an excellent source of liquidity. Dodds (1982) contends that to ensure convertibility without delay and appreciable loss, such assets must meet three requisites. Liability Management Theory Liquidity management theory according to Dodds (1982) consists of the activities involved in obtaining funds from depositors and other creditors and determining the appropriate mix of funds for a particularly bank.

Liquidity theory has been subjected to critical review by various authors. The general consensus is that during the period of distress, a bank may find it difficult to obtain the desired liquidity since the confidence of the market may have seriously affected and credit worthiness would invariably be lacking. However, for a healthy bank, the liabilities constitute an important source of liquidity.

Commercial Loan Theory

This theory has been subjected to various criticisms by Dodds (1982) and Nwankwo (1992). From the various points of view, the major limitation is that the theory is inconsistent with the demands of economic development especially for developing countries since it excludes long term loans which are the engine of growth. The theory also emphasizes the maturity structure of bank assets and not necessarily the marketability or the shiftability of the assets.

Also, the theory assumes that repayment from the self-liquidating assets of the bank would be sufficient to provide for liquidity. This ignores the fact that seasonal deposit withdrawals and meeting credit request could affect the liquidity position adversely. Moreover, the theory fails to reflect in the normal stability of demand deposits in the liquidity consideration.

This obvious view may eventually impact on the liquidity position of the bank. Also the theory assumes that repayment from the self-liquidating assets of a bank would be sufficient to provide for liquidity. This ignores the fact that seasonal deposit withdrawals and meeting credit request could affect the liquidity position adversely.

Determinants of Business Organizations Profitability

According to Husni (2011) the determinants of banks profitability are normally consisting

of factors that are within the control of commercial banks. They are the factors which affect the revenue and the cost of the banks. Some studies classified them into two categories namely the financial statement variables and non-financial variables. The financial statement variables include factors that are directly related to the bank's balance sheet and income statement. Whiles, the non-financial statement variables include factors like the number of branches of a particular bank, location and size of the bank.

Income

Rasiah (2010) presented that banks generate income mostly on their assets and the assets could be termed as income and non-income generating. With regards to business organizations income Rasiah (2010) classified it into two, namely interest and non-interest income. The interest income consist of rates charge on loans, overdraft and trade finance which the banks offers to customers. Whereas, the non-interest income is consisting of fees, commissions, brokerage charges and returns on investments in subsidiaries and securities. According to Vong et al (2009), the major source of banks revenue is interest income. It contributes about 80% of business organizations earnings. The other source of banks revenue includes dividends and gains from dealing in the securities market. There could be also some minor sources of income for instance earnings from trust activities and service charges on deposit accounts; Vong et al (2009).

Capital Ratio

Devinaga (2010) and Vong et al (2009) included capital ratio as a variable in their study of determinants of banks profitability and performance because capital also serve as a source of funds along with deposits and borrowings. They argue that capital structure which includes shareholders' funds, reserves and retained profit affect the profitability of business organizations because of its effect on leverage and risk. They documented that, business organizations assets could be also financed by either capital or debt. But debt financing could be very risky as compared to capital financing with regards to credits and liquidity risks with which business organizations are expose to. This is because for instance, if a commercial bank experience loss of profit as result of credit default or liquidity problem the bank still has the obligation to services its debt, on the other hand a commercial bank with enough capital is able take higher risk and also absorb shocks which emanate from liquidity and credits risks. Sufian et al (2008) argued that banks in developing countries needs a strong capital structure, because it provides them strength to withstand financial crises and offers depositors a better safety net in times of bankruptcy and distress macroeconomic conditions. And according to Molyneux (1992) banks with high level of equity can reduce their cost of capital and that could impact positively on profitability. In addition, Both Basel II and III accord admits that most frequent bank insolvencies are mostly coursed by credit losses and for this reason it is prudent for business organizations to have higher quality of capital in order to be able to absorb more loss hence to better withstand stress periods; (Basel Committee's response to the Financial Crises 2010). Berger (1995) also asserted that lower level of capital put the banks into risky position and impact negatively the bank's profitability; Berger (1995).

The argument presented above makes the decision of commercial bank of Nigeria to

continue increase regulatory capital requirement in the banking industry very appropriate because having the strong capital structure would enable them to reduce cost of capital and withstand financial crises hence continues experience in profitability.

Liquidity Ratio

According to Devinaga Rasiah (2010) business organizations are required by regulators to hold a certain level of liquidity assets. And the reason behind this regulation is to make sure that the business organizations always possess enough liquidity in order to be able to deal with bank runs. He further argue that a bank assume the status of highly liquid only if it has been able to accumulate enough cash and have in possession other liquid assets as well as having the ability to raise funds quickly from other sources to be able to meet its payment obligation and other financial commitments on time.

He claims that for instance, in a situation where a commercial bank is faced with the problem of bank run, the bank may encounter liquidity problem. In such a situation the bank might be compelled to raise additional liquid funds by borrowings or selling off some of their liquid assets and it is well known that short-term borrowings are usually costive. In addition, the situation where by the bank rush to sell off the liquid assets creates an impression in the minds of investors that the bank is trying to dispose of bad assets and for this reason these liquid assets normally attracts lower prices from investors and as a result there could be loss of income from the sale of liquid assets.

These two issues tend to have an adverse effect on business organizations profitability. This is relative to what happened in the United States in 2007- 2008 at the early stage of the crisis most banks experience bank runs and the inter-bank market freeze lending to counter parties due to the loss of confidence in the banking systems as result of huge default of sub- prime loans and there was strong decline of prices of securities associated with the sub-prime loans. This made it difficult for the banks to refinance these sub-prime loans and borrowing became very expensive for banks. This situation triggered the global financial crisis. For this reason the Basel III accord introduced the liquidity coverage ratio (LCR) with which banks are required to have enough high quality liquid assets to be able deal with stress funding situations (Basel Committee's response to the Financial Crises 2010). This means that business organizations in Ghana are in better position to withstand stress funding situations hence making profits during these years of global financial crisis. This is because the findings of Bourke (1989) on concentration and other determinants of bank profitability in Europe, North America and Australia indicated a positive relationship between banks level of liquidity and profitability.

Deposits

Banks are said to be heavily dependent on the funds mainly provided by the public as deposits to finance the loans being offered to the customers. There is a general notion that deposits are the cheapest sources of funds for banks and so to this extent deposits have positive impact on banks profitability if the demand for bank loans is very high. That is, the more deposits commercial bank is able accumulate the

greater is its capacity to offer more loans and make profits; Devinaga Rasiah (2010).

However, one should be aware that if banks loans are not high in demand, having more deposits could decrease earnings and may result in low profit for the banks. This is because deposits like Fixed, Time or Term deposits attract high interest from the banks to the depositors, Devinaga Rasiah (2010). Investigation done by Husni (2011) on the determinants business organizations performance in Jordan disclosed that there is significant positive relationship between ROA and Total liability to total Assets. To capture deposits in the model Anna Vong et al. (2009) presented the effect of deposits on profitability as deposits to total assets ratio.

Empirical Review

This section discusses studies which have being conducted locally and internationally, which examines the effect of liquidity management on profitability of business organizations in Nigeria.

International Evidence

Bourke (1989) carried out a study to establish the relationship between liquid assets and bank profitability for 90 banks in Europe, North America and Australia from 1972 to 1981, the study used econometric framework presented in an equation. The dependent variable, profitability, was regressed against a non-linear expression of relative liquid asset holdings, as well as a set of control variables. Liquid assets were generally included as a control variable in this study with very limited discussion around the estimated parameter. From the study a company with low liquidity and high profitability has to increase its borrowing leading to an increase of the financial costs. This would certainly lead to increasing interest rates, since the cheaper sources are quickly exhausted. Furthermore, having increased its debt, the company raises its credit risk, causing an increase in interest rates charged by their financiers. Under these conditions, the company has to get more time from suppliers, resulting in the acquisition of raw materials at higher prices. Also it will fail to achieve financial discounts offered by the anticipation of payments and incur interest and penalties for late payments the liquidity problems would become even worse. The study emphasized that profitability and solvency are necessary condition for the healthy existence of the company and both are conditioned by the strategy adopted in the medium and long term.

Berger (1995) analyzed the statistical relationships between bank earnings and capital for 50 U.S. banks over the period of 1983-1989 using multiple regression analysis and found that, contrary to what one might expect in situations of perfect capital markets with symmetric information there is a positive relationship between capital and return on equity. This result, according to the author, is consistent with the “expected bankruptcy cost hypothesis.” More specifically, Berger’s results suggest that banks with higher levels of capital see their funding costs decrease to such an extent that it more than offsets the cost of issuing additional capital. While Berger applies the concept of the “expected bankruptcy cost hypothesis” in the realm of capital, it is also conceptually applicable to the impact of liquid assets on profitability, whereby banks holding more liquid assets benefit from a superior perception in funding markets, reducing their financing costs and increasing profitability.

Bordeleau, Crawford and Graham (2009) reviewed the impact of liquidity on bank

profitability for 55 US banks and 10 Canadian banks between the period of 1997 and 2009. The study employed quantitative measures to assess the impact of liquidity on bank profitability. Results from the study suggested that a nonlinear relationship exists, whereby profitability is improved for banks that hold some liquid assets, however, there is a point beyond which holding further liquid assets diminishes a banks' profitability, all else equal.

Owolabi, Obiakor and Okwu (2011) conducted a study that investigated the relationship between liquidity and profitability in 15 selected quoted companies in Nigeria. The central objective was to examine the nature and extent of the relationship between liquidity and profitability in profit-driven quoted companies and also to determine whether any cause and effect relationship existed between the two performance measures. Liquidity measure considered was current assets-liabilities ratio while profitability measure was operating profit-turnover ratio. Investigative and quantitative analysis methods were used for the study.

In an attempt to measure the impact of liquidity on profitability Lanberg (2017) conducted a study using a sample of companies listed on Shochholm Stock Exchange. Their focus was on impact of active liquidity strategies on company's profitability in and out of financial turbulence or economic downturn. Relevant data were financial ratios which generated from financial statements. Their findings suggested that the adaptation of liquidity strategies do not have a significant impact on return on assets (ROA). Only increased use of liquidity forecasting and short-term financing during financial crisis had a positive impact on ROA. They found also that the importance of key ratios monitoring companies' liquidity has not changed between the studied time points.

Summary of the Literature Review

This chapter reviewed theoretical and empirical literature on the relationship between liquidity and banks profitability. The empirical review reveals that many researchers have studied working capital from different views and in different environments. While these studies were all relevant to the current study, none of them did an empirical analysis of the liquidity management and banks profitability. Finally of these studies, none has been conducted so far on business organizations in Nigeria and in respect to liquidity management policies and their relationship to the profitability of the banks.

Research Methodology

Research Design

A descriptive research design was adopted in the study to explain the relationship between liquidity policies and profitability. Cooper and Schindler (2011) defines descriptive studies as those studies whose objective is to explain a phenomenon, to estimate a proportion of a population with similar characteristics and to discover associations among different variables. The descriptive design was appropriate as it sought to ascertain the effect of liquidity management on profitability of business organizations in Nigeria.

Population of the study

The population of interest in the study composed of all business organizations in Nigeria between years 2009 and 2017, in

that period 19 business organizations (Appendix I) fulfilled the data collection.

Sample and Sampling Procedure

This study was a census of all business organizations in Nigeria, for an individual bank to qualify it needed to have operated throughout the set period of study. Given the population of the subjects of study all the business organizations were studied due to the manageable numbers involved and sampling was not necessary.

Data Collection

The study employed secondary data collection. The study variables were deduced from audited financial statements of the business organizations in Nigeria for the financial periods 2009 to 2017.

Data was collected for the business organizations in operation during the period and this ensured completeness and consistency of the study elements.

Data Analysis

The study used multiple linear regression equation and the method of estimation was Ordinary Least Squares (OLS) so as to establish the relationship between liquidity and profitability exists between the study variables. To achieve the objectives of this study, a model was developed using profitability as the dependent variable and liquidity as the independent variable. The data analysis was followed by data interpretation of the results of the analysis.

Analytical Model

The economic model used in the study was:

$Y = \beta 0 + \beta X + \varepsilon$

Where, Y is an independent variable and refers to the return on assets (ROA) of a financial institution; the β0 is the intercept; X represents explanatory variable (liquidity attributes); β is co-efficient and ε represent the error term.

The empirical model used in the study for both pre and post period of the financial crisis was presented as follows:

$Y = b0 + b1X1 + b2X2 + b3X3 + \varepsilon$. Where:

Y = Profitability as measured by Return on Assets

X1 = Liquidity Management as measured by cash and cash equivalents X2 = Profitability determinant as a measure of Capital ratio

X3 = Profitability determinant as a measure of Deposits to total assets ratio

Correlation analysis was used to determine whether the values of two variables are associated. The two variables should be random samples, and should have a Normal distribution (possibly after transformation). Pearson's Correlation analysis was used for data to see the relationship between variables such as those between liquidity and profitability.

Operationalization of the Variables

Y; The return on average total assets of the bank

The argument made by Rivard and Thomas (1997) that bank profitability is best measured by ROA because ROA cannot be distorted by high equity multiplier. This study chose to use (ROA) thus returns on total assets to measure performance of the banks. ROA in actual sense signifies managerial efficiency, in other words it depicts how effective and efficient the management of banks has been as they seek to transform assets into earnings. The ROA is defined as net income divided by total assets. The data was obtained from the financial statements of all business organizations for period of 2009 to 2017.

X1; Cash and Cash Equivalents

This variable is absolute term of addition of bank cash asset (CA), bank balances and Treasury bill and certificate. Cash and cash equivalents are most liquid assets within the asset portion of company balance sheet, which are readily convertible into cash. The data was obtained from the financial statements of all business organizations for period of 2009 to 2017.

X2; Deposits to total assets ratio

The effect of fund source on profitability is captured by the deposits/total assets ratio. It is believed to be the major and the cheapest source of funding for banks, empirical evidence provided by Husni Ali Khrawish (2011) prove that customer deposits impact banking performance positively as long as there is a sufficient demand for loans in the market.

X3; Capital and reserve to total assets ratio

This is defined as total equity over total asset. This is expected to uncover the capital adequacy of the banks and capture the general average safety and soundness of the banks. According to Molyneux (1993) banks with high level of equity can reduce their cost of capital and that could impact positively on profitability. Earlier work done by Karkrah and Ameyaw (2010) on profitability determinants of business organizations in Ghana revealed that the equity ratio which is the measure of the capital strength of the banks posted a positive relationship with the banks ROA which was in line with the study of Suffian et al (2008) which as well revealed positive relation existing between Philippines banks level of capitalization and profitability. Meanwhile the research work of Berger (1995), Demirguc-Kunt and Huizinga (1999), Staikouras and Wood (2003), Goddard et al. (2004), Pasiouras and Kosmidou (2007), and Kosmidou (2008) also shear the view.

Test of Significance

Analysis of Variance (ANOVA) was used to test the significance of the model, The significance of the regression model was determined at 95% confidence interval and 5% level of significance. Adjusted R squared was used to determine the variation in the dependent variable due to changes in the independent variables.

Data Analysis, Results and Discussion

Response Rate

The target population of was all business organizations in operations during the five year period of study 2009 to 2017. 5 banks were eliminated since they were not in operation over the whole period of study. 11 banks were eliminated since all the information for the study period was not available in time for the study therefore not consistent. The study obtained data of a total of 27 banks out of the eligible 44 and

this represents 63% response rate which is sufficient to draw conclusions.

Regression Analysis

In addition to the above analysis, the researcher conducted a multiple regression analysis so as to test the relationship among independent variables. The researcher applied the Statistical package for social Sciences (SPSS Version 20) aid in computation of the measurements of the multiple regressions for the study. The findings are as shown in the table 1 below.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.801[a]	.743	.697	.88195

Source: Research Findings

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.697 an indication that there was variation of 69.7% on profitability due to changes in Cash and cash equivalents, capital ratio and deposits to total assets ratio at 95% confidence level.

R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0.801.This implies that 69.7% of profitability of business organizations is as a result of variation in cash and cash equivalent, capital ratio and deposit ratio at a confidence level of 95%. This means that 30.3% of the profits of business organizations are attributable to other factors other than liquidity management levels in the bank.

Table 2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.042	2	0.021	15.52	.018[b]

Residual	7.824	24	0.326
Total	**7.866**	**26**	

Source: Research Findings

From the ANOVA statics in table above, the processed data, which is the population parameters, had a significance level of 1.8% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%. The following table gives the coefficients which helps in establishing the regression line;

Table 3: Table of coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.161	0.129		9	0
	Measured by cash and cash equivalents	1.218	0.04	0.03	30.45	0.041
	Measure of Capital ratio	0.942	0.05	0.232	18.84	0.004
	Ratio of Deposits to total assets of the	1.482	0.064	0.093	23.16	0.039

Source: Research Findings

The coefficients of the variable are positive for Cash and cash equivalents, Capital ratio and Deposit ratio; this implies a positive relationship between the ROA and the Cash and cash equivalents, Capital ratio and Deposit ratio. The constant coefficient is 1.161 this implies that when Cash and cash equivalents, Capital ratio and Deposit ratio the ROA is1.161%.

The regression equation that estimates the relationship between profitability and liquidity is as below. ROA= 1.161 + 1.218 Cash and cash equivalents + 0.942 Capital Ratio + 1.482 Ratio of Deposits to total assets of the bank.

From the above regression model, holding Cash and cash equivalents, Capital Ratio and Ratio of Deposits to total assets of the bank, Return on assets would be 1.161, its established that a unit increase in Cash and cash equivalents would cause an increase in return on assets by a factor of 1.218, a unit increase in capital ratio would cause an increase in return on assets by a factor of 0.942, also a unit increase in Ratio of Deposits to total assets of the bank would cause increase in return of assets by a factor of 1.482. The study further revealed that the P-value were less than 5% in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study.

R2 is the coefficient of determination which tells us how ROA varies with changes in Cash and cash equivalents, Capital ratio and Deposit ratio. From the table above the value of R2 is 0.0207. This implies that 2.07% of profitability of business organizations is as a result of variation in Cash and cash equivalents, Capital ratio and Deposit ratio level at a confidence level of 95%. This means that 97.93% of the profits of business organizations are attributable to other factors other than liquidity levels in the bank. The R is the correlation coefficient which shows the nature of relationship between the ROA and Cash and cash equivalents, Capital ratio and Deposit ratio. From the results above R is 0.1439 which indicate a weak positive relationship between ROA and Cash and cash equivalents, Capital ratio and Deposit ratio.

Summary, Conclusions and Recommendations
Introduction
Summary

From the data analysis in chapter four, there exist a positive relationship between profitability and liquidity management for business organizations as represented by the positive values of R from the regression analysis. Liquidity is one of the factors that determine profitability of business organizations as represented by the positive values of R^2.

The study revealed that there was a strong positive relationship between the study variables as shown by 0.801. This implies that 69.7% of profitability of business organizations is as a result of variation in Cash and cash equivalents, Capital ratio and Deposit ratio level at a confidence level of 95%. The regression equation that estimates the relationship between profitability and liquidity is as below. ROA= 1.218+ 1.218 Cash and cash equivalents + 0.942 Capital Ratio + 1.482 Ratio of Deposits to total assets of the bank.

Conclusion

The data analysis results in chapter four indicate that liquidity is one of the determinants of profitability of commercial banks. The relationship between ROA and Cash and cash equivalents, Capital ratio and Deposit ratio is positive implying that an increase in liquidity will lead to an increase in profitability of commercial bank. Considering the findings of this study, the following conclusions can be drawn: For the success of operations and survival, business organizations should not compromise efficient and effective liquidity management. They are expected to maintain optimal liquidity level in order to satisfy their financial obligations to customers or depositors and maximize profits for the shareholders.

The optimal liquidity level is reached if the business organizations religiously maintained the minimum liquidity requirement as stated by the Central Bank of Nigeria. This attempt helps to reduce cases of bank distress. From the study, we can rightly conclude that both illiquidity and excess liquidity are financial Diseases that can easily erode the profit base of a bank as they affect bank's attempt to attain high profitability-level. The pursuit of high profit without consideration to the liquidity level can cause great illiquidity, which reduces the customers' patronage and loyalty. Therefore, any bank that has the aim of maximizing its profit level must adopt effective liquidity management.

Effective liquidity management also requires adequate liquidity level which will help business organizations to estimate the proportion of depositor's funds that will be demanded at any period and arrange on how to meet the demand.

Recommendations for Policy

The study results conclude that there is a positive relationship between the profitability and liquidity management of business organizations in Nigeria. As a result the study recommends that the banking industry regulator, CBN, maintain the regulation over the minimum liquidity of business organizations which is currently at 20% as this have an impact on the profitability of business organizations and therefore the long and short term stability of the entire systems.

Since the survival of business organizations depend on liquidity management and profitability, they should not solely concentrate on the profit maximization n concept but should also adopt measures that will ensure effective liquidity management. The measures will help to minimize or avoid cases of excessive and deficient liquidity as their effects.

Instead of keeping excessive liquidity as a provision for unexpected withdrawal demands of the customers, the business organizations should find it reasonable to adopt other measures of meeting such requirements, which can include borrowing and discounting bills. In addition, the surplus funds of the business organizations should be seasonally invested in short-term instruments of the money market.

For the fact that the monetary policies of CBN grossly affect liquidity management of the commercial banks, CBN should take the interest of the later into consideration while establishing and implementing these monetary policies in general and the liquidity ratio in particular. To achieve this feat, CBN is expected to create a forum whereby its policy makers and the management of business organizations interact and dialogue for acceptable monetary policies.

The Central Bank should be encourage maintaining a flexible Minimum Monetary Policy or discount rate so as to enable the business organizations take advantage of the alternative measures of meeting the unexpected withdrawal demands, and reduce the tendency of maintaining excess idle cash at expense of profitability. The monetary authority should as a matter of urgency encourage and legitimate the use of credit cards and enforce cheque usage for huge amounts in the day to day business transactions. This action will go a long way to remedy the problem of maintaining huge idle cash in vault in expectation of unprecedented withdrawal, as the movement of cash will be highly reduced.

Business organizations should schedule the maturity periods of their secondary reserve assets to correspond to the period in which the funds will be needed. The business organizations should create a customer forum where their customers will be educated on varieties of deposits and the operational requirements of each of them. A situation where the customers operate any of the deposits as required, the business organizations will be able to estimate the liquidity level to be maintained.

Limitations of the Study

During the study several conditions reduced the efficiency with which the research work was done. The financial statements of some

business organizations were not available in time for the study to be conducted and this reduced the sample items from which the data was collected. Additionally the information provided in the financial statements was not in a standard format and additional time was required to put the information in a standardized presentable format for consistency of the information.

The study was only done in Nigeria and therefore the results are limited to Nigeria and may not be applicable to other countries with a different operating environment. The uniqueness of the operating environment may hinder application of these results in other countries where the environment is different.

The study was carried out over a period of 5 years covering 2009 to 2017; this period may not be enough to draw conclusions as major economic fluctuations may influence the economic performance of the business organizations and therefore wrong conclusions may have been arrived at during this study.

Suggestions for Further Studies

It would be interesting to carry out a study in other industries and establish the effect of liquidity management on profitability. This study focused on business organizations since there is a regulatory requirement that require a certain level of liquidity maintained by the business organizations and therefore a study in other industries where there are no such restrictions would be interesting to carry out.

This study suggests a cross border study be carried out involving other countries in order to determine the impact of different economic and operating factors on the relationship between the two variables. Additionally a study on the relationship between the various levels of liquidity management maintained by business organizations and the level of profitability would provide an insight as how the liquidity management level affects profitability of commercial banks.

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Appendix 1–List of Banks (Business organizations) in Nigeria

1. Access Bank Plc
2. Fidelity Bank Plc
3. First City Monument Bank Plc
4. First Bank of Nigeria Limited
5. Guaranty Trust Bank Plc
6. Union Bank of Nigeria Plc
7. United Bank for Africa Plc
8. Zenith Bank Plc
9. Citibank Nigeria Limited

10. Diamond Bank Plc
11. Ecobank Nigeria Plc
12. Heritage Banking Company Limited
13. Keystone Bank Limited
14. Polaris Bank Limited. The successor to Skye Bank Plc
15. Stanbic IBTC Bank Plc
16. Standard Chartered
17. Sterling Bank Plc
18. Unity Bank Plc
19. Wema Bank Plc