EFFECT OF LIQUIDITY MANAGEMENT ON THE FINANCIAL PERFORMANCE OF SELECTED DEPOSIT MONEY BANKS IN NIGERIA.

BY

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Being a Research Dissertation Submitted to the Department of Business Administration and Entrepreneurship in Partial Fulfilment of the Requirements for the Award of M.Sc. Management

October, 2018.

DECLARATION

I hereby declare that this research dissertation is a product of my research efforts undertaken under the supervision of DrBala Ado K/Mata, and has not been presented anywhere for the award of a degree or certificate. All sources used have been duly acknowledged.

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CERTIFICATION

This is to certify that the research work for this dissertation “Effect liquidity management on performance of selectedDMBs in Nigeria was carried out under my supervision.

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APPROVAL PAGE

This dissertation has been examined and approved for the award of Master of Science (M.Sc.) Degree in Management.

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DEDICATION

This research dissertation is dedicated to my beloved husband and parents who stood firmly by me with their constant words of encouragement, unparalleled motivation and love.

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ABSTRACT

This study examines the effect of liquidity management (liquidity ratio, loan to deposit ratio and current ratio) on performance of DMBs in Nigeria. The study aimed at finding out the effect of liquidity ratio, loan to deposit ratio and current ratio) on performance of DMBs in Nigeria. The study also employed an ex-post facto research design and used 5 out of the 15 DMBs listed in the Nigeria Stock Exchange(NSE). Multiple regression was used to analyze the data using STATA. Three hypotheses were formulated and statistically tested at 5 per cent level of significance using Multiple Linear Regression Analysis. Findings from the empirical analysis show that there is a significant relationship between liquidity management and the performance of Deposit Money Banks in Nigeria.The correlation results reveal positive impacts between liquidity and profitabilitys. The key results indicate that only the banks with optimum liquidity were able to maximize returns. The study concludes that illiquidity and excess liquidity pose problem to bank management operations and recommends that bank should adopt optimum liquidity model for efficiency and effectiveness.The study however recommends that banks management pay more emphasis on the three variables (liquidity, loan to deposit and current ratios) to improve the performance.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In every system, there are major components that are paramount to its survival. This is also applicable to the financial system where deposit money banks contribute significantly to the effectiveness of the entire system, whichan efficient mechanism for the mobilization of resources and efficiently channeling them for productive investment (Wilner, 2000). However, efficient financial intermediation by a deposit money bank demands the purposeful attention of the bank's management to maintain a balance between liquidity and profitability. Both goals run in opposite direction in the sense that an attempt by a bank to achieve higher profitability will certainly take a toll on the liquidity level and solvency position and vice versa (Olagunji, Adenanju&Olabode, 2011).

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. 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.

Bhattacharyya and Sahoo (2011), argued that Liquidity management by central banks typically refers to the framework, set of instruments, and the rules that the monetary authority follows in managing systemic liquidity, consistent with the ultimate goals of monetary policy. In this regard, central banks modulate liquidity conditions by varying both the level of short-term interest rates and influencing the supply of bank reserves in the interbank market. While Central bank liquidity management has short-term effects in financial markets, its long-term implications for the real sector and on price level are more profound. Effective liquidity management is a key factor that helps sustain bank profits and concurrently keeps the banking institution and the financial system generally from illiquidity and perhaps, insolvency.

Strategic bank management aims prominently at keeping the bank solvent and liquid in order to earn good profits and remain sound. In order to maintain public confidence on the financial system of the country, Banks are required to maintain adequate amount of cash and near cash assets such as securities to meet withdrawal obligations. It is paramount for the survival of the totality of the financial system of a country and the banks in particular whose core function of financial intermediation depend on the availability of adequate liquidity. In Nigeria, the challenges of inefficient liquidity management in banks were brought to the fore during the liquidation and distress era of 1980s and 1990s.

The negative cumulative effects of banking system liquidity crisis from the 1980s and 1990s lingered up to the re-capitalization era in 2005 in which banks were mandated to increase their capital base from N2 billion to an astronomical high N25 billion. This move by the apex bank was believed would stabilize and rectify liquidity problems that were prevalent in the economy. Barely five years of what was applauded and considered as a fortified repositioning of banks against liquidity shortage, Central Bank of Nigeria (CBN) in 2009 came on a rescue mission to save three illiquid banks (the defunct Afribank, Bank PHB, and Spring bank). The global financial crisis of 2008 also had its claws on the already ailing banks and to contain the crisis of confidence and ease financial conditions, CBN used both conventional and unconventional measures to inject liquidity into the system. In its rescue mission in 2009, CBN injected N620b to save the affected three banks that were operating on negative shareholder's funds (Okpara, 2013).

The use of unconventional measures became necessary as the regular monetary policy transmission mechanism got seriously impaired by the liquidity crisis that warranted the setting up an agency, Asset Management Corporation of Nigeria (AMCON) in 2011 to buy out the bad debts of affected banks (Okpara, 2013). However, there is a serious liquidity problem still rocking the Nigerian banking industry. After the election of 2015, in which the ruling party lost to a new government, there has been rumours of some politicians who borrowed money from the banks to support their campaigns not being able to pay back (most recent is the case of Ayo Fayose& Zenith bank plc), and the introduction of treasury single account (TSA), in which the presidency mandated that all public sector funds should be withdrawn from the deposit money banks, thereby leaving the banks illiquid, given that the public sector deposit constitute about

75% of the banks' deposit. On the other hand, like all businesses, banks profit by earning more money than what they pay in expenses.

The major portion of a bank's profit comes from the fees that it charges for its services and the interest that it earns on its assets. Its major expense is the interest paid on its liabilities. The major assets of a bank are its loans to individuals, businesses, and other organizations and the securities that it holds, while its major liabilities are its deposits and the money that it borrows, either from other banks or by selling commercial paper in the money market. The bank profitability can be determined through various ratios, which include; return on asset, return on equity, net interest margin, profit before tax, yield on earning assets, etc.

From the foregoing, it is obvious that banks need huge amount of money to be able to effectively provide the required intermediary services, in order to improve their level of profit and also ensure that the customers have their money available for withdrawal when needed. These two functions are very contradictory in nature, and hence needs to be given thorough attention. Through the financial intermediation role, the Deposit money banks reactivate the idle funds borrowed from the lenders by investing such funds in different classes of portfolios. Such business activity of the bank is not without problems since the deposits from these fund savers which have been invested by the banks for profit maximization, can be recalled or demanded when the latter is not in position to meet their financial obligations. Considering the public loss of confidence as a result of bank distress which has bedeviled the financial sector in the last decade; and the intensity of competition in the banking sector due to the emergence of large number of new Deposit money banks. The Deposit Money Banks (DMBs) therefore strive to make profit and at the same time meets the financial demands of its depositors by maintaining adequate liquidity. The problem then becomes how to select or identify the optimum point or the level at which the DMBs can maintain its assets in order to optimize these two objectives. This problem becomes more pronounced as good number of DMBs are engrossed with profit maximization and as such neglecting the importance of liquidity management in banking. However, the profit maximization becomes a myth as the resulted liquidity can lead to both technical and legal insolvency with the consequence of low patronage, deposit flight, erosion of asset base. It is against this backdrop, this article seek to explore the effects of liquidity management on the performance of deposit money banks (DMBs) in Nigeria from 2000-2015.

Specifically, the study will determine the relationship between liquidity ratio and the profitability of DMBs; ascertain the relationship between cash to deposit ratio and profitability of DMBs; determine the relationship between loan to deposit ratio and profitability of DMBs and determine the relationship between loan to asset ratio and profitability of DMBs in Nigeria.

1.2 Statement of the Problem

Liquidity management and profitability are very important issues in the growth and survival of any business particularly the Deposit Money Banks (DMBs) and the ability to handle the trade-off between the two a source of concern for financial managers.One of the major reasons that may cause liquidation is illiquidity and inability to make adequate profit. For these reasons liquidity management and bank performance are key factors in determining the development, survival, sustainability, growth and performance of a banking system and the ability to handle the trade-off between the two is a source of concern for bank managers. For instance, banks make loans that cannot be sold quickly at a high price and also issue demand deposits that allow depositors to withdraw at any time. Such a mismatch of liquidity, in which a bank's liabilities are more liquid than its assets, causes problems for banks when too many depositors attempt to withdraw at once as it affects bank liquidity position. Many banks have investment in safe and high yielding illiquid assets but are tied up in loans. Some banks despite having a lot of assets, the sudden withdrawals and the lack of liquid funds lead to a huge loss as a result of taking out emergency loans. This was identified as the major cause of bank failures and nationalisation in (Barrell Davis, 2008), alongside with inability to make adequate profit. As the basic ingredient of measuring the "going concern" banks for these reasons are developing various policies to stop runs and strategies to improve the liquidity position which are usually neglected in times of favourable business conditions, yet the problem is unsolved. The attempts by bank managers to increase return tend to have negative impact on liquidity which might be dangerous to the banks as this can lead to loss of bank's patronage, goodwill, deterioration of bank's credit standings and might lead to forced liquidation of bank's assets on one hand, and maintaining excess liquidity to satisfy customers' demands might affect the returns on the other hand. Mistakes in liquidity planning and implementation can affect bank operations and might exhibit long term effect on the economy. Profitability does not translate to liquidity in all cases. A bank may be profitable without necessarily being liquid. So liquidity should be managed in order to obtain an

optimal level, that is, a level that avoids excess liquidity which may mean lack of business idea by management (Owolabi, Sunday Ajao&Obida, Solomon Small, 2012). At the same time 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. Consequently this research investigates the impact of liquidity management on the performance of deposit money banks in Nigeria. However, this study intends to measure liquidity management using three different proxies (Liquidity Ratio, Loan to Deposit Ratio, Ratio and Current Ratio). Also, financial performance will be measured using Return on Investment. Also, contrary to most of the previous studies, this study will use ten (10) years financial reports of the selected banks.

1.3 Research Questions

This study addressed issues relating to the following pertinent questions emerging within the domain of study problems:

i) To what extent does liquidity ratio significantly affect financial performance of DMBs in Nigeria?
ii) To what extent does Loan to deposit ratio significantly affect financial performance of DMBs in Nigeria?
iii) To what extent does current ratiosignificantly affect financial performance of DMBs in Nigeria?

1.4 Objectives of the Study

The aim of this study is to examine the effect of liquidity management and banks financial performance in Nigeria. However, it is set to achieve the following specific objectives:

i) To examine the effect ofliquidity ratio and financial performance of DMBs in Nigeria.
ii) To evaluate the extent to which Loan to deposit ratio significantly affect financial performance of DMBs in Nigeria.
iii) To examine the relationship betweenCurrent Ratio and financial performance of DMBs in Nigeria.

1.5 Research Hypotheses

To answer the research questions and realize the study objectives, this study intends to test the following hypotheses;

H_{O1}liquidity ratio does not significantly affect financial performance of DMBs in Nigeria.

H_{O2}Loanto deposit ratiodoes not significantly affect financial performance of DMBs in Nigeria.

H_{O3}Current Ratio does not significantly affect financial performance (EVA) of commercial bank in Nigeria.

1.6 Significance of the Study

The relationship between Liquidity and financial performance or profitability of DMBs listed on the Nigerian Stock Exchange is being researched into since it is of critical importance and it will consistently help DMBs maintain proper balance between current assets and current liabilities to enable them meet their day to day financial obligations.

Generally, banks occupy an important position in the economic equation of any country such that its (good or poor) performance invariably affects the economy of the country. Poor liquidity management can also lead markets to lose confidence in the ability of a bank to properly manage its assets and liabilities, including deposits, which could in turn trigger liquidity crisis. Hence, the findings of this study when completed would provide a good insights to the management of the selected deposits money banks on how best to management their key liquidity measures that were used for performance analysis. This when implement properly would play a significant role in improving their financial performance.Lastly, this study is intended to broaden existing knowledge and also serve as a basis for further researches in this area of study.

1.7 Scope of the study

This study examines the relationship between liquidity management and financial performance of deposit money banks in Nigeria. The study will use ten years (2006-2015) financial reports of five (5) deposit money banks (UBA, GTB, Union Bank, First Bank and Zenith Bank) listed on the Nigerian Stock Exchange. These banks were selected because they formed the first tier category in the Nigerian DMBs on the basis of their market share, market growth, customer patronage and profitability. The study also covers the Commercial Loan Theory which states that

the liquidity of the commercial bank achieved automatically through self-liquidation of the loan, which being granted for short periods and to finance the working capital, where borrowers refund the borrowed funds after completion of their trade cycles successfully. According to this theory, the banks do not lend money for the purposes of purchasing real estate or consumer goods or for investing in stocks and bonds, due to the length of the expected payback period of these investments, where this theory is proper for traders who need to finance their specific trading transactions and for short periods (Emmanuel, 2011).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will review the concept of financial performance and liquidity management alongside with their measurements, the empirical review relating to the construct, theoretical review as well as the research framework.

2.2 Concept of Financial Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. It is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. It is very essential to measure the results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets, value added, etc.Similarly, it is also used as a general measure of a firm's overall financial health or soundness over a given period of time which can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Govit, 2015).

Evaluating the financial performance of a business allows decision-makers to judge the results of business strategies and activities in objective monetary terms. The success of any management team is judged over time-based upon the overall financial performance of the company. Financial performance of a firm can be analyzed in terms of profitability, dividend growth, sales turnover, and return on investments among others. However, there is still debate among several disciplines regarding how the performance of firms should be measured and the factors that affect financial performance of companies (Liargovas& Skandalis, 2008). The financial performance is often measured using traditional accounting Key Performance Indicators such as Return on Assets, Operating profit margin, Earnings before Interest and Tax, Economic Value Added or Sales growth (DeBusk, 2008). The advantage of these measurements is their general availability, since every profit oriented organization produces these figures for the yearly financial reporting (Smith, 2007).

Owolabi and Obida (2012) defined financial performance as 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 main objective of companies operating in capitalist economies is to achieve an appropriate return over the amount of risk accepted by the shareholders. After all, profit is the major element of any investments in different projects. The assessment of financial performance is usually done through the ROA (Return on Assets = Net Income / Total Assets) and ROE (Return on Equity = Net Income / Equity), which is the ultimate measure of economic success (Damilola, 2007).

A company should earn profit to survive and grow over a long period of time (Owolabi&Obida, 2012). They further stated that profits were essential, but all management decision should not be profit centered at the expense of the concerns for stakeholders such as customers, employees, suppliers or social consequences. Owulabi and Obida (2012) further stated that profit is the difference between revenues and expenses over a period of time (usually one year). Profit is the ultimate output of a company, and it will have nofuture if it fails to make sufficient profits. The profitability ratios are calculated to measure the operating efficiency of the company. Some the profitability ratios include the following:

2.2.1 Return on Investment (ROI)

According to Owulabi and Obida (2012) the term investment may refer to total assets or net assets. The funds employed in net assets in are known as capita employed. Net assets equal net fixed assets plus current assets minus current liabilities excluding bank loan. The conventional approach of calculating return on investment is to divide profit after tax (PAT) by investment. Investment refers to pool of funds supplied by shareholders and lenders, while PAT represents residue income of shareholders. The formula of ROI is stated thus:

Return on Investment = Profit After Tax /Net Assets

2.2.2 Return on Equity (ROE)

Mayo (2003) defined return on equity as the sum of stock, additional paid-in capital if any and retained earnings if any. He said it measures the amount that the firm is earning on stockholders investment. The rate of dividend is not fixed; the earnings may be distributed to shareholders or retained in the business. Nevertheless, the net profit after tax represents their return. A return on shareholder‘s equity is calculated to see the profitability of owners investment. The shareholders equity or net worth will include paid up share capital, share premium and reserves and surplus less accumulated losses. The ROI is net profit after taxes divided by shareholders equity which is given by net worth. It is being computed as follows:

Return on Equity = Profit After Taxes/ Equity (Net Worth)

2.2.3 Return on Assets (ROA)

Return on Assets expresses the net income earned by a company as a percentage of the total assets available for use by that company (Owulabi&Obida, 2012). ROA suggests that companies with higher amounts of assets should be able to earn higher levels of income. ROA measures management‘s ability to earn a return on the firm‘s resources (assets). The income amount used in this computation is income before the deduction of interest expense, since interest is the return to creditors for the resources that they provide to the firm. The resulting adjusted income amount is thereby the income before any distribution to those who provided funds to the company. ROA is computed by dividing net income plus interest expense by the company‘s average investment in asset during the year.

Return on Assets = Profit Before Taxes/ Total Assets

The issue of profitability is a contentious subject that a bank has to consistently face. Profit is the disparity between expenses and revenue over a period of time, normally one year. As explained by Heibati, Nourani and Dadkhah (2009), a business is organic; it survives and grows. Therefore, it is important that a bank earns profit for its long term survival and growth. It is also necessary that enough profit must be earned to maintain the activities of the business to be able to obtain funds for expansion and growth of the bank. Also, Agbada and Osuji(2013) argued that corporate

profit planning remains one of the most difficult and time consuming aspects of bank management because of the many variables involved in the decision, which are outside the control of the bank. It is even more difficult if the bank is operating in a highly competitive economic environment, such as that of Nigeria.

According to Tabari, Ahmadi and Emami (2013) the profitability variable is represented by two alternative measures: the ratio of profits to assets, i.e., the return on assets (ROA) and the returns to equity ratio (ROE). In principle, return on assets ROA reflects the ability of abank's asset to generate profit, although it may be biased due to off-balance-sheet activities. ROE indicates the returns to shareholders on their equity and equals ROA times the total assets-to-equity ratio.

2.3 Concept of Liquidity Management

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 maintainsufficient 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 existingreserve requirements. Nwaezeaku (2008) defined liquidity as the degree of convertibility to cash or theease 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 theliquidity conditions in the banking system, so as to determine its liquidity needs and thus the volume ofliquidity 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).

According to Olagunji, et al. (2011), liquidity refers to the ability of a bank to ensure the availability of funds to meet financial commitments or maturing obligations at a reasonable price at all times. Put differently, bank liquidity means banks having money when they need it particularly to satisfy the withdrawal needs of their customers. The survival of deposit money banks depends greatly on how liquid they are, since illiquidity, being a sign of imminent distress, can easily erode the confidence of the public in the banking system and results to run on deposit.

Liquid assets should be marketable or transferable. This means, they are expected to be converted to cash easily and promptly, and are redeemable prior to maturity. Another quality of liquid assets is price stability. Based on this characteristic, bank deposits and short term securities are more liquid than equity investments due to the fact that the prices of the former are fixed than the prices and value of the later (Richard, 2013)

Liquidity is defined by the relative ease, cost, and speed with which an asset can be converted into cash (Bodie& Merton, 2000). Mayo (2003) also defined liquidity as the ease with which assets can be converted into cash with little risk of loss of principal.Brigham & Houston (2001) added on that liquidity is the ease of selling the asset and converting it to cash at a fair market value.Shim and Siegel (2000) on the other hand defined accounting liquidity as the company‘s capacity to liquidate maturing short-term debt (within one year). Maintaining adequate liquidity is much more than a corporate goal, it is a condition without which the continuity of a business is at risk.

Liquidity Management refers to all management decisions and actions that influence the size and effectiveness of liquidity. It emphasizes the management of current assets, current liabilities and the relationship that exists between them. Liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of the inability to meet due short term obligations.

The firm‘s liquidity management is considered best if it is based on the principle of cash collecting from debtors early and holdup the payments of current debts and obligations/liabilities as much as possible (Muneeb&Kashif, 2012). When a business firm is not able to manage its liquidity position it will definitely face difficulty in paying its short term debts and therefore the business may be forced to resort to external financing to clear its short term debts.

Management will use a combination of policies and techniques for the management of liquidity. These policies aim at managing the current assets (generally cash and cash equivalents, inventories and debtors) and the short term financing. When a business firm is not able to manage its liquidity position it will definitely face difficulty in paying its short term debts and therefore the business may be forced to resort to external financing to clear its short term debts(Muneeb&Kashif, 2012). They (Muneeb&Kashif, 2012) stated that the efficiency of liquidity management is based on the principle of expediting the collections from debtors as much as possible and delaying down the cash payments as much as possible.

2.3.1. Current Asset Management

In financial Accounting, assets are economic resources tangible or intangible that is capable of being owned or controlled to produce value and that is held to have positive economic value.According to Adelman and Marks (2007), a current asset is an asset on the balance sheet which is expected to be sold or otherwise used up in the near future, usually within one year, or one operating cycle whichever is longer and continually change. They are listed on the balance sheet in order of their liquidity or how fast they can be converted into cash. Current Assets include: cash, debtors, prepaid expenses and account receivables.

2.3.1.1 Cash Management

In ordinary language cash refers to money in the physical form of currency, such as banknotes and coins. In bookkeeping and finance, cash refers to current assets comprising currency or currency equivalents that can be accessed immediately or near-immediately (as in the case of money market accounts). Cash is seen either as a reserve for payments, in case of a structural or incidental negative cash flow or as a way to avoid a downturn on financial markets.

Brigham & Houston (2001) defined cash management as minimizing the amount of cash the firm must hold for use in conducting its normal business activities but yet having sufficient cash to take trade discounts, maintain credit rating and to meet unexpected cash needs. Cash and cash equivalents are the most liquid assets found within the asset portion of a company's balance sheet. Cash equivalents are assets that are readily convertible into cash, such as money market holdings, short-term government bonds or Treasury bills, marketable securities and commercial paper. Cash equivalents are distinguished from other investments through their short-term existence; they mature within three months whereas short-term investments are twelve months or less, and long-term investments are any investments that mature in excess of twelve months.

Another important condition a cash equivalent needs to satisfy is that the investment should have insignificant risk of change in value; thus, common stock cannot be considered a cash equivalent, butpreferred stock acquired shortly before its redemption date can be. Cash is managed by identifying the cash balance which allows for the business to meet day to day expenses, but reduces cash holding costs.Effective cash management involves investing idle cash in those short-term marketable securities that offer not only safety of principal but also a positive rate of

return. Cash management is a part of effective liquidity management that involves a trade-off between risk and return.

Other effective cash management as outlined by (Brigham & Houston, 2001) encompasses proper management of cash inflows and outflows which entails synchronizing cash flows, using float, accelerating collections, getting available funds to where they are needed and controlling disbursements.

2.3.1.2 Debtors Management

A debtor is an entity that owes a debt to someone else. The entity may be an individual, a firm, a government, a company or other legal person. The counterparty is called a creditor. Debtors are people or other firms who owe money to the firm. This will usually happen where the firm has sold goods with a period of credit. The firm sells the good or service but allows the purchaser a period of credit to pay - usually a month. During this month the purchaser owes the firm the money and is therefore a debtor. If the firm has debts these are considered an asset, because when the debtors pay the firm will have converted the debt into cash in the bank. Because most debts are relatively short-term they are considered current assets.

Debtors are managed by identifying the appropriate credit policy, i.e. credit terms which will attract customers, such that any impact on cash flows and the cash conversion cycle will be offset by increased revenue and hence return on Capital or vice versa.

2.3.1.3 Inventory Management.

Inventory means stockbought by an institution in order to resell them. Inventory management involves the control of the assets that are used in the production process or produced to be sold in the normal course of the firm‘s operations (Keown, et al. 1996). Thus company'smerchandise, raw materials, and finished and unfinished products which have not yet been sold are termed as inventory. These are considered liquid assets, since they can be converted into cash quite easily.Inventory management is primarily about specifying the size and placement of stocked goods which are required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials or goods. Management of the inventories, with the primary objective of determining/controlling stock levels within the physical distribution

function to balance the need for product availability against the need for minimizing stock holding and handling costs.

2.3.2. Current Liabilities Management

According to (Williams,2005), a liability is a debt assumed by a business entity as a result of its borrowing activities or other fiscal obligations (such as funding pension plans for its employees); liabilities are paid off under either short term or long term arrangements. The amount of time allotted to pay off the liability is typically determined by the size of the debt, large amount of money are usually borrowed under long term plans. Current liabilities are short term obligations that are paid off within one year or one current operating cycle, whichever is longer. Typical current liabilities include creditors, account payables, accrued expenses. Current liabilities management consists of minimizing firm‘s obligations and payments for short-term debt, accrued liabilities and accounts payable. Current liabilities management consists of short-term debt management, accrued liabilities management and accounts payable management.

2.3.2.1 Creditors Management

A creditor is a party (e.g. person, organization, company or government) that has a claim to the services of a second party. It is a person or institution to whom money is owed. The first party, in general, has provided some property or service to the second party under the assumption (usually enforced by contract) that the second party will return an equivalent property or service. The second party is frequently called a debtor or borrower. The first party is the creditor, which is the lender of property, service or money. The term creditor is frequently used in the financial world, especially in reference to short term loans, long term bonds, and mortgage loans. In law, a person who has a money judgment entered in their favour by a court is called a judgement creditor.

The term creditor is derived from the notion of credit. In modern America, credit refers to a rating which indicates the likelihood a borrower will pay back his or her loan. In earlier times, credit also referred to reputation or trustworthiness. Creditors can be classified as either "personal" or "real". Those people who loan money to friends or family are personal creditors. Real creditors (i.e. a bank or finance company) have legal contracts with the borrower granting

the lender the right to claim any of the debtor's property used as collateral if the debtor refuses to pay back the loan.

2.3.2.2 Account Payables Management

Account payable represents the current liabilities towards suppliers from whom the firm has purchased raw materials on credit (Pandey 2004). It is sometimes referred to as trade payables. The account payable is a form of credit that suppliers offer to their customers by allowing them to pay for a product or service after it has already been received. The largest portion of accounts payable normally consists of the obligations of a firm that were obtained by purchasing inventory on credit as well as other items such as travel expenses and maintenance services. The purpose of managing accounts payable is to minimize the cash paid for inventories and these other obligations. Because inventories comprise the largest portion of accounts payable, the firm can normally minimize these cash payments by taking advantage of the discounts that are offered by vendors.

2.3.3. Working Capital Management Policy

Working capital policy is basically about how much working capital the company should maintain. Should they go in for a zero-risk arrangement, or can they try a bit of daredevilry in their liquidity management? On this base the literature of Pandey (2004) classifies working capital policy into three categories, Matching, Aggressive and Conservative;

2.3.3.1 Matching policy

A company adopts a financial plan which matches the expectancy life cycle of assets with the expected life of the sources of capital raised to finance the assets. The justification for the exact matching is that, since the purpose of financing is to pay for assets, the source of financing and assets should have the same life cycle. However, it should be realized that exact matching will be impossible because of the uncertainty about the life expectancy of assets (Pandey 2004)

2.3.3.2 Aggressive policy

A company can follow aggressive policy by financing its current assets with short term debt because it gives the low interest rate but the risk associated with short term debt is higher than

the long term debt. This approach is very risky because the difference between short term or liquid assets and short term liabilities turns very little. Such a policy is adopted by the company which is operating in a stable economy and is quite certain about future cash flows. A company with aggressive working capital policy offers short credit period to customers, holds minimal inventory and has a small amount of cash in hand.

2.3.3.3 Conservative Working Capital Policy

In this policy, you not only match the current assets and the current liabilities, but you also keep a little safety net just in case of any uncertainty. Undoubtedly, this is the lowest risk working capital policy, but it reduces the money used in increasing the production some companies want neither to be aggressive by reducing the level of current assets as compared to current liabilities nor to be defensive by increasing the level of current assets as compared to current liabilities. So, In order to balance the risk and return these firms are following the moderate or conservative approach. This approach is a mixture of matching and aggressive policy. In these approach temporary current assets, assets which appear on the balance sheet for short period will be financed by the short term borrowings and long term debts are used to finance fixed assets and permanent current assets.

2.3.4. Liquidity Ratios

2.3.4.1 Current ratio

The current ratio is an indication of the extent with which current liabilities, which must be paid within a year, are covered by current assets by current assets (Mayo 2003). It is a firm's market liquidity and ability to meet creditor's demands. Acceptable current ratios vary from industry to industry. If a company's current ratio is in this range, then it is generally considered to have good short-term financial strength. If current liabilities exceed current assets (the current ratio is below 1), then the company may have problems meeting its short-term obligations. If the current ratio is too high, then the company may not be efficiently using its current assets or its short-term financing facilities. This may also indicate problems in liquidity management.

The current ratio is a financial ratio that measures whether or not a firm has enough resources to pay its debts over the next 12 months. It compares a firm's current assets to its current liabilities.

Low values for the current or quick ratios (values less than 1) indicate that a firm may have difficulty meeting current obligations. Low values, however, do not indicate a critical problem. If an organization has good long-term prospects, it may be able to borrow against those prospects to meet current obligations. Some types of businesses usually operate with a current ratio less than one. For example, if inventory turns over much more rapidly than the accounts payable become due, then the current ratio will be less than one. This can allow a firm to operate with a low current ratio.It is expressed as follows:

Current ratio = Current asset / Current liability

2.3.4.2 Quick Ratio

Mayo (2003) defined current ration as an indicator of the company‘s ability to meet its current liabilities as they become due, that determines whether a firm has enough short-term assets to cover its immediate liabilities without selling inventory. The ***Acid-Test*** ratio is far more strenuous than the working capital ratio primarily because the working capital ratio allows for the inclusion of inventory assets. Current assets includes inventory and prepaid expenses, which are relatively illiquid compared to cash, short-term investments, and accounts receivable hence, a better measure of liquidity for companies with large inventories or prepaid expenses is the quick ratio (acid-test ratio, quick asset ratio), which is the same as the current ratio, but without the value of inventory and prepaid expenses in the numerator, calculated by:

Quick Ratio = Current Assets – Inventory /Current Liabilities

2.3.5. Measures of Liquidity Management

The liquidity of a company is measured with the use of some financial ratios refers to as liquidity ratios. These group of ratios measures the ability of the firms to meet its current obligations (Liabilities).Analysis of liquidity needs the preparation of cash budgets and cashflow statement; but liquidity ratio, by establishing a relationship between cash and other current assets to current obligations, provided a quick measure of liquidity (Pandy 2005). The most common ratios, which indicate the extent of liquidity or lack of it, are:

2.3.5.1 Cash Conversion Cycle

The Cash Conversion Cycle (CCC) measures how long a firm will be deprived of cash if it increases its investment in resources in order to expand customer sales. It is thus a measure of the liquidity risk entailed by growth.According to Muneeb and Kashif(2012), Besley and Brigham (2005) describe cash conversion cycle as ―the length of time from the payment for the purchase

of raw materials to manufacture a product until the collection of account receivable associated with the sale of the product.However, shortening the CCC creates its own risks: while a firm could even achieve a negative CCC by collecting from customers before paying suppliers, a policy of strict collections and lax payments is not always sustainable.

The term "cash conversion cycle" refers to the time span between a firm's disbursing and collecting cash. However, the CCC cannot be directly observed in cash flows, because these are also influenced by investment and financing activities; it must be derived from statement of financial position data associated with the firm's operations. Cash Conversion Cycle must be calculated by tracing a change in cash through its effect upon receivables, inventory, payables, and finally back to cash—thus, the term *cash conversion cycle*, and the observation that these four accounts "articulate" with one another. Besley and Brigham (2005) acknowledged that to account for the efficiency of the firm‘s cash management, the practitioners and researchers use the cash conversion cycle (CCC) parameter by considering the variables of inventory conversion, debtors conversion and the payables conversion. The CCC is calculated by taking into account the; 1) Debtors conversion period 2) Payables conversion period, and 3) Inventory conversion period.

CCC = inventory conversion period + debtors conversion period – payables conversion period

2.3.5.2 Average Collection Period or Debtors Collection Period.

This ratio shows number of days it takes an organization to recover it credit sales. The shorter the period, the better for the organization. Account receivables with longer recoverable period possess the risk of bad debt for the company and also affects liquidity in the short run (Owalabi&Obida, 2012). DCP ratio is calculated by dividing Trade debtors by Turnover and multiply by 365:

DCP = Average Trade Debtors × 365 Days / Turnover

The average collection period is the number of days on average that it takes a company to collection of its credit accounts or its accounts receivables. In other words, the average collection period of accounts receivable is the average number of days required to convert receivables into cash.

2.3.5.3 Average Payment Period (APP) or Creditors Payment Period (CPP)

This ratio shows the number of days the company is required to settle its short term obligations. The longer the period the better for the company as it gives the company leverage to recover it

receivables. Where the period is shorter than the debtors collection period it exacts pressure on the liquidity of the company (Owalabi&Obida 2012). CPP ratio is calculated by dividing Average Trade Creditors by Cost of Goods Sold and multiply the 365 days.

CPP = Average Trade Creditors × 365 Days/ Cost of Goods Sold

It is a short-term liquidity measure used to quantify the rate at which a company pays off its suppliers. Accounts payable turnover ratio is calculated by taking the total purchases made from suppliers and dividing it by the average accounts payable amount during the same period. The measure shows investors how many times per period the company pays its average payable amount. The average payment period ratio represents the number of days by the firm to pay its creditors. A high creditor‘s turnover ratio or a lower credit period ratio signifies that the creditors are being paid promptly.

Similarly within the context of the deposit money banks, (Abdullah, 2013) viewed liquidity as the stability of customer base, whether loans and funding are well matched and overall liquidity position, which is an important evaluation element for both good banks and stressed ones. Banks are highly concerned with liquidity risk; that is, the chance that bank will not be able to meet its current financial obligations (e.g., those of depositors) because of insufficient current assets such as cash and quickly marketable securities, especially during economic recession (Golin, 2001). Also, Laruccia and Revoltella (2000) found that banks with low net loans to assets ratio (good liquidity position) tend to obtain better performance. Similarly, Firth (2005) and Pasiouras, et al. (2006) concluded that banks with high loans to total asset ratio (poor liquidity position) acquire low performance.

The interbank ratio (IBR) positively affects bank liquidity position as whenever the bank is net placer (i.e., amounts due from other banks are greater than those due to other banks), which means that bank total assets exceed bank total liabilities and thus a higher net worth. The ratios of net loans/total assets (LR), net loans/deposit and short-term funding (NLDSTF) and net loans/total deposit and borrowing (NLTDB) positively affect bank performance. This is mainly because well-operated banks are able to sell more loans to increase profitability. This increases the amount of undivided profit, which leads to an increase in bank equity capital.

The ratios of liquid assets/deposit and short-term funding (LADSTF) and liquid assets/total deposit and borrowing (LATDB) positively affect liquidity strength as banks with high volumes of liquid assets relative to their liabilities will have higher net worth and thus higher equity

capital (Abdullah, 2013; Casey &Lannoo, 2005; Diamond &Rajan, 2001; Hatakeda, 2000; Gatev&Strahan, 2006; Loutskina, 2011; Sawada, 2010; Wagner, 2007).

2.4 Review of Empirical Literature

The effect of liquidity management on banks' profitability has been studied by a number of researchers; here is some review of them. Adebayo (2011) examined liquidity management and commercial banks' profitability in Nigeria. Findings of this study indicate that there is significant relationship between liquidity and profitability. That means profitability in commercial banks is significantly influenced by liquidity and vice versa.

Saleem and Rehman (2011) sought to reveal the relationship between liquidity and profitability. The main results of the study demonstrate that each ratio (variable) has a significant effect on the financial positions of enterprises with differing amounts and that along with the liquidity ratios in the first place. Profitability ratios also play an important role in the financial positions of enterprises.

Arif (2012) tested liquidity risk factors and assessed their impact on (22) of Pakistani banks during the period (2004-2009). Findings of the study indicate that there is a significant impact of liquidity risk factors on the banks profitability, where an increase in deposits lead to increasing in the bank's profitability in terms of reducing dependence on the central bank in meeting the customers' obligations, and profitability is negatively affected by the allocation of non-performing loans and liquidity gap.

Agbada and Osuji (2013) examined empirically the effect of efficient liquidity management on banking performance in Nigeria. Findings from the empirical analysis were quite robust and clearly indicate that there is significant relationship between efficient liquidity management and banking performance and that efficient liquidity management enhances the soundness of bank.

Ibe (2013) examined the effect of liquidity management on the profitability of banks in Nigeria. He found that liquidity management is indeed a critical issue in the banking sector of Nigeria.

Lartey (2013) sought to find out the relationship between the liquidity and the profitability of banks listed on the Ghana Stock Exchange. It was found that for the period 2005-2010, both the liquidity and the profitability of the listed banks were declining. Again, it was also found that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana.

Moein-Addin (2013) investigated the relationship between modern liquidity indices and stock return in companies listed on Tehran Stock Exchange. Results indicated that there was a positive and significant relationship between comprehensive liquidity index and stock returns while there was no significant relationship between the index of cash conversion cycle as well as net liquidity balance and sock returns.

Maaka (2013) in their research sought to establish the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study adopted correlation research design where data was retrieved from the balance sheets, income statements and notes of thirty-three (33) Kenyan banks during 2008-2012. Multiple regressions was employed to assess the impact of liquidity risk on banks' profitability and the findings were that profitability of the commercial bank in Kenya is negatively affected due to increase in the liquidity gap and leverage. With a significant liquidity gap, the banks may have to borrow from the market even at a higher rate thereby pushing up the cost of banks. The level of customer deposit was also found to positively affect the bank's profitability and it will therefore be encouraged for banks to open more branches in the country.

In the study of the determinants of liquidity and their impact on financial performance in Nepalese commercial banks by Sushil and Bivab (2013), the results of regression analysis showed that capital adequacy, bank size, share of non-performing loans in the total volume of loans and liquidity premium paid by borrowers has negative and statistically significant impact on banks' liquidity. Growth rate of gross domestic product on the basis price level, short term interest rate and inflation rate has negative and statistically insignificant impact on banks' liquidity. And, loan growth rate has positive and statistically insignificant impact on banks liquidity. Among the statistically significant factors affecting banks liquidity capital adequacy, bank size and growth rate of gross domestic product on the basis price level had negative impact on financial performance whereas, liquidity premium paid by borrowers had positive impact on financial performance. In all, the impact of bank liquidity on financial performance was non-linear. Results suggest that profitability is improved for banks that hold some liquid assets, however, there is a point at which holding further liquid assets diminishes a banks' profitability, ceteris paribus.

Heibati (2009) examined and compared the performance of private banks in Iran and Arabic countries of Persian Gulf area. The empirical results from regression analysis of

crosscountry panel data of the banks showed statistically significant relationship between liquidity and profitability of the banks especially during initial years of their activity. The effect of liquid asset holdings on the profitability of U.S. and Canadian banks was investigated by Bordeleau (2010). The empirical results from ordinary least squares regression analysis of panel data of the banks suggested that profitability is improved for banks that hold some liquid assets. However, there is a point at which holding -further liquid assets minimizes a bank's profitability, all else equal. Furthermore, the empirical results from the study also indicated that this relationship varies depending on a bank's business model and the state of the economy.

Imad (2011) studied a balanced panel data set of Jordanian banks for the purpose of investigating the nature of the relationship between the profitability of banks and their liquidity level for ten banks over the period 2001 to 2010. Using two measures of bank's profitability: the rate of return on assets (ROA) and the rate of return on equity (ROE), the results showed that the Jordanian bank's liquidity explain a significant part of the variation in banks' profitability. High Jordanian bank profitability tends to be associated with well-capitalized banks, high lending activities, low credit risk, and the efficiency of credit management. Results also showed that the estimated effect of size did not support significant scale economies for Jordanian Banks. The relationship between liquidity and the profitability of banks listed on the Ghanaian Stock Exchange was investigated by Lartey and Boadi (2013). The study was carried out on seven of the nine listed banks. The researchers made use of the longitudinal time dimension model. Specifically the panel method time series analysis and profitability ratios were computed from the annual financial reports of the seven banks. The trend in liquidity and profitability were determined by the use of time series analysis. It was revealed that for the period 2005 to 2010, both liquidity and profitability had a downward trend. When liquidity ratio was regressed on the profitability ratio, the result revealed that there was a positive and statistically significant relationship between liquidity and profitability of the listed banks. Obiakor andOkwu (2011), examined the nature and extent of the relationship between liquidity and profitability of Nigerian banks. A model of perceived functional relationship was specified and estimated using correlation and regression analysis. The results indicated that a trade-off existed between liquidity and profitability in the banks.

Uremadu (2012) carried out a study on the effect of capital structure and liquidity on the profitability of selected Nigerians banks. Time series data for the 1980 to 2006 period was used

for the study. The data was analyzed using descriptive statistics and regressive distributed lag (ARDL) model. The empirical results indicated a positive and significant relationship between cash reserve ratio, liquidity ratio, corporate income tax and banks' profitability. On the other hand, there was negative and significant relationship between savings deposit rate, gross national savings, balances with the central bank, inflation rate, foreign private investment and bank profitability.

Ibe (2013) investigated that impact of liquidity management on the profitability of banks in Nigeria. Three banks were randomly selected to represent the entire banking industry in Nigeria. The proxies for liquidity management include cash and short-term fund, bank balances and treasury bills and certificates, while profit after tax was the proxy for profitability. Elliot Rosenberg Stock (ERS) stationary test model was used to test the association of the variables under study, while regression analysis was used to test the hypothesis. The result showed that there is a statistically significant relationship between the variables of liquidity management and profitability of the selected banks. The study by Kehinde (2013) critically examined the relationship between credit management, liquidity position and profitability of selected banks in Nigeria using annual data of ten banks over the period of 2006 and 2010. The results from ordinary least squares estimate found that liquidity has significant positive effect on Return on Asset (ROA).

2.5 Theoretical Review

There are a number of liquidity management theories; Anticipated Income Theory, Shiftability Theory, Liability Management Theory and Commercial Loan Theory. However, this study adopts the commercial loan theory as the major theory which it hinged on.

Osborne, Fuertes and Milne (2012) postulated that higher liquidity is often costly to banks, implying that higher liquidity reduces profitability. However, according to the trade-off theory, higher liquidity may also reduce a bank's risk and hence the premium demanded to compensate investors for the costs of bankruptcy. (Osborne, et al. 2012) According to conventional corporate finance theories, a bank in equilibrium will desire to hold a privately optimal level of liquidity that just trades off costs and benefits implying a zero relationship at the margin. However, capital requirement imposed by monetary authorities, if they are binding, forces banks to hold liquidity

in excess of their private optimal level and hence force banks above their internal optimal liquidity level (Miller, et al. 1989).

Furthermore, since bank's optimal liquidity level is likely to vary over the business cycle, typically rising when there are higher expected costs of distress, the relationship between liquidity and profitability is likely to be highly cyclical, becoming more positive during the periods of distress as banks that increase their liquidity improve their profitability (Osborne, et al. 2012). Thus, there may be a positive or negative relationship between liquidity and profitability in the short-run depending on whether a bank is above or below its optimal liquidity level.

Flannery and Rangan (2008) assert that indeed if banks are successful in attaining their optimal liquidity level there may in fact be no short-run relationship at all, since the standard first order conditions imply that any change in liquidity has no impact on profitability. However, the long run, regulatory liquidity requirements may be binding. This implies that higher liquidity only reduces profitability if banks are above their optimal liquidity level, for example due to regulatory requirements or unexpected shock (Flannery & Regan 2008).

In view of the above, Osborne, et al. (2012) opined that banks' optimal liquidity level rises during periods of banking sector distress, since in such conditions the expected cost of bankruptcy rises. Consequently, it is expected that the average relationship between liquidity and profitability across banks will be cyclical. This is because in a distressed environment banks tend to be below their optimal liquidity level, whereas during normal conditions, banks may either meet their optimal capital level or not, in which case the relationship would be approximately zero, or overshoot, in which case banks can increase profitability by reducing the liquidity level (Osborne, et al. 2012).

A bank with a higher liquidity level has more chances of surviving and improving profitability in the future. Allen and Marguez (2011) argued that this may result in large voluntary liquidity buffer in competitive markets, since the higher liquidity is a more effective guarantee of the

bank's solvency and therefore allows the bank to offer more surplus to borrowers. The effect is to increase bank's optimal liquidity level.

Agbada and Osuji (2013) captured the relationship between liquidity and profitability rather succinctly. According to them: "Maximum safety or in simple language we can say liquidity can be attained only if the banks keep high amount of cash against the deposits they hold. But if they do this, this will not bring profit for the banks. Similarly, if they go the other way round that is they only keep investing and trying to increase the profitability factor then they will have illiquidity problem if customers demand for much cash in a given period". Thus, the authors advocated that a good banker should try to reconcile the twin conflicting objectives by actually working out a good portfolio mix. This can be done by analyzing the situation, studying the objectives and therefore choosing a diversified and balanced asset portfolio.

2.5.1 Commercial Loan Theory

This theory has been subjected to various criticisms by (Dodds, 1982; 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 (loan and investments) 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.

2.6 Theoretical Framework

Model of the Study

Independent Variable

De

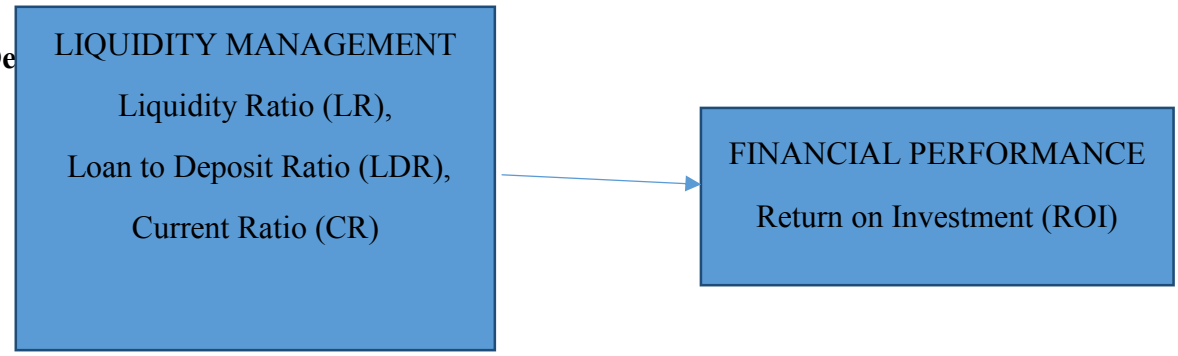

Fig. 2.1 Framework of the Study

Two theories; anticipated income and shiftability theories, were adopted to underpin the relationship in the between they. The anticipated income 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. On the other hand, shiftability 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 shift ability, marketability or transferability of a bank's assets is a basis for ensuring liquidity.The theory further contends that highly marketable security held by a bank is an excellent source of liquidity. Based on the above, the deposit money banks will have adequate liquidity to finance their short term maturing obligations and consequently improves their performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter attempts to discuss research methodology and procedures to be undertaken by the study. Specifically, this chapter covers research design, the population of the study, sample size and sampling technique, measurement of research variables, method of data collection as well as method of data analysis used for the study and model development.

3.2 Research Design

Research design has been viewed as a blue print or road map indicating the methods and procedure for collecting and analyzing information (Zikmund, Babin, Carr & Griffin, 2010). This study adopted Expost-Facto research design because it is a panel data research andwill use secondary data from financial reports to examine the relationship between liquidity management and financial performance of DMBs in Nigeria.

3.3Population of the Study

The population of this study comprises all the 15 DMBs listed on the Nigerian Stock Exchange. These are; First Bank, Zenith Bank, Diamond Bank, Sterling Bank, Union Bank of African, Guarantee Trust Bank, Eco bank, FCMB, Fidelity Bank, Union Bank,Mainstreet bank, Keystone Bank, Wema Bank, Skye Bankand Access Bank.

3.4 Sample Size and Sampling Technique

A sample has been defined by Zikmund, et al., (2010) as a sub-set or some part of a larger population. An ideal sample is needed to reduce the cost of sample error and to truly represent the population. Also, the correct use of sampling technique can mean that the validity of the research leads to higher overall accuracy (Saunders *et al* 2003). Judgmental sampling was used in the selection of the sampled population. An informal judgment was made about the sampling units and size base on the knowledge and experience about the population, and the purpose of the study. This helps to observe the elements, research instruments and identify characteristics of the elements. The Deposit money banks such as Zenith Bank, Guarantee Trust Bank, united Bank of Africa, First Bank and Union Bank of Africa, were chosen for this study in aggregate. These banks were considered and selected because they are the first tier category and on the basis of their market share, profit, capital base, and patronage (CBN, 2015).

3.5 Data Collection Technique

Data were collected mainly from secondary sources. Data emanated from banks' financial reports. The study made use of the financial performance data which were of interest to this researcher. Accessing publicly available data is assumed to be the suitable method for the

accuracy of the data. Financial reports and other relevant information of the banks for the period 2006-2015 were obtained from the banks and CBN.

3.6 Method of Data Analysis

Data analysis refers to the strategies and procedures for summarizing and exploring relationship among the variables on which data have been collected. The statistical technique used in analyzing data in this research work is multiple linear regression analysis. However Statistical Package for Social Sciences (SPSS, Version 23) was used for the analysis. It is assumed that the business model is related to funding structure therefore data were obtained through Annual Financial Reports. The stated hypotheses are tested using F-test at 5% level of significance. The quantitative research approach is adopted to arrive at the findings of the research study. Bank performance and liquidity management variables of the banks are analyzed from 2006-2015. Descriptive, correlations and inferential statistics are also used. Descriptive statistics depict the mean, standard deviation and coefficient of variation for the chosen variables. It is a snapshot of the samples and their measures and shows the exact position of the data used in the study. Inferential statistics are used to draw conclusions about the reliability and generalization of the findings. In this study, Multiple Linear Regression Analysis has been used as a tool to identify the key relationship between the variables under inferential statistics.

3.7 Model Specification

Liquidity stock approach is adopted in determining the quantum of liquidity and bank returns by examining the ratios of end of year data between 2006 and 2015. Pearson correlation coefficients analysis is applied to identify the nature of relationship between the two variables. The correlation coefficient measures the relationship between return on investment (Y) and liquidity management (X) is tested in which "X" is the independent variable: liquidity ratio, loan to deposit ratio and current ratio and can be denoted as Y = f (X) showing "Y" as a function of liquidity. Regression is given as:

$Y = bo + b1x1 + b2x2 + b3x3 + \mu$ Where

Y = Return on Investment (ROI).

X1 = Liquidity Ratio

X2 = Loan to Deposit Ratio

X3 = Current Ratio

b1,b2,b3 = the slope or the co-efficient of the independent variables.

μ = stochastic error term.

Specifically, in order to test for key relationship of interest between liquidity and return on equity (ROE), Return on Equity was regressed on liquidity ratio, Loan to deposit ratio and cash reserve ratio.

3.8 Measurement of Research Variables

The dependent and independent variable of the study are to be measured as follows

3.8.1 Return on Investment (ROI)

The dependent variable for this study is financial performance which will be measured using Return on Investment (ROI) which is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. ROI measures the amount of return on an investment relative to the investment's cost. To calculate ROI, the benefit (or return) of an investment is divided by the cost of the investment, and the result is expressed as a percentage or a ratio.

3.8.3 liquidity Management

The independent variable which is liquidity management is measured by using; Liquidity Ratio (LR), Loan to Deposit Ratio (TDR) and CurrentRatio (CR).

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

Chapter four presents data analysis and interpretation of results from the study. It covers the inferential analysis and multiple regression analysis of the data. The chapter also discusses the findings of the study under which the research questions were answered and hypotheses formulated were tested.

4.2. Descriptive Statistical Analysis

Descriptive statistical analysis was performed in this study. Table 4.1 shows the mean return on Investment at 19.02%. It alsoshows that the banks maintained liquidity ratio of 43.60% during this period and this was higher than the prescribed minimum requirement of 25 – 30%. The analysis shows that loan to deposit ratio stood at 60.74 %. This implies that the banks took a high credit risk which might affect the bank performance as a result of non-performing loans.

Table 4.1*Descriptive Statistics*

Variable	Mean	Std. Deviation	Variation
Return on Investment	17.0421	8.5151	0.50
Liquidity Ratio	40.6991	25.2431	0.62
Loan – Deposit Ratio	65.6352	42.8756	0.65
Current Ratio	6.7652	1.2482	0.18

Note: coefficient of the variation is standard deviation/mean

Table 4.2 *Model Summary*[b].

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin - Watson
1.	.907[a]	.822	.798	3.52748	1.397

a. Predictors: (Constant), Loan to Deposit Ratio, Liquidity Ratio and Current Ratio

b. Dependent Variable: Return on Investment

Table 4.3*Anova*[b].

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1265.673	3	421.891	33.906	.000
Residual	273.749	22	12.443		
Total	1539.421	25			

a. Predictors: (Constant), Loan to Deposit Ratio, Liquidity Ratio and Current Ratio
b. Dependent Variable: Return on Investment

4.3 ANOVA Analysis

Table 4.3 is the ANOVA table which indicates that the model as a whole is significant, considering the sig. F change value ($F = 33.906$, $p < 0.0005$). The level of significance is 0.000 which implies that the analysis of variance for the study has fallen within the acceptable standards. It shows that the model is good and fit for the study.

Table 4.4 *Pearson Correlations Results*

	Return on Investment	Liquidity Ratio	Loan to Deposit Ratio	Current Ratio
Return on Investment Pearson Correlation	1	.835**	-.220	.775**
Sig.(2 tailed)		.000	.280	.000
Sum of Squares and Cross-products	1539.421	1476.407	- 436.196	536.612
Covariance	61.577	59.056	-17.448	21.464
N	26	26	26	26
Return on Investment Pearson Correlation	.835**	1	-.409*	.665**
Sig.(2 tailed)	.000		.038	.000
Sum of Squares and Cross-products	1476.407	2030.210	-929.846	528.635
Covariance	59.056	81.208	-37.194	21.145
N	26	26	26	26
Return on Investment Pearson Correlation	-.220	-.409*	1	-.407*
Sig.(2 tailed)	.280	.038	2548.802	.039
Sum of Squares and Cross-products	-436.196	-929.846	101.952	-362.076
Covariance	-17.448	-37.194	26	-14.483
N	26	26		26
Return on Investment Pearson Correlation	.775**	.665**	-.407*	1
Sig.(2 tailed)	.000	.000	.039	
Sum of Squares and Cross-products	536.612	528.635	-362.076	311.045
Covariance	21.464	21.145	-14.483	12.442
N	26	26	26	26

4.4.1 Correlation Analysis

Pearson correlation analysis was conducted to gain an understanding of the relationships existing between the observed and the predicted variables. The results suggest that there is a correlation between the liquidity and bank performance. The analysis shows loan to deposit ratio correlation coefficient of -.220 at p-value 0.280 with bank return. The analysis has also shown current ratio correlation coefficient of.775 at p-value.000 with banks profitability. The result implies that there is positive relationship between liquidity andprofitability. With regard to the liquidity, the result shows liquidity correlation coefficient of.835 at p-value.000 with profitability. This reveals positive relationship between return on investment and liquidity. Coefficient determination r^2 is 0.835 meaning that liquidity contributes about 83.5% of the returns on investment.

Table 4.5. *Coefficients*[a]

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	T	
1 (Constant)	-23.351	7.643		-3.055	.006
Liquidity Ratio	.546.	.107	.627	5.097	.000
Loan to Deposit Ratio	.169	.078	.218	2.167	.041
Current Ratio	.995	.273	.447	3.640	.001

a. Predictors: (Constant), Inter Bank Ratio, Loan to Deposit Ratio, Liquidity Ratio

b. Dependent Variable: Return on Investment

The above table 4.5 above, shows the contributions of the independent variables (liquidity, loan to deposit and current ratios) in explaining the variation in the performance (return on investment). The table 4.5 shows that current ratio, liquidity ratio and loan to deposit ratio were all statistically significant in predicting performance of DMBs in Nigeria with P values (.000, .041 and .001) and beta value (.627, .218 and .447). This means that, in terms of contribution (predictive power), liquidity ratio contributed most by 62.7% ($\beta = .627$) followed by current ratio which contributed 44.7% ($\beta = 0.447$) and then loan to deposits ratio contributed 21.8% ($\beta = .218$) in explaining the variation in the performance of deposits money banks in Nigeria (ROI).

4.5 Hypotheses Testing

Hypothesis I, which states thatthere is no significant relationship between liquidity ratio and performance was not supported by the statistical analysis presented at p value = .000 and Beta coefficient = .618. This implies that liquidityratio is statistically significant in predicting the variations in performance of DMBs in Nigeria. Hence, the null hypothesis is rejected.

Also, hypothesis II, which states that, there is no significant relationship between loan-depositsratio and performance of DMBs in Nigeria.was also not supported from the above analysis as evidenced by (p value = .041 and β = .218).This means that loan-deposits ratio is statistically significant in explaining variability in performance of DMBs in Nigeria. Hence, the null hypothesis is also rejected.

Lastly, hypothesis III, which states that there is no significant relationship between current ratio and performance is rejected by the analysis presented above at p value = .447 and β = .001. The null hypothesis is therefore rejected. It shows that loan to deposits ratio has significant effect on performance of DMBs in Nigeria.

4.6 Discussion of Findings

The above findings show that liquidity ratio was statistically significant, indicating that the variable contributed in predicting performance of DMBs in Nigeria. This result indicate that deposit money banks in Nigeria manages their liquidity properly in term of deposits. This finding confirmed the findings of some authors (Sharma 2016; Rutland 2014; Ugboro&Obeng 2000; Benko 2015; &; Davidson 2014; Greasly et al., 2015) that empowerment enhances hotels performance.

The result also reveals that, loan to deposit ratio was statistically significant, indicating that the variable contributed in predicting performance of DMBs in Nigeria. This result also means that banks do get sufficient deposits from customers and further used those funds to give out loans to both individuals, SMEs and corporate organizations. This has played a vital role in improving their return which has positive effect on their performance. This is in line with the findings of

other scholars (Totterdill, Dhondt&Milsome 2002; OECD 2000; Denison et al., 2006; Nier2014; Scott et al. 2013; Khattak et al., 2013).

Additionally, the results of the study reveals that, current ratio was statistically significant in explaining variability in performance of DMBs in Nigeria. This indicates that deposits money banks do keep sufficient current assets over current liabilities. In other words, DMBs ensure efficient and effective current assets management. This play a significant role in improving their performance (return on investment).This corroborates with findings of other scholars (Mobley, Wang & 2015; Irawanto 2015; Razavi 2011; Khattak et al 2013; Thakur 2010).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the general summary of the results obtained, the conclusion drawn from the analysis and interpretation of data for the study and recommendations offered. The chapter also suggested areas for further research.

5.2 Summary.

This chapter summarizes the findings and interpretation of the empirical result for the study, conclusion and recommendation are drawn for further studies. All the assumption of multiple regression analysis conducted were found to be satisfactory and none of the condition was violated. Construct reliability was conducted for the variable and Cronbach alpha values were found to be good.

More importantly, multiple regression analysis of the construct was conducted, and it was found that liquidity management have significant relationship with performance of DMBs.

5.3 Conclusion

This research work presents empirical evidence of the existing relationship between liquidity management and the performance of deposit money banks in Nigeria from 2006 to 2015 using Multiple Linear Regression Model. The results of the investigation revealed that there is a significant relationship between liquidity management and the performance of deposit money banks in Nigeria. The study shows that profitability in terms of return on investment is maximized at optimum liquidity level where cost is efficient. The profit maximization of the banks however, depends on business model adopted by individual banks, its loan-deposits ratios, proper liquidity and current assets management. From this study, we can conclude that illiquidity and excess liquidity pose "financial problems" which can easily wear down the bank's return base as both affect bank performance. The desire to maximize high return on investment can cause great illiquidity, which reduces the customers' patronage and loyalty. Therefore, any bank that has the aim of maximizing its return must adopt optimum liquidity model for efficiency and effectiveness.

5.4 Recommendations

The study found the liquidity management and financial performance of deposit money banks in Nigeria between 2006 - 2015. The study revealed that among the three dimensions of liquidity Management, (the Liquidity Ratio, Loan-deposits Ratio (LR), and Current Ratio) have significant effect on Return on Investment (ROI) (dependent variable). Therefore, having discussed the various findings associated with the current study, this section presents recommendation as follows.

1. Deposit money banks, should avoid keeping excessive liquidity as a provision of unexpected withdrawal demands of the customers. They should find it reasonable to adopt other measures of meeting such requirements which can include lending and borrowing at the interbank market at reasonable rates of interest as well as discounting of eligible bills.

2. Monetary policies of CBN adversely affect liquidity management of the Nigerian DMBs, thus, the Central Bank of Nigeria should take the interest of the later into consideration while establishing and implementing these monetary policies in general and the liquidity ratio in particular by avoiding 'fire brigade' approach and hawkish policies.

3. 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). To guide banks' management on the expected level of liquidity in the system over a period of time, liquidity management which involves the planning and control of cash and other liquid assets, may be supported by daily liquidity forecasting by the Central bank so that appropriate measures are taken to prevent undesirable market developments that may negatively impact on the objective of price stability

4. The monetary authority should as a matter of urgency encourage and legitimize 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.

5.There is a need to invest the excess of liquidity available at the banks, in a various aspects of investments in order to increase the banks' profitability and to get benefits from the time value of the available money, also the Nigerian deposit money banks should adopt a general framework for liquidity management to assure a sufficient liquidity for executing their works efficiently, and

there is a need to make an analytical study of the liquidity evolution rates to assess the banks' ability to achieve a balance between sources and uses of funds.

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