EFFECTS OF SELECTED ECONOMIC VARIABLES ON THE PROFITABILITY OF QUOTED COMMERCIAL BANKS IN NIGERIA

BY

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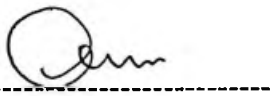
DECLARATION

I hereby declare that this dissertation has been written by me and it is a report of my research work. It has not been presented in any previous application for the award of any degree or certificate. All quotations are indicated and sources of information specifically acknowledged by means of references.



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CERTIFICATION

This Dissertation entitled "Effect of Selected Economic Variables on the Profitability of Quoted Commercial Banks in Nigeria" meets the requirements governing the award of M.Sc. in Finance, School of Postgraduate studies, Nasarawa State University, Keffi, and is approved for its contribution to knowledge.

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DEDICATION

I dedicate this research work to Almighty God for His divine wisdom to complete this work.

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ABSTRACT

The objective of this study is to examine selected economic variables on profitability of quoted commercial banks in Nigeria for the period of 2009-2018. Four proxies of selected economic variables used in this study are credit risk, loan to asset ratio, banking system development and inflation rate, while return on asset was used as proxy for profitability. Ex-post facto research design was adopted for this study. Secondary data were collected from the individual financial reports of the quoted commercial banks. This study used OLS regression technique and Wald test to analyse the data. The findings showed that loan to asset ratio have significant effect on profitability. Credit risk has insignificant effect on profitability. While banking system development has significant effect on profitability, while inflation rate had insignificant effect on profitability. In the overall, loan to asset ratio and banking system development remains a driver of profitability among quoted commercial banks in Nigeria as the F-statistics shows a good fit. It was recommended that efficient and effective loan management should be adopted by bank managers to ensure that banks do not become insolvent. Also, banks should be encouraged to enter other local market as well as strategically operate in other international markets and economies. While macroeconomic policies should be used to promote low inflation and put other macroeconomic variables in check to have good impacts on bank profitability and development.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Over the last two decades, global banking systems have encountered major changes. The Basel Committee through Basel I, II and III and the financial crisis had important influence on the structure and the performance of banks. Changes have become inevitable to the banking sector globally. These are perhaps, due to changes in government policies, globalization, information technologies, economic and financial deregulation among others. Particularly, the banking system in Nigeria has witnessed series of issues and challenges. These range from banking consolidations, global financial crisis in 2007/2008 as well as bank recapitalization and ever changing Nigerian government policies.

Banks as a financial institution has the major role of facilitating the economic operations of a nation. The banking system plays a major role in moving funds from the saving units to the spending units. To mention a few, if a financial system is efficient, it should show improvements in profitability, increasing the volume of funds flowing from saver to borrowers, and provide better quality services for consumers. As financial intermediaries, banks play an important role in the operation of an economy (Levine, Loayza & Terrance, 2000).

A bank is a financial institution that provides banking and other financial services to their customers. A bank is generally understood as an institution which provides fundamental banking services such as accepting deposits and providing loans. There are also nonbanking institutions that provide certain banking services without meeting the legal definition of a bank. Banks are a subset of the financial services industry.

The two major functions of a commercial bank are the mobilization of deposits and the extension of credits (Adekanye, 2006). As financial intermediary, bank collect deposits and paying interest on them, making loans and advances and charging the borrowers higher rates of interest. In rending this service to borrowers and depositors, banks have an expectation of achieving targeted rates of returns (Mustapha, 2017). Apart from granting loans, banks also generate profit from investments. In a bid to maximise their earnings, every bank attempts to structure its assets and liabilities in a way as to yield the highest returns, bearing in mind the risk involves and subject to some constraints (Musa, 2015).

The assets held by banks may be categorized into two broad classes; the earning assets and the non-earning assets. The earning assets are loans and investment, while the non-earning assets consist of fixed assets, total reserves of banks, vault cash and non-interest earning deposit with the Central Bank, profits are often generated by the earning assets (Faozi, Eissa, Mosab & Najib, 2018).

Most of the banks' liabilities are payable on demand, but it is known by banks that on the average, customers will usually demand for a small proportion of the funds deposited at any given time. Hence, provided adequate provision is made to cover such withdrawals, the balance of the deposits can be given as loan to credit-worthy customers of the bank (Ayadi & Chidozie, 2017). The bulk of the profits made by banks arise from the difference between the costs of funds deposited by customers and the charges on Loans to borrowers. Generally, depositors receive lower rates of interest in comparison to the rate charged on loans. Based on the foregoing, we can say that the more money banks are able to lend the higher their profit (Hossain & Khalid, 2018). By and large, the efficiency of a bank largely depends on the extent to which it has performed in the intermediation

process either locally or globally. Banks through their intermediary role accrue profits and on the other hand, might incur losses if not efficient and effective in their operations. There is no gainsaying that the strength of a bank is undoubtedly linked to its profitability, hence, the primary desire of the bank's management is to continually make profit as this would assure their continued existence and foster buoyancy for the nation (Haroon, 2014). It is of noteworthy that bank managers should understand the key factors that affect bank profitability and these factors could be internal or external. The internal factors originate from bank accounts (balance sheets and/or profit and loss accounts) and therefore could be termed micro or bank-specific factors of profitability while the external factors are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions (Athanasoglou, Brissimis & Delis, 2005).

As financial intermediaries, banks play a pivotal role in the economic activities of most nations. The efficiency of banks financial intermediation roles plays a significant role in economic growth (Ifuero & Chijuka, 2014). Profitable banks are in better position to contribute positively to the Gross Domestic Product of a nation. Besides, Banks liquidation usually provoke systemic economic crisis. Therefore, it is important to study the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria.

1.2 Statement of the Problem

The Nigerian banking industry occupied an important position in the nation's financial system, serving as mechanism to finance economic growth. The banking sector in Nigeria has undergone various reforms, one of which led to the establishment of Asset Management Corporation of Nigeria (AMCON). Before the establishment of AMCON, some banks were getting excellent ratings, while sitting on non-performing loans running into over 40 per cent. The purchase of the non-performing Assets of banks by AMCON ought to have returned most of the banks to the path of real profit making. However, this is not the case as most of banks still pile up non-performing assets. For instance in 2018, Nigerian banks non-performing loan was N1.79trillion, while the gross loans as at the end of 2018 stood at N15.35trillion (National Bureau of Statistics, 2018).

Linkages between bank profitability and selected economic variables depend upon which factors in the micro and macro economy are most strongly linked to the banking industry. Bank-specific factors, which influence profitability levels of the listed commercial banks in Nigeria, require further investigations among researchers with a view to further addressing the issue of selected economic variables and profitability. So, Ani, Ugwunta, Ezeudu and Ugwuanyi (2012) suggested that additional variables such as credit risk, and inflation should be included in determining bank profitability. The recommended variables have therefore, been incorporated in this study.

There are several studies, Ifuero and Chijuka (2014); Ayanda, Christopher and Mudashiru (2013); Aminu (2013); Kanwal (2013); Kalluci (2011); Mathuva (2009) among others, which discussed determinants of commercial banks' profitability. However, most of them do not consider industry specific determinant as been considered

in this study. Bank specific factors includes: Credit risk and loan to total asset. While industry specific factor is banking sector development and macroeconomic factor on the other hand is inflation rate. This will enable banks to see which of the factors contribute more to bank's profitability which is represented by return on asset.

1.3 Research Questions

This study provides answers to the following research questions:

i. What is the effect of credit risk on profitability of quoted commercial banks in Nigeria?

ii. How can the loan to asset ratio affect profitability of quoted commercial banks in Nigeria?

iii. What is the effect of banking system development on profitability of quoted commercial banks in Nigeria?

iv. In what way will inflation rate affect profitability of quoted commercial banks in Nigeria?

1.4 Objectives of the Study

The major objective of this study is to examine the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria. In order to achieve the main objective, the following specific objectives are specified to:

i. Assess the effect of credit risk on profitability of quoted commercial banks in Nigeria.

ii. Examine the effect of loan to asset ratio on profitability of quoted commercial banks in Nigeria.

iii. Assess the effect of banking system development on profitability of quoted commercial banks in Nigeria.

iv. Ascertain the effect of inflation on profitability of quoted commercial banks in Nigeria.

1.5 Statement of Hypotheses

H_{01}: Credit risk has no significant effect on profitability of quoted commercial banks in Nigeria.

H_{02}: Loan to asset ratio have no significant effect on profitability of quoted commercial banks in Nigeria.

H_{03}: Banking system development have no significant effect on profitability of quoted commercial banks in Nigeria.

H_{04}: Inflation rate have no significant effect on profitability of quoted commercial banks in Nigeria.

1.6 Significance of the Study

This study is principally inspired by the fact that it will serve as a policy guide in the Nigerian Banking Industry because there is no adequate and exhaustive information available for policy makers on banks' profitability in the country that would be used as guidance in her Banking sector.

The government of Nigeria as well as the Central Bank of Nigeria needs to understand the drivers of profitability of the banking sector. Knowledge of such factors that drive profitability will inform policy and regulations that will enhance and safeguard the

profitability of banks, which are important for stability of the financial markets and the growth of the economy. Suck knowledge will also inform the regulators action in pursuing policy of consolidation (discouraging growth and new entrants) or expansion (encouraging new entrants and growth).

This study will be of significance to decision makers which are majorly the management of the quoted commercial banks in Nigeria in understanding how each of the bank specific, industry specific and macroeconomic specific factors will determine the profitability of their banks. This will aid them to be more focused in their decision since they will see will of the factors has significant in the determination of their return on asset.

The findings of this study will significantly add to the body of knowledge regulating finance decisions in the country under study. It will also contribute to the controversial academic debates concerning which internal and external factors influence banks' profitability, especially with evidence from quoted commercial banks in Nigeria.

1.7 Scope of the Study

The study examined effect of selected economic variables on the profitability of quoted commercial banks in Nigeria for the period of 2010 to 2018. The period of the study was selected because it covered the period of unstable economic development in Nigeria. The quoted commercial Banks were chosen as a domain of the study because of their strategic importance to Nigerian economy in terms of providing financial services for higher profitability and national economic benefits in Nigeria.

The independent variables of the study are bank specific factors (credit risk and loan to total asset.), industry specific factor (banking sector development) and macroeconomic specific factors (inflation rate) while the dependent variable of the study was proxied by return on assets.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Framework

This study examined effect of selected economic variables on the profitability of quoted commercial banks in Nigeria. This section provides the enabling literature highlighting the concept of selected economic variables and concept of profitability.

2.1.1 Concept of Economic Variables

The focus on the economic variables for the Nigerian commercial banking sector is underscored by the fact that Nigeria has a bank-based financial system. Because of the nature of her financial system, the success of these banks measured in terms of their profitability determines the level of financial development which is a major prerequisite for economic growth. In this vein, the Central Bank of Nigeria (CBN) over the years has introduced various reforms with the aim to enhance banks' profitability and stability (Central Bank of Nigeria, 2019). The importance of bank profitability at both the micro and macro levels has made researchers, academics, bank managements and bank regulatory authorities to develop considerable interest on the factors that determine bank profitability (Athanasoglou, Brissimis & Delis, 2005).

Determinants of bank profitability can be split between those that are internal and those that are external. Internal determinants of bank profitability can be defined as those factors that are influenced by the Bank's management decisions and policy objectives (Mustapha, 2017). Management effects are the results of differences in bank management objectives, policies, decisions, and actions reflected in differences in bank operating

results, including profitability. Zimmerman (2006) said that management decisions, especially regarding loan portfolio concentration, were an important contributing factor in bank performance. Researchers frequently attribute good bank performance to quality management. Management quality is assessed in terms of senior officers' awareness and control of the bank's policies and performance.

External factors of bank profitability are concerned with those factors which are not influenced by specific bank's decisions and policies, but by events outside the influence of the bank (Ani, Ugwunta, Ezeudu & Ugwuanyi, 2012).

This study classifies economic variables as follows: 1. Bank specific factors are: Credit risk and loan to total asset. 2. Industry specific factor is banking sector development. 3. Macroeconomic factor is inflation rate.

2.1.1.1 Bank Specific Factors

Bank specific factors constitute internal environmental factors such as market share, bank size, solvency/liquidity risk, credit risk, operating expenses management Capital adequacy, loan to total asset and Bank size (Pervan et al, 2015). Naceur and Omran (2008) opined that bank specific factors, especially credit risk, have great influence on banks' profitability in general. Therefore, this study considers credit risk and loan to total asset as bank specific factors.

a. Credit Risk

Credit Risk is the possibility of losing outstanding loan partially or totally due to credit events (default risk). Geiseche (2004) stated that credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risk.

The idea of credit risk is really incontrovertible across financial services entities; therefore, a loan loss provision is an amount, which is set aside for uncollected loans or credits (Ani, Ugwunta & Imo, 2012). It is calculated as loan loss provision to total loans. The level of loan loss provision to total loans makes the bank managers to know their expectation about bank's asset quality. When giving out loans, banks are conscious of the fact that borrowers could default, thereby not able to fully pay up the loan (Antonio, 2016). When it shows that the borrowers may not redeem their loans, a bank will set aside a 'provision' to be charged to the income statement, which then appears on the face of the statement of financial position as a loan loss reserve (Aminu, 2013). If a customer defaults eventually, the loan balance would then be reduced by making a charge to the loan loss reserve. The higher the ratio, the lower is the asset quality and vice versa.

Pervan, Capraru and Ihnatov (2015) proposed that credit risk is measured as the ratio of reserves to total loans. It is a possibility for banks to find themselves in a situation where a borrowing client becomes unable to fulfill his obligations, that is, client cannot pay the whole or part amount of the principal or interest, which then has a negative impact on incomes and the reduction of the bank capitalization level. The improvement of bank profitability level and anticipation of expected future credit risk level is a product of better management of credit risks and an appropriate credit policy framework.

In this study, the loan loss provision to total loans will be used to measure credit risk, which is consistent with Million, Matewos and Sujata (2015); Ahmed, Riaz and Muhammad (2012); Fan (2014); Ishmael (2015); Manel (2015); Ahmad (2007) and Boahene, Dasah and Agyei (2012).

b. Loan to Total Assets

The ratio of total loans to total assets (TLA) - This ratio measures credit risk, which reflect changes in the health of a bank' s loan portfolio (see Cooper et al., 2003), which may affect the performance of the institution. Duca and McLaughlin (1990), among others opined that variations in bank profitability are largely attributable to variations in credit risk, since increased exposure to credit risk is normally associated with decreased firm profitability.

2.1.1.2 Industry Specific Factor

A bank's industrial environment constitutes the bank's competitors, bank customers (individuals, organization) and operating guidelines such as Basel Accord in place to regulate and supervise these institutions. The banking industry influences banks to improve the quality of their financial products through competition and operate within the limits of its memorandum of association and article of association and according to existing banking laws in the industry environment

Banking Sector Development

Pervan, Capraru and Ihnatov (2015) proposed that banking sector development indicates the annual growth of customer deposits in a percentage format. The biggest risk of any bank is to grow and retain a sustainable business in a turbulent market and business environment. Market growth can be diminished in scenarios of declining demand for banking products and services. Conversely, when demand increases because of better quality of products and services as well as appropriate pricing, a rapid market expansion

happens. It is projected that market expansion will have a positive effect on banks profitability level.

Sharma and Gounder (2015) stated that annual customer deposit growth seems to be a definite indicator of bank profitability level in Fiji. It is anticipated that a bank with fast increasing liabilities to be able to or otherwise wish to enhance its business/provide increased credit hence produce increased profitability levels. Although, enhanced profits from deposit increase might depend on a number of variables, including a bank's ability to transform new deposits into revenue generating assets, especially loans, which to a certain degree indicates a bank's operational efficiency (Sharma & Gounder, 2015). If expansion is attained by investing in reduced quality assets, profits might actually decline. Additionally, enhanced growth levels might attract new entrants, thereby reducing profitability levels. Although, Sharma and Gounder (2015) said that deposit increase (market growth) seems immaterial for profitability level of banks in Fiji. They found that profitability levels are expected to decline as the deposit base increases. Hence, if the availability for new deposits in Fiji became constrained or scarce, the profitability level and hence the stability of the banking sector may not necessarily be at risk.

Adusei (2015) argues that as increased customer deposits are accumulated and deployed as loans and/or investments, a bank is subjected to increased stability crisis or insolvency risk subject to there being adequate capitalization to safeguard it against potential losses resulting from customer default. The position has been that the higher the profitability level of a bank, the higher its stability (Adusei, 2015).

2.1.1.3 Macroeconomic Factors

Sufian (2009) explains that bank profitability level is influenced by macroeconomic indicators notwithstanding the move in the banking industry towards increased geographic diversification and enhanced use of financial engineering models to manage risk and linked with business cycle forecasting. This study considers inflation rate as macroeconomic factor.

Inflation Rate

The concept of inflation is generally incontrovertible and it is therefore, a situation where there is a persistent rise in the general level of prices or a decline in the value of money over a period (Ani, Ugwunta & Imo, 2012). In other words, inflation is the pervasive and continuous rise in the aggregate level of prices measured by an index of the cost of various goods and services, occasioned by wars, religious unrest, political instability, poor harvests, environmental upheavals kidnapping and other social malaise.

Inflation affects banks pricing behavior, and hence if banks expect general inflation to be higher in the future, they may believe that they can increase their prices without experiencing a decline in demand for their output (Driver & Windram, 2007).

2.1.2 Concept of Profitability

The major rationale behind the establishment of business enterprises is the profitability. Basically, profitability consists of two words, which are profit and ability. The term profit is concerned with receipts less costs, whereas ability is the power of a business enterprise to generate profit on sales of goods or provision of services (Antonio, 2016). Profit is expressed in absolute terms while profitability is expressed in relative terms.

Profitability can be defined as an outcome which arises from the effectiveness of management and optimal utilization of resources at its disposal; thus leading to reaping of higher return on capital employed (Abdus, 2015). The management of any firm should be able to identify its strength and weakness, likewise exploit opportunities and tackle threats if it is determined to make profits.

A bank is said to be 'profitable' if it can accrue financial gains from the capital invested into the operational activity of the bank (Abugamea, 2018). The success of a bank is determined by how well the bank made profits in the course of a financial period. For banks to be profitable, they have to assume a reasonable level of risk. If management of a bank decides to be risk averse, then such decision is at the detriment of the bank's performance (Adwaita & Sebak, 2017).

Banks face lot of risks, which are capable of adversely affecting their profitability. Banks are exposed to a high degree of risk than any other business because they are involved in the management of assets and liabilities. Banks are exposed to risks in varied dimensions; however these risks emerge prominently in form of credit risk, interest rate risk, and liquidity risk because they are closely associated to the banks' lending activity from which a lion share of banks' profit is generated (Dudley & Carl-Henri, 2016).

The knowledge of the banking environment is of paramount importance to banks because level of profitability hinges on it. The bank has the task of decisively analyzing its environment to know how to face challenges around them. According to Faozi, Eissa, Mosab and Najib (2018) banks do not operate in isolation; thus banks find themselves in the following environments;

Economic: This environment reflects the influence of macroeconomic components such as demand, inflationary trend, interest rate, exchange rate, monetary policies, and fiscal policies among others on banks' operation.

Political: The political situation of the country influences the operations of banks. Political instability tends to put banks in dilemma because government is always in the habit of formulating and implementing its policies in line with its own aims and objectives. Therefore, change in power means that banks would have to adjust to the dictates of the present government. In the political environment, the apex regulator in the banking system is the Central Bank of Nigeria (CBN) with Nigerian Deposit Insurance Corporation (NDIC) playing a complementary role.

Legal: This environment provides the legal framework for banks. The legal framework encompasses laid down rules and regulations, principles and practices which govern the operations of banks. It is meant to safeguard the interest of various stakeholders. The legal framework for banks is mainly contained in Banks and Other Financial Institutions Act (1991) and its subsequent amendments. Also, the Central Bank of Nigeria Act (1959) and its subsequent amendments. .

Proximate: Bank relies on this environment for resources needed in the operation of its banking business. The proximate environment is constituted by raw materials, human and financial resources, and technology. This environment determines the day-to-day operation of banks.

Socio-cultural: The environment reflects the attitudes, values, education, performances, beliefs, and customs of the society in a bank is located. All these factors determine the patronage level for bank's products by members of the society in which it is operating.

In farm accounting, profitability is measured through farming gross margin relative to total farm asset values. Conversely, in a manufacturing setting, profitability is obtained using gross profit to net sales ratio or operating profit to net sales expressed in terms of percentage. On the other hand, in banking sector, profitability is arrived at through Net Interest Margin, Return on Equity or Return on Assets. In essence, there is no single basis for measuring profitability because it all depends on who is measuring profitability and for what purpose. In this study, profitability will be measured using the return on assets (ROA) as employed by Molyneux and Thornton (1992); Athanasoglou, Brissimis and Delis (2005) and expressed as a function of firm-level, industry level and macroeconomic factors.

2.2 Empirical Review

Various empirical studies have been conducted to validate whether economic variables has a favourable or otherwise effect on profitability. Evidence from various researchers is thoroughly reviewed in this research in order to get an adequate and better knowledge of economic variables and profitability of quoted commercial banks in some emerging and developed economies.

2.2.1 Bank Specific Factors and Profitability

Sapto, Sugiyanto and Chajar (2019) investigated the determinants of profitability in Indonesian banking industry. The study defines profitability as basic earning power (BEP) and return on equity (ROE) with variables like basic condition, market structure, banking characteristics and performance as its determinants. Both credit market and deposit market channel of Indonesian banking were used to analyze the data. The

Structure-Conduct Performance (SCP) paradigm was used to offer theoretical perspective. Data was collected through purposive sampling technique, randomly picked from Indonesian banks financial statements during 2001-2014. The dynamic panel GMM-Arellanno Bond was used as the tool analysis. The results show that basic condition, market structure, banking characteristic, and performance significantly influence profitability. Based on this result, the study recommends that Indonesian banking segment should improve its market structure through enhancement of performance particularly that of individual banks. It also recommends that regulations and policy planning of national banking industry should be directed to retaining and increasing profitability without relying on market power, nor requiring collusion or high interest to get higher profit.

Serhat, Shahriyar, Elvin and Mustafa (2018) assessed determinants of bank profitability in 13 post-Soviet countries. Within this scope, annual data between 1996 and 2016 was analyzed by using fixed effects panel regression and the Generalized Method of Moments (GMM). It was concluded that loan amount, non-interest income and economic growth are significant indicators of profitability. Moreover, the 2008 global mortgage crisis has a negative influence on bank profitability in post-Soviet countries. According to the estimation results, there is a positive relationship between non-interest income and economic growth with profitability. This result shows that when non-interest income of the banks increases, such as credit card fees and commission, it affects the financial performance of the banks, positively, and contributes to bank profitability. Another result of this study is that economic growth positively influences bank profitability. The study concluded that higher GDP comes with higher bank profitability for post-Soviet

countries. Lastly, there was a negative relationship between loan-to-GDP ratio and profitability of the banks in post-Soviet countries. This means that when the ratio of total loans to GDP increases, it affects financial performance of the banks in a negative way. While considering this result, it was recommended that banks in post-Soviet countries should focus on ways to increase their non-interest income. Additionally, it is also significant for these banks to be careful and risk averse when lending to their customers.

Abugamea (2018) examined the impact of bank-specific and major macroeconomic factors on the profitability of banking sector of Palestine by using the aggregate bank balance sheet data over the time period 1995-2015. The study employs the Ordinary Least Square method to investigate the effect of bank's asset size, capital, loans, deposits, economic growth and inflation on key bank profitability indicators, i.e., return on assets (ROA), return on equity (ROE) and net interest margin (NIM), separately. The main findings show that size has positive impact on ROE. Capital is positively related to ROA. Loans are positively correlated with both ROA and ROE. Deposits are negatively related to both ROA and ROE. Also, it is found that neither internal nor external factors have significant impact on NIM, despite the fact that overall internal and external factors have a significant effect as denoted by F-statistics value. Moreover, banking sector has not benefited significantly from both the inflationary environment and economic growth. These findings are of value to both academicians and policy makers.

Saheed (2018) examined internal factors affecting profitability of commercial banks in Nigeria for the period of 2008-2016 using panel data of 14 listed banks drawn from the Nigerian Stock Exchange. Secondary data obtained from the listed commercial banks' financial statements were analyzed. The independent variables were proxied by Capital

Adequacy, Credit Risk, and Inflation while profitability was proxied by Return on Assets (ROA). The study adopts correlational research design to investigate the determinants of profitability of the commercial banks. Panel data techniques (fixed and random effects model) were employed to examine the effect of internal factors on profitability of the sampled listed commercial banks. Although Hausman specification test suggested that fixed effect model is more appropriate, the study used Feasible Generalized Least Square (FGLS) to underpin the outcome of the Hausman specification. The study found that internal factors had significantly influenced the commercial banks' profitability over the study period. The Capital Adequacy had a positive and significant relationship with bank profitability while Credit Risk had a negative and significant relationship with bank profitability during the study period. It is therefore suggested among others that the Central Bank of Nigeria (CBN) should maintain a central database called Credit Risk Management System across banks in the country, which would be generating accurate and reliable credit information on bank borrowers as a way of evaluating the repayment capabilities of the customers to be granted credit facilities.

Tam, Trang and Hanh (2017) examined determinants of bank profitability: The case of commercial banks listed on the Vietnam's Stock Exchange. Using panel data collected from 9 Vietnamese commercial banks listed in the HNX and HOSE in period 2007-2013 data, this paper found out that: (1) profitability level of these banks is higher than minimum requirements of CAMELS, that is, when compared to the average levels of international standards - although some banks got low profitability in certain years; (2) the profitability of these banks are determined by several internal and external factors. The key significant internal factors are: bank size - the smaller banks have higher profit;

total assets – a total assets growth rate – the higher the profit; interest rates – higher interest rate level bring better benefit to banks than deposit customers. To improve the bank profitability, management should consider carefully the appropriate bank size, manage the cost structure well, implement the rational interest rate policy, and manage the credit risks and other risks prudentially. Bank returns are also strongly affected by macroeconomic variables, suggesting that macroeconomic policies to promote low inflation and high GDP growth rate to have good impacts on bank profitability and development.

Mehmet and Nimet (2017) determined the bank-specific and macroeconomic determinants of commercial banks in Turkey over the period 2005-2015. A balanced panel data set has been formed covering 43 periods between the dates of January 2005 and September 2015. Each period is of 1-year length. According to the empirical results, bank-specific characteristics such as, the ratio of interest on loans to the interest on deposits (ILID), used as a proxy for net interest margin, the ratio of net fees and commissions revenues to total operating expenses (FCE), and relative size (SIZE) have positive and significant impact on profitability represented by return on assets and return on equity. On the other hand, the ratio of nonperforming loans to total loans (NPL) used as a proxy for credit risk, and capital adequacy (ESA) and the ratio of other operating expenses to total operating revenues (OEI), are negatively related to profitability. The most striking result is the fact that among all the bank-specific variables OEI has the strongest impact on profitability. The finding is consistent with the fact that since banks are limited in the determination of interest rates, they do not have control on the level of net interest revenues. Thus economizing on the operating expenses is a more feasible

option in increasing the profits. With respect to macroeconomic variables, real GDP and interest rate have positive impact on profitability whereas the exchange rate has a negative impact.

Mustapha (2017) investigated the determinants of banks' profitability in Nigeria using a panel dataset between 2001 and 2015. The results of previous empirical studies are mixed and inconclusive in terms of factors that actually influence the level of bank performance as a result of difference in sample period, estimation techniques, and countries. Ordinary Least Square and Generalized Method of Moment techniques were utilized. The results show that bank specific factors such as efficiency ratio, credit risk and capital adequacy are the key determinants of banks 'profitability in the long run. In addition, only capital adequacy exhibits a significant influence. However in the short run, the market concentration and real gross domestic product significantly affect the performance level in Nigeria's commercial banks for the full sample period as well as for period after bank capitalization.

Khan (2017) investigated the influence of various bank specific and macroeconomic determinants of bank profitability by taking 47 commercial banks of Bangladesh during the period 2010-15. Three different measures of profitability namely return on assets (ROA), return on equity (ROE) and net interest margin over total assets (NIM) are used in the study. The data are from the annual reports of individual banks, BFID annual reports, and various publications of the Bangladesh Bank and Bangladesh Bureau of Statistics. The Feasible Generalised Least Squares (FGLS) model for panel data has been applied to estimate the effect of the explanatory variables. The result indicated that nonperforming loans, loan loss provisions, bank size, cost efficiency and liquidity had

significant negative effect on ROA, while non-traditional activities measured by non interest income and off balance sheet activities had significant positive effect on ROA. In the model for ROE, loan loss provision and cost efficiency had significant negative effect. The equity capital, loan loss provision, non interest income, cost efficiency and liquidity had significant positive effect on NIM, while bank size and off balance sheet activities had significant negative effect on NIM. The study finds no significant impact of the macroeconomic variables-rate of growth of real GDP and inflation rate included in the models on profitability. The financial soundness indicators of Bangladesh compare well with those from countries like India, Pakistan, Sri Lanka, China, Indonesia, Thailand and Vietnam.

Adwaita and Sebak (2017) examined determinants of profitability of banks in India: a panel data analysis. The study finds the determinants of five major bank groups in India namely, State Bank of India & its Associates, Nationalised Banks, New Private Sector Banks, Old Private Sector Banks and Foreign Banks, consisting a total of 75 banks. The study uses panel data regression method to investigate the impact of various internal factors on profitability of banks. The empirical results have found strong evidence that profit per employee, net interest margin, net non-performing assets ratio and non-interest income have a significant impacts on the profitability for all bank groups.

Karakuza (2017) examined the profitability of Turkish commercial banks during the period 2005 – 2014. The study used bank – specific determinants to predict the following years' profitability measured by return on assets (ROA). Among the performance measures, the amount of net interest income as a proportion of total operating income is positive related to profitability. It remains important for banks to loan money out at a rate

higher than their cost of capital. Non-interest income as a proportion of total assets is strongly positively related to profitability. Consumer loans as a proportion of total loans is negatively related to profitability. The findings indicate that while the traditional source of bank profits from lending remains crucial, diversifying away from consumer loans into earning income from non-interest sources is important for enhancing bank profitability.

Md and Rezwanul (2017) investigated the determinants of profitability of fifteen selected private commercial banks in Bangladesh over the period 2005–2015. The study emphasizes on the internal factors that affect bank profitability. The study used panel data to explore the impact of the nonperforming loan, cost to income ratio, loan to deposit ratio, commission fees, cost of fund and operating expenses on the profitability indicators of banks like return on asset and return on equity. The experimental outcomes have found strong evidence that nonperforming loan (NPL) and operating expenses have a significant effect on the profitability. Moreover, the results have shown that higher NPL may lead to less profit due to the provision of classified loans. Again, higher loan to deposit (LD) ratio and cost of fund contribute towards profitability, but their impacts are not significant in the private commercial banks of Bangladesh.

Md, Md, Mahabub, Arifin and AZM (2017) examined the profitability determinants of private commercial banks of Bangladesh for the year 2014 and 2015. The study employed annual data for all the 11 private commercial banks of Bangladesh for the year 2014 and 2015. Multiple regression analyses were run to capture the significant determinants of profitability and to test hypothesis. The empirical findings from the study suggested that asset size and Net Interest Margin ratio had no significant effect on the

profitability. But the impact of non-performing loans to total loans (NPL) on profitability was observed as the most significant among various variables. Furthermore, investment activities, mainly in shares and debentures of private sectors also have some positive impact on return on equity (ROE). The findings also suggested that diversified banking activities including the investment activities made these banks more profitable. Diversified banking activities are welcomed but if these activities include higher proportion of volatile trading activity rather than low risk income streams like fees and commission, the risk may become higher. The policy direction should be directed in such a way which will enhance the resilience and efficiency of the financial institutions with the aim of intensifying the sturdiness as well as strength of the banking sector.

Antonio (2016) examined the factors determining the profitability of the top sixteen global banks according to market capitalization. Using panel data spanning the period 1980 to 2015, this study estimates several specifications to examine the impact of bank-level and country-level variables on profitability. Fixed effects and GMM results show that bank characteristics, industry structure and macroeconomics variables are important in explaining global banks' profitability. Bank capital and productivity increase a bank's profitability whereas credit risk and operating efficiency reduce it. With respect to the macroeconomic indicators, higher economic growth and inflation spur banks' profitability. The study also provides evidence on the positive impact of the business cycle on global banks' profitability. In sum, the study concludes that bank-level factors are the most significant determinant of bank profitability. The result should be that bank managers focus greater on adjusting internal factors while adapting to external factors.

Shoaib, Wang, Jaleel and Peng (2015) investigated how bank-specific, industry-specific and macroeconomic factors affect the profitability of banking sector of Pakistan. The study applied Pooled Ordinary Least Square (POLS) regression technique on financial data of all Pakistani banks over the period 2006 to 2013. In this way this paper fills the gap in Pakistani banking literature by providing current determinants of profitability of the sector by using latest available data. All the independent variables proved according to the expected signs and show highly significant relationship with the profitability. The empirical results show that profitability of Pakistani banking sector is negatively affected by funding Cost, liquidity, non-performing loans, and administrative expensive and positively affected by non-fund based services, capital adequacy, banking sector development and economic growth. Our study has important implications for the regulator and management of the banks for developing future business strategies.

Fentaw (2015) reviewed the determinants of commercial banks' profitability and to compare or combine results across sets of similar studies and contrasting the significant deviations in those findings by different scholars and to suggest a comprehensive model that incorporates macroeconomic, industry-specific and bank-specific determinants of commercial banks profitability. To achieve these objectives the study was designed to gleaned data from various national and international journal articles together with the basic theories relating to the determinants of commercial bank's profitability irrespective of countries or economic level in which the banks are operating. Most of the research works so far, either in developed or developing counties, regarding the determinants of commercial banks profitability, comes across divergent results with the application of different models (i.e. pooled ordinary least square is mostly commonly applied by

scholars in those countries). However, in finance the distribution of the data is often heavy-tailed and skewed with numerous large outliers, which violate the assumptions of classical linear regression. The variables investigated across studies have got uncommon concern by scholars. Most of the scholars used the traditional accounting measures for analysis towards determinants of banks' profitability; ROA and ROE using multiple linear regression models. Economic measures of profitability are not used due to the lack of data and because the disclosed parameters are subject to internal policies and assessments which cannot be generalized or validated. The study recommends that the mixed research approach and panel data with the GMM model estimator and the inclusion of all banks specific, industry/sector specific and macro economic factors to better understand the determinants of the variations in the performance of commercial banks irrespective of the level of economic development.

Musa (2015) examined the determinants of financial performance listed mega banks in Nigeria for a period of seven years. The population of this study comprises the 11 listed mega banks in Nigeria as at 31 December, 2013. A total of 8 banks that meet the criteria were duly selected as sample for the study. The audited annual reports (Balance sheet and Profit/Loss account) were obtained from Central Bank of Nigeria (CBN) and from selected mega banks' annual publication reports. The result of random effect regression provides evidence that capital adequacy, bank size, cost income ratio and income diversification have significant impact on financial performance of the banks under study. Based on the findings, the study recommends among others that a policy that will encourages banks to engage in non-interest income activities should be put in place since non- interest income has positive impact on financial performance.

Olaoye and Olarewaju (2015) examined the determinants of bank profitability in Nigeria. It relates internal bank specific and macroeconomic indicators to the overall profitability of Nigerian banks based on Return on Asset as the measure of profitability. The study uses a panel of individual banks' financial statements from 2004 to 20012. According to the empirical results, Nigerian banks suffer from low quality of loans and do not monitor the repayment of the loans disbursed and more so, their assets cannot cover the amount of loan disbursed. This study also finds that macro economic variables do not have a major effect on bank profitability and inflation posed adverse effect on profitability. Most importantly, Sterling bank should react quickly to all the variables considered in the study, all nearly posed a negative influence on their profitability in that if these entire factors are properly monitored, they are likely to be better off in their performance.

Stephen, Funso and Adewale (2014) examined the factors that influence the profitability level of commercial banks in Nigeria. Panel data method was employed to analyze time series and cross-sectional data gathered from 2000 to 2013 on a sample of fourteen banks. Profitability is measured with return on assets as a function of some internal and external determinants, which includes; capital adequacy ratio, asset quality, management efficiency, liquidity ratio, inflation, and economic growth. The findings revealed that asset quality, management efficiency, and economic growth are the determinants of commercial banks' profitability. They were found to be statistically significant on profitability in both the fixed effect and random effect models. Asset quality was highly significant in all the models; thus concluding that credit risk is a major determinant of commercial banks' profitability.

Haroon (2014) examined determinants of banks profitability in Pakistan. The study is conducted by taking 31 commercial banks operating in Pakistan for the period 2009-2012. The results revealed that banks profitability is significantly impacted by CAP and size while loan loss provision, deposit growth are form to have negative significant coefficients our results are robust as we imply panel data estimation techniques of fixed, common, and random effect model. The results are in line with in past research done on the impact of internal factors on banks profitability.

Ani, Ugwunta and Imo (2012) examined determinants of banking industry profitability in Nigeria: a bank-specific and macroeconomic characteristics analysis. Industry related dataset that covers a 10year period of time was used. The regression results indicate that bank-specific characteristics and macroeconomic variables explain up to 97.4% variations in bank profitability when NIM was used as a dependent variable. Summarily, profitability was found to be associated with well-capitalised banks as capital ratio has a positive significant relationship with NIM; bank size has a negative but significant relationship with NIM; Asset composition has a positive but an insignificant relationship with NIM; Liquidity has a negative and insignificant relationship with NIM; all the macroeconomic variables apart from inflation have a negative and insignificant relationship with NIM. Therefore, the study recommends that regulatory authorities should promote policies that will bring about low inflation and stable economic output growth, whereas, bank managements should concentrate more on cost and non-performing loans reduction and asset composition diversification.

Ani, Ugwunta, Ezeudu and Ugwuanyi (2012) investigated determinants of the profitability of commercial banks in Nigeria. The study data set is made up of 147 bank

level observations over a 10-year period from 2001 to 2010 in respect of 15 banks that satisfied the study requirements. Data were obtained from the annual reports and accounts of the sampled banks. Pooled OLS (Pooled ordinary least square) stated in a multiple regression form was used to estimate the coefficients. Major outcomes of the analysis include that increase in size (higher total assets) may not necessarily lead to higher profits due to diseconomies of scale; higher capital-assets ratio and loans and advances contribute strongly to bank profitability. Overall, the study suggested bank size, capital and asset composition as the major endogenous determinants of bank profitability in Nigeria.

Javaid, Anwar, Zaman and Gafoor (2011) examined the determinants that mostly influence the overall performance of banks in Pakistan. This study aims to give the analysis of the determinants of top 10 banks' profitability in Pakistan over the period 2004-2008. The focus is on the internal factors only. The study used the pooled Ordinary Least Square (POLS) method to investigate the impact of assets, loans, equity, and deposits on one of the major profitability indicator return on asset (ROA). The empirical results have found strong evidence that these variables have a strong influence on the profitability. However, the results show that higher total assets may not necessarily lead to higher profits due to diseconomies of scales. Also, higher loans contribute towards profitability but their impact is not significant. Equity and Deposits have significant impact on profitability.

Naceur (2003) investigated the impact of bank's characteristics, financial structure and macroeconomic indicators on banks' net interest margins and profitability in the Tunisian banking industry during the 1980-2000 period. The key findings suggest that individual

bank characteristics explain a substantial part of the within country variation in bank interest margins and net profitability. High net interest margin or profitability tend to be associated with banks that hold a relatively high amount of capital, large overheads and with loans. The size has negative and significant coefficients against the net interest margin. However, such macroeconomic indicators as inflation and growth rates have no impact on bank's interest margins and profitability.

2.2.2 Industry Specific Factors and Profitability

Wayiera (2017) examined the factors that influence bank profitability in Kenya. The study has three objectives; to identify the effect of bank-specific factors on profitability level of commercial banks in Kenya, to examine the effect of industry-specific factors on profitability level of commercial banks in Kenya, and to determine the effect of macro-economic factors on profitability level of commercial banks in Kenya. The study used secondary research approach due to the availability of secondary data. The study has a population of 43 commercial banks. The study finds that bank specific factors present mixed results although in each case, the correlations are significant. That is, bank capitalization has a negative correlation with profitability, while bank size has a positive correlation with profitability. Industry specific factors have a significant negative correlation with bank profitability. That is, both industry concentration and market growth have a significant negative correlation with bank profitability. Macro-economic factors in both instances have significant negative correlation with bank profitability. That is, both GDP (Gross Domestic Product) and interest rates have a significant negative correlation with bank profitability. The study recommends that, to achieve bank

profitability, monopolistic tendencies should be discouraged through specific policy and decisions to encourage competitive behavior.

Dudley and Carl-Henri (2016) examined determinants of profitability in Haiti. The study looks at the data from the country's nine banks from the 1st quarter of 2001 to the last quarter of 2015 in order to find the determinants of their profitability. The study regressed the Return on Asset Ratio (ROA) on a set of bank-specific indicators, market structure factors as well as macroeconomic variables. The main conclusion regarding bank specific factors is that past profitability and credit risk are positively associated with ROA, while operating expenses shows a negative relationship with it. With respect to market structure, banking system concentration has a relatively small impact on ROA. On the macroeconomic side, factors positively associated with ROA are the growth in commercial activity and the main monetary policy rate.

Petriaa, Caprarub and Ihnatovc (2015) assessed the main determinants of banks' profitability in EU27 over the period 2004-2011. The study split the factors that influence bank profitability in two large groups: bank-specific (internal) factors and industry specific and macroeconomic (external) factors. The study considers as proxy for banks profitability the return on average assets (ROAA) and the return on average equity (ROAE). Credit and liquidity risk, management efficiency, the diversification of business, the market concentration/competition and the economic growth have influence on bank profitability, both on ROAA and ROAE. An interesting and valuable result is the positive influence of competition on bank profitability in EU27.

Shoaib, Wang, Jaleel and Peng (2015) investigated how bank-specific, industry-specific and macroeconomic factors affect the profitability of banking sector of Pakistan. The study applied Pooled Ordinary Least Square (POLS) regression technique on financial data of all Pakistani banks over the period 2006 to 2013. In this way this paper fills the gap in Pakistani banking literature by providing current determinants of profitability of the sector by using latest available data. All the independent variables proved according to the expected signs and show highly significant relationship with the profitability. The empirical results show that profitability of Pakistani banking sector is negatively affected by funding Cost, liquidity, non-performing loans, and administrative expensive and positively affected by non-fund based services, capital adequacy, banking sector development and economic growth. Our study has important implications for the regulator and management of the banks for developing future business strategies.

James, Olawale and Felix (2014) investigated the impact of bank-specific, industry-specific and macroeconomic indicators on bank profitability in Nigeria over the time period from 1998 to 2012, using random-effect model. Bank profitability is proxied by return on assets (ROA) return on equity (ROE) and net interest margin (NIM). Findings suggest the existence of positive and significant effect of capital adequacy, bank size, productivity growth and deposits on profitability. Credit risk and liquidity ratio have a negative and significant effect on bank profits. However, no evidence is found in support of the effect of industry-specific variables. Finally, as expected, inflation rate and interest rate are negatively and significantly related to bank profitability.

Osuagwu (2014) investigated 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.

2.2.3 Macroeconomic Factors and Profitability

Faozi, Eissa, Mosab and Najib (2018) examined the determinants of profitability of Indian commercial banks. The analysis was conducted over a period of 10 years in which the Indian banking sector has gone under different changes such as demonetization and issues related to banking sector sustainability and banking sector frauds. The analysis is based on balanced panel data over a period ranging from 2008 to 2017 for 69 commercial Indian banks. Profitability of Indian banks is measured by two proxies, namely, return on assets (ROA) and return on equity (ROE), whereas bank size, assets quality, capital adequacy, liquidity, operating efficiency, deposits, leverage, assets management, and the number of branches are used as bank-specific factors. Further, a set of macroeconomic determinants such as gross domestic product, inflation rate, interest rate, exchange rate, financial crisis, and demonetization are used as independent variables. Stationary test along with pooled, fixed, random effect models and panel correction standard error are used in this study. The results revealed that bank size, the number of branches, assets management ratio, operational efficiency, and leverage ratio are the most important

bank-specific determinants that affect the profitability of Indian commercial banks as measured by ROA. Furthermore, among the bank-specific determinants, the results revealed that bank size, assets management ratio, assets quality ratio, and liquidity ratio are found to have a significant positive impact on ROE. With regard to the macroeconomic determinants, the results revealed that the inflation rate, exchange rate, the interest rate, and demonization are found to have a significant impact on ROA. However, in the case of ROE, the results show that all macroeconomic determinants except demonization have a significant impact on the bank's profitability as measured by ROE.

Hossain and Khalid (2018) examined the factors of profitability. Moreover, the study examined to find the relationship between profitability and its determinants in Bangladesh context during recession and Pre-recession. Some others external and internal factors also considered to measure the banking profitability of bank. Return on average asset (ROAA) is considered as a dependent variable and which is the measurement of profitability in this study, whether, independent variables are divided into two segments: those are bank-specific characteristics (internal factors) such as - Equity Over Total Assets (ETA), Cost-Income Ratio (CIR), Loan Loss Provisions Over Total Loans (LLPOTL), Yearly Growth Of Deposits (YGD), Net Interest Income Over Net Income (NII) and industry-specific characteristics (external factors) such as - Effective Tax Rate (ETR), Real GDP Growth (RGG), Treasury Bonds (TBDiff), Inflation Growth (IG). To conduct the research the data for pre-crisis period (2002-2006) and, on the contrary, during crisis situation (2007-2008) was taken. The results show that bank-specific

(internal) and market-specific (external) factors have influence on bank profitability, but macroeconomic factors do not.

Tuffour, Owusu and Ofori-Boateng (2018) examined internal and external determinants of bank profitability in Ghanaian banking industry. Materials and Methods: A panel data of 6 banks listed on the Ghana Stock Exchange was analyzed over the period 2010-2015, using pooled regression models. Results: The statistical results revealed that major determinants of bank profitability in Ghana include the bank capital adequacy, liquidity, total assets and real interest rate. Bank liquidity has significant negative effect on both return on assets and return on equity, while bank operating efficiency has negative and significant influence on only return on equity. On the other hand, while bank capital adequacy was positive and significant for determining both return on assets and return on equity, that of bank total assets has positive and significant influence on only return on assets. Conclusion: With respect to the external factors, the results show that real interest rate has significant positive relationship with both return on assets and return on equity, making it a key determinant of bank profitability unlike gross domestic product. It is recommended that banks should consider their interest rate carefully so that, bank performance can be enhanced. Also, efficient and effective liquidity management should be implemented by bank managers to ensure that banks do not become insolvent. Banks should therefore be encouraged to look beyond local market and strategically expand their operations to other markets and sectors of the economy. The government should implement policies to stimulate the growth of the economy to facilitate financial transactions.

Ayadi and Chidozie (2017) analysed the impact of macroeconomic dynamics on banks' profitability in Nigeria. Specifically, the study examined the impact of macroeconomic variables (Gross domestic product growth, Inflation, and Crude oil price) on banks' profitability. It also seeks to examine the significance of microeconomic variables (cost to income ratio, loan to deposit ratio; loan to total assets ratio and total assets) on banks' profitability. It analysed the impact of banking industry concentration on banks' profitability. The estimation technique follows a panel regression which studied a cross section of the banking firms while observing the heterogeneity in the individual firms. The results indicated that the ratio of cost to income market concentration, and crude oil price are negatively significant in determining changes in return on average equity while total assets is positively significant in explaining return on average equity (as a measure of profitability). The study recommended that banks' exposure to the oil and gas sector must be properly managed given the significant impact of crude oil price on banks' profitability. It is evident that the Nigerian banking industry is fairly competitive, and banks size matters in determining profitability. Banks management must therefore focus on strategies that will give them cost advantage as well as differentiate them from other competitors.

Ofuan and Agbonrha-Oghoye (2016) investigated the determinants of profit in the Nigerian banking sector. The study employed a panel research design, with bank specific and macroeconomic data sourced from annual reports and Central Bank of Nigeria Statistical Bulletin covering the period 2006 to 2012. The data panel were analyzed using Ordinary Least Square (OLS) statistical technique. Conventional diagnostic tests of normality, multicollinearity, heteroskedasticity, autocorrelation and misspecification

were conducted. In conducting the estimation of bank specific and macro-economic characteristics and bank profit, the significant variables from fixed effect estimation of preliminary baseline regressions were extracted and regressed on PCAINDEX and TOBINS' Q and the findings are: capital adequacy, economic stability, money supply, inflation rate, lending interest rate and exchange rate were statistically significant at 5% level of significance on PCAINDEX and TOBIN'S Q respectively, although the strength of their impact was not the same. Total loans and advances were not statistically significant on PCAINDEX. The study also shows that the differences between the forecasting measures for bank specific conditions and macroeconomic conditions are not convincing enough to conclude on which model has higher forecasting ability for banks profitability. The study therefore recommend that there is the need for sensible macroeconomic and bank specific characteristics management as the findings have revealed the sensitivity of banks profitability indices to both macroeconomic and bank specific factors.

Abdus (2015) examined the impact of bank specific characteristics and macroeconomic variables in determining the banks' profitablity of Bangladesh banking industry with a panel data. A total of 42 Bangladesh commercial banks' financial reports were analyzed; and bank specific characteristics such as bank financial risk, bank operational efficiency, and bank sizes as well as macroeconomic variables such as economic growth are examined to estimate their impact of bank profits. Results indicate that bank specific factors such as loan-deposit ratio, loan-loss provision to total assets, equity capital to total assets, and operating expenses to total assets are significant factors. Bank sizes and macroeconomic variable show no impact on profits.

Aminu (2013) conducted to find out the impact of bank specific and macroeconomic factors on the profitability of seven (7) selected banks from Nigeria for a period of seven (7) years from 2005-2011. A panel regression analysis was used to find out these relationships empirically. The estimation results indicated that management efficiency has been a driving force in determining the profitability of banks in Nigeria with respect to the short-run analysis. However, the study also indicated how macroeconomic factors such as GDP growth rate had a negative impact on the profitability of Nigerian banks, which is no surprise due to unsettled policy reformations during the last few years. The study concluded with some remarks on possible implementations of the findings.

2.3 Theoretical Framework

This section highlights theoretical underpinnings from which the study is grounded, ranging from market structure theory to structure conduct performance theory and efficient structure theory.

2.3.1 Market Structure Theory

The theory of market structure is attributed to Hayek in the late 1920s, while it later gained attention through the works of Russell and Ruth (1988), Robert and Allan (1981). The concept of market structure is central to both economics and marketing. Both disciplines are concerned with strategic decision making. In decision-making analysis, market structure has an important role through its impact on the decision-making environment. The extent and characteristics of competition in the market affect choice behavior among the actors (Baumol, 1961; Yadav, 1995).

The traditional theory of the firm was assumed that a firm's objective is simply to maximize profit. In practice this theory is not applicable because of most modern industries, involvement in providing a variety of products/services, and faced with much more complex decisions to be taken in a dynamic and uncertain environment Devinaga (2010). The central assumption of this theory is, the industry structure (measured by market concentration in term of market share ratio) has impact on profitability of banks. The literature on the measurement of market structure (structural approach) divided into two mainstreams, called the structure–conduct–performance (SCP) paradigm and the efficiency structure hypothesis (ESH).

Market structure theory suggested two alternative policy drives in order to increase profit of the bank industry and for rationalizing market structure in banking industry. The first one lies in limiting the number of banking units in the market through encouraging mergers among existing banks. This is help to increase the bank size for pursuing scale of economics. The second strategy is the sharing common facilities such as ATM with other banks in the industry. Both strategies may be useful in enhancing the competition in the market and improving the overall profitability and efficiency of the market. As explained in the efficient structure hypothesis (ESH), there is no need to encourage mergers, since the efficient entities can improve their market share by providing banking services, which is more economical in the market. Therefore, ESH suggests instead of encouraging bank mergers, the ESH supports policies that may encourage sharing common facilities to avoid duplication of capital cost.

2.3.2 Structure Conduct Performance (SCP) Theory

Structure conduct performance (SCP) framework derived from the neo-classical analysis of markets. It first formalized by Mason in 1939 as a method of analyzing markets and firms. The SCP was the central opinion of the Harvard school of thought and popularized during 1940-60 with its empirical work involving the identification of correlations between industry structure and profitability. Most early research explanation for the relationship between the market concentration and profitability based on the structure-conduct performance (SCP) hypothesis, and focused on the interpretation of a positive empirical relationship between concentration and profitability (Goddard et al. 2004).

The SCP paradigm asserts that there is a relationship between the degree of market concentration and the degree of competition among firms. This hypothesis assumes that firms behave or rivalry in the market determined by market structure conditions, especially the number and size distribution of firms in the industry and the conditions of entry. This rivalry leads to unique levels of prices, profits and other aspects of market performance (Berger et al. 1989). The Structure-Conduct-Performance (SCP) hypothesis, which also sometimes referred to as the MP hypothesis, asserts that increased market power yields monopoly profits. A special case of the SCP hypothesis is the Relative-Market-Power (RMP) hypothesis, which suggests that only firms with large market shares and well-differentiated products are able to exercise market power and earn non-competitive profits (Berger, 1995).

The assumptions of SCP hypotheses have been applied in different research by various researcher and supported positive relationship between market concentration (measured

by concentration ratio) and performance (measured by profits) exists. Furthermore, SCP recognized the competitiveness of small market share banks with large market share is weak as a result the positive relationship between market concentration and performance (profitability) of high market share banks exist (Berger, 1989). As explained in the SCP, the market concentration encourages collusion among large firms in the industry, which subsequently leads to higher profits. Hence, SCP pointed out those changes in market concentration may have a direct influence on a firm's financial performance. Firms in more concentrated industries can earn higher profit than firms operating in less concentrated industries earn, irrespective of their efficiency (Goldberg et al. 1996).

The relative market power hypothesis (RMPH) which is a special case of SCP posited that only banks with large market shares and well differentiated service lines are able to exercise market power to gain superior profit on non-competitive price setting behaviour (in this case service charge). Berger (1995); Berger and Hannan (1989) investigated the profit structure relationship in banking, providing tests of the RMP hypotheses. To some extent, the RMP hypothesis verified that superior management and increased market share (especially in the case of small-to medium-sized banks) raise profits. SCP, in general, provides two main benefits to studies, which investigate the banks profit behaviour. First, it shows the way to the banks profits are operating. Thus, it explains different forces that restrict or expand the scope of banks' operations in the market. Especially with profitability studies, SCP helps to interpret different sources of productivity and efficiency gains or losses. Second, SCP provides a rational basis for analyzing the market behaviour.

2.3.3 The Efficient Structure Theory

The third formulation of theoretical framework for studying determinants of commercial banks profitability in this study is the efficient structure hypothesis. According to the 'efficiency' hypothesis, a positive concentration– profitability relationship may reflect a positive relationship between size and efficiency. It states that efficient banks in the market lead to increase in the firms' size and market share due to the aggressive behaviour. This behaviour of the efficient banks allowed such firms to concentrate and earn higher profits with further enhancing their market share. Those firms can maximize profits either by maintaining the present level of product price or service charge and firms' size or by reducing the service charge and expanding the firm size (Smirlock 1985).

Finally, the ESH stated that the significant relationship between profit and concentration results exist from the lower cost achieved through superior management and efficient production process. In contrast to SCP hypothesis, the ESH uncertain whether the high profits of large banks are a consequence of concentrated market structures and collusion. As explained by Berger and Hannan (1989), ESH and SPC stand on similar observation on the relationship between concentration and performance (profitability). However, the difference in two theories consisted mainly in ways of interpretation of the relationship.

This study support the market structure theory, according to the theory there is a direct relationship between bank specific, industry specific factors and profitability. Therefore, this study adopts the market structure theory.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The study adopts *Ex post facto* research design to explain the relationship between economic variables and profitability. *Ex post facto* research design is a quasi-experimental study and is appropriate for this study as it examined how independent variables affect dependent variable. A quasi-experimental study simply means participants are not randomly assigned. This study sought to ascertain the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria.

3.2 Population, Sample and Sampling Techniques

All the thirteen (13) commercial banks quoted on the floor of Nigerian stock exchange form the population of the study as at December 2019. Namely: Fidelity Bank Plc, Stanbic IBTC Bank Plc, Access bank Plc, First City Monument bank Plc, Ecobank Transnational incorporated, First Bank Plc, Guaranty Trust Bank Plc, Union Bank of Nigeria Plc, United Bank of Africa Plc, Unity Bank Plc, Sterling Bank Plc, Wema Bank Plc and Zenith Bank Plc.

Ecobank Transnational incorporated was exempted from the sampled banks due to accessibility to data, therefore twelve quoted commercial banks in Nigeria was used as the sample size for this study.

3.3 Methods of Data Collection

The data was collected from secondary source of data such as: Annual reports of commercial banks from 2010 to 2018.

3.4 Technique for Data Analysis and Model Specification

This study employed multiple regression analysis to estimate each of the economic variables (bank specific, industry specific and macroeconomic specific factors. Bank specific factors includes: Credit risk and loan to total asset. While industry specific factor is banking sector development and Macroeconomic factor on the other hand was inflation rate.) with profitability (return on asset) of quoted commercial banks in Nigeria. The data collected was analyzed using E-views version 10. Descriptive statistics, regression analysis and wald test was carried out and post estimation analysis such as Heteroskedasticity test and Serial Correlation was also carried out.

3.4.1 Model Specification

The model adopted for this study is given as thus:

$$LOGROA_{it} = b_o + b_1LOGCR_{it} + b_2LOGLTA_{it} + b_3LOGBSD_{it} + b_4LOGINF_{it} + e_{it}$$

Where;

$LOGROA_{it}$ = Natural Logarithm of Return on Asset of firm i at time t

$LOGCR_{it}$= Natural Logarithm of Credit Risk of firm i at time t

$LOGLTA_{it}$= Natural Logarithm of Loan to Total Asset of firm i at time t

$LOGBSD_{it}$ = Natural Logarithm of Banking Sector Development of firm i at time t

$LOGINF_{it}$= Natural Logarithm of Inflation Rate of firm i at time t

b_0 = Constant

e_{it} = Error term

b_1, b_2, b_3, b_4 = the slope or the co-efficient of the independent variables.

Table 1 Measurement Table for Dependent and Independent Variables

Variables Specification	**Proxied By**	**Description**
Dependent Profitability	Return on Asset (ROA)	Profit after tax / Total asset
Independent Bank Specific Factors	Credit Risk (CR)	Non performing loan / Total loan and advances
	Loan to Total Asset (LTA)	Total loan and advances / Total asset
Industry Specific Factor	Banking Sector Development (BSD)	Log of Total Assets / Log of GDP
Macroeconomic Factors	Inflation Rate (INF)	defined as the natural logarithm of inflation rate

Source: Researcher's Computation 2019.

3.5 Justification of Methods

The Ordinary Least Square (OLS) is appropriate because it is Best Linear Unbiased Estimation (BLUE) method of regression. It is a statistical tool that measures cause-effect relationship between variables. Thus this study is on the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria. Therefore, the study looked at the cause-effect of economic variables such as bank specific factors, industry specific factor and macroeconomic factors. Thus OLS is more appropriate. This method is considered simple and explicit as it tells how significant each of these economic variables (bank specific factors, industry specific factor and macroeconomic factors) is to profitability of quoted commercial banks in Nigeria. This helps to draw a reliable and reasonable conclusion without much stress.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation

This study examines the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria. Data relating to bank specific factors (Credit risk and Loan to total asset), industry specific factor (Banking sector development) and macroeconomic factor (Inflation rate) were presented for analysis which can be seen in appendix 1.

4.2 Data Analysis

Table 2 Descriptive Statistics

	LOGROA	LOGCR	LOGLTA	LOGBSD	LOGINF
Mean	0.434939	-1.907875	-0.796819	1.553820	2.451525
Median	0.491526	-1.745823	-0.799045	1.382229	2.468100
Maximum	3.007167	0.902497	1.722885	2.171049	2.920470
Minimum	-3.218876	-4.578236	-3.315938	1.082592	2.074429
Std. Dev.	0.942758	1.259559	0.634165	0.288672	0.270295
Skewness	-0.548927	-0.270549	0.694677	0.181930	0.213974
Kurtosis	4.439206	2.125196	10.24604	1.347083	2.057011
Jarque-Bera	16.38300	5.290344	272.1772	14.32265	5.361831
Probability	0.000277	0.070993	0.000000	0.000776	0.068500
Sum	52.19266	-228.9449	-95.61823	186.4584	294.1830
Sum Sq. Dev.	105.7664	188.7923	47.85764	9.916479	8.694050
Observations	120	120	120	120	120

Source: Eview version 10 output 2019

The table 2 revealed the data used in the study with logarithm of return on asset having a mean value of 0.434939 which means that return on asset on an average is 0.43% for quoted commercial banks in Nigeria. The deviation from the mean (standard deviation) was 0.942758; this means that logarithm of return on asset was not normally distributed because the standard deviation value was higher than the mean value. In like manner, it

has a median of 0.491526 with skewness and kurtosis of -0.548927 and 4.439206 respectively. The maximum logarithm of return on asset of quoted commercial banks in Nigeria as at the period of study was 3.007167 which means that the highest logarithm of return on asset of quoted commercial banks was not more than 3, while the minimum logarithm of return on asset employed by the quoted commercial banks in Nigeria for the period under study was -3.218876.

The logarithm of credit risk has mean value of 1.907875 while deviation from the mean (standard deviation) was 1.259559. This means that logarithm of credit risk was normally distributed because the standard deviation value was lower than the mean value. In like manner it had median of 1.745823 with skewness and kurtosis of -0.270549 and 2.125196 respectively. The maximum logarithm of credit risk of quoted commercial banks in Nigeria as at the period of study was 0.902497 which means that the highest logarithm of credit risk from non performing loan of the quoted commercial banks in Nigeria was not more than 0.90, while the minimum logarithm of credit risk from the quoted commercial banks for the period under study was approximately -4.578236.

The logarithm of loan to total asset has mean value of 0.796819 while deviation from the mean (standard deviation) was 0.634165. This means that logarithm of loan to total asset was normally distributed because the standard deviation value was lower than the mean value. In like manner it had median of 0.799045 with skewness and kurtosis of 0.694677 and 10.24604 respectively. The maximum logarithm of loan to total asset of quoted commercial banks in Nigeria as at the period of study was 1.722885 which means that the highest logarithm of loan to total asset from total loan and advances of the quoted commercial banks in Nigeria was not more than 1.72, while the minimum logarithm of

loan to total asset from the quoted commercial banks for the period under study was approximately -3.315938.

The logarithm of banking sector development has mean value of 1.553820 while deviation from the mean (standard deviation) was 0.288672. This means that logarithm of banking sector development was normally distributed because the standard deviation value was lower than the mean value. In like manner it had median of 1.382229 with skewness and kurtosis of 0.181930 and 1.347083 respectively. The maximum logarithm of banking sector development of quoted commercial banks in Nigeria as at the period of study was 2.171049 which means that the highest logarithm of banking sector development of the quoted commercial banks in Nigeria was not more than 2.17, while the minimum logarithm of banking sector development from the quoted commercial banks for the period under study was approximately 1.082592.

The logarithm of inflation rate has mean value of 2.451525 while deviation from the mean (standard deviation) was 0.270295. This means that logarithm of inflation rate was normally distributed because the standard deviation value was lower than the mean value. In like manner it had median of 2.468100 with skewness and kurtosis of 0.213974 and 2.057011 respectively. The maximum logarithm of inflation rate in Nigeria as at the period of study was 2.920470 which means that the highest logarithm of inflation rate in Nigeria was not more than 2.92, while the minimum logarithm of inflation rate for the period under study was approximately 2.074429.

Table 3 Correlation Matrix

Correlation	LOGROA	LOGCR	LOGLTA	LOGBSD	LOGINF
LOGROA	1.000000				
LOGCR	0.010571	1.000000			
LOGLTA	-0.210791	-0.006080	1.000000		
LOGBSD	0.105713	-0.727772	0.046932	1.000000	
LOGINF	-0.089088	0.200763	0.079877	-0.056533	1.000000

Source: Eview version 10 output

Table 3 presents the relationship between economic variables and return on asset of quoted commercial banks in Nigeria, from which it can be observed that logarithm of loan to total asset and logarithm of inflation rate, are negatively correlated with logarithm of return on asset. While logarithm of credit risk and logarithm of banking sector development are positively correlated with logarithm of return on asset. Logarithm of credit risk was correlated to logarithm of return on asset to the extent of 0.010571 (1%), while logarithm of loan to total asset was correlated with logarithm of return on asset to the extent of 0.210791 (21%). Logarithm of banking sector development and logarithm of inflation rate was correlated with logarithm of return on asset to the extent of 0.105713(11%) and 0.089088(9%). It can be seen from table 3 that the highest correlation between independent variables is 0.73 and that occurred between logarithm of banking sector development and logarithm of credit risk. Judge, Griffiths, Hill, Luthepohl, and Lee (1985) suggest that simple correlation between independent variables should not be considered harmful until they exceed 0.8 or 0.9. (Gurajati & Portal, 2009).

Table 4 Regression Result

Variable	Coefficient	t-Statistic	Prob.
C	-0.025028	-0.026603	0.9788
LOGCR	0.175007	1.749123	0.0829
LOGLTA	-0.318554	-2.392674	0.0183
LOGBSD	0.914785	2.133235	0.0350
LOGINF	-0.359524	-1.119643	0.2652
R-squared	0.086434		
Adjusted R-squared	0.054658		
F-statistic	2.720081		
Prob(F-statistic)	0.033000		

Source: Eview version 10 output

Logarithm of credit risk had insignificant effect on logarithm of return on asset because the p-value was 0.0829 which was more than the 5% significant level, indicating that a percentage increase in credit risk as a proxy for bank specific factors will not increase return on asset to the extent of 18%. But logarithm of loan to total asset have a significant effect on logarithm of return on asset because the p-value was 0.0183 which is less than the 5% significant level, indicating that a percentage increase in loan to total asset as a proxy for bank specific factors will decrease return on asset to the extent of 32%. Therefore, the study reject H_{01}, which state that bank specific factors have no significant effect on profitability of quoted commercial banks in Nigeria, since the percentage effect of loan to total asset of 32% is greater than that of credit risk of 18% on return on asset.

However, logarithm of banking sector development have significant effect on logarithm of return on asset because the p-value was 0.0350 which was less than the 5% significant level, indicating that a percentage increase in banking sector development as a proxy for industry specific factor will increase return on asset to the extent of 91%. Therefore, the study failed to accept H_{02}, which state that industry specific factor has no significant effect on profitability of quoted commercial banks in Nigeria.

Meanwhile, logarithm of inflation rate had insignificant effect on logarithm of return on asset because the p-value was 0.2652 which was greater than the 5% significant level, indicating that a percentage increase in inflation rate as a proxy for macroeconomic factor will not decrease return on asset to the extent of 36%. Therefore, the study accepts H_{03}, which state that macroeconomic factors have no significant effect on profitability of quoted commercial banks in Nigeria.

The coefficient of determination (R^2) is 0.086434 which means that selected economic variables used in the study explained variation on profitability to the extent of 9%, while the remaining variation was explained by other variables not captured in the model. The F-statistics p-value indicates that the model is fit at 0.033000.

Table 5 Post Estimation Test

Description	Probability values
Serial Correlation	
F-statistics	1.966431
P-value	0.1448
Observed R-squared P-value	0.1305
Heteroskadasticity Test	
F-statistics	1.944025
P-value	0.1078
Observed R-squared P-value	0.1074

Source: *Researcher's computation*, 2019

The Breusch-Godfrey Serial Correlation LM Test indicates that there is no autocorrelation. This is given by the F-statistic of 1.966431 and its corresponding P-value of 0.1448, and corroborated by observed R-squared of the auxiliary regression P-value of 0.1305. The Breusch Pegan Test of Heteroskedasticity given the F-statistics 1.944025 and its corresponding P-value of 0.1078 indicates that there is no problem of

heteroskedasticity and this is corroborated by observed R-squared of the auxiliary regression P-value of 0.1074.

Wald Test for Testing Individual Variable

Table 6 H_{01}: Bank specific factors have no significant effect on profitability of quoted commercial banks in Nigeria.

Wald Test:			
Equation: Untitled			
Test Statistic	Value	df	Probability
t-statistic	-2.392674	115	0.0183
F-statistic	5.724891	(1, 115)	0.0183
Chi-square	5.724891	1	0.0167

Source: Eview Version 10 output

From the Wald test used for testing the effect of bank specific factors, it was evident that logarithm of loan to total asset have significant effect on logarithm of return on asset because the p-value was 0.0183 which agrees with the regression p-value. This signifies that loan to total asset have effect on profitability of quoted commercial banks in Nigeria. Therefore, the study rejected the null hypothesis which states that bank specific factors has no significant effect on profitability of quoted commercial banks in Nigeria thereby accepting the alternative hypothesis that bank specific factors has significant effect on profitability of quoted commercial banks in Nigeria.

Table 7 H_{02}: Industry specific factor has no significant effect on profitability of quoted commercial banks in Nigeria.

Wald Test:			
Equation: Untitled			
Test Statistic	Value	df	Probability
t-statistic	2.133235	115	0.0350
F-statistic	4.550693	(1, 115)	0.0350
Chi-square	4.550693	1	0.0329

Source: Eview Version 10 output

From the Wald test used for testing the effect of industry specific factor, it was evident that logarithm of banking sector development have significant effect on logarithm of return on asset because the p-value was 0.0350 which agrees with the regression p-value. This signifies that banking sector development have effect on profitability of quoted commercial banks in Nigeria. Therefore, the study rejected the null hypothesis which states that industry specific factor has no significant effect on profitability of quoted commercial banks in Nigeria thereby accepting the alternative hypothesis that industry specific factor has significant effect on profitability of quoted commercial banks in Nigeria.

Table 8 H_{03}: Macroeconomic factors have no significant effect on profitability of quoted commercial banks in Nigeria.

Wald Test:			
Equation: Untitled			
Test Statistic	Value	df	Probability
t-statistic	-1.119643	115	0.2652
F-statistic	1.253601	(1, 115)	0.2652
Chi-square	1.253601	1	0.2629

Source: Eview Version 10 output

From the Wald test used for testing the effect of macroeconomic factors, it was evident that logarithm of inflation rate has no significant effect on logarithm of return on asset because the p-value was 0.2652 which agrees with the regression p-value. This signifies that inflation rate has no effect on profitability of quoted commercial banks in Nigeria. Therefore, the study accepted the null hypothesis which states that macroeconomic factors have no significant effect on profitability of quoted commercial banks in Nigeria thereby rejecting the alternative hypothesis that macroeconomic factors have significant effect on profitability of quoted commercial banks in Nigeria.

4.3 Discussion of Findings

This study examines effect of selected economic variables on the profitability of quoted commercial banks in Nigeria which has unravelled various findings as discussed below:

The study found out that logarithm of credit risk as a proxy for bank specific factor has insignificant effect on logarithm of return on asset as a proxy for profitability. While it was found that logarithm of loan to total asset as a proxy for bank specific factors have significant effect on logarithm of return on asset as a proxy for profitability. Therefore, we reject the hypotheses that bank specific factors have no significant effect on profitability of quoted commercial banks in Nigeria. This is in line with the findings of Abugamea (2018) who concluded that bank-specific factors have significant impact on the profitability of banking sector of Palestine. Saheed (2018) also found that internal bank factors had significantly influenced the commercial banks' profitability over the study period in Nigeria. The findings of Mehmet and Nimet (2017); Mustapha (2017) also concluded in favour of this finding.

Logarithm of banking sector development as a proxy for industry specific factor has a significant effect on logarithm of return on asset as a proxy for profitability. As a result, we reject the hypothesis that industry specific factor has no significant effect on profitability of quoted commercial banks in Nigeria. This is in tandem with Shoaib, Wang, Jaleel and Peng (2015) they concluded that industry specific factor has a significant effect on profitability of banking sector of Pakistan. The study was also supported by the findings of Wayiera (2017).

The study also found out that logarithm of inflation rate as a proxy for macroeconomic factor has an insignificant effect on logarithm of return on asset as a proxy of profitability. Consequently, we accept the hypothesis that macroeconomic factor has no significant effect on profitability of quoted commercial banks in Nigeria. It is in agreement with the findings of Khan (2017) who examined influence of various bank specific and macroeconomic factors of bank profitability by taking 47 commercial banks of Bangladesh during the period 2010-15. The findings showed that macroeconomic factors had no significant effect on profitability of commercial banks in Bangladesh, likewise the findings of Olaoye and Olarewaju (2015); Naceur (2003). This result differs from that of Antonio (2016); Faozi, Eissa, Mosab and Najib (2018) who found that macroeconomic factors have significant effect on profitability.

The findings of this study support the market structure theory, according to the theory there is a direct relationship between bank specific, industry specific factors and profitability.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The banking system in Nigeria has witnessed series of issues and challenges. These range from banking consolidations, global financial crisis in 2007/2008 as well as bank recapitalization and of recent, ever changing Nigerian government policies. The banking system plays a major role in moving funds from the saving units to the spending units. To mention a few, if a financial system is efficient, it should show improvements in profitability, increasing the volume of funds flowing from saver to borrowers, and provide better quality services for consumers. This study examined the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria with specific objectives as to investigate the effect of bank specific factors on profitability, examine the effect of industry specific factor on profitability and to investigate the effect of macroeconomic factor on profitability of quoted commercial banks in Nigeria. From the objectives of the study, three hypotheses were formulated in null form.

Furthermore, concepts were also defined and literatures reviewed. Ex post facto research design was adopted and the 12 quoted commercial banks were employed as sample size covering the period of unstable economic development in Nigeria from 2009 to 2018 (10years). The study used secondary method of data collection sourced from annual reports and financial statements of the quoted banks. Also, multiple regression models was used to identify, explain and estimate the key relationship between various economic variables and profitability using E-views.

The study found that bank specific factors had a significant effect on profitability; industry specific factor had a significant effect on profitability; while macroeconomic factor had an insignificant effect on profitability.

5.2 Conclusion

The study concludes that credit risk as a proxy of bank specific factors had an insignificant effect on profitability, while loan to total asset as a proxy of bank specific factors have significant effect on profitability. This showed that an increase in bank specific factors will increase profitability of quoted commercial banks in Nigeria.

In the same manner, the study concludes that industry specific factor have a significant effect on profitability. This revealed that increase in industry specific factor will increase profitability of quoted commercial banks in Nigeria.

Also, the study concludes that inflation rate as a proxy for macroeconomic factor had an insignificant effect on profitability, this shows that increase in macroeconomic factor will increase profitability of quoted commercial banks in Nigeria.

5.3 Recommendations

It was therefore suggested among others that the Central Bank of Nigeria (CBN) should maintain a central database called Credit Risk Management System across banks in the country, which would be generating accurate and reliable credit information on bank borrowers as a way of evaluating the repayment capabilities of the customers to be granted credit facilities so as to keep banks profitable. Efficient and effective loan management should be adopted by bank managers to ensure that banks do not become

insolvent. Since banks are less profitable when less liquid, bank managers should be encouraged to invest in more liquid assets. This will not only improve bank profitability but it will also enable banks to meet their short term obligations as they fall due.

In addition, economies of scale derived from banking sector development play a crucial role in bank profitability. The benefit of banking sector development would reflect in the ability to reach wider markets. Banks should therefore, be encouraged to enter other local market as well as strategically operate in other international markets and economies.

The result shows that macroeconomic factors do not have significant influence in determining banks profitability. Therefore it was recommended that macroeconomic policies should be used to reduce inflation and put other macroeconomic variables in check to have good impacts on bank profitability and development. Finally, a healthy economy is a prerequisite for healthy banking system.

5.4 Limitations of the Study

The study examined the effect of selected economic variables on the profitability of quoted commercial banks in Nigeria. Thirteen commercial banks were quoted as at the time of this study, however the study was only able to use twelve because of access to data because most financial re. Therefore the result and interpretation for the study was based on the above aforementioned limitation.

5.5 Suggestions for Further Studies

This study is on effect of selected economic variables on the profitability of quoted commercial banks in Nigeria. The economic variables were grouped into three: Bank specific factors (Credit risk, Loan to total asset) industry specific factor (Banking sector development) and macroeconomic factor (inflation rate). These economic variables used contributed 9% of the profitability of quoted commercial banks in Nigeria. Therefore, further studies could be carried out on other factors that contribute the remaining 91% in determining profitability of quoted commercial banks in Nigeria.

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Appendix I

Data on Logarithm of Return On Asset, Logarithm of Credit Risk, Logarithm of Loan to Total Asset, Logarithm of Banking Sector Development and Logarithm of Inflation Rate of Quoted Commercial Banks in Nigeria from 2009-2018

BANKS-YEARS	LOGROA	LOGCR	LOGLTA	LOGBSD	LOGINF
ACCESS BANK - 09	-0.462035	-1.580083	-0.544045	1.879468	2.631889
ACCESS BANK - 10	0.322083	-0.136406	-0.589492	1.870587	2.468100
ACCESS BANK - 11	-0.061875	-3.798650	-0.658037	1.886116	2.332144
ACCESS BANK - 12	0.943906	-3.749692	-0.999944	1.712273	2.484907
ACCESS BANK - 13	0.712950	-3.500410	-0.822919	1.922888	2.074429
ACCESS BANK - 14	0.717840	-3.751436	-0.611125	1.926034	2.076938
ACCESS BANK - 15	0.932164	-3.977629	-0.615281	1.938906	2.256541
ACCESS BANK - 16	0.717840	-3.762784	-0.599988	2.171049	2.920470
ACCESS BANK - 17	0.412110	-2.916570	-0.625285	1.973687	2.803360
ACCESS BANK - 18	0.652325	-2.518480	-0.800131	1.981575	2.433613
FIDELITY BANK - 09	-1.272966	-1.210279	0.000000	1.200059	2.631889
FIDELITY BANK - 10	0.239017	-0.825235	1.268486	1.082592	2.468100
FIDELITY BANK - 11	-1.049822	-0.114022	-1.690762	1.233036	2.332144
FIDELITY BANK - 12	0.688135	-1.723273	-0.738814	1.281980	2.484907
FIDELITY BANK - 13	-0.342490	-1.765729	-0.740245	1.297229	2.074429
FIDELITY BANK - 14	0.148420	-2.169069	-0.660967	1.342440	2.076938
FIDELITY BANK –	0.122218	-1.988548	-1.015680	1.366862	2.256541

15					
FIDELITY BANK - 16	-0.287682	-0.770568	-0.591660	1.265156	2.920470
FIDELITY BANK - 17	0.314811	-1.564775	-0.584521	1.269664	2.803360
FIDELITY BANK - 18	0.285179	-1.092536	-0.704916	1.287285	2.433613
FIRST BANK - 09	-1.469676	-0.938843	-0.550130	1.330130	2.631889
FIRST BANK - 10	0.371564	-0.094402	-0.654284	1.328112	2.468100
FIRST BANK - 11	-0.430783	-1.401786	-0.592321	1.343127	2.332144
FIRST BANK - 12	0.862890	-2.020818	-0.521027	1.348486	2.484907
FIRST BANK - 13	0.598837	-1.739746	-0.567070	1.356307	2.074429
FIRST BANK - 14	0.647103	-1.353684	-0.538733	1.355468	2.076938
FIRST BANK - 15	-1.021651	-1.551056	-0.736917	1.347955	2.256541
FIRST BANK - 16	-1.021651	-1.488557	-0.627631	1.381496	2.920470
FIRST BANK - 17	-0.094311	-1.721185	-0.646189	1.389485	2.803360
FIRST BANK - 18	0.067659	-1.607081	-0.782079	1.392617	2.433613
FCMB - 09	-2.120264	-2.070418	-0.663998	1.844051	2.631889
FCMB - 10	0.385262	-3.117832	-0.481238	1.841590	2.468100
FCMB - 11	0.431782	-3.093191	-0.620131	1.843193	2.332144
FCMB - 12	0.506818	-4.248755	-0.931874	1.875056	2.484907
FCMB - 13	0.463734	-4.416452	-0.805570	1.875415	2.074429
FCMB - 14	0.636577	-4.328979	-0.637760	1.878564	2.076938
FCMB - 15	-0.891598	-3.675490	-0.670652	1.873172	2.256541
FCMB - 16	0.198851	-3.966796	-0.574986	1.876880	2.920470
FCMB - 17	-0.235722	-3.399499	-0.601832	1.876517	2.803360

FCMB - 18	0.048790	-3.064718	-0.815812	1.890150	2.433613
GTB - 09	0.985817	-2.027889	-0.639356	1.917646	2.631889
GTB - 10	1.202972	-2.573856	-0.638248	1.905745	2.468100
GTB - 11	1.128171	-3.389427	-0.805085	1.929360	2.332144
GTB - 12	1.609438	-3.320687	-0.780164	1.927645	2.484907
GTB - 13	1.453953	-3.313296	-2.464986	1.932940	2.074429
GTB - 14	1.432701	-3.412218	-0.586962	1.932372	2.076938
GTB - 15	1.371181	-3.414465	-0.587394	1.933764	2.256541
GTB - 16	1.444563	-3.155526	-0.611912	1.948895	2.920470
GTB - 17	1.627278	-2.388339	-0.802609	1.954450	2.803360
GTB - 18	1.726332	-2.049254	-0.932049	1.947468	2.433613
STANBIC IBTC - 09	1.141033	-1.835555	-0.819434	1.185949	2.631889
STANBIC IBTC - 10	0.900161	-0.321728	1.209699	1.165187	2.468100
STANBIC IBTC - 11	0.182322	-0.603764	-0.605103	1.206766	2.332144
STANBIC IBTC - 12	0.405465	-0.707394	-0.844372	1.220366	2.484907
STANBIC IBTC - 13	1.137833	-1.052090	-0.686865	1.225315	2.074429
STANBIC IBTC - 14	1.220830	-0.822063	-0.838080	1.237607	2.076938
STANBIC IBTC - 15	0.698135	-0.131303	-0.902339	1.234139	2.256541
STANBIC IBTC - 16	0.996949	-0.678935	-1.051189	1.246390	2.920470
STANBIC IBTC - 17	1.249902	-0.185352	-1.289814	1.270132	2.803360
STANBIC IBTC - 18	1.497388	-1.995042	-1.327139	1.284305	2.433613
STERLING BANK - 09	1.593309	-1.229869	-0.967629	1.769605	2.631889
STERLING BANK - 10	0.770108	-2.041938	-0.960797	1.776178	2.468100

STERLING BANK - 11	0.398776	-2.966057	-1.149911	1.828415	2.332144
STERLING BANK - 12	0.262364	-3.487246	-0.927860	1.834293	2.484907
STERLING BANK - 13	0.246860	-4.075071	-0.788401	1.843406	2.074429
STERLING BANK - 14	0.086178	-3.628989	-0.797959	1.847129	2.076938
STERLING BANK - 15	0.254642	-3.099783	-0.858734	1.839800	2.256541
STERLING BANK - 16	-0.478036	-1.751900	-0.573393	1.225044	2.920470
STERLING BANK - 17	-0.235722	-0.980195	-0.580578	1.246765	2.803360
STERLING BANK - 18	-0.174353	-0.528767	-0.558784	1.246054	2.433613
UBA - 09	-1.771957	-0.066482	-0.893158	1.308379	2.631889
UBA - 10	-3.218876	-0.766286	-0.922840	1.299506	2.468100
UBA - 11	-0.713350	-1.258982	-1.020829	1.306564	2.332144
UBA - 12	0.904218	-1.493835	-1.172280	1.315763	2.484907
UBA - 13	0.565314	-1.951274	-0.990907	1.321818	2.074429
UBA - 14	0.548121	-1.662253	-0.918393	1.319436	2.076938
UBA - 15	0.774727	-0.210869	-0.973446	1.311353	2.256541
UBA - 16	0.722706	-1.630437	-0.823860	1.325470	2.920470
UBA - 17	0.657520	-1.431334	-0.898996	1.337392	2.803360
UBA - 18	0.476234	-1.076533	-1.072056	1.353296	2.433613
UNION BANK - 09	3.007167	-0.122649	-3.315938	1.286594	2.631889
UNION BANK - 10	2.255493	-0.413581	-1.554159	1.251133	2.468100

UNION BANK - 11	2.057963	-2.070656	-1.792520	1.245070	2.332144
UNION BANK - 12	-0.342490	-2.004676	-1.867393	1.244895	2.484907
UNION BANK - 13	-0.494296	-1.495453	-1.434632	1.238431	2.074429
UNION BANK - 14	0.966984	-0.579749	-1.112966	1.235512	2.076938
UNION BANK - 15	0.285179	-0.296770	-1.050866	1.239759	2.256541
UNION BANK - 16	0.207014	-0.279976	-0.830008	1.252169	2.920470
UNION BANK - 17	0.000000	-0.130578	-1.005177	1.266732	2.803360
UNION BANK - 18	0.215111	-1.936242	-1.129428	1.263850	2.433613
UNITY BANK - 09	1.860975	-1.917364	-1.073029	1.790143	2.631889
UNITY BANK - 10	1.564441	-1.758820	-0.985418	1.791028	2.468100
UNITY BANK - 11	0.029559	-3.208035	-1.151754	1.800855	2.332144
UNITY BANK - 12	0.587787	-3.494531	-0.738741	1.799504	2.484907
UNITY BANK - 13	1.720979	-1.221085	-0.726321	1.792597	2.074429
UNITY BANK - 14	0.951658	-1.544957	-0.633585	1.784992	2.076938
UNITY BANK - 15	0.058269	-1.413694	1.714204	1.786881	2.256541
UNITY BANK - 16	-0.820981	-1.091225	-0.575071	1.798932	2.920470
UNITY BANK - 17	2.254445	-2.174165	-2.860537	1.694614	2.803360
UNITY BANK - 18	-0.616186	-1.271406	-1.687356	1.728533	2.433613
WEMA BANK - 09	1.342865	0.902497	-0.463009	1.630153	2.631889
WEMA BANK - 10	2.161022	-0.038815	0.957089	1.513810	2.468100
WEMA BANK - 11	0.678034	-1.836935	-1.190655	1.753180	2.332144
WEMA BANK - 12	0.722706	-1.997921	-1.203506	1.756182	2.484907
WEMA BANK - 13	-0.597837	-3.186046	-1.210340	1.774616	2.074429
WEMA BANK - 14	-0.478036	-4.578236	-0.940975	1.778037	2.076938

WEMA BANK - 15	-0.527633	-4.259526	-0.759714	1.776919	2.256541
WEMA BANK - 16	-0.510826	-3.760805	-0.618170	1.784848	2.920470
WEMA BANK - 17	-0.544727	-3.302584	1.722885	1.775547	2.803360
WEMA BANK - 18	-0.385662	-3.283521	-0.639254	1.791805	2.433613
ZENITH BANK - 09	0.215111	-0.324523	-0.854690	1.319104	2.631889
ZENITH BANK - 10	0.891998	-0.411164	-0.985590	1.319894	2.468100
ZENITH BANK - 11	0.924259	-1.322494	-0.964208	1.331220	2.332144
ZENITH BANK - 12	1.547563	-1.821864	-1.001258	1.336817	2.484907
ZENITH BANK - 13	1.286474	-2.096555	-1.111588	1.345428	2.074429
ZENITH BANK - 14	0.974560	-0.445951	-0.773174	1.353723	2.076938
ZENITH BANK - 15	0.970779	-1.415587	-0.707076	1.358559	2.256541
ZENITH BANK - 16	1.007958	-1.097168	0.076602	1.303120	2.920470
ZENITH BANK - 17	1.156881	-0.848289	-0.892272	1.382295	2.803360
ZENITH BANK - 18	-1.139434	-0.462101	-1.048865	1.382163	2.827905

Source: Annual reports of the various banks from 2009-2018

Appendix II

Descriptive Statistics

	LOGROA	LOGCR	LOGLTA	LOGBSD	LOGINF
Mean	0.434939	-1.907875	-0.796819	1.553820	2.451525
Median	0.491526	-1.745823	-0.799045	1.382229	2.468100
Maximum	3.007167	0.902497	1.722885	2.171049	2.920470
Minimum	-3.218876	-4.578236	-3.315938	1.082592	2.074429
Std. Dev.	0.942758	1.259559	0.634165	0.288672	0.270295
Skewness	-0.548927	-0.270549	0.694677	0.181930	0.213974
Kurtosis	4.439206	2.125196	10.24604	1.347083	2.057011
Jarque-Bera	16.38300	5.290344	272.1772	14.32265	5.361831
Probability	0.000277	0.070993	0.000000	0.000776	0.068500
Sum	52.19266	-228.9449	-95.61823	186.4584	294.1830
Sum Sq. Dev.	105.7664	188.7923	47.85764	9.916479	8.694050
Observations	120	120	120	120	120

Correlation Matrix

Covariance Analysis: Ordinary
Date: 09/28/19 Time: 22:57
Sample: 2009 2018
Included observations: 120

Correlation	LOGROA	LOGCR	LOGLTA	LOGBSD	LOGINF
LOGROA	1.000000				
LOGCR	0.010571	1.000000			
LOGLTA	-0.210791	-0.006080	1.000000		
LOGBSD	0.105713	-0.727772	0.046932	1.000000	
LOGINF	-0.089088	0.200763	0.079877	-0.056533	1.000000

Regression Result

Dependent Variable: LOGROA
Method: Panel Least Squares
Date: 09/28/19 Time: 00:37
Sample: 2009 2018
Periods included: 10
Cross-sections included: 12
Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.025028	0.940808	-0.026603	0.9788
LOGCR	0.175007	0.100054	1.749123	0.0829
LOGLTA	-0.318554	0.133137	-2.392674	0.0183
LOGBSD	0.914785	0.428825	2.133235	0.0350
LOGINF	-0.359524	0.321106	-1.119643	0.2652

R-squared	0.086434	Mean dependent var	0.434939
Adjusted R-squared	0.054658	S.D. dependent var	0.942758
S.E. of regression	0.916632	Akaike info criterion	2.704552
Sum squared resid	96.62462	Schwarz criterion	2.820698
Log likelihood	-157.2731	Hannan-Quinn criter.	2.751719
F-statistic	2.720081	Durbin-Watson stat	1.181123
Prob(F-statistic)	0.033000		

Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	1.966431	Prob. F(2,111)	0.1448
Obs*R-squared	4.072035	Prob. Chi-Square(2)	0.1305

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 09/28/19 Time: 23:11
Sample: 2 120
Included observations: 119
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.025968	0.873057	0.029744	0.9763
LOGCR	0.005606	0.093745	0.059796	0.9524

LOGLTA	0.009713	0.123782	0.078473	0.9376
LOGBSD	-0.070880	0.408404	-0.173554	0.8625
LOGINF	-0.035389	0.300372	-0.117818	0.9064
LAGLOGROA	0.445128	0.277135	1.606181	0.1111
RESID(-1)	-0.542010	0.302204	-1.793527	0.0756
RESID(-2)	-0.122828	0.154105	-0.797041	0.4271

R-squared	0.034219	Mean dependent var	3.96E-16
Adjusted R-squared	-0.026686	S.D. dependent var	0.829294
S.E. of regression	0.840287	Akaike info criterion	2.554713
Sum squared resid	78.37504	Schwarz criterion	2.741545
Log likelihood	-144.0054	Hannan-Quinn criter.	2.630579
F-statistic	0.561838	Durbin-Watson stat	1.968589
Prob(F-statistic)	0.785403		

Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.944025	Prob. F(4,115)	0.1078
Obs*R-squared	7.600273	Prob. Chi-Square(4)	0.1074
Scaled explained SS	13.45526	Prob. Chi-Square(4)	0.0093

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 09/28/19 Time: 23:07
Sample: 1 120
Included observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.492589	1.604266	-0.307050	0.7594
LOGCR	0.320306	0.170612	1.877391	0.0630
LOGLTA	-0.253486	0.227025	-1.116555	0.2665
LOGBSD	0.415210	0.731232	0.567822	0.5713
LOGINF	0.433100	0.547549	0.790979	0.4306

R-squared	0.063336	Mean dependent var	0.805205
Adjusted R-squared	0.030756	S.D. dependent var	1.587646
S.E. of regression	1.563040	Akaike info criterion	3.771916
Sum squared resid	280.9558	Schwarz criterion	3.888062
Log likelihood	-221.3150	Hannan-Quinn criter.	3.819083
F-statistic	1.944025	Durbin-Watson stat	1.661319
Prob(F-statistic)	0.107837		

Individual Wald Test

Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability
t-statistic	1.749123	115	0.0829
F-statistic	3.059431	(1, 115)	0.0829
Chi-square	3.059431	1	0.0803

Null Hypothesis: C(2)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(2)	0.175007	0.100054

Restrictions are linear in coefficients.

Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability
t-statistic	-2.392674	115	0.0183
F-statistic	5.724891	(1, 115)	0.0183
Chi-square	5.724891	1	0.0167

Null Hypothesis: C(3)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(3)	-0.318554	0.133137

Restrictions are linear in coefficients.

Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability
t-statistic	2.133235	115	0.0350
F-statistic	4.550693	(1, 115)	0.0350
Chi-square	4.550693	1	0.0329

Null Hypothesis: C(4)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(4)	0.914785	0.428825

Restrictions are linear in coefficients.

Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability
t-statistic	-1.119643	115	0.2652
F-statistic	1.253601	(1, 115)	0.2652
Chi-square	1.253601	1	0.2629

Null Hypothesis: C(5)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(5)	-0.359524	0.321106

Restrictions are linear in coefficients.