DETERMINANTS OF OPERATIONAL EFFICIENCY OF SELECTED NIGERIAN DEPOSIT MONEY BANKS.

BY

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BEING A THESIS SUBMITTED AND PRESENTED IN PARTIAL FULFILMENT OFTHE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE(M.Sc) DEGREE IN FINANCE OF THE DEPARTMENT OF ACCOUNTING AND FINANCE, SCHOOL OF BUSINESS AND GOVERNANCE,COLLEGE OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCE, KWARA STATE UNIVERSITY, MALETE.

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DECLARATION

I wish to state that this research was solely conducted by me under the guidance of my supervisor, Prof. A.R Onaolapo; that all the sources of information used in this work have been acknowledged and to the best of my knowledge, this work has not been submitted elsewhere for the award of any degree or any certificate. However, any omission or commission is from me, not intentional and is regretted.

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CERTIFICATION

This thesis titled "Determinants of Operational Efficiency of selected Nigerian Deposit Money Banks" by Majeed AjibolaIBRAHIM meets the regulations governing the award of degree of Master of Science (M. Sc.) in Finance of Kwara State University, Malete. Hence, it is approved for literary presentations.

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External Examiner	Date

DEDICATION

This work is dedicated to Almighty Allah, the source of knowledge and wisdom who made me a symbol of his greatness.

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ABSTRACT

Operational efficiency of banks is a reflection of how banks are run as well as the quality of banks management, competitive strategies, and risk management capabilities as well as the quality of asset and liquidity transformation activities. Financial service operators in developing countries usually earn higher spreads but yet some still experience financial failure due to poor managerial coordination and credit risk management. This study sought to empirically investigate the determinants of operational efficiency of selected deposit money banks in Nigeria with a view to specifically determining the impact of management quality on the Price Book Value of Nigerian DMBs; ascertain the impact of default risk on the Net Interest Margin of Nigerian DMBs; and finally to ascertain the impact of staff productivity on the Asset Size of Nigerian DMBs. Data were retrieved secondarily from the audited financial report of the sampled banks during 2008-2016. A GLS panel regression was employed for the testing of the three formulated hypotheses base on the results of the hausman test with the aid of STATA 13. The empirical result of this study based on the inferential statistics results led to the rejection of the three formulated null hypotheses for the acceptance of the alternative hypotheses which implies that the management quality ,default risk and staffs productivity as variables for modeling banks micro environment factors has significant impact on the operational efficiency of the sampled DMBs which implies that deposit money banks with efficient micro factors management perform better than those with poor micro factors management. The study recommend among many others that For Nigerian DMBs to achieve an enhanced and sustainable profitability through interest income, from loans and advances, appropriate micro environment management strategies need to be instituted with a view of ensuring operating expenses minimization and asset management maximization to prevent a systemic collapse.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The main role of the financial system is to channel funds from savers to borrowers. Banks are the engine room of the economy that provides catalyst for development of other sectors through the financial services they render. Banks operational efficiency has substantial consequences on Capital allocation, firm expansion, industrial growth and economic development. Therefore, the operational efficiency and profitability of banks is not just of interest at the individual bank level, but also at a broader macroeconomic level because they constitute the major public saving repository and their inefficiencies will no doubt have a contagious effect on the economic activities as a whole (Nadica, 2016).

Lending remain the core banking activity and Loan portfolio is naturally the largest asset and the largest source of income for banks. Over the years the Nigerian banking sector has recorded an impressive performance and this is evident from the size of the interest income generated from the loans granted to the potential borrowers. In the process of performing intermediation role banks incur certain costs in order to offer the intermediation services to potential borrowers and depositors (Ngugi, 2017).Financial intermediaries have an imperative financial role in the economy and their efficiency influence economic growth.

Banks are the financial intermediaries that play an important role in the economy by providing different services. Banking sector plays an important role in strengthening the economic activities and they are considered as the back bone of an economy. Countries with sound and profitable banking system achieve a stable financial system and can easily cope with financial distress.In view of this, it is crucial to determine all the factors which influence bank's performance (Opara, 2015).

Banks as intermediary institutions assumed a strategic role on the economic development of a country. The operational efficiency of the banks either individually or at aggregate level is of great concern to the industry players due largely to its expected influence on the growth rate of a country economy subject to both the internal and external factors associated with financial service rendition. Internal factors are the micro elements that are within the control of banks while external factors are the macroeconomic and financial conditions of a country in general. The operational efficiency of each bank depended on their individual characteristics and the distinctive advantages they possess (Aviliani, Hermanto,Tubagus and Heni, 2017).

Management quality is one of the key internal factors that determine the performance of the bank .The performance of management is often expressed through subjective evaluation of management systems, organizational discipline, control systems, quality of staff and many others. However, management quality is a reflection of how efficientlyresources are deployed in terms ofoperating income generation maximization and operating costs rationalizations .The more efficient management is in terms of cost

structure management and income generation activities, the higher the quality of management in place which determines the level of operational efficiencyand in turn affects the overall performance of the bank (Vicent, 2017).

Bank operational efficiency is an important ingredient of financial development, its relevance spans through banking firm performance to macroeconomic stability. At the firm level, a higher net interest margin to a large extent reduces bank fragility. However, higher net interest margin may imply higher lending rates on loans. This explains reasons why monetary authorities are always poised to regulate the industry in order to ensure healthy competition among the operators in the sector, thereby exposing them to increased fragility depending on their individual micro environment management. Inefficient operation of banks promotes deterioration of credit quality and also increases the probability of loan default (Eze, 2015).

The efficiency of the financial sector has always been topical both home and aboard due largely to the perception that an inefficient financial sector is inimical to the economic growth prospects of a country.Therefore banks efficiency is mainly influenced by bank-specific factors because lending is the major business of banks in terms of intermediation role (Umraugh, 2015). Inefficiencies in intermediation may emerge from structural problems such as high operating costs, scale diseconomies due to small market size and shared values, poor marketing strategies among other factors (Stephanie, 2015). The operational efficiency of banks is mainly centered on the competence of the bank management in the area of revenues generation and costs minimization. The

consequences of this background gave the impetus to study the determinants of DMBs operational efficiency in Nigeria.

1.2 Statement of the Problem

Savings and investments are among the most important determinants of economic growth. The health of the general economy of a country depends on the functionality of its financial system.The stream of bank failures in Nigeria that were recorded both before and after the last recapitalizations exercise in 2004 was mainly caused by bank-specific factors and poor micro environment management.This has greatly enhanced the scope for increased competition in financial services bringing wider choices for consumers (Echekoba, Chinedu and Ezu, 2014).The operational efficiency of banks affect the bank cost of raising capital as a direct contributor to equity financing and as a barometer for external investors assessment of the financial strength of the bank.

The operational efficiency of a bank is determined bymicro factors such as bank structure, management quality, style, staff productivity as well as how a bank is able to manage it credit portfolio in relation to default risk. Banks operational efficiency is typified by the level of interest rate spreads, financial service operators in developing countries usually earn higher spreads but yet some still experience financial failure due to poor management quality. Opera (2015) opined that management quality plays a major role in determining the price book value of financial service operators. Poor management quality has become part of the endemic crisis that had ravaged the Nigerian financial sector over the years and yet to be decisively dealt with (Muhammed, 2016).

The increasing volume of default risk as part of the bank micro factors has always been the major concern of banks management, regulators and policy makers considering its adverse effect on both the bank operational efficiency and the economy at large. Non-performing loans usually reduce the earning capacity of the banks in terms of net interest margin. This usually leads to financial crises, bank distress, affects the level of domestic investment, put high pressure on regulators in an attempt to bail out the failed banks, and ultimately hinders the intermediation role of banks (Ogechi and Fredrick, 2017).

Operational efficiency of banks is a reflection ofStaff productivity in relation to liquidity transformation activities. The productivity of bank Staff determines the growth opportunity of a bank in terms of asset size. Poor Staff productivity usually hinder the growth opportunity of a bank considering it effect on the bank asset size which serve as an index for bank operational efficiency.Vicent (2017) opined that the operational inefficiencies of most banks were usually as a result of poor Staff productivity in connection with the quality of banks liquidity management framework.

However, most of the previous studies such as Felicia (2011), Eze (2015), Kolapo and Dapo (2015), Lucky and Nwosi (2015) and Ogechi and Fredrick (2017) among many others that examined the determinant of banks operational efficiency in Nigeria did not specifically studied the impacts of micro factors' as the determinants of banks operational efficiency. This leaves the impact of micro factors on the operational efficiency of banks in Nigeria as not being fully researched on, yet the country has witnessed a surge in the number of deposit money banks in the recent years in connection

with poor micro environment factors management by the affected banks. It is imperative that the gap be filled by taking a look at how the micro environment factors of banks affect their operational efficiency bearing in mind that lending is the core activity of banks, thenthe operational efficiency of banks should rather be viewed from the angle of banks micro environment factorswhich indicates how efficiently the financial institutions perform their intermediation role of savings utilization and allocation.

1.3 Research Questions

In a bid to seek solution to the problem statement the following questions were crafted:

i. To what extent does management quality (operating expenses, asset management and bank size) influence the Price Book Valueof Nigerian DMBs?
ii. To what extent does default risk (capital adequacy, non-performing loan and loan loss provision) affect theNet Interest Marginof Nigerian DMBs?
iii. To what extent doesStaffproductivity (financing cost, staff salary expenses and liquidity management) affect the Asset Size of Nigerian DMBs?

1.4. Objectives of the Study

The main objective of this study is to explore the micro environment factors of DMBs as determinants of their operational efficiency. However, the specific objectives include to:

i. determine the impact of management quality (operating expenses, asset management and bank size) on the Price Book Valueof Nigerian DMBs.

ii.examine the impact of default risk(capital adequacy, non-performing loan and loan loss provision) on theNet Interest Marginof Nigerian DMBs; and

iii. investigate the impact of staffproductivity (financing cost, staff salary expenses and liquidity management) on the Asset Size of Nigerian DMBs.

1.5 Research Hypotheses

To guide the thrust of this study, the following null hypotheses were tested:

H_{01}: Management quality(operating expenses, asset management and bank size) has no significant impact on Price Book Value of Nigerian DMBs.

H_{02}: Default risk (capital adequacy, non-performing loan and loan loss provision) does not significantly affect theNet Interest Marginof Nigerian DMBs.

H_{03}: Staff productivity(financing cost, staff salary expenses and liquidity management) has no significant impact on the Asset Size of Nigerian DMBs.

1.6. Justification for the Study.

The determinants of banks operational efficiency in different part of the world has been examined by various researchers such as: David (2013), Lucky and Nwosi (2015), Stephanie (2015),Nadica (2016), Arjera (2017) andOgechi and Fredrick (2017) among many others that made contributions to the subject matter. It was observed that allthese scholars look at thedeterminants of banks operational efficiency at aggregate level without properly segmenting the determinants of banks operational efficiency into both the micro and the macro factors.

Equally,previous authors such as: Felicia (2011), Eze (2015), Kolapo and Dapo (2015), and Ogechi and Fredrick (2017) among many others measure banks operational efficiency either with Return on Asset (ROA), Return on Equity (ROE) or Return on investment (ROI).However, this study measured the operational efficiency ofthe selected DMBs withPrice Book Value, Net Interest Marginand Asset Size to reflect banks micro environment factors in relation to management decisions and policy objectives.

Thus, this study specially takes into account the main micro environment factors that influence the operational efficiency of banks in Nigeria in relation to core banking activities. Therefore the outcome of this study will contribute to the body of existing knowledge on the Subject matter. Also, the outcome of this study will be of immense benefit to the management of Nigeria deposit money Banks and the Banks Regulatory bodies on the level at which banks micro environment factors affect banks intermediation role.

1.7. Scope of the Study

This study covers ten banks which includeZenith Bank, Guarantee Trust Bank, United Bank for Africa, Union Bank, First City Monument Bank, First Bank of Nigeria, Fidelity Bank, Stanbic IBTC Bank, Diamond Bank and Wema Bank Plcs.The selections was based on the fact that these banks were rated as the ten topmost Nigerian banks in the area credit score rating by Fitch rating and Bankers' magazine as at January 2017. This study covers the banks financial statement for the period of eight years (2008 – 2016) of

the banks' operations. The basis for assessing eight (8) years financial statement is to provide a cross sectional view of the trends within this period due largely to the fact that theRisk-Based Banking Supervision (RBS) of the CBN was introduced in 2008 and the latest possible data that one can access at present is 2016.

CHAPTER TWO

LITERATURE REVIEW

This section presents a review of the available literature on the subject matter and major conceptual issues, theoretical review as well as empirical review.

2.1 Conceptual Review

The section contains the review of the concepts relating to the study, which include; Bank Operational Efficiency, Lending Operation ,Bank Micro Environment, Management Quality and Banks Operational Efficiency, Default Risk and Banks Operational Efficiency, and Effects of Non-performing Loan on Operational Efficiency of Banks.

2.1.1 Banks operational Efficiency

According to Antonio (2015) since the early 1990s, advances in information, communications and financial technologies have allowed banks to perform many of their traditional services more efficiently. Consequently, the cost-to-income ratio, a proxy for operational efficiency, has been declining almost everywhere to different degrees. Dimitris (2008) opined that operational efficiency is the ability of a bank to maintain income stability and growth. A bank with a good operational efficiency is a bank that is able to withstand negative shocks and contribute to the stability of the financial systems.Eze (2015) suggests that operational efficiency is a prerequisite for improving the profitability of the banking system, because the most profitable banks enjoy the lowest efficiency ratios. In the opinion of Ngumi (2017) operational efficiency is an

indicator of how profitable a bank is relative to its competitive advantage, assets size and net interest margin.

Dutta and Bose (2007) posits that the competitive advantage of a bank can be expressed in relation to its price book value which measures banks operational efficiency in terms of market expectation of future earnings. Euphemia (2012) opined that net interest margin represent the proceed from lending operation which indicate the rate at which a bank is able to perform it intermediation role efficiently. An efficient bank should be able to generate decent interest spread because the present and future efficient operations of banks depend on the quality of its interest spread.

2.1.2. Lending operation

Banks exist not only to accept deposits but also to grant credit facilities, lending operation of deposit money banks has been conceptualized by various researchers such as Felicia (2011), Eze (2015), Kolapo and Dapo (2015), Lucky and Nwosi (2015) and Ogech and Fredrick (2017) with respect to some micro environment factors that affect the operational efficiency of banks with respect to lending operations.

In the view of Nwankwo (2000) cited by Felicia (2011) credit constitutes the largest single income-earning asset in the portfolio of banks. This explains why banks spend enormous resources to estimate, monitor and manage credit quality. This is understandably, a practice that impact greatly on the lending behaviour of banks as large resources are involved.

According to Adedoyin and Sobodun (2009) cited by Lucky and Nwosi (2015) lending is undoubtedly the heart of banking business, it administration requires considerable skill and dexterity on the part of the bank management. While a bank is irrevocably committed to pay interest on deposits it mobilized from different sources, the ability to articulate loanable avenues where deposit funds could be placed to generate reasonable income; maintain liquidity and ensure safety requires a high degree of pragmatic policy formulation and application. Commercial banking in Nigeria witnessed an era of impressive profitability, characterized by high competition, huge deposits and varied investment opportunities; in an effort to make quick profits the commercial banks relied essentially on self-liquidating loans and diversified their portfolio into less risky investments with safe margin. The current trend in Nigerian banking and finance sector, suggest that the days of cheap profits are now over and only banks with well conceptualized lending and credit administration policies and procedures can survive the emerging competition.

Chodechai (2004) cited by Eze (2015) banks have to be careful with their pricing decisions as regards to lending as banks cannot charge loan rates that are too low because the revenue from the interest income will not be enough to cover the cost of deposits, general expenses and the loss of revenue from some borrowers that do not pay. Moreover, charging too high loan rates may also create an adverse selection situation and moral hazard problems for the borrowers.

Ogech and Fredrick (2017) further stressed that lending decisions generally are fraught with a great deal of risks, which calls for a great deal of caution and tact in this aspect of banking operations. The success of every lending activity to a great extent therefore, hinges on the part of the management in terms of an objective based credit scoring with a view of separating good borrowers from cancerous borrowers this will go a long way in mitigating the incidence of default risk.

2.1.3 Bank Micro Environment

According to David (2013) existing literature identifies the following as some of the bank micro factors that induced operational efficiency to include; Operating expenses, efficiency of management, deposit composition and quality, asset quality, capital and size and bank reserve requirement. Technically speaking, a more efficient bank should have higher profit since it is able to maximise on its net interest margin. Molyneux and Thorton (1992) cited by David (2013) observe a positive relationship between operational efficiency and profitability. Al-Smadi and Ahmed (2009), conclude that at the micro level, precautionary credit policies adopted by the banks during periods of high demand on loans usually reduce the banks' credit risk exposure.

Ramlall (2009) opined that the higher the efficiency levels of the bank, the higher its profit level. Hence a positive relationship is posited between efficiency and profitability of banks, a good micro environment management means picking up high quality assets and low cost liabilities. Ramlall (2009) identified poor asset quality as

indicated by the high levels of non- performing loans (NPLs) to be responsible for the low profitability of some banks.

2.1.4 Management quality and Banks Operational Efficiency

According to Robert (2016) management plays a big role in determining the future of the bank. The management has an overview of a bank's operations, manages the quality of loans and has to ensure that the bank is profitable. In the opinions of Benazir and Shirin (2016) the performance of management capacity is usually qualitative and can be understood through the subjective evaluation of management systems, organization culture, and control mechanisms and so on. However, the capacity of the management of a bank can also be gauged with the help of certain ratios of off-site evaluation of a bank in the capacity of the management to deploy its resources aggressively to maximize the income, utilize the facilities in the bank productively and reduce costs, etc.

Ngumi (2017) posits that management quality can be evaluated with reference to expenditure to income ratio, credit to deposit ratio, Asset utilization ratio, diversification ratio, earnings per employee ratio and expenditure per employee ratio. Operating efficiency and staffs productive plays a great role on the overall performance of banks. In the opinion of Job (2014) the capability of management to use its resources efficiently, minimize its operating costs and maximizing its income can be measured by it operational efficiency. The operating profit to income ratio can be used to measure

Management quality. The higher the operating profits to total income the more efficient management is in terms of operational efficiency and income generation.

Management quality can also be measured by another important ratio of expense to asset ratio whereby operating expenses to total assets are expected to be negatively associated with profitability; therefore management quality determines the level of operating expenses and in turn affects profitability. A bank with high profitability level can increase the growth of lending due to surplus income.Zawadi (2014) suggest thatmanagement quality is the ability of management of the banks to manage its operating costs in a more efficient manner through cost rationalization. It involves the process of allocating the available resources to viable investments. It can also be view as what occurs when the right combination of people, process, and technology come together to enhance the productivity and value of any business operation, while driving down the cost of routine operations to a desired level.

2.1.5 Default Risk and Banks Operational Efficiency

According to Robert (2016) the quality of assets held by a bank depends on it exposure to default risk in terms of non- performing loans and the financial health of banks borrowers. Poor asset quality and low levels of liquidity are the two major causes of bank failures. Echekoba, *et al* (2014)suggest that many financial institutions that collapse are due to high rate of non-performing loans (NPLs) and extensive insider lending. Default risk is one of the factors that affect the operational efficiency of banks.

Vincent (2017) opined that the extent of the default risk depends on the quality of assets held by bank. The quality of assets held by a bank depends on non-performing loans cases. Therefore how well a banks is able to manage it default risk exposure determine it operational efficiency.

2.1.6 Effects of Non-Performing Loans on operational efficiency of Banks

According to Opara (2015) the impact of Non-performing loans can be largely linked to the following;

i. Profitability: Whenever a bank makes a wrong choice of its clients, its performing assets turn into Non Performing Assets. Non-performing loans affect not only current profits of the banks but also future stream of profits, which may lead to the loss of some long term beneficial opportunities. Non-performing loans generate no income for the banks. The higher the cases of Non-performing loans, the lower the level of a bank profitability owning largely to provision requirement.

ii. Lower Credit Rating: High Non-performing loans degrade a bank's credit rating, lowering its creditability as well as its ability to raise fresh capital. Today the incidence of high NPAs in the Nigeria banking industry points to a deteriorating credit market. Due to Non-performing loans, banks also lose their goodwill and brand image which creates negative impact and depositors deposit their money in some other bank.

iii. **Liquidity:** As the assets of banks are blocked, banks are left with less liquidity in hands and sometimes they are forced to borrow money from other banks leading to additional cost. This shortage of liquidity also creates difficulty in day to day operations of the bank.

iv. **Additional Operational Cost:** This is another indirect cost of high Non-performing loans that a bank has to bear. Time and resources use in handling and managing Non-performing loans would have diverted to some fruitful activities, which would have given good returns. Now a day, banks have special employees that deal with NPAs, which is additional cost to banks.

v. **Poor Capital Adequacy Ratio:**As per Basel Norms, every bank must maintain a Capital Adequacy Ratio, which is the ratio of total capital to risk weighted assets. As NPAs go up, so do the aggregate risk weighted assets, forcing the banks to allocate further capital in order to maintain the ratio. Today commercial banks in Nigeria are struggling to meet the Capital Adequacy norms.

2.2.0 Theoretical Review

This study hinges on the review of the following theories; Conventional Economic Efficiency Theory, Regulatory and Efficient Market-Monitoring Theory and Efficient Structures and Profitability Theory.

2.2.1 Conventional Economic Efficiency Theory

The conventional economic efficiency theory was developed Alfred Marshal in 1924 on the doctrine that a service provider should always pay the lowest possible wage and charge the highest possible prices as a way of ensuring operating cost rationalization and income maximization to ensure Economies of scale as a way of achieving optimal production and counteracting perceptible benefit repeated by more costs associated with overstressing the existing systems. In the short run, the situation of maximum operational efficiency is the level of output at which all accessible economies of scale are taking advantage of such efficiency. In the end, lifting the capacity of existing systems can increase the optimal level of productive efficiency (Zerbe, 2011). The conventional economic efficiency theory is in two parts, allocative (price) efficiency criteria and the productive (technical) efficiency criteria.

Maximum allocation efficiency is the point when the business produces the optimal output of a combination of goods and services to maximize the benefit to the business as a whole (Said, 2011). The theory provides a basic context for understanding a variety of factors associated with existing operating costs of the business (Zerbe, 2011). For banks to operate at efficient level, then all bank products have optimal pricing. This will in turn reduce unfair competition in the market and reduction in interest rate spreads. The productive efficiency takes place when the business employs all of its resources efficiently, producing the most output from the least input (Quinzi andSujaya, 1993).

Many researchers have employed the theory of conventional economic efficiency to measure efficiency in banking systems (Sathye, 2001; Barr, Killgo, Siems and Zimmer

2002; Saad and El-Moussawi, 2009; Said 2011). A firm with higher profits is more economically efficient but within a given range of prices (Mullineaux, 1978). Efficiency ratios evaluate the overhead structure of a financial institution. It is the measure of how effectively a bank uses overhead expenses including salaries and benefit costs occupancy expenses as well as other operating expenses in generating revenues (Yeh, 1996).

Generally, calculating operating efficiency ratio for banks is by dividing operational expenses by the sum of net interest income and non-interest or fee income (Allen and Rai (1996); Yeh (1996); Halkos and Salamouris (2004)). Other things being equal, a decrease in the efficiency ratio is a positive sign while a rising efficiency ratio is generally undesirable. Lower efficiency ratio means that the bank is making considerably more than it is spending and is therefore on sound fiscal footing. Efficiency ratio can be conceptualized as the measure of what a bank must spend in order to make a shilling (Halkos and Salamouris, 2004). Therefore, a higher efficiency ratio was more desirable than a lower efficiency ratio.

2.2.2 The Regulatory and Efficient Market-Monitoring Theory

The regulatory and efficien market monitoring theory was developed Keynes in 1936. According to the regulatory hypothesis, regulators encourage banks to increase their capital to commensurate with the amount of risk taken. The increase in capital to march the increase in risk may come from efficient market monitoring, when capital positions are inadequate (Calomiris and Kahn, 1991; Berger, 1995). Therefore, an important factor contributing to a positive relationship between capital adequacy and

credit risk management to banks efficiency relates to the actions of regulators and supervisors (Shrieves and Dahl, 1992; Jacques and Nigro, 1997; Aggarwal and Jacques, 1998; Editz, Michael and Perraudin, 1998). Banks could respond to regulatory actions forcing them to increase their capital by increasing asset risk (Kim and Santomero, 1988). Altunbas, Carbo, Gardener and Molyneux (2007), suggest that, any empirical approach used to model the relationships between capital and risk needs to take account of bank efficiency.

Level of bank risk could also affect efficiency (Berger and De Young, 1997). For instance, managers who are not very efficient at assessing and monitoring loans are not likely to be very efficient in achieving a high level of operational efficiency. Yener, Carbo, Gardener and Molyneux (2007), did not find a positive relationship between inefficiency and bank risk-taking in contrast to established evidence in the United States. Inefficient European banks appeared to hold more capital and take on less risk. According to Kwani (1997) and Saunders, Strock and Travlos, (1990), bank risk-taking affects and is related to operating efficiency; firms with more capital are bound to operate more efficiently than firms with less capital, indicating that the level of capitalization is a good proxy for performance. From the above discussion, we may deduce that capital adequacy and credit risk affects operating efficiency of a bank.

2.2.3 The Efficient Structures and Profitability Theory

The Efficient Structures and Profitability theory was developed by Herbert V. Prochnow in 1949 on the doctrine that banks earn high profits because they are more

efficient than others are; profitable banks are more efficient because of their lower operational costs. Such banks tend to gain larger market shares, which may manifest in higher levels of market concentration, but without any causal relationship from concentration to profitability (Athanasoglou, Brissimis and Delis, 2008).

In addition, larger banks can obtain lower unit cost and higher profits through economies of scale. In cases where a bank is highly efficient relative to its competitors, the bank can maximize profit by maintaining its current size and pricing strategy or by reducing prices and expanding its operations (Berger, 1995). By extension, those more efficient banks will gain greater market share, which may result in a more concentrated market (Beck, Cull, Fuchs, Getenga and Randa, 2010). A study by Dimitris (2008), on commercial bank in Greece finds that there is a positive relation among profitability, size of the branches and their efficiency and within the branch characteristics, variable, more profitable and larger branches have higher operating efficiency. Overtime and especially among relatively large banks, information flows and competitive pressures act to reduce differences in operating efficiency that may appear in the short run.

2.3. Empirical Review

Operational efficiency constitutes the major barometer that determine success matrix of financial service operators concerning it efficacy on the financial health of banks. This has actually drawn the attention of financial industry key players globally; therefore various researchers have examines it in varying dimensions, among which we have the following;**International evidence**:

Dimitrios (2008) investigate the impact of macro and micro environment on the profitability of 50 largest European banks, measured by Return on Average Assets (ROAA), Return on Average Equity (ROAE), Net Interest Margin (NIM) and Profit before Tax (PBT), during the period 2009-2015.Seven banks specific and two macroeconomic variables were employed in a panel dataset with 350 observations. The result of the finding shows that liquidity ratios had a negative impact on profitability; it was recommended that banks should maintain their liquidity levels mostly though their capital reserves (e.g. Tier 1 Capital) and take actions to mitigate the liquidity risk of their investments.

Dahlia and Dianna (2012) investigate the effect of market interest rate risk on bank operational efficiency using a modification of Flannery's (1981 and 1983) model with similar assumptions for the period 2000-2008 in Jamaica for the National Commercial Bank (NCB) and Bank of Nova Scotia (BNS) Jamaica Ltd. The results indicate that market interest rates, in particular, Treasury bill rates have a small effect on bank profitability as a measure of operational efficiency across the two major banks in Jamaica. Also, interest rate risk (volatility) has a very small, but negative impact on bank profitability.

Khalad and Mazila (2013) evaluate the o financial performance of Libyan banking sector from 2009-2012. The outcome of the findings shows that a significant relationship exist between the Loans to total assets, Loans to short term liabilities and deposits, Bank's loans, customer deposits to Total assets and return on assets (ROA). The

study also found that is no significant relationship between liquidity position and net interest margin (NIM) of Libyan banks. The data was collected from four banks from 2009 to 2012 from their financial statement to inspect the connection between liquidity and banks financial performance. The data was analyzed by using multiple regression analysis. It was recommended that banks should give cognizant to liquidity management as a way of ensuring perpetual operation.

Maryasm, Naveed, Muhanmad and Mubashir (2014) evaluate the impact of macro-economic determinants of Pakistani commercial bank's performance in relation to Market value added, cash flow return on investment, cash value added, shareholders value added, and economic value as an alternative to the conventional accounting-based measures.To test this claim, analysis was conducted on commercial banks listed on Karachi Stock Exchange by using Pooled OLS techniques for the period 2009-2013. In this regard, results of this study show that Gross Domestic Product and Inflation rate are strong determinants of commercial banks performance in Pakistan.

Zawadi (2014) investigate the effects of bank specific and macroeconomic factors on banks' profitability in Tanzania. The fixed effects regression model was used on a panel data obtained from 23 banks from 2009 to 2013. The empirical results show that bank-specific factors (that are affected by bank-level management) significantly affect banks' profitability in Tanzania. However, macroeconomic factors do not seem to significantly affect banks' profitability. It can be argued that the profitability performance of banks in Tanzania is mainly influenced by management decisions, while

macroeconomic factors have insignificant contribution. Thus Bank management must efficiently manage factors related to their management decisions in order to protect the long run interest of profit-making.

Stephanie (2015) evaluate the bank- specific factors and macroeconomic determinants of net interest margins (NIM) in the Jamaica banking industry. A generalized method of moments (GMM) technique was applied to a panel of 11 Jamaican financial institutions using quarterly data over the period 2002 to 2014. The results show that foreign bank participation and operating costs were the most significant reasons for the relatively high NIMs in Jamaica. Liquidity, credit and funding risks and the change in the size of the financial institutions were inversely related with the NIM. In regards to macroeconomic variables, NIM displayed a negative relationship with the exchange rate volatility. Overall, these results indicate that structural changes to improve the operational efficiency as well competition need to occur to reduce the NIM over the long-run in Jamaica.

Antonio (2015) analyzes empirically the factors that determine the profitability of Spanish banks for the period of 1999-2009. The results obtained through GMM estimator to a large sample of Spanish banks indicate that the high bank profitability during these years is associated with a large percentage of loans in total assets, a high proportion of customer deposits, good efficiency, and a low credit risk. In addition, higher capital ratios also increase the bank's return, although this finding applies only when using return on assets (ROA) as the profitability measure. No evidence of either economies or

diseconomies of scale or scope in the Spanish banking sector. On the other hand, all industry and macroeconomic determinants, with the exception of interest rate, affect bank profitability in the anticipated ways. Finally, the study reveals differences in the performance of commercial and savings banks.

Benazir and Shirin (2016) investigate the marketing promotional tools and strategies used by banks to increase financial profitability and brand image and specifically shows the comparative study between the conventional and Islamic banks in Bangladesh in terms of using marketing promotional tools to create brand image, to retain goodwill in the financial market and to ensure financial profitability and growth. The reveals that now-a-days conventional and Islamic both types of banks are engaged with promotional tools in a positive manner but their goals are a slight different. Conventional banks are more attentive to promote their services for creating brand awareness and image which affects their sales as well as financial return. The Islamic banks are very much conscious to increase their financial profit in comparison to brand image. But being a Muslim country, people are relying more on Islamic Banks in terms of various banking transactions from their religious perspective on the other hand, they are more attracted by the offers of the conventional bank. Such type of activities incurs huge costs on a regular basis which directly affect Net Profit After Taxes (NPAT) and also regain revenue as impact of sales up growth. Outcomes of this study can be used as an index by both type of banking categories for formulating their brand image and financial sustainability and growth through the promotional activities.

Nadica (2016) examine the determinants of the Net-Interest Margin (NIM) as a measure of Banks Operational Efficiency in the Macedonian banking industry. Regression analysis was employs for the period between 2008 and 2011 to determine the crucial factors that affect NIM. The results show that high net-interest margin and hence profitability tend to be positively associated with banks that employ quality and high-paid staff, and banks that concentrate a great part of their investments in loans. During the period under study, the results show that management's behavior towards risk, the size of the bank and expenses management did not have a clear-cut or significant impact on bank profits.

Euphemia (2016) examine the impact of interest rate sensitivity as a determinant of commercial banks' interest profitability (Net Interest Margin) in South African between 2001 and 2014.Data was obtained from annual financial statements of the sampled banks, it was found that fluctuations on interest rate (repo rate) affect the profit of commercial banks, but this effect is huge on small banks than the big banks. As the repo rate increases, the profit of commercial banks increases. Such effect of repo rate on profit of commercial banks was found to be statistically significant. It was also found that interest rate changes as well affect the net worth of commercial banks. The macroeconomic factors that determine the interest rates do not have direct effect on the banks' profit, but have significant effect on the banks' net worth, especially that of the small banks. As the rate of inflation, the rate of money supply, and uncertainty increase, the net worth of the small commercial banks in South Africa also increase.

It could be advised that to maximize owners' equity, South African commercial banks (big and small) should concentrate more on forecasting and controlling the determinants of the interest rates, rather than the interest rates itself. It was also found that among the internal factors affecting profit and net worth of commercial banks, the liquidity ratio is most significant relative to capital ratio, competition, and Non-Performing Loan.

Avilian*iet al* (2017) examine the impact of macroeconomic condition on the banks performance in Indonesia from 2006-2013. The result of the finding shows that the volatility of macroeconomic variables such as inflation and exchange rate has no effect on the ROA of Indonesia bank, the finding shows that the performance of Indonesia banks are majorly determined by the bank specific-factors, therefore banks management were advised to gives cognizant to revenue generating activities and overhead cost minimizations.

Arjera (2017) analyzes the determinants of profitability of all the commercial banks in Albania, the objective of the study is to determine the factors that affect the profitability in commercial banks. A panel data with all the commercial banks that operate in Albania is analyzed for the period 2009-2014. Return on Asset is used as the independent variable while the following variables were used as the independent variables; Gross Domestic Product(GDP) Inflation Rate (IR) Exchange Rate(XR) High powered money, bank size, capital adequacy and operational efficiency. The result of the finding shows that macro factors have no clear cut impact on the performance of Bank.

Gerald (2018)evaluate the Relationship between sensitive of banks net interest margin and profitability of Commercial Banks in Kenya to credit ,interest rate and term-structure shocks across bank product specialization. The study adopted correlation research design where data was retrieved from the balance sheets, income statements and notes of 33 Kenyan banks during 2008-2017. Multiple regressions were applied to assess the impact of liquidity risk on banks' profitability. The findings of the study show that a positive relationship exists between the dependent variable and the independent variables. It was recommended that banks must keep adequate level of liquidity.

Local evidence:

Felicia (2011) evaluate the determinants of deposit money banks lending behaviours in Nigeria with particular reference to First bank of Nigeria Plc. Descriptive research design was used for the study where questionnaires were administered to a sample size of eighty (80) respondents. The data obtained were presented in tables and analysed using simple percentages. The formulated hypotheses were tested using the Pearson product moment correlation. The results of the study revealed that there is a significant relationship between credit management and bank profitability of First bank of Nigeria Plc and there is a significant relationship between bank liquidity and profitability of First bank of Nigeria Plc. They recommended that deposit money banks should set up effective system of internal controls to monitor the risk control mechanisms in use in order to ensure complete compliance with bank philosophy. Again, banks

should always maintain a balance between deposit-loan ratios in order to avoid asset liabilities mismatch.

Echekoba*et al* (2014) examine the determinants of Bank Profitability in Nigeria; Using Camel Rating Model from2001 – 2010. The outcome of the finding reveals that the model was estimated using ordinary least square method and the Statistical Package for Social Sciences (SPSS) 19. The findings based on the analysis elucidate that liquidity has a significant impact on banks profitability while capital adequacy, assets quality, management efficiency, earning did not. It was then recommended that banks should make sure that they maintain a reasonable liquidity position at all times to meet up regular financial obligations thereby maintaining depositors' confidence in the industry and increase profitability.

Eze (2015) investigate the determinants of bank profitability in the light of bank specific variables, industry related factors and macroeconomic influences, using a panel of selected banks that account for over 60% of total bank assets in Nigeria. Findings show that bank profitability is largely determined by credit risk and other factors that relate to the internal organization of banking firms. Market concentration is significant as a determinant of bank profitability. There is no evidence of structure-conduct-performance hypothesis, however empirical results show that there is no collusive behavior amongst banks. Exchange rate is significant as a determinant of bank profitability through return on equity and non-interest margin, but not significant to return on asset as a measure of profitability.

Lucky and Nwosi (2015) examine the relationship between asset quality and the profitability of commercial banks in Nigeria from 1980 – 2013. The result of the finding reveals that positive relationships exist between the dependent (profitability) and independent variable (credit portfolio management). Liquidity management includes the broad money supply and aggregate bank deposits and profitability was measure by return on assets ratio (ROA). Ordinary least square (OLS) econometrics method was used to analysis the hypothesis.

Muhammed (2016) investigate the determinants of Cost of Financial Intermediation (CFI) in some selected quoted banks in Nigeria. The study used thirteen (13) banks which were drawn from the quoted banks in Nigeria. In identifying the determinants of the CFI, we estimated the two popular panel data (fixed and random effects) regression models for six (6) different measures of interest rate spread. In all, our results based on Hausman test selection and some statistical criterion shows that Loan Loss Provision and Operating Expenses were the most common factors that determine the commercial bank interest rate spread in all six models of measuring interest rate spread. This study therefore recommends that financial intermediation operating expenses (OE) and Loan loss provision (LLP) be given top priority in understanding the variations in commercial banks' cost of financial intermediation weather measured using narrow or broad interest rate spread definitions.

2.4. Summary and gap Identified

The above empirical studies shows both the correlation and disparity in the methodologies adopted by different researchers while carrying their findings on the subject matter as it was applicable to their individual study objectives, all the eminent researchers that were cited in the above empirical studies employed statistical methodologies that are in usage in their individual country, From the foregoing, it could be deduced that research by scholars in the recent time on the determinant of banks operational efficiency concentrated more on macroeconomic factors and it impending influence on the performance of banks while no attention was given to the main bank-specific factors that affect the lending operations of deposit money banks in Nigeria.

This leaves the effect of bank-specific factors on the operational efficiency of banks in Nigeria as being not fully researched on, yet the country has witnessed a surge in the number of deposit money banks in the recent years in connection with poor micro environment factors management by the affected banks. It is imperative that the gap be filled by taking into consideration the effects of banks micro environment factors on the lending operations of deposit money banks in Nigeria. Banks micro environment factors management is a reflection of how a bank is able to efficiently perform intermediation role. In the light of the foregoing, it is worthy of note that the consideration of banks micro environment factors will be of high significance in modelling the determinants of banks operational efficiency in attempt to bridge the indentified gap.

2.5. Theoretical Framework

For the purpose of this study, the Conventional Economic Efficiency Theory was adopted as a framework given cognizance to it connectivity with the study specific objectives. The Efficient Structures and Profitability Theory is centered on the impact of banks size on the operational efficiency of banks without assessing the functionality of banks in terms of how efficient they are in performing lending activities. Net interest margin is a major performance index of banks, the size of a bank branches may not necessarily implies a performance matrix without a good interest spread and a bank without adequate interest spread may not be able to survive in a competitive environment.

Therefore bank size is not the key determinant of banks operational efficiency. Similarly, the Regulatory and Efficient Market-Monitoring theory also has some deficiencies which may not guarantee operational efficiency, the theory only focused on the influence of capital adequacy and credit risk management on the operational efficiency of banks. A bank with good asset quality, strong earnings and sufficient capital may fail if proper attention is not given to it micro environment management in terms of operating efficiency and staffs productivity. The operational efficiency of banks is determine by some factors such as bank style, staffing, operating expenses and how well a bank is able to negotiate for a better interest spread in the course of performing lending operation.

The Conventional Economic Efficiency theory gives cognizance to the fact that the lending activities is the core function of the banks which require allocative (price)

efficiency criteria and productive (technical) efficiency criteria for the attainment of banks intrinsic and extrinsic values. Allocative (price) efficiency criteria has to do with credit portfolio management while productive (technical) efficiency criteria has to do with cost structure management of banks and Asset management which is a reflection of management quality. A bank can only enjoy operational efficiency if it ensures efficient credit portfolio management by maintaining adequate liquidity and good asset quality. Liquidity can be managed through the proper phasing and structuring of the loan commitments made by a bank to the customers; this will enable the bank to critically evaluate the feasibility and the viability of a loan applicant with a view of avoiding cancerous borrowers which usually induced the level of non-performing loan incidence thereby reducing the bank exposure to default risk.

This theory encouraged banks to adopt productive (technical) efficiency criteria that will ensure cost minimization with respect to operating efficiency and staffs productivity; this will no doubt enhance banks operational efficiency. The theory provides a basic context for understanding variety of micro factors associated with banks operational efficiency. For banks to operate at efficient level, all the bank products must have optimal pricing, productive efficiency takes place when a bank employs all of its resources efficiently with a view of maximizing values. In the light of the foregoing the researcher deems it fit to draw a line of appropriateness for the adoption of the Conventional Economic Efficiency theory for this study because it has a link with the study specific objectives.

2.6 Conceptual Model of the Study

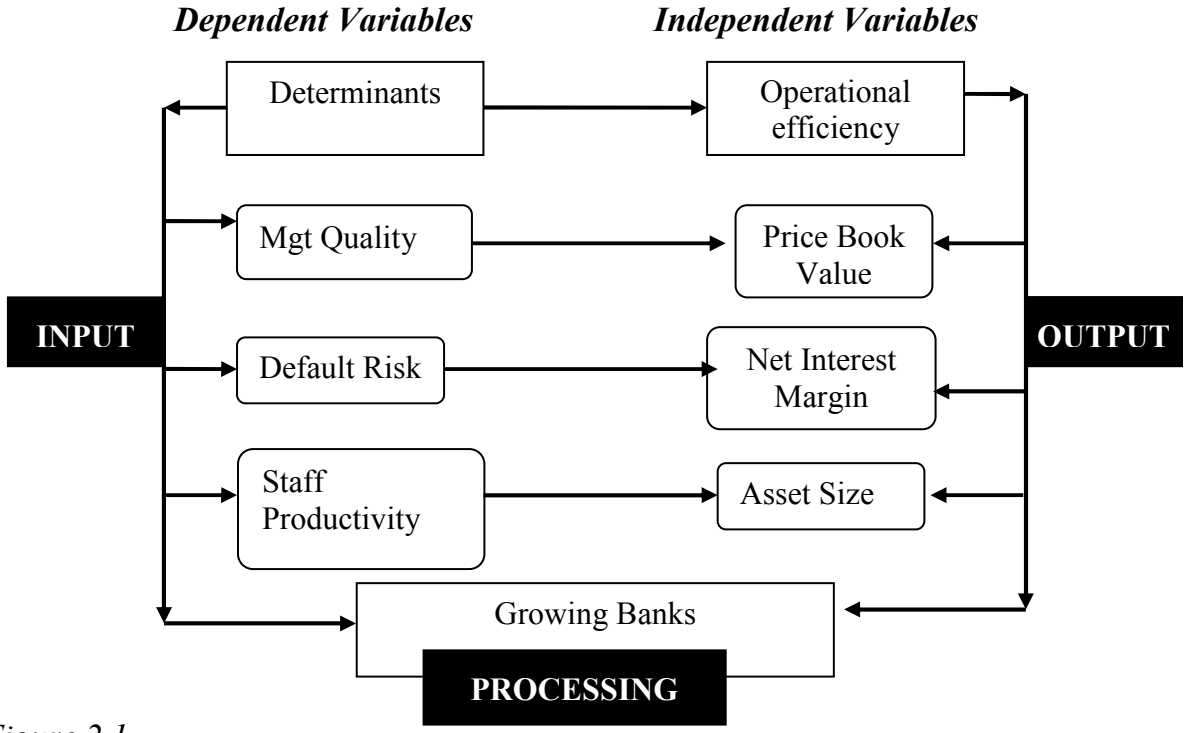

Figure 2.1

Source: Researcher's Conceptual Model, (2018).

Different studies on the subject matter present mixed results as to the effect of each of these variables on the operational efficiency of Banks. Some studies present a positive relationship while others reveal a negative relationship between the dependent and independent variables.

CHAPTER THREE

METHODOLOGY

This section outlines the way that the research work is designed and the method to be adopted in carrying out this research work.

3.1. Model Specification

Operational efficiency of the selected banks was analyzed through the balance panel data. Operational efficiency of the selected banks wasdepicted by Price Book Value (PBV), Net Interest Margin (NIM) and Asset Size (ASS) and the determinants of deposit money banks operational efficiency was depicted by bank micro environment factors. This study was modelled according to the work of Arjera (2017), Nadica (2016), Stephanie (2015),Eze (2015) andAntonio (2014). Specifically, this study adapted the model of Arjera (2017) which studied the determinants of Bank Profitability in Albania.

In other to achieve the study objective, this study adopts theConventional Economic Efficiency theory as theoretical framework. Therefore, the Operational efficiency of the selected banks was proxies by the Price Book Value (PBV), Net Interest Margin (NIM) and Asset Size (ASS) while bank micro environment factors as determinants of banks operational efficiency was depicted by (Operating Expenses, Asset Management, Bank Size, Capital Adequacy, Non-Performing Loans, Loan Loss Provision, Financing Cost , Staff Salary Expenses andLiquidity Management).In a bid to

test for the significance of the formulated hypotheses,three separate econometric models were formulated as follows:

Research objective one (Impact of Management Quality on the Price Book Value of Nigerian DMBs).

$PBV_{i,t} = f(MAQ)$ ……..…….3.1

$MAQ = OE_{i,t} + AM_{i,t} + BS_{i,t}$…….....…….....3.2

Research objective two(Impact of Default Riskon the Net Interest Margin of Nigerian DMBs.):

$NIM_{i,t} = f(DR)$……..…….3.3

$DR = CA_{i,t} + NPL_{i,t} + LLP_{i,t}$…….....…….....3.4

Research objective three (Impact of Staffs Productivity on the Asset Size of Nigerian DMBs):

$ASS_{i,t} = f(SPR)$…….....……...3.5

$SPR = FC_{it} + SSE_{it} + LM_{it}$....……..…….....3.6

Where:

$PBV_{i,t}$ = Price book value of the selected banks in year t

$NIM_{i,t}$ = Net interest margin of the selected banks in year t

$ASS_{i,t}$ = Asset size of the selected banks in year t

MAQ = Management Quality of the selected banks

DR = Default risk of the selected banks

SPR = Staff productivity of the selected banks

OE_{it} = Operating expenses in year t

AM_{it} = Asset management in year t

BS_{it}= Bank Size in year t

CA_{it} = Capital adequacy in year t

NPL_{it} = Non performing loan in year t

LLP_{it} = loan loss provision in year t

FC_{it} = Financing cost in year t

SSE_{it} = Staff salary expenses in year t

LM_{it} = Liquidity Management in year t

The model to be estimated for the three specific objectives becomes:

$PBV_{i,t} = \beta_0 + \beta_1 OE_{i,t} + \beta_2 AM_{i,t} + \beta_3 BS_{i,t} + \mu_{i,t}$.....…….3.4

$NIM_{i,t} = \beta_0 + \beta_1 CA_{i,t} + \beta_2 NPL_{i,t} + \beta_3 LLP_{i,t} + \mu_{i,t}$…....…….3.5

$ASS_{i,t} = \beta_0 + \beta_1 FC_{it} + \beta_2 SSE_{it} + \beta_3 LM_{it} + \mu_{i,t}$ ……....……...3.6

$\beta_0, \beta_1, \beta_2,$ and β_3 parameters of estimation

u_{it} = the error term

i = cross-sectional variable

t = time series variable

3.2. Sources of Data.

This study adopted quantitative research techniques to arrive at its finding, using secondary data obtained from the Annual audited reports of the ten selected banks. Year 2008 marked a watershed in the history of Nigerian Deposit Money Banks when the Central Bank of Nigeria (CBN) introduced the Bank Risk Supervision norms to curtail the persistent cosmetics and window addressing of prudential and risk return reports by some Banks while year 2016 is the least possible data that one can easily access.

3.3. Methods of Data Analysis

Tables were used to present the data. Panel data regression analysis was used to investigate the extent at which banks' micro environment factors affect the operational efficiency of banks in Nigeria within the period of 2008 - 2016. Panel data estimation technique was adopted because it takes care of heterogeneity associated with individual

banks by allowing for individual specific variables. Also, by combining time series with cross sectional observations, panel data give more informative data, more variability, less co-linearity among variables, more degrees of freedom and more efficiency. Besides, panel data will minimize the bias that can result if individual banks are aggregated (Gujarati, 2015). It also enriches empirical analysis in such a way that may not be possible if either only time series data or cross sectional data are used.

3.4Variables Measurement And a *Priori* Expectations

Variable	*Determinants*	*Proxies*	*Measures*	*Notation*	*Expected Relationship*	*Remarks*
DEPENDENT(OPERATIONAL EFFICIENCY OF THE SELECTED BANKS)		Price book value, Net interest margin and Asset size	Price of share/ equity value, Interest income – Interest expenses and log of total assets	PBV, NIM and ASS		
INDEPENDENT VARIABLES (MICRO ENVIRONMENT FACTORS)	**Management Quality**	Operating expense	Operating expense/Total Asset	OE	Negative(-)	As expected
		Asset management	Operating income/Total Asset	AM	Positive(+)	As expected
		Bank Size	Log of employees	BS	Positive e(+)	As expected
	Default Risk	Capital adequacy	Shareholder equity/ Total asset	CA	Positive(+)	As expected
		Non-performing loan	Non-performing loan/Total loan	NPL	Negative(-)	As expected
		Loan loss provision	Loan loss provision/ Total loan	LLP	Negative(-)	As expected
	Staffs productivity	Financing cost	Interest expenses/Total deposit	FC	Negative(-)	Not as expected
		Staff salary expenses	Staffs salary expenses/Total asset	SSE	Positive(+)	As expected
		Liquidity management	Liquidity asset/ Total asset	LM	Positive(+)	As expected

Source: Author's computation (2018).

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

This chapter presents the analysis of the data collected through secondary source (audited financial statement of the selected DMBs) and the discussion of findings on the research objectives using a panel data regression analysis.

4.1 Descriptive statistics

Table 4.1: Descriptive Statistics of the Variables

Variables	Obs	Mean	Std. Dev.	Min	Max
Pbv	80	.0904	.1087	0.0151	.5502
nim	80	.0575	.0274	0.0122	.0922
ass	80	.1415	.1817	0.0122	1.3040
oe	80	.0836	.0198	0.0114	.0950
am	80	.0525	.0329	0.0124	.0865
bs	80	.0824	**.0105**	0.0212	.0919
ca	80	.0627	.0330	0.0112	**.0866**
Npl	80	.0820	.0194	0.0232	.0938
llp	80	.0769	.0183	**0.0312**	.0907
fc	80	.1917	.1732	0.0111	**1.4061**
sse	80	**.0218**	.0251	**-0.0242**	.1034
lm	80	**.3319**	**.2802**	0.0304	.9677

Source: Author's computation (2018).

Table 4.1 presents the descriptive statistics for the dependent variables, Price Book Value (PBV), Net interest margin (NIM) and Asset Size (ASS) as well as the explanatory variables i.eOperating Expenses (OE), Asset management (AM), Bank Size

(BS), Capital adequacy (CA), Non-Performing Loans (NPL), Loan Loss Provision (LLP), Financing Cost (FC), Staff Salary Expenses (SSE) and Liquidity Management (LM) of the selected banks. From table 4.1 price book value has minimum and maximum values of .0151 and .5502 respectively and the mean value of .0904 as well as the standard deviation value of .1087. Net interest margin, has minimum and maximum values of .0122 and .0922 respectively and the mean value of .0575 as well as the standard deviation value of .0274. Asset Size has minimum and maximum values of .0122 and 1.3040 respectively and the mean value of .1415 as well as the standard deviation value of .1817.

The table also shows that the mean of the operating expenses of the selected banks is .0836 with standard deviation of .0198. A minimum and maximum values of .0114 and .0950 respectively.Also, the table shows that the mean of the Asset management of the selected banks is .0525 with standard deviation of .0329. The minimum and maximum values are .0124 and .0865 respectively. This implies that the Asset management of the sampled banks on average stood at .0525, and the standard deviation value indicates that the value deviates from the mean on both sides by .0329.

Furthermore, the table shows that the mean of the Bank Size for the sampled DMBs stood at .0824 with standard deviation of .0105. The minimum and maximum values are of .0212 and .0919 respectively. This implies that bank size of the sample DMBs stood at .0824 on average. The standard deviation signal that the value of the bank size of the sampled DMBs deviates from the mean value on both sides by .0105.

The table also shows that the mean of the capital adequacy of the selected banks stood at .0627 with standard deviation of .0330. The minimum and maximum values are .0112 and .0866 respectively. This implies that the capital adequacy of sampled banks stood at.0627 on average, and the standard deviation value indicates that the value deviates from the mean on both sides by .0330.

Furthermore, the table shows that the mean of the non-performing loan of the sampled banks stood at .0820 with standard deviation of .0194 .The minimum and maximum values are of .0232 and .0938 respectively. This implies that of the non-performing loan sample banks is on average .0820. The standard deviation signal that the value of the sampled banks non-performing loan deviates from the mean value from both sides by .0194.

The table equally shows that the mean of the loan loss provision of the sampled banks stood at .0769 with standard deviation of .0183. The minimum and maximum values are .0312 and .0907 respectively. This implies that the loan loss provision of the sample banks is on average .0769. The standard deviation signal that the value of the sampled banks loan loss provision deviates from the mean value from both sides by .0183.

The table also shows that the mean of the financing cost of the selected banks stood at .1917 with standard deviation of .1732. The minimum and maximum values are .0111 and 1.406169respectively. This implies that the cash balance of the sampled

banks is on average .1917746 and the standard deviation value indicates that the value deviates from the mean from both sides by .1732.

More so the table also shows that the mean of the staff salary expenses of the selected banks stood at .0218 with standard deviation of .0251. The minimum and maximum values are -.0242 and .1034 respectively. This implies that the staff salary expenses of sampled banks is on average .0218 and the standard deviation value indicates that the value deviates from the mean from both sides by .0251. Equally, the mean of the liquidity management of the selected banks stood at. 3319 With standard deviation of .2802. The minimum and maximum values are .0304 and .9677 respectively.

On the final note, the overall results of the descriptive statistic shows that Staff Salary Expenses (SSE) has the lowest value for meanwhile Liquidity Management (LM) has the highest value for mean, it was also observed that Bank Size (BS) has the lowest value for standard deviation while Liquidity Management (LM) has the highest value for standard deviation.

4.2 Pairwise Correlation Analysis among the variables

Table 4.2. Pairwise Correlation

	Pby	nim	ass	oe	am	bs	Ca	npl	Llp	fc	Sse	lm
Pbv	1.0000											
Nim	0.2186	1.0000										
Ass	0.5909	0.0507	1.0000									
oe	-0.2126	0.1217	0.1601	1.0000								
am	0.2006	-0.0231	0.4256	0.0381	1.0000							
bs	0.5454	0.1857	0.6646	0.1591	0.2943	1.0000						
ca	0.5120	0.2265	0.6348	0.1489	0.3282	**0.6838**	1.0000					
Npl	-0.0624	0.0165	0.0159	-0.0613	-0.1053	0.0324	0.0182	1.0000				
Llp	**-0.0206**	0.1637	-0.0581	0.0610	-0.1060	0.1535	0.1654	-0.1125	1.0000			
fc	0.1811	0.1877	0.0514	0.2121	-0.1655	-0.0313	-0.0256	-0.0737	0.5262	1.0000		
Sse	0.5120	0.2265	0.0304	0.1537	0.0471	0.0520	0.4560	0.2435	0.2454	0.2525	1.0000	
lm	0.2006	-0.0231	0.1811	0.1987	0.0634	0.3341	0.2665	0.0344	0.0457	0.0537	0.4432	1.0000

Source: Author's computation (2018).

Table 4.2 summarizes the results of correlation analyses among the variables with a view of determining whether there are bivariate relationship between each pair of the dependent and independent variables also to ensure that the correlations among the explanatory variables do not poses the threat of multi-collinearity. The correlation analysis measures the extent of multicollinearity among variables. The logic behind the assumption of no multicollinearity is that if the value of correlation coefficient between two variables is greater than 0.70, it could be interpreted and concluded that the variables are having multicollinearity problem. The solution to the multicollinearity problem is to drop one of the collinear variables.This is supported by (Gujarati ,2015).It is worthy of note by implication that all adopted variables were not significantly correlated with each

other from the pairwise correlation results in the table 4.2 evidenced by the range value of variables correlation which lies between -.0.206 and 0.6838 suggesting the absence of multi-colinearity among the adopted variables for the model.

4.3 Regression Analysis relating to the determinants of operational efficiency of selected Nigerian Deposit Money Banks.

The core objective of this study is to examine the determinants of DMBs operational efficiency in Nigeria from the year 2008-2016.In the light of this, a panel data regression analysis was used. Also, in a bid to select the most appropriate model between the random and fixed effect, hausman test was conducted to decide on the best model to be estimated and the resultwas presented as follows:

4.3.1 Research objective one (Impact of management quality onthePrice Book Value of Nigerian DMBs).

4.3.1 (a) **Hausman specification result**

	fixed	Random	Difference	S.E.
Oe	-.8625	-.7056	-.1568	.0579
Am	1.0933	.9493	.1439	.0550
bs	.0018	.0121	.0103	.0189

Test: Ho: difference in coefficients not systematic

chi2(3) = 13.52 Prob>chi2 = 0.0036

Source: Author's computation, 2018

Tables 4.3.1 (a) provide the statistical information on both the random and fixed effect of the estimated panel respectively. A critical observation at both the random and

fixed effect of the estimated panel shows that the fixed effect panel is more robust and appropriate than the random effect. Based on the result of the hausman test that was conducted to decide on the best estimate from the both the random and fixed effect model results. The result reveals that chi2 value of 13.52 with 0.0036 probability which is below the 0.0500 significant margin.This suggests that the fixed effect is the best model to be estimated for objective one. Therefore, the fixed effect was selected and interpreted as the appropriate model.

Findings relating to the Impact of management quality(Operating expenses, Asset management and Bank Size)on the price Book Value of Nigerian DMBs .Fixed Effects Panel data regression results.

Table 4.3.1 (b) Panel data regression result (fixed effect)

Regression analysis for the testing of hypothesis 1(management quality has no significant impact on price book value of Nigerian DMBs)

Fixed-effects (within) regression	Number of obs = 80
Group variable: countries	Number of groups = 10
R-sq: within = 0.5098	Obs per group: min = 8
between = 0.5021	avg = 8.0
overall = 0.5049	max = 8
F(3,67) = 15.51	
corr(u_i, Xb) = -0.1160	Prob > F = 0.0000

Pbv	Coef.	Std.	t		[95% Conf. Interval]

		Err.		P>|t|		
Oe	-.8625	.2908	-2.97	0.004	-1.4431	-.2820
am	1.0933	.2734	4.00	0.000	.5474	1.6392
bs	.0018	.0460	0.04	0.968	.0938	.0901
Cons	.0591	.0040	14.71	0.000	.0511	.0671
R-square	50.9					
F-statistics	0.0000					
observation	80					

Source: Author's computation (2018)

From the table 4.3.1(b) the fixed effect of the panel data output shows that the coefficient of R-squared has a value of 0.5098 this implies that explanatory variables (Operating expenses, Asset management and bank size) were able to explain 50.98% of the total variation in the operational efficiency of the sampled bank depicted by Price Book Value (PBV) implying that the remaining 49.2% which was not accounted for were the stochastic element of the model which was actually dumped into the error terms. In view of this the model could be said to exhibit some goodness of fit.

The F-statistics can be said to be significant at 1% considering its probability value of 0.0000 which posits that all independent variables (Operating expenses, Asset management and Bank Size) were jointly significant in explaining PBV (operational efficiency of the sampled banks).The coefficients of the constant (C) has a value of .0591.This suggests that if all the explanatory variables are held constant, the explained variable which is depicted by PBV will surge by .0591 units. This shows that regardless of change in the explanatory variables the sampled banks Price Book Value will respond according.

Operating expenses has part of the regressors for management quality shows a negative coefficient of -.8625 and it was statistically significant at 5% level. This posits that in a situation where other predictor variables are held constant, by implication a unit change in operating expenses will account for .86256 units decline in the PBV. This is in line with the adopted theory because operating expenses is a performance indicator for financial institutions in the area of lending activities. Similarly this is inconformity with the a-priori expectation that was early made for this study. This is equally in agreement with the studies of Dimitris (2008), Dahlia and Dianna (2012) and Eze (2015) who all reported a negative relationship between banks operating expenses and the financial health of banks.Stating that the higher the operating expenses of a financial service provider, the lower the interest revenue becomes.

Asset Managementhas part of the regressors for management quality reveals a positive coefficient of 1.0933 with Price Book Value (PBV) and it was statistically significant at 1%, this suggests that where other regressors are held constant, a unit change in the asset management will account for an increment of 1.0933 units in the net interest margin. This is in agreement with the studies of Felicia (2011) and Job (2014) who also found a positive relationship between asset management and the performance of banks which was depicted by Return on Asset and Earning per share. Stating that asset management are income generation activities for banks, which means that the more efficient a bank is in terms of asset management, the moreoperationally efficient

itbecomes. To corroborate this assertion ,a study by Ogechi and Fredrick (2017) Posits that each bank has different characteristics; therefore asset management policies affect their performance on different levels.

Bank Size has a positive coefficient of .0018 with PBV but statistically insignificant at 5%. This suggests that where other regressors are held constant, a unit change in the Bank size will account for an increase of unit .0018 in the PBV. This is in line with the outcome of Nadica (2016) who found a positive relationship between bank size and ROA which was adopted as a measurement of the selected banks, stating that the effect of a growing size has benefits like economies of scale and reduced costs or economies of scope and product diversification, that provide access to markets that small banks cannot benefit also large banks may be able to exert market power through stronger brand image.

4.3.2Research objective two (Impact of default risk on the Net Interest Margin of Nigerian DMBs).

4.3.2 (a) Hausman specification result

	fixed	Random	Difference	S.E.
Ca	.0044	.0122	-.0078	.0048
Npl	.2975	.3204	.0228	.0106
llp	-.0387	-.1012	.0625	.0223

Test: Ho: difference in coefficients not systematic

chi2(3) = 19.04 Prob>chi2 = 0.0003

Source: Author's computation, 2018

Tables 4.3.2(a) Provides the statistical information on both the random and fixed effect of the estimated panel respectively.A critical observation at both the random and fixed effect of the estimated panel shows that the fixed effect estimated panel is more robust and appropriate than the random effect. Based on the result of the hausman test that was conducted to decide on the best estimates from the both the random and fixed effect model results. The result reveals chi2 value of **19.04** with 0.0003 probability which is below the 0.0500 significant margin,which suggest that the fixed effect is the best model to be estimated for objective two. Therefore, the fixed effect was selected and interpreted as the appropriate model.

Findings relating to the Impact of default risk(Capital adequacy, Non-performing loan and Loan Loss provision)on the net interest margin of Nigerian DMBs.Fixed Effects Panel data regression results.

Table 4.3.2 (b) Panel data regression result (Fixed effect)

Regression analysis for the testing of hypothesis 2 (Default risk has not significantly affected the Net Interest Margin of Nigerian DMBs).

Fixed-effects (within) regression Number of obs = 80
Group variable: countries Number of groups = 10

R-sq: within = 0.5372 Obs per group: min = 8
between = 0.5063 avg = 8.0
overall = 0.5273 max = 8

F(3,67) = 11.36
corr(u_i, Xb) = 0.1217 Prob > F = 0.0000

nim	Coef.	Std.	t		[95% Conf. Interval]

		Err.		P>|t|		
ca	.0044	.0062	0.71	0.483	.0080	.0169
npl	-.2975	.0510	-5.83	0.000	-.1956	.3994
llp	-.0387	.0505	0.77	0.445	-.1396	.0620
cons	.0574	.0047	12.16	0.000	.0480	.0668
R-square	53.7					
F-statistics	0.0000					
observation	80					

Source: Author's computation (2018)

From the table 4.3.2(b) the fixed effect of the panel data output shows that the coefficient of R-squared has a value of 0.5372 implies that explanatory variables (capital adequacy, non-performing loan and loan loss provision) were able to explain 53.72% of the total variation in the operational efficiency of the sampled bank depicted by Net Interest Margin(NIM) implying that the remaining 46.28% which was not accounted for were the other unobserved factors which were actually dumped into the error terms. 0ne may say that the model exhibit some goodness of fit.

The F-statisticscould be said to be significant at 1% considering its probability value of 0.0000 which posits that all independent variables (Capital adequacy, Non-performing loan and Loan Loss provision) were jointly significant in explaining NIM(operational efficiency of the sampled banks) The coefficients of the constant (C) has a value of.0574 this suggests that if all the explanatory variables are held constant, the explained variable which is depicted by NIM will surge by.0574288 units. This shows that regardless of change in the explanatory variables the operational efficiency sampled banks will respond according.

Capital adequacy has part of the regressors for default risk shows a positive coefficient of .0044 and it was not statistically significant at 5% level. This posits that in a situation where other predictor variables are held constant, by implication a unit change in capital adequacy will account for .0044 units increase in the NIM. This is in line with the Conventional Economic Efficiency theory which was adopted as the theoretical framework for this study. Similarly this is also inconformity with the a-priori expectation that was early made for this study. This result is equally in agreement with Astoeti,el al (2017) andArjeta(2017) who also found a positive relationship between capital adequacy and return on asset of their individual selected Banks.

Non-performing loan has part of the regressors for default risk shows a negative coefficient of -.2975 and it is statistically significant at 5% level. This posits that in a situation where other predictor variables are held constant, by implication a unit change in NPL will account for .2975 units decline in theNIM. This is in line with the adopted theory. Similarly this is inconformity with the a-priori Expectation that was early made for this study. But, this is in contrary to the outcome ofBenazir and Shirin (2016) who provides a positive relationship between NPL and the Return on asset stating that Non-performing loans fairly affect the profitability of some banks and this is a result of shifting cost on loan default to other customers. However, this study posits a bidirectional relationship between NPL and NIM.

Loan loss provision has part of the regressors for default risk shows a negative coefficient of -.0387 and it was not statistically insignificant at 5% level. This posits that in a situation where other predictor variables are held constant, by implication a unit change in Loan loss provision will account for .0387 units decrease in the NIM. This is in line with the adopted theory. Similarly this is agreement with the a-priori expectation that was early made for this study. However, this is not in line with the outcome ofBenazir and Shirin (2016) which provide a positive relationship between loan loss provision and the Return on asset stating that loan loss provisionhave no effect on the profitability of banks, because loan loss provision is mandatory for banks, therefore banks usually shift the cost of loan loss provision on other customers.

4.3.3 Research objectivethree (Impact of Staff Productivity on the Asset Size of Nigerian DMBs).

4.3.3 (a) Hausman specification result

	fixed	Random	Difference	S.E.
Fc	.0232	.0681	-.0449	.0150
Sse	.2972	.2992	-.0019	.0211
Lm	.0245	.0320	-.0074	.0106

Test: Ho: difference in coefficients not systematic

chi2(3) = 6.71 Prob>chi2 = 0.0818

Source: Author's computation (2018)

Tables 4.3.3(a) provides the statistical information on both the random and fixed effect of the estimated panel respectively.A critical observation at both the random and

fixed effect of the estimated panel shows that the random effect estimated panel is more robust than the fixed effect. Based on the result of the hausman test that was conducted to decide on the best estimates from the both the random and fixed effect model results. The result reveals chi2 value of6.71 with 0.0818 probabilitywhich is above the 0.0500 significant margin, which suggest that the random effect is the best model to be estimated for objective three. Therefore, the random effect was selected and interpreted as the appropriate model.

Findings relating to the Impact of Staffs Productivity (financing cost, staffs salary expenses and liquidity management)on the Asset Size of Nigerian DMBs.Random Effects Panel data regression results.

Table 4.3.3 (b) Panel data regression result (random effect)

Regression analysis for the testing of hypothesis 3 (Staffs productivity has no significant impact on the Asset Size of Nigerian DMBs)

Random-effects GLS regression — Number of obs = 80
Group variable: countries — Number of groups = 10

R-sq: within = 0.5170 — Obs per group: min = 8
between = 0.5045 — avg = 8.0
overall = 0.5075 — max = 8

Wald chi2(3) = 49.52
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.0000

Ass	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Fc	.0681	.0345	1.98	0.008	.0005	.1358
sse	.2992	.0478	6.25	0.000	.2054	.3930

lm	.0320	.0290	1.10	0.270	.0248	.0888
cons	.0518	.0047	11.56	0.000	.0430	.0605
R-square	51.7					
F-statistics	0.0000					
observation	80					

Source: Author's computation (2018)

From the table 4.3.3(b) the random effect of the panel data output shows that the coefficient of R-squared has a value of 0.5170 implies that explanatory variables (financing cost, staffs salary expenses and liquidity management) were able to explain 51.7% of the total variation in the operational efficiency of the sampled banks which was depicted by asset size implying that the remaining 48.3% which was not accounted for was actually dumped into the error terms. Based on this result one may say that the model exhibit some goodness of fit.

The F-statistics was said to be significant at 1% this was corroborated by its probability value of 0.0000 which posits that all independent variables (financing cost, staff salary expenses and liquidity management) were jointly significant in explainingAsset size (Operational efficiency of the sampled banks)

The coefficients of the constant (C) has a value of **.0518**this suggests that if all the explanatory variables are held constant, the explained variable which was depicted byAsset Size will surge by .0518 units. This shows that regardless of changes in the explanatory variables the sampled banks operational efficiencywill respond accordingly.

Financing cost revealed a positive coefficient of.0681with Asset Sizeand statistically significant at 10%.This suggests that where other regressors are held

constant, a unit change in the Financing cost will account for an increment of.**0681** units in the Asset Size.This is not in line with the a-prior expectation made at the preceding chapter of this study. Also this is not in conformity with the studies ofZawadi (2014),Stephnie (2015) and Robert (2016) who found a negative relationship between financing costand the operational efficiency of banks which was depicted by Return on Asset. However, a study conducted by Antonio (2015) shows that no statistical significant relationship exists betweenFinancing cost and the profitability of banks stating that financing cost is beyond the control of banks because the monetary regulatory bodies of each country majorly determine banks cost of borrowing. However, this result is very unusual because, theoreticallyfinancing cost is expected to have an inverse relationship with a bank's operational efficiency, because the higher the Financing costof a bank, the lower the asset size becomes. However, the positive relationship between the financing cost and Asset Size may be due to the liquidity risk management framework of the selected banks.

Staff salary expenses have a positive coefficient of.2992 withAsset Size which serves as the growth opportunity of the selected banks and it was statistically significant at 1%. This suggests that where other regressors are held constant, a unit change in the Staffs salary expenses will account for an increase of .2992 units in theAsset Size of the selected banks. This result is in agreement with the study of Nacida (2016) which posits that higher productivity growth generates income that is partly channeled to banks

profits. Staff salary expenses, logically are expected to be inversely related with the bank profitability (Asset Size) but where staffs are highly remunerated and motivated (by salaries, promotion and other benefits) their productivity is usually high and Since the banking sector is one of highest salary paying sectors in Nigeria, we expect that the staffs salary to induce their productivity which is a key determinant of banks operational efficiency. Therefore, staff productivity is a reflection of workers quality and competence which induce the growth opportunity of a bank. Similarly, this result is in line with the a-prior expectation that was early made in the preceding chapter.

Liquidity management shows a positive coefficient of .0320 with the Asset Sizebut not statistically significant at 5%, implying that where other predictor variables are held constant, a unit change in the liquidity management will bring about a .0320 units improvement in Asset Size of the sampled banks. The growth opportunities (Asset Size) of banks depend largely on how well they are able to manage their liquidity. This is in line with the a-prior expectation made at the preceding chapter of this study and the Conventional Economic Efficiency Theory which was adopted as the theoretical framework for this study. Efficient Liquidity management is a reflection of management competence which usually brings about a better operational efficiency.

4.4 Discussion of Results

Based on the inferential results from the table 4.3.1(b) relating to specific objective one (1) it was revealed that management qualityis one of the key micro

environment factors that determines the operational efficiency of DMBs in the area of lending activities. This was evidenced by coefficient of F-statistic which posits that the adopted variables (operating expenses, asset management and bank size) are jointly significant inexplaining the price book value as a performance indicator for the selected banks. Therefore, the null hypothesis which stated that management quality has no significance impact on the Price Book Value of Nigerian DMBs is hereby rejected for the acceptance of the alternative hypothesis which posits that management quality has a significance impact on the price book value of Nigerian DMBs.

It was equally observed that operating expenses and Asset management as part of regressors for management quality have a significant impact on the price book value of the selected Nigerian DMBs given cognizance to their individual reported coefficient which was statistically significant @5% and 1% level of significant respectively. Bank Size as part of the adopted regressor for Management quality have no significant impact on the operational efficiency of the selected Banks, this was evidenced by it coefficient which was not statistically significant @5% level of significant. In view of this banks must therefore give cognizance to their cost structure and asset management with a view of ensuring a better operational efficiency.

From table 4.3.2 (b)relating to specific objective two (2)itwasrevealed that default risk is an important bank micro environment factors which has an influence on banks operational efficiency. This was supported by the reported coefficient ofF-statistic which posits that the adopted variables (capital adequacy, non-performing loan and loan loss

provision) are jointly significant in explaining the Net Interest Margin as a performance indicator for the selected banks. Therefore, the null hypothesis which stated thatdefault risk has no significance impact on the Net Interest Marginof Nigerian DMBs is hereby rejected for the acceptance of the alternative hypothesis which posits that default risk has a significance impact on the Net Interest Margin of Nigerian DMBs.It was equally observed that both Capital Adequacy and Loan Loss Provision as part of regressors for default risk have no significant impact on the Net Interest Margin of the selected Nigerian DMBs given cognizance to their individual reported coefficient which was not statistically significant @5%level of significant respectively, except Non-performing Loanthat has a significant impact on the operational efficiency of the selected Banks depicted by Net Interest Margin, this was evidenced by its reported coefficient which was statistically significant @5% level of significant. Therefore banks must give cognizance to their lending activities with a view of avoiding cancerous borrowers that constitute the main causes of non-performing loans.

From table 4.3.3 (b)relating to specific objective three (3) the inferential results reveal thatStaff productivity is a major banks micro environment factor which has an impact on the operational efficiency of the selected DMBs depicted by Asset Size given cognizance to the coefficient of F-statistic which indicate that the adopted variable (financing cost, Staffs salary expenses and liquidity management) are jointly significant in explaining Asset Size as a proxy for banks operational efficiency.Therefore, the null hypothesis which stated thatStaffs productivity has no significant effect on banks Asset

Size is hereby rejected for the acceptance of the alternative hypothesis which posits thatStaffs productivity has a significant effect on the banks Asset Size as a proxy for operational efficiency of the selected DMBs.

It was also observed that Liquidity management as part of regressors for Staff Productivity have no significant impact on the Asset Size of the selected Nigerian DMBs considering it reported coefficient which was not statistically significant @5%level of significance.Financing cost and Staffs salary expenses as part of the adopted regressors for Staff Productivity has a significant impact on the operational efficiency of the selected Banks depicted by Asset Size which measures the growth opportunity of the selected Banks, this was evidenced by their individual reported coefficient which was statistically significant @10% and @5% level of significant respectively. Therefore banks must recruit quality and competence staffs to ensure a better performance in term of operational efficiency.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter covers summary of the study, conclusion and recommendations based on the study specific objectives. Finally, suggestions for further studies and contributions to knowledge were also discussed.

5.1 Summary

The study was divided into five chapters. The first chapter discussed the background of the study, which led to developing three research questions and objectives as well as the formulation of three null hypotheses with a scope covering eight (8) years, from 2008 to 2016. The review of conceptual literatureand empirical studies on determinants of operational efficiency was also carried out.The theoretical framework and the conceptual Model that underpinned the study were also discussed. As stated in the methodology of this study, Price Book Value (PBV), Net interest margin (NIM) and Asset Size (ASS) were considered as proxies for the operational efficiency of the selected deposit money banks. A GLS panel model was used to investigate the impact micro environment factors as a determinants of operational efficiency in selected deposit money banks in Nigeria from 2008-2016 with the aid of STATA 13. The result of this finding revealed that micro environment factors assumed a very critical position in determining the operational efficiency and survival of operators of financial services.

For the purpose of this study, a total of nine regressors i.eOperating Expenses (OE), Asset Management (AM), Bank Size (BS) ,Capital Adequacy (CA), Non-Performing Loans (NPL), Loan Loss Provision (LLP), Financing Cost (FC), Staff Salary

Expenses (SSE) and Liquidity Management (LM) were adopted for the modeling of micro environment factors in line with the adopted theory which serves as the theoretical framework for this study given cognizance to the fact that the theory captured the study objectives which is to empirically investigate the impact of micro environment management on the operational efficiency of the deposit money banks in Nigeria.

However, objective one which has to do with the management quality of the selected DMBs was decomposed into (Operating Expenses, Asset Management and Bank Size) while research objective two which has to do with the default risk of the selected DMBs was decomposed into (Capital Adequacy , Non-Performing Loans and Loan Loss Provision) and research objective three which has to do with the staffs productivity of the selected DMBs was decomposed into (Financing Cost, Staff Salary Expenses and Liquidity Management) all with the view to ascertain the level at which each of this regressors affect the operational efficiency of the selected DMBs with the view of testing the formulated hypotheses.

The empirical outcome of this study based on the inferential statistic results suggest the rejection of the three formulated null hypotheses for the acceptance of the alternatives hypotheses which implies that the management quality ,default risk and staffs productivity all as variables for modeling banks micro environment factors has significant impact on the operational efficiency of the sampled DMBs. The inferential results of this study equally reveal that deposit money banks with efficient micro

environment factors management perform better than those with poor micro environment factors management strategies. Therefore, one cannot rule out the significance of micro environment factors management in determining the attainment of both the intrinsic and extrinsic value of banks.

5.2 Conclusion

Based on the empirical findings of this study, it was revealed thatmanagement quality play crucial roles in accessing the level of problem that banks are confronted with in terms of cost structure rationalization and asset management, this is evidenced by the negative coefficient that was reported on the operating expenses which signal that higher operating expenses possess a serious threat to the operational efficiency of DMBs. A positive coefficient that was reported on asset management as a performance indicator posits that the selected banks are really doing well in terms of revenue generating activities (Asset Management). Although Bank size which measure the selected DMBs economy of scale has no clear cut effect on the performance of the selected banks. This was evidenced by the reported inferential result which was not statistically significance.

The empirical results equally shows that capital adequacy as part of the regressors for default risk has no clear cut impact on the operational efficiency of the selected DMBs given cognizance to the inferential statistic results. A negative coefficient that was reported for both the non-performing loan and loan loss provision called for a sound credit risk management strategies to enhancethe profitability of the selected DMBs. Although, the sampled banks are really taken cognizance in preventing and mitigating

incidence of loan default,this is no doubt the result of a statistical insignificant result that was reported on the loan loss provision.

A positive coefficient was reported for financing cost, staffs salary expenses and liquidity management all as a regressors for staff's productivity. Although, bank profitability could be improved considerably if expenses are minimized except for staff expenses because quality staffs are highly paid considering the fact that they are the key driver of a bank performance. The growth opportunities (Asset Size) of banks depend to some extent on staffs' productivity.

Therefore, the overall results of this finding posit that banks with better micro environment factors perform better than those with poor micro environment factors. This research results also relate to the previous studies conducted by various scholars which were indicated in the previous chapter.

5.3 Recommendations

In the light of the above, the following recommendations were put forward for consideration:

i. For Nigerian DMBs to achieve an enhanced and sustained profitability through interest income, from loans and advances, appropriate micro environment management strategies need to be instituted with a view of ensuring an efficient management quality with respect to operating expenses minimization and asset management maximization to prevent a systemic collapse. Considering that operating expenses rationalization and

asset management which is a revenue generating activities constitute the major determinant of financial service operators operational efficiency.

ii. To ensure an effective default risk measurement, regulatory bodies need to intensify both their on-site and off-site function to strengthen the level of banks compliance with statutory stipulated amount to be provided as capital adequacy as this will enable banks to absorb unforeseen shocks in terms of non-performing loans incidence. The reported coefficient on the capital adequacy suggest that capital adequacy as measurement and predictor of banks profitability and performance from the regulators angle has no clear cut impact on the selected banks performance index measured by the net interest margin which signal a case of poor compliance level with the statutory stipulated amount to be provided as capital adequacy by selected banks.

iii. On the final note, to ensure staff productivity banks must ensure that their personnel are adequately remunerated as this will go a long way in bringing about a better productivity of their staff which is a major determinant of banks operational efficiency in terms of growth opportunity (Asset size) and this will enable them to retain their best brains who are the key drivers of banks performance.

5.4 Suggestions for further studies

Determinants of banks operational efficiency are extensive. Thus, it is impossible to exhaustively study the subject matter in a single report. Consequently, even after this effort, there are still numerous areas that are open for study. The result of this findings shows that there are about other 47% variables which this study did not captured that can be explore by other researchers evidenced by the reported R-square of this study. In order to have a more comprehensive results, funding risk as a determinant of banks operational efficiency was considered in this study. Therefore it is suggested that future researcher should consider the inclusion of funding risk as an important regressor for the modeling of banks operational efficiency as this will enable the operators of financial service to become more aware of the effect of funding risk on their lending operations.

5.5 Contribution to Knowledge

This study has contributed to knowledge by showing, in empirical terms, how the micro environment factor affect the operational efficiency of deposit money banks .Specifically, the study reveal that management quality in terms of operating expenses and asset management are the main micro environment factors that affect the operational efficiency of banks with respect to competitive advantage measure with Price Book Value. Competitive advantage of a bank is a reflection of how efficient a bank is in terms of operating expenses management and operating income generation (Asset Management). Equally the study contribute to knowledge by empirically showing how default risk in terms of non-performing loan induce the operational of banks in relation to Net Interest Margin which measures the success matrix of a bank in the area of portfolio

management (Lending Operation).Finally, the outcome of this study also contribute to the body of existing knowledge by revealing how Staffs productivity in terms of Staffs salary expenses influence the general performance of a bank in terms of Asset Size which signal the growth opportunity of a bank.

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Appendix

S/N	Fitch Viability Rating (VR) (B+)
1.	Zenith Bank plc
2.	Guaranty Trust Bank
3.	First Bank of Nigeria Plc
4.	United Bank of Africa (UBA)
5.	Access Bank
6.	Diamond Bank
7.	Fidelity Bank
8.	Union Bank
9.	FCMB
10.	Wema Bank

Source: ***www.fitchratings.com/site/pr/980462***