

Asset quality, Internal Control System and Profitability of Deposit Money Banks in Nigeria

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Certification

This is to certify that Oluseyi Abraham Olayinka with matriculation number LCU/PG/001379 carried out this research work titled “**Asset quality, Internal Control System and Profitability of Deposit Money banks in Nigeria**” in the Department of Management and Accounting, Faculty of Management and Social Sciences, Lead City University, Ibadan, Oyo State, for the award of Doctor of Philosophy Degree (PhD) in Accounting and that this has not been previously submitted.

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Dedication

This research work is dedicated to God almighty

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Acknowledgement

My appreciation goes to the management and staff of Lead City University, Ibadan in general and Lead City University library and their staff for their contribution toward the success of this thesis.

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Even though the above mentioned institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any, found in the work.

Abstract

Banking industry has witnessed several changes in the last decade from partial to full digital transformation which improved their customer engagement especially in the area of granting loans with implications on their profitability. This study investigated the effect of asset quality on the profitability of Deposit Money Banks (DMBs) in Nigeria and the moderating effect of internal control system on the interaction between asset quality and profitability of banks. Dearth of study that combines asset quality relevance and internal control system in one study to address profitability of DMBs in Nigeria was the gap filled. The study was anchored on Liabilities Management theory. Four research questions and hypotheses were formulated. The study adopted ex-post facto design which entails the utilization of historical data to forecast future trends. Inferential statistics adopted econometrics models with panel data using pooled ordinary least square, Fixed and Random effects Regression models. The population comprises of twenty three DMBs in Nigeria. Sample size consisted of seven banks based on the problem identified in this study. The results showed that asset quality has significant effect on Return on asset ($F = 10.89, p = 0.001 < 0.05, R^2 = 0.434$); Return on Equity ($F = 4.442, p = 0.004 < 0.05, R^2 = 0.235$); no effect on Return on Capital Employed ($F = 1.193, p = 0.069 > 0.05, R^2 = 0.068$), Internal Control System has no moderating effect on the interaction between asset quality and profitability of DMBs ($F = 1.013, p = 0.071 > 0.05, R^2 = 0.066$). The study concluded that asset quality has effect on the profitability of DMBs and there is no moderating effect of internal control system between asset quality and profitability. It was therefore recommended amongst others that banks should review their credit policy regularly that will reduce non-performing loans and the DMBs should also re-strategise their policy on deposit mobilization that will minimize the impact of Payment Service Banks (PSBs).

Keywords: Asset Quality, Deposit Money Banks, Internal Control System, Loans, Profitability,

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List of Acronyms

Abbreviation	Meaning
AMCON	- Asset Management Corporation of Nigeria
AQ	- Asset Quality
CA	- Capital Adequacy
CBN	- Central Bank of Nigeria
DEP	- Deposit
DMB	- Deposit Money Bank
GAAP	- Generally Accepted Accounting Principles
GLA	- Gross Loans and Advances
GTB	- Guaranty Trust Bank
ICS	- Internal Control System
PLA	- Performing Loans and Advances
PRO	- Profitability
ROA	- Return on Asset
ROCE	- Return on Capital Employed
ROE	- Return on Equity
TA	- Total Assets
UBA	- United Bank of Africa

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Chapter One

Introduction

1.1 Background to the Study

The banking sector have witnessed several changes in the last decade, moving from analogue to digital across the world. Bank has moved closer to the people unlike in the past where you will need to get to the bank premises before transaction can be carried out. Banking has become one of the great tool in the world that countries depend to carry out their various transactions across borders especially financial transactions. Banking is bride that every community, state and nation love to have with them. At the same time, banking has also witnessed series of crises ranging from online frauds, outright stealing from insiders to outsiders, accumulation of non-repayment facilities by various customers, collapse of some banks.

Global banking had progressed from traditional banking to a new phase. Because of the change, many nonbanking entities have now joined them in carrying out the roles that the sector engages in the economy. The growth in the broader digital economy since 2011 has made global banking experience disruption. The Disruptability index anchor by Accenture shows that the banking sector has climbed to 0.52 in 2019 from 0.43 in 2011. The index measures disruption on a scale of 0 to 1 across industries. The sector has moved on the index to volatile from vulnerable ¹.

By 2020, twenty percent (20%) of total players in the banking and payments sectors would be under the age of 15. Tech-driven new entrants such as PayPal's P2P Venmo service engaged in aggressive marketing, increasing their volume by 73 percent in 2019 to over 40 million users. A product of Buy now, pay later credit offering which used to be insignificant in recent time has now been used by an estimated 1 in 2 United States consumers and in the last two years more

than 60% of those under 45 use the product. Powerful newly formed technologies, rising in consumer expectations, fast and agile new industry players and unpredictable changing of regulations are driving these changes and these are putting enormous force on the incumbent banks to introduce relevant innovation to existed businesses ². Twelve (12) percent of traditional banks had fully embraced digital as the defining architecture of their business model, while the remaining 38 percent were on the verge of doing so ³.

Prior to the COVID-19 pandemic, business world assumed that there would be a stable but impossible march toward a world in which competitors and new comers embraced new business models and gained share, while the best incumbents pivoted to digital and maintained a leadership position, with everyone in the middle being compressed. Then the pandemic struck. It has, of course, accelerated many pre-existing trends, such as the increased use of online banking services and the decline in branch traffic and cash usage. The impact of the pandemic was also less probable. It created a level playing field in the banking industry by reshaping the competitive environment. The effect was visible in three major areas: profits have been squeezed, the amount of managing risks have risen, and the speed of digital transformations has greatly increased. Foremost financial institutions worldwide saw their net income of double digit declined of 7% in Asia-Pacific, 37% in North America, and 51% in Europe in 2020. Immediate impact of lower income brought a credit crisis, which resulted in a significant increase in the cost of managing risk for global banks during the first quarter of 2020. Bad loans rose again in the second quarter of 2020, albeit very moderately given the unparalleled public-sector fiscal support. The true extent of the credit crisis in the banking industry will not be clear until this support has dwindled and the contours of the economy that of pre -crisis emerge. Regardless of the amount

and size of the provisions, banks showed that they were better equipped and prepared to deal with the crisis in terms of capital than they had been previously².

The pandemic served as a jolt of adrenaline for digital transformation. The milestones that large banks thought will take years before it can be achieved were accomplished in months; mobile app is now being used by fifty percent (50%) of customers of banks worldwide, connection of customer to the website of bank at least weekly moved up to thirty two percent (32%), this figure was higher than what operated before the pandemic. After a surge in 2020, digital penetration increased above seventy percent (70%) in the developed countries. Since the beginning of lockdowns, in-branch transactions have dropped by 30-40%, as well as cash usage in most developed markets ².

The pandemic brought out new issue in the global banking, part of the portion of market and revenue sizes controlled by banking sector migrates to other industries , particularly big tech companies . The big tech companies include Apple, Amazon, Google, Rakuten and Tencent . Those big tech companies have now added financial services into the products they offer to the public. These new services include Google Plex accounts offered by Google , insurance products offered by Alibaba to their customers living in United states as well as Europe. These have given financial institutions opportunity to partner with other companies or innovate a genius ideas that will improve their services so that they can remain competitive ².

The data from Nigeria, Egypt, Morocco, Kenya as well as south Africa released by their various banks revealed that despite the spread of the COVID- 19 in the continent, the effects of the crisis on the banks were less drastic than earlier anticipated in year . 2020. This indicate that banks may recover faster in Africa even when the important roles of banks is considered and she

occupy in term of the economy and continent as a whole. The aftermath of the pandemic on banks in Africa would be milder. In 2020, the average return on equity of Banks in the continent moved from fourteen percent (14%) in 2019 to seven percent (7%). are experienced average return on equity (ROE) of seven percent (7%) in 2020. And this rate may likely return to pre-crisis levels before 2023 if the economy recovery of Africa follows the scheme has forecasted by top executives which will most likely evolve ³.

The road to recovery for banks in Africa is paved with difficult even with the higher revenues which include risk costs. The difficult that banks will face after the crisis are continuous increase of risks, continuous growth of government debt that will necessitate for lower interest rate for longer period, and drastic reduction in demand. There are two scenarios that will likely unfold. First, the successful intervention from government in term of policy and response from health sector that will minimize the impact of virus could bring a faster rate of recovery. Revenue could return to the initial position before the crisis in year 2022. The second scenario could delay recovery to 2023 if the economic intervention is partial successful, and the response from public health sector across the African countries which could not curtail the reoccurrence of the virus in their various countries. This will likely make the recovery to the slower ³.

Banks in Nigeria are still struggling with macro-economic forces such as increase in the rate of inflation, decrease in the rate of real Gross Domestic Product (GDP), increase in the rate of unemployment as well as fluctuation in foreign exchange rate which was caused by volatility of the price of oil. The combination of the above factors reduce government spending and affect negatively the consumption of people as well as reduction in investment which are not favourable to the activities of banks. Simultaneously, some of the measures put in place to

cushion the effect of the pandemic have added additional strain on banks rather than energise system and expand the rate of production of goods and services through increase in lending. The downward review of fees on the charges of electronic banking products introduced in January 2020 by Central Bank which was meant to protect consumers had an adverse effect on the revenues of the banks ⁴.

The profitability of the banks is also being affected negatively by the high rate of cash reserve requirement imposed on the banks. The rate is 27.5% which stands as one the highest in the financial world. The reserve is used by central bank to limit amounts of funds that banks can give out as loans while it is being set aside with the central bank. Against this backdrop, the desire of Central Bank to allow individuals and businesses have access to affordable financial services and products by year 2020 at the rate of eighty percent (80%) has led to intense competition in term of payments from non-bank financial institutions⁴.

The investments of fintech in last three years in Nigeria has been rising. it has grown to one hundred and ninety seven percent (197%) which has made the companies in Africa to be widely regarded as most electrifying. Fintech companies have continued to expand even in the midst of the crisis caused by Covid -19. Recently a Silicon Valley group, Stripe acquired paystack, one of the foremost fintech in Nigeria. This is seen as an evidence of the rapid expansion of fintech in Nigeria. The above expansion has resulted in intense competition for sourcing of digital talents which are limited in supply and also an activities that will help banks to confront the challenges they face have increased. The growth of incomes in the industry has witnessed astronomical growth rate of over twenty three percent (23.5) annually in the last ten years but the real growth is actually twelve percent (12%). The larger percentage of the income comes from

fixed income, derivate income such as Swaps, Forwards and futures which are non-banking activities. The income from derivate in respect of banks in Tier 1 is about \$1 billion and profit of \$30 million was generated from its trading as reported in the financial statement. This represented about twelve percent (12%) of the entire profit ⁵.

Some of the guidelines and rules put in place to curtail the spreading of COVID-19 have brought untold adverse effects on businesses. Some of them are physical distancing, partial or full lockdowns of the entire country, state or city. These have impacted businesses negatively, reduction in salary of workers, downsizing of workforce, businesses are surrounded with uncertainty and money spend on non-essential by consumers have been drastically reduced. The banks also had their fair share of the effects on their revenues which have been drastically reduced and the amount of provisioning were increased. Revenues of the banks in the first six month of year 2020 dropped by about six percent (6%) when it is compared to the revenue in the quarter three of 2019 ⁴.

According to the report published by McKinsey on Covid -19 which states that recovery from the effect of pandemic in the short term and long term would likely rest on the implementation of the stimulus and the pro-action from public health. The effect of the crisis on the performance of banks is likely to be prolonged as provisioning made by banks on loans have moved up by two hundred percent (200 %) in 2020 when to compare to 2019. Revenue pool will likely decrease in the short term and medium term as the income from fees will be reducing. Road to recovery may gradually appear after the incomes from customers may have fallen by eighteen percent (18%) in year 2021 ⁴.

Banks' declining profitability can be reversed by improving asset quality and instituting a proper internal control system.

The Profitability of banks is measured on factors like Return on Assets (ROA), Return on Equity (ROE), Return on capital employed (ROCE) and Return on Investment (ROI). Return on equity (ROE) represented by equity and capital, it serves as the decisive determinant of profitability as it shows to shareholders the amount of profit earned from the bank on book value basis of their invested capital. Return on asset (ROA), on the other hand, which is the total assets, show how effective the bank is in asset quality management⁷. Return on investment (ROI) is a performance measurement used to evaluate the efficiency or profitability of an investment or compare the efficiency of a number of different investments. The variables of asset quality are Total Loans, Performing Loans, Deposits, Capital Adequacy and Total Assets. Internal Control System is measured by Auditor fees.

1.2 Statement of the Problem

Since 2010 profitability has been a major cause of concern for Deposit Money Banks (DMBs) in Nigeria and they are on consistent mission to achieve improvement on the profitability. To substantiate the declining profitability of Deposit Money Banks (DMBs), the data from Central Bank of Nigeria (CBN) and annual financial report of DMBs affirm this claim (appendix 1, 2,3,4,5,6) in the last decade (2010-2020).

Return on asset of Union Bank, United Bank for Africa, Access Bank, Fidelity Bank, Wema Bank, Unity Bank and Sterling Bank fall below Return on asset of banking sector (appendix 7,8). First Bank, Union Bank, Access bank, Fidelity Bank, Wema Bank, Unity Bank, and sterling also fall below return on equity of banking sector (appendix 9,8). Similar scenario also takes place

return on Capital employed of First Bank , Union Bank, UBA, Access Bank, fidelity Bank, Wema bank, Unity Bank and Sterling Bank (appendix 11,12). The figures of return on asset and return on equity of banks collected from Central Bank of Nigeria (CBN) were used as benchmark to measure the performance of banks.

The shortfall in the performance of the concerned banks may be due to inability of the banks to monitor the asset quality.

Internal control system is relevant to the banks by helping them to maintain the assets of a company, ensuring accuracy and reliability of information and reports related to accounting and other operations, and increasing the effectiveness of the operations. It also covers all assessment and methods that are adopted in order to detect the suitability of operations in accordance with the policies determined by management, implementing a chart of accounts and reporting system, specifying the duties, authority and responsibility and organization plan of the cooperation. If the Deposit Money Banks decide to institute an effective internal control system, it may help to enhance the interaction of asset quality on profitability.

Both asset quality and weak internal control system may be responsible for the declining in profitability of concerned banks. Several studies have been done in different researches context about asset quality and bank's performance or internal control system and bank performance^{6,7,8,9,10}. The study on the role of asset quality on profitability of banks showed that poor asset quality has a significant negative impact on the profitability of banks⁶. Another study on the effect of internal control system on the performance of commercial Banks in Nigeria showed internal control system have effect on profitability of bank¹². However, accessing studies that combine asset quality relevance and internal control system together in one study to address profitability concern considered in this study remained less explored. Consequently, the study

investigated the interaction of asset quality, internal control system and profitability of deposit money banks in Nigeria. The addition of a moderating variable further distinguishes this study as filling a previously identified gap.

1.3 Aim and Objectives of the Study

The aim of the study is to investigate the interaction of asset quality (gross loans and advances, Performing loans and advances, Deposit, Capital adequacy, Total assets), internal control system (Audit Fees) and profitability (return on asset, return on equity, return on capital employed) of deposit money banks in Nigeria. To achieve this, the following specific objectives were considered,

1. examine the impact of asset quality on return on asset of DMBs in Nigeria.
2. assessing the effect of asset quality on return of equity of DMBs in Nigeria.
3. investigate the effect of asset quality on return on capital employed of DMBs in Nigeria.
4. determine the moderating effect of internal control system on the interaction between asset quality and profitability of DMBs in Nigeria

1.4 Research Questions

The study provided answers to the following questions;

1. How does asset quality affects Return On Assets of DMBs in Nigeria?
2. What impact does asset quality have on Return on Equity of DMBs in Nigeria?
3. What degree does asset quality affects Return on Capital Employed of DMBs in Nigeria?
4. What is the moderating effect of internal control system on the interaction between asset quality and profitability of DMBs in Nigeria?

1.5 Hypotheses

Ho₁- There is no significant effect of Asset Quality on return on asset of DMBs in Nigeria.

Ho₂– There is no significant effect of Asset Quality on return on equity of DMBs in Nigeria

Ho₃- There is no significant effect of Asset Quality on return on capital employed of the DMBs in Nigeria

Ho₄– Internal Control System has no significant moderating effect on the interaction between assets quality and profitability of DMBs in Nigeria

1.6 Significance of the Study

The study is of significant to various stakeholders which may include management of banks, Central Bank of Nigeria (CBN), Asset Management Corporation of Nigeria (AMCON), and Researchers.

The study will provide a clear understanding of the factors that affect asset quality, internal control system and profitability of bank with empirical evidence that will assist the management of bank to formulate strategies that enhance better procedures and ways to management their assets and implementation of good internal control system.

The study will provide a great insight to the Central bank of Nigeria that will assist them to formulate the appropriate Credit policy that will help in their oversight functions/ supervision of deposit money banks.

The study will also provide information with empirical evidences which will serve as part of tools to management of Asset Management Corporation of Nigeria (AMCON) that will assist to formulate policy and setting guidelines on resolving non performing assets of banks in Nigeria.

For the researcher, this study will serves as a reference point to future researchers in accounting and banking

1.7 Scope of the Study

The scope of the study is focused on interaction of asset quality, internal control system and the profitability of deposit money banks in Nigeria. The study examined asset quality: Gross loans, Performing loans and Advances, Deposit, Capital Adequacy and Total assets, as well as Profitability: Return on Asset, Return Equity and Return on Capital Employed of selected Deposit Money Banks in Nigeria. To provide in depth explanation for the planned functional relationship between the independent and dependent variables, a (another) third variable (moderator) was introduced. Internal control system was the moderator in this study.

Deposit money banks in Nigeria are chosen as the area of the study while the study will be restricted to seven banks in Nigeria out of twenty two based on the earlier finding. The seven banks selected were based on performance and availability of data (appendix 1,2,3,4,5,6,7,8,9,10,11,12).It used secondary data of annual financial report of deposit money banks over a period of ten years from 2010 -2020. The geographical scope of the study is Nigeria.

1.8 Limitation of the Study

The study relied solely on quantitative data. The study failed to incorporate qualitative information that would have revealed other aspects of the interaction of internal control system, asset quality and profitability of Deposit money banks. Such information would have been captured through a questionnaire, an interview guide or focused group discussions. The study

only focused on 10 years (year 2010 to year 2020). Perhaps different results would have been found if a longer period was considered. The study also did not also put into consideration other factors that could have affected the performance of Deposit Money banks. Macroeconomic factors perhaps would have added the explanatory power of the model.

1.9 Operationalisation of the Research Variables

The model specified is based on empirical studies on the asset qualities and profitability of selected deposit money banks,

This shows the relationships among variables;

$$Y = f(X)$$

Y = Dependent Variable

X = Independent Variable

Where

Y = Profitability

X = Asset Quality

$$Y = (ROA_1, ROE_2, ROCE_3)$$

$$X = (GL_1, PLA_2, DEP_3, CA_4, TA_5)$$

Where: Dependable Variables;

y_1 = Return on Asset

y_2 = Return on Equity

y_3 = Return on Capital Employed

Independent Variable

x_1 = Gross Loans

x_2 = Performing Loans and Advances

x_3 = Deposit

x_4 = Capital Adequacy

x_5 = Total Assets

The Modelling structure of the study on the asset qualities and profitability of selected deposit money banks is adapted from the study ¹¹.

$$ROA = f(GL, PLA, DEP, CA, TA) \text{ ----- Equation 1}$$

$$ROE = f(GL, PLA, DEP, CA, TA) \text{ ----- Equation 2}$$

$$ROCE = f(GL, PLA, DEP, CA, TA) \text{ ----- Equation 3}$$

Transforming equation 1,2 and 3 above to econometrics model we have;

$$ROA = \alpha + \beta_1 GL + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e \text{ ----- 4}$$

$$ROE = \alpha + \beta_1 GL + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e \text{ ----- 5}$$

$$ROCE = \alpha + \beta_1 GL + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e \text{ ----- 6}$$

$$PRO = \alpha + \beta_1 AQ + \beta_2 ICS + \beta_3 AQ * ICS \text{----- 7}$$

Where;

ROA: Return on Asset

ROE : Return on Equity

ROCE Return on Capital Employed

GL : Gross Loans

PLA : Performing Loans and Advances

DEP : Deposit

CA : Capital Adequacy

TA : Total Assets

μ : Error Term

β_0 : Regression Intercept

β_1 - β_5 : Coefficient of the independent Variables to the dependent variables

1.10 Operational Definitions of Terms

Asset Quality- is an evaluation of asset to measure the credit risk associated with it. It is concerned with loans that banks lend out in order to generate incomes for bank. There is a poor asset quality when loans become impaired or non performing.

Capital Adequacy- is the statutory minimum reserves of capital which a bank or other financial institution must have available. It is a measure of ability of banks or other financial institution to pay its debts if people or organizations are unable to pay back the money they have borrowed from the bank or financial institution

Deposit – is the money placed into banking institution for safekeeping. It also refers a portion of funds that is used as a security or collateral for the delivery of a good.

Gross Loans and Advances-loans is a sum of money that one or more individuals or companies borrow from banks or other financial institutions so as to financially manage planned or unplanned events and is expected to be paid back with interest.

Internal Control System – is the policies combined with procedures created by management to protect the integrity of assets and ensure efficiency operations.

Performing Loan- The loans and advance is said to be performing when the borrowers remains financial healthy and pays the agreed instalments and interest as scheduled.

Profitability – Profitability is the earnings/incomes that bank realized from revenue after deducting all expenses incurred during a given period.

Return on Asset – Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. It is a profitability ratio that provides how much profit a company is able to generate from asset

Return on Capital Employed- Return on Capital Employed is one of the profitability ratios that use to assess the profits before interest and tax that the company could generate from its business by using shareholders' capital employed

Return on Equity - Return on equity is used to measure the ability of the company to create profits on the equity of shareholders.

Total Assets –Total assets is the sum of the book values of all assets owned by an individual, company, banks.

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Chapter Two

Literature Review

Key conceptual issues has been discussed in this chapter. Also the major theories underpinning asset quality and profitability of deposit money banks in Nigeria. The chapter presents the empirical studies on the related studies in line with the objectives of the study.

- 2.1 Conceptual Review
 - 2.1.1 Profitability
 - 2.1.1.1 Return on Assets (ROA)
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 - 2.1.2 Asset Quality
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- 2.2 Theoretical Review
- 2.3 Review of Empirical Studies
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- 2.5 Summary of Gaps in Literature Reviewed

2.1 Conceptual Review

2.1.1 Profitability

Profitability is the earnings/incomes that bank realized from revenue after deducting all expenses incurred during a given period. It is one of the indicators that show the achievement of the

management. It reveals shareholders' satisfaction and serve as a bait to attract potential investors. Survival and sustainability of banks is depend on the profitability. Without doubt, the goal of any bank or company in both short and long term is to make profit by growing the values of its stocks which will maximize the wealth of its shareholders. In other word, Profitability is ability of a company to use its resources to generate revenues in excess of its expenses. It is the company's capability of generating profits from its operations. It reveals financial health of the company over a period of time¹.

Profitability is the most important and reliable indicator of corporate growth because it provides a broad indicator of a company's ability to increase its income level. As a result, profitability has emerged as one of the most important goals of financial management, because one of the goals of financial management is to maximize company owner wealth and profitability, which in turn indicates improved financial performance².

Profitability is one of the indices that the performance of the bank/company. Maximization of profit is core objective of the business, particularly banks. The resources of banks/ companies are converted into goods and/or services. And these converted products are sold at profit to their customers. For banks/ companies to continue to survive and replace resources for the production of goods and services, they will need to make profits both for immediate and future period. Profitability shows the efficiency of the company that is, the ability of the company to utilize the available resources to generate profit. It helps management to take decision for the success of the company both in the short and long term. So management must be very conversant with those factors that affect the profitability of the company to enable them develop appropriate business plan to aid the company to continue to make profit and survive. It is the capacity of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all expenses

directly related to the generation of the revenue, such as producing a product, and other expenses related to the conduct of the business activities. It is a situation in which an entity is generating a profit³. Profitability arises when the aggregate amount of revenue is greater than the aggregate amount of expenses in a reporting period. If an entity is recording its business transactions under the accrual basis of accounting, it is quite possible that the profitability condition will not be matched by the cash flows generated by the organization, since some accrual-basis transactions (such as depreciation) do not involve cash flows. It can be achieved in the short term through the sale of assets that garner immediate gains. However, this type of profitability is not sustainable. An organization must have a business model that allows its ongoing operations to generate a profit, or else it will eventually fail. Profitability is one of the measures that can be used to derive the valuation of a business, usually as a multiple of the annual amount of profitability. A better approach to business valuation is a multiple of annual cash flows, since this better reflects the stream of net cash receipts that a buyer can expect to receive³.

Profitability is viewed as the ability of an investment to generate return from its usage. The risk banks face in the course of intermediation can be minimized by the profit generated by banks⁴. Profitability shows the maximization of wealth of shareholders and is measured by financial performance. It can be measured by looking at the company's profitability. Financial performance is measured by using profitability ratios such as gross profit ratio, net profit ratio, interest coverage ratio, return on capital employed on earnings after tax, contribution margin ratio, return on assets, return on equity in relation to after-tax share capital, return on investment, earnings per share⁵. Profitability analysis is the analysing of the profits which is basically the money remaining from the capital after subtracting all the overhead costs, will help bank to keep

a track of their business' performance. Profitability analysis allows companies to maximise their profit. Thus, resulting in maximising the opportunities that business can take advantage of, in order to continue growing in an extremely dynamic, competitive, and vibrant market. Profitability analysis helps businesses identify growth opportunities, fast/slow-moving stock items, market trends, ultimately helping decision-makers see a more concrete picture of the company as a whole. While profitability analysis gives business owners a 360° view of your company's profits, different ratios that derive profitability ratios have different roles to play ⁵.

Profitability ratios are financial metrics used by analysts and investors to measure and evaluate the ability of a banks to generate income (profit) relative to revenue, balance sheet assets, operating costs, and shareholders' equity during a specific period of time. They show how well a company utilizes its assets to produce profit and value to shareholders ⁶. Gross Profit Ratio is the ratio of Gross Profit to Net Sales and expressed as a percentage. It is also called Turnover Ratio. It reveals the amount of Gross Profit for each naira of sale. It is highly significant and important since the earning capacity of the business can be ascertained by taking the margin between cost of goods and sales. The higher the ratio, the greater will be the margin, and this is why it is also called Margin Ratio. Management is always interested in a high margin in order to cover the operating expenses and sufficient return on the Proprietor's Fund. It is very useful as a test of profitability and management efficiency. 20% to 30% Gross Profit Ratio may be considered normal. Gross profit ratio reveals the efficiency of the firm about the goods produced. Since gross profit is the difference between selling price and cost of goods sold the higher the profit, better will be the financial performances. There must be adequate amount of gross profit, otherwise, after deducting operating expenses, depreciation, other overheads, nothing will remain for declaring dividend, or Transfer to Reserves. Needless to say that a low gross profit results

from the higher amount of cost of goods sold for defective purchasing procedure of the management, lowest selling price, over-investment in fixed assets. Gross Profit Ratio may be compared with other firms of the same group. If any change is found, the reasons for such change should be investigated and, accordingly, steps must be taken to improve the situation ⁷.

Net Profit Ratio is the ratio of Net Profit to Net Sales and is also expressed as a percentage. It indicates the amount of sales left for shareholders after all costs and expenses have been met. The higher the ratio, the greater will be profitability—and the higher the return to the shareholders. 5% to 10% may be considered the normal. It is a very useful tool to control the cost of production as well as to increase sales. This ratio measures the overall efficiency of the management. Practically, it measures the firm's overall profitability. It is the difference between Gross Profit and operating and non- operating income minus operating and non-operating expenses after deduction of tax. This ratio is very significant as, if it is found to be very low, many problems may arise, dividend may not be paid, operating expenses may not be paid. Moreover, higher profit earning capacity protects a firm against many financial hindrances (e.g. adverse economic condition) and, naturally, higher the ratio, the better will be the profitability⁷.

Operating Ratio is the ratio of operating expenses or operating cost to sales. It may be expressed as a percentage and it reveals the amount of sales required to cover the cost of goods sold plus operating expenses. The lower the ratio the higher is the profitability and the better is the management efficiency. 80% to 90% may be considered as normal. Operating Expenses consist of (i) Office and administrative expenses, and (ii) Selling and Distribution expenses and the two components of this ratio are Operating Expenses and Net Sales. Operating Profit Ratio is a modified version of Net Profit to Sales Ratio. Here, the non-operating incomes and expenses are

to be adjusted (i.e. to be excluded) with the net profit in order to find out the amount of operating net profit. It indicates the amount of profit earned for each rupee of sales after dividing Operating Net Profit by Net Sales. It is also expressed as a percentage. $\text{Operating Net Profit} = \text{Net Profit} - \text{Income from external securities and others (i.e. non-trading incomes)} + \text{Non-operating expenses (i.e. Interest on Debentures .)}$ ⁷. Cash Flow Margin measures the relationship between cash flow from operating activities and sales since gross profit or Net profit is ascertained on the basis of data prepared under accrual basis of accounting. Many authorities prefer to use cash flow data order to avoid the effects of accruals and deferrals system. We know that a firm requires cash for various modes of payments. Naturally, earning on the basis of accrual system fails to provide information relating to cash positions. Thus, cash flow technique really measures the convertibility of sales into cash. Margin before Interest and Tax is calculated as $\text{Margin before Interest and Tax} = \text{EBIT}/\text{Sales}$. Pre-Tax Margin indicates that how much naira of sales are left after paying all expenses (including interest but before the payment of Income-Tax)⁷. Contribution Margin Ratio is used to determine the BEP (Break-Even Point) analysis contribution. Since fixed costs and variable costs are not separately provided in the Financial Statement, it is rather very difficult to ascertain contribution directly. Practically, this ratio supplies the information regarding the relationship between sales, variable cost and contribution per naira of sales against fixed cost and profit⁷.

Expense Ratio is fixed Expenses to Total Cost Ratio. It indicates the idle capacity in the organization. If this ratio gradually increases without, however, a corresponding increase in fixed assets, the matter should be analyzed and scrutinized carefully. It is also Material Consumption to Sales Ratio and Wages to Sales Ratio. These indicate the percentage of Materials and Wages to Total Sales. The higher the ratios, the smaller will be the margin of profit. Material

Consumption to Sales Ratio = Material Consumption / Sales. Wages to Sales Ratio = Wages/Sales. Office and Administration, Selling and Distribution Expenses to Sales Ratio. These also indicate the percentage of Office and Administration and Selling and Distribution Expenses to Total Sales. This ratio indicates the relationship between expenses and sales. This is very significant since some expenses may increase, some may decrease, i.e., they are of varying nature. The analyst can compare the change of each component of expenses to sales which helps him to take the financial decision after proper analysis and interpretation. This ratio may be computed in two ways, i.e. sum total of all expenses to net sales, or, each individual item of expenses to net sales. Naturally, greater the ratio, smaller will be the margin, and vice versa⁶. Profit Cover Ratios is Dividend Coverage Ratios and Preference Shareholders' Coverage Ratio. It indicates the number of times the Preference Dividends are covered by the Net Profit (i.e., Net Profit after Interest and Tax but before Equity Dividend). The higher the coverage, the better will be the financial strength. It reveals the safety margin available to the Preference Shareholders. Pref. Shareholders' Coverage Ratio= Net Profit (after Interest and Tax but before Equity Dividend) / Preference Dividend ⁷.

Equity Shareholders' Coverage Ratio indicates the number of times the Equity dividends are covered by the Net Profit (i.e. Net Profit after Interest, Tax and Pref. Dividend). The higher the coverage, the better will be the financial strength and the fairer the return for the shareholder since maintenance of dividend is assured. Equity Shareholders' Coverage Ratio = Net Profit (after Interest, Tax and Pref. Dividend) / Equity Dividend. Interest Coverage Ratio indicates the number of times the fixed interest charges (Debenture Interest, Interest on Loans.) are covered by the Net Profit (i.e. Net Profit before Interest and Tax). It is calculated by dividing the Net Profit (before Tax and Interest) by the amount of fixed interest and charges. The higher the coverage,

the better will be the position of Debenture-holders or Loan Creditors regarding their fixed payment of interest, the greater will be the profitability/ and the better will be the management efficiency ⁶Total Coverage Ratio expresses the relationship that exists between the Net Profit before Interest and Tax on Total Fixed charges (Total Fixed Charges = Interest on Loan + Pref. Dividend + Repayment of Capital). It also indicates the number of times the total fixed charges are covered by the Net Profit. Naturally, the higher the coverage, the greater will be the profitability ⁷.

Profitability and profit are used interchangeably but are not the same. Both are accounting metrics in analyzing the financial success of a company, but there are distinct differences between the two. To adequately determine whether a company is financially sound or poised for growth, investors must first understand what differentiates a company's profit from its profitability. Profit is an absolute number determined by the amount of income or revenue above and beyond the costs or expenses a company incurs. It is calculated as total revenue minus total expenses and appears on a company's income statement. No matter the size or scope of the business or the industry in which it operates, a company's objective is always to make a profit ⁶.Profitability is closely related to profit – but with one key difference. While profit is an absolute amount, profitability is a relative one. It is the metric used to determine the scope of a company's profit in relation to the size of the business. Profitability is a measurement of efficiency – and ultimately its success or failure. A further definition of profitability is a business's ability to produce a return on an investment based on its resources in comparison with an alternative investment. Although a company can realize a profit, this does not necessarily mean that the company is profitable ⁸.

Profit is what is left when you deduct expenses from revenue ($\text{Profit} = \text{Revenue} - \text{Expenses}$). Revenue, or income, is generated by delivering services or selling products. However, generating revenue is typically not a free exercise, it comes with lots of expenses, or costs, such as employee wages, equipment, and marketing to name a few. So, profit is an absolute measure of how profitable a business is. It tells you the naira amount of how much extra money is left for owners at the end of a period⁷. Profitability is a relative measure of how profitable a business is. What this means is that calculating profitability removes the raw absolute amount of the profit, revenue, and expenses and looks at those in percentage terms. By doing so, you can look at companies of different sizes and look at their levels of profit side by side. Generally, a company with higher profitability is more efficient, in as much as they are generating a higher percentage of profit for each naira of input expended. So yes, profit and profitability are very much related, they use the same numbers but they are vastly different in their uses⁹.

There are resemblance and contrast between Accounting profit and economic profit. The two share similarities, but there are distinct differences between the two metrics. The area of similarity between Economic profit and accounting profit is that direct costs are subtracted from revenue in order to arrive their profits. In addition, opportunity costs will be considered as an additional cost in arriving at economic profit. This cost represents cost of embarking on a particular course compare to another in the period. Economic principles is applied to arrive at Economic while accounting principles is used to determined accounting profit. Indirect costs that are related to resources of the firm are used to determine Economic profit. Profit from rendering and producing services and goods as well as including alternatives usage of resources of a company determine Economic profit. For instance, the market price that company will sell their natural assets or the company use the assets for the firm. A furniture company that owns a

forest of trees may cut down the trees and the trees to produce various furniture products. The timber is the indirect (implicit) cost that the company can sell to customers at a market price. Another example, company may have two project which they will need to choose one(project 1 and project 2). The accounting profit will be the profit derive from project 1 which company choose after deducting expenses and costs. While the economic profit will look at the opportunity cost of selecting project 1 instead of selecting second project . In other words, economic profit will consider how much profit the company would have earned if the resources had been use to execute project 2. [Accounting profit](#) can also be referred to the bottom line or net income. According to generally accepted accounting principles (GAAP), accounting profit refers to profit after different costs and expenses have been deducted from total sales or total revenues. Costs and expenses include Labor costs(wages), Inventory needed for production, Raw materials, Production costs and overhead, Transportation costs, Sales and marketing costs. Accounting profit is the money remaining after direct (explicit) costs of running company has been subtracted. Explicit costs are direct amounts that company incur for expense in a particular period, for instance, salary. Financial performance of the firm is determine by accounting profit or net income which is usually being announced on a quarterly and annual basis. The major differences between economic profit and accounting profit is that economic profit is usually focused on a theoretical calculation based on alternative actions that could have been taken. While accounting profit determine what actually happened and the calculate the results for the period. In another word, accounting profit is the profit after deducting direct (explicit) costs (salary and rents). Economic profit is the profit that includes direct (explicit) costs as well as indirect (implicit) costs, that the alternative that company forego in order to pursue a particular path¹⁰.

Components of profitability are Gross Profit Margin (GPM), Net Profit Margin (NPM), Earnings per Share (EPS), Return on Capital Employed (ROCE), Return On Asset (ROA), Return On Equity (ROE). Gross Profit Margin (GPM) is also known as gross margin ratio or the gross profit percentage. This is a financial metric used to assess a financial health of company by showing the proportion of money left over from revenues after accounting for the cost of goods sold. Gross profit margin serves as the source of paying additional expenses and future savings. It is calculated as; $\frac{\text{Revenue} - \text{Cost of goods sold}}{\text{Revenue}} \times 100$. The gross margin is not an exact estimate of the company's pricing strategy but it does give a good indication of financial health. Without an adequate gross margin, a company will be unable to pay its operating and other expenses and build for the future. In general, a gross profit margin of company should be stable. It should not fluctuate much from one period to another unless the industry it is in has been undergoing drastic changes which will affect the cost of goods sold or pricing policies. This metric can be used to compare a company with its competitors. More efficient companies will usually see higher profits margins ¹¹.

Net Profit Margin (NPM) is the percentage of revenue remaining after all operating expenses, interest, taxes and preferred stock dividends (but not common stock dividends) have been deducted from a company's total revenue. The formula for net profit margin is; $\frac{\text{Net Profit Margin}}{\text{Total Revenue}} \times 100$. By using this formula, we can see what percentage of revenue made it all the way to the bottom line, which is good for investors. Net profit margin is one of the most closely followed numbers in finance. Shareholders look at net profit margin closely because it shows how good a company is at converting revenue into profits available for shareholders. Changes in net profit margin are endlessly scrutinized. In general, when a net profit margin of company is declining over time; a myriad of problems could be to blame, ranging from

decreasing sales to poor customer experience to inadequate expense management. Net profit margin is often used to compare companies within the same industry in a process known as margin analysis. Net profit margin is a percentage of sales, not an absolute number, so it can be extremely useful to compare net profit margins among a group of companies to see which are most effective at converting sales into profits¹¹.

Earnings Per Share (EPS) is also called net income per share, is a market prospect ratio that measures the amount of net income earned per share of stock outstanding. In other words, this is the amount of money each share of stock would receive if all of the profits were distributed to the outstanding shares at the end of the year. Earnings per share are also a calculation that shows how profitable a company is on a shareholder basis. So a larger company's profits per share can be compared to a smaller company's profits per share. Obviously, this calculation is heavily influenced on how many shares are outstanding. Thus, a larger company will have to split its earnings amongst many more shares of stock compared to a smaller company. The formula for calculating earnings per share is given as;
$$\frac{\text{Profit after Tax} - \text{Preferred Dividends}}{\text{Number of Common Stock Outstanding}}$$

$$\frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Common Shares Outstanding}}$$
 It will be noticed that the preferred dividends are removed from net income in the earnings per share calculation. This is because earnings per share only measure the income available to common stockholders. Preferred dividends are set aside for the preferred shareholders and cannot belong to the common shareholders. Earnings per share are the same as any profitability or market prospect ratio. Higher earnings per share are always better than a lower ratio because this means the company is more profitable and the company has more profits to distribute to its shareholders. Although many investors do not pay much attention to the earnings per share, higher earnings per share ratio often makes the stock price of a company rise. Since so many

things can manipulate this ratio, investors tend to look at it but do not let it influence their decisions drastically¹¹.

In this study the proxy of profitability that is of concerned are Return on asset (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE).

2.1.1.1 Return on Assets (ROA)

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Return on assets is displayed as a percentage; the higher the ROA the better. In other word, return on asset is the ability of the bank to efficiently utilize their assets to generate profit. It is the ratio between profit before tax and total bank assets ¹².

The return on assets compares the net earnings of a business to its total assets. It provides an estimate of the efficiency of management in using assets to create a profit, and so is considered a key tool for evaluating management performance. The return on assets figure can be used to compare the efficiency of asset usage within an industry, since each of these businesses should require roughly the same proportions of assets to sales in order to provide goods and services to customers. However, the asset base of a business could vary substantially across industries, so the measure should not be used to compare entities located in different industries. For example, the return on assets of an asset-intensive production facility would not be comparable to the return on assets of an asset-light consulting business ¹³.

Return on Asset is calculated by dividing a company's net income by total assets. As a formula, it would be expressed as: $\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$ Return on Assets = Total Assets Net Income. Higher return on asset (ROA) indicates more asset efficiency¹³. Return on Assets can be calculated; the net profit figure will be taken from the income statement of the entity. This should be the net after-tax figure, not one of the earlier profit subtotals listed higher in the income statement; the total assets figure will be taken from the balance sheet of the entity. Intangible Assets will not be subtracted from the figure; the net profits will be divided by the total assets figure to arrive at the return on assets. The formula is $\text{Net profits} \div \text{Total assets} = \text{Return on assets}$. For instance if Seyi International earns N100, 000 in its most recent year of operations. As of its year-end balance sheet, the company had N1,000,000 of total assets. This results in a return on assets of 10%, which is derived as follows: $\text{N100,000 Net profits} \div \text{N1,000,000 Total assets} = 10\% \text{ Return on assets}$.

The major issue with return on assets (ROA) is that it cannot be used across industries. For instance one company may be in the technology industry while another company in oil industry will have different asset bases. Some analysts also feel that the basic return on asset (ROA) formula is limited in its applications, being most suitable for banks. Bank balance sheets better represent the real value of their assets and liabilities because they are carried at market value (via mark-to-market accounting), or at least an estimate of market value, versus historical cost. Both interest expense and interest income are already factored in ¹³. When using the return on assets measurement, be aware of the following; Periods covered- a business may be seasonal, so that its profit figures vary wildly by month. To avoid this issue, run the calculation on an annual or trailing twelve (12) months basis; Asset averaging- the total assets figure in the

denominator is as of a single point in time. The asset total on that date could be quite different from the usual asset balance, perhaps due to a major asset acquisition or disposal. Consequently, consider replacing it with an average asset figure that is based on multiple months of balance sheets; accelerated depreciation- If a business uses accelerated depreciation, its net fixed asset balance will be artificially low, which artificially increases the return on assets; Impact of debt- part of the financial structure of an entity may be a certain amount of debt. In order to determine the underlying return on assets without the negative effects of interest expense, subtract this expense from the net profit figure in the numerator; Trend analysis- the results of this calculation should be plotted on a trend line. Doing so reveals any spikes or declines in the measurement that could be precursors of longer-term changes; manipulation- the net profit figure is subject to manipulation by management. They could hold off on certain discretionary expenses in order to improve profits. They could also outsource asset-intensive functions (such as production) in order to reduce the total investment in assets ¹³. Some analysts will argue with regards to what the correct formula for return on asset (ROA) should be. A study conducted by professors at the University of Lipscomb, across different financial textbooks there are eleven (11) listed variations of the return on asset (ROA) formula. This study sampled seventy seven (77) textbooks to get a consensus on the most widely used variation and it turns out that 40% of textbooks describe the formula that we have stated before. This was the highest for any of the variations examined. Return on asset (ROA) is prone to manipulation by management to obtain desired results. For example, net income is affected by accounting depreciation which is primarily based on judgment. Another scenario could be when the management has just replaced

the old machinery and there is a massive one-time depreciation charge, which could negatively affect net income ¹⁴.

The Significance of Return on Assets is that it tells us what earnings were generated from invested capital (assets). Return on asset (ROA) for public companies can vary substantially and will be highly dependent on the industry. This is why when using return on asset (ROA) as a comparative measure, it is best to compare it against a company's previous return on asset (ROA) numbers or a similar company's return on asset (ROA). The return on asset (ROA) figure gives investors an idea of how effective the company is in converting the money it invests into net income. The higher the return on asset (ROA) number, the better, because the company is earning more money on less investment. Because of the balance sheet accounting equation, note that total assets are also the sum of its total liabilities and shareholder's equity. Both of these types of financing are used to fund the operations of the company. Since a company's assets are either funded by debt or equity, some analysts and investors disregard the cost of acquiring the asset by adding back interest expense in the formula for return on asset (ROA). In other words, the impact of taking more debt is negated by adding back the cost of borrowing to the net income and using the average assets in a given period as the denominator. Interest expense is added because the net income amount on the income statement excludes interest expense ¹³.

Both return on asset (ROA) and return on equity (ROE) are measures of how a company utilizes its resources. Essentially, return on equity (ROE) only measures the return on a company's equity, leaving out the liabilities. Thus, return on asset (ROA) accounts for a company's debt and ROE does not. The more leverage and debt a company takes on, the higher return on equity

(ROE) will be relative to return on asset (ROA) ¹². The measurement of Return on asset (ROA) includes all of a business's assets-; those which arise out of liabilities to creditors as well capital paid in by investors. Total assets are used rather than net assets. Thus, for instance, the cash holdings of a company have been borrowed and are thus balanced by a liability. Similarly, the company's receivables are definitely an asset but are balanced by its payables, a liability. For this reason, Return on asset (ROA) is usually of less interest to shareholders than some other financial ratios; stockholders are more interested in return on their input. But the inclusion of all assets, whether derived from debt or equity, is of more interest to management which wants to assess the use of all money put to work ¹³.

Return on asset (ROA) is used internally by companies to track asset-use over time, to monitor the company's performance in light of industry performance, and to look at different operations or divisions by comparing them one to the other. For this to be accomplished effectively, however, accounting systems must be in place to allocate assets accurately to different operations. Return on asset (ROA) can signal both effective use of assets as well as under-capitalization. If the Return on asset (ROA) begins to grow in relation to the industries as a whole, and management cannot pinpoint the unique efficiencies that produce the profitability, the favorable signal may be negative: investment in new equipment may be overdue .Another common internal use for return on asset (ROA) involves evaluating the benefits of investing in a new system versus expanding a current operation. The best choice will ideally increase productivity and income as well as reduce asset costs, resulting in an improved ROA ratio. For example, say that a small manufacturing company with a current sales volume of N50,000, average assets of N30,000, and a net profit of N6,000 (giving it an return on asset (ROA) of $N6,000 / N30,000$ or 20 percent) must decide whether to improve its current inventory management system or install a

new one. Expanding the current system would allow an increase in sales volume to N65, 000 and in net profit to N7, 800, but would also increase average assets to N39, 000. Although sales would increase, the return on asset (ROA) of this option would be the same-; 20 percent. On the other hand, installing a new system would increase sales to N70, 000 and net profit to N12, 250. Because the new system would allow the company to manage its inventory more efficiently, the average assets would increase only to N35, 000. As a result, the return on asset (ROA) for this option would increase to 35 percent, meaning that the company should choose to install the new system ¹³.

Return on asset (ROA) is a significant indicator of growth of business operations of a firm. It is a broader concept than return on equity (ROE) and return on capital employed (ROCE). An increase in return on asset (ROA) means that wealth is being generated for all stakeholders, as against return on equity (ROE) which creates wealth only for Equity Shareholders. Furthermore, return on capital employed (ROCE) considers only shareholders and creditors while ignoring current liabilities used to fund operations. It tells how much return has been generated through all capital employed. A decrease in return on asset (ROA) should be seen as a red flag and the management of the firm should work to uncover the underlying reason for this decline ¹⁴.

Return on asset (ROA) gives investors a true picture of management's ability to derive profits from the assets it invests in. The metric also provides a strong insight into net margins and asset turnover, two key performance drivers. Return on asset (ROA) helps make the process of analyzing a company much easier, by helping investors differentiate the good quality stocks from the bad pile. Unlike other profitability ratios such as return on equity (ROE), return on asset (ROA) calculations include all business assets - it does not matter if they were funded by equity or debt. Though shareholders are primarily interested in the return on their investment,

management is more concerned with the way all assets across the firm are being deployed to generate returns. Return on asset (ROA) is also used internally by firms to monitor asset use over time as well as to monitor the firm's asset deployment efficiency in respect to its peers. It also offers insights into the efficiency of different operations or divisions by comparing them one to the other. Another use case for return on asset (ROA) involves assessing the benefits of investing in a new project vs. expanding the scope of deployed assets. Here the aim of the management is to increase productivity and income as well as reduce asset costs, thus resulting in an improved return on assets (ROA) metric ¹⁴.

The return on asset (ROA) ratio assumes that the assets have been valued fairly on the books. However, in real life, it is a known fact that companies keep over and/or under valuing their assets to reduce taxation. This may affect the return on asset (ROA) adversely and reduce its usability as a profitability metric ¹³. The Return on Assets ratio assumes that the company is using all its assets to run the day to day operations. This assumption is likely to be proved incorrect. A lot of companies hold significant cash on their balance sheet. The most valuable company in the world Apple Inc is one such example. Also many other companies hold a lot of impaired and obsolete assets which they plan to sell in the near future. This brings down the Return On Assets (ROA) ratio ¹⁵. Some of the major advantages of return on total assets are; as the metric uses operating income, it effectively captures the influence of both equity and debt financing on asset purchases and its ability to generate profit. So, companies with different capital structures can be compared without any adjustment; it helps in assessing the capability of the company's management in utilizing the available assets¹⁶.

2.1.1.2 Return on Equity

Return on equity is used to measure the ability of the company to create profits on the equity of shareholders. It is part of profitability ratios. It measures the ability of the company to generate profit based on the share capital owned by the company. The ratio is calculated based on division of net profit after tax and total equity. By measuring the earnings a company can generate from assets, return on equity (ROE) offers a gauge of profit-generating efficiency. Return on equity (ROE) helps investors determine whether a company is a lean, profit machine or an inefficient operator. Firms that do a good job of milking profit from their operations typically have a competitive advantage—a feature that normally translates into superior returns for investors. The relationship between the company's profit and the investor's return makes return on equity (ROE) a particularly valuable metric to examine ¹⁶.

To find companies with a competitive advantage, investors can use five-year averages of the return on equity (ROE) of companies within the same industry. Return on equity (ROE) offers a useful signal of financial success since it might indicate whether the company is earning profits without pouring new equity capital into the business. A steadily increasing return on equity (ROE) is a hint that management is giving shareholders more for their money, which is represented by shareholders' equity. Simply put, return on equity (ROE) indicates how well management is using investors' capital. It turns out, however, that a company cannot grow earnings faster than its current return on equity (ROE) without raising additional cash. That is, a firm that now has a 15% return on equity (ROE) cannot increase its earnings faster than 15% annually without borrowing funds or selling more shares. However, raising funds comes at a cost. Servicing additional debt cuts into net income, and selling more shares shrinks earnings per share (EPS) by increasing the total number of outstanding. So return on equity (ROE) is, in effect, a speed limit on a firm's growth rate, which is why money managers rely on it to gauge growth

potential. In fact, many specify 15% as their minimum acceptable return on equity (ROE) when evaluating investment candidates ¹⁷.

Return on equity (ROE) is not an absolute indicator of investment value. After all, the ratio gets a big boost whenever the value of shareholders' equity, the denominator, goes down. If, for instance, a company takes a large write-down, the reduction in income return on equity (ROE's numerator) occurs only in the year that the expense is charged. That write-down, therefore, makes a more significant dent in shareholders' equity (the denominator) in the following years, causing an overall rise in the ROE without any improvement in the company's operations. Having a similar effect as write-downs, share buybacks also normally depress shareholders' equity proportionately far more than they depress earnings. As a result, buybacks also give an artificial boost to return on equity (ROE). Moreover, a high return on equity (ROE) doesn't tell you if a company has excessive debt and is raising more of its funds through borrowing rather than issuing shares. Remember, shareholders' equity is assets less liabilities, which represent what the firm owes, including its long- and short-term debt. So, the more debt a company has, the less equity it has. And the less equity a company has, the higher its ROE ratio will be ¹⁷.

Return on Equity (ROE) is probably the most important number in the financial universe. Every company is driven by profit and Return on Equity (ROE) is considered to be the best indicator of the profitability of a company. Debt holders just want to get their interest and principle back i.e. they will obtain a fixed rate of return. On the other hand equity holders get a variable return. For this reason, this number is considered more important than return on Assets or return On Invested Capital. Return on equity tells the shareholders how many dollars of post-tax earnings, the company generated for every dollar of equity capital it had ¹⁷. Return on equity (ROE) has

some assumptions; No Dilution- the Return on Equity (ROE) figure does not take into account the outstanding share warrants. This is because there is uncertainty as to whether the derivative products will be exercised and whether the equity base of the company will change. However, if warrants are exercised and equity is diluted, the ROE figure could change drastically; leverage to Continue- the return which is being compared against equity has been generated by using debt too. The Return on Equity (ROE) ratio assumes that the current gearing ratio i.e. leverage of the firm is likely to continue in the future. Moreover Return on Equity (ROE) may go up or down because of a change in leverage alone. ROE going down could be a good sign too because it would mean de-risking of the company; taxation to Continue- the Return on Equity (ROE) also assumes that the taxation structure will remain the same in the future. If comparisons are being made with past return on equity (ROE's) then there is an implicit assumption that the tax structure has not changed ¹⁸. Return on equity can be interpreted in many ways. Return on equity (ROE) is the most widely used ratio for valuation of a firm. Equity investors are interested in the earnings that the firm will generate for them. ROE provides a direct measure. Therefore investors usually buy shares at multiples of return on equity (ROE). Return on equity (ROE) may be affected by the gestation period. A company may borrow money today to invest in long term facilities. The returns may take some time to start. This will show a low return on equity (ROE) but may be a positive sign. For this reason, return on equity (ROE) may not be an accurate measure ¹⁸.

Return on Equity (ROE) is one of the Financial Ratios that use to measure and assess the entity's profitability based on the relationship between net profits over its averaged equity. Two main important elements of this ratio are Net Profits and Shareholders' Equity. Return on Equity (ROE) is the ratio that mostly concerns by shareholders, management teams, and

investors in term of profitability assessment. It is also commonly used as key financial indicators in performance measurement as well as setting as the key indicator performance (KIP) for the entity. However, many accounting technical and investor warn that this ratio could return many risks to the entity if it is used improperly. Return on Equity (ROE) is measuring the direct profits that the entity could possibly generate from business operations to its shareholders or investors over the invested fund (equity). It is simply mean how much profit (N) the entity could generate per (N) invested. The best way to make this ratio more meaningful is it needs to be used with other financial indicators as well as non-financial indicators. Return on Equity (ROE) is said to be good if it is over the cost of capital ¹⁸.

Return on Equity (ROE) = Net Profit / Total Equity.

The equity here is sometime could be the equity at the end of the period. and sometime it could be the equity on average. For fair assessment, the equity should be in averages. That means equity balance at the beginning of the period plus the equity balance at the end of the period divided by two. Yet, if you could not find or they provide only the equity at the end, let use the ending balance. You can also find the equity balance from the balance sheet if you do not tell you. For example, total equity = total assets less total liabilities. Remember, equity is the net worth and none of the liabilities is included. It is different from capital employed since capital employed is net worth plus long term liabilities. The Net Income is quite straight forward. We just pick up the Net Income that you use for the period that you want to analysis. You can find net income in the income statement in the period you want to assess or calculate it from the balance sheet. However, the period that you analyst must be consistence otherwise your analysis will be not fairly interpreted. Remember, the net income that you use to calculate ROE must be after deduction of taxes and interest expenses ¹⁹.

The first thing that we need to think about in order to calculate and analyze Return on Equity (ROE) is Net Profit. Net Profit here is the profit after tax that entity generates for the period of time.

Net profit arrived after deduction many significant importance expenses. Those expenses are included Cost of Goods Sold, Operating Expenses, and Interest Expenses as well as tax expenses. As you could see the way how we calculate Net Income above. It is after deduction many significant expenses that could be manipulated by the entity if they wish to. For example, depreciation expenses are subject to the entity's accounting policies. Management could use both accounting technique and accounting policies to make depreciation expenses increase or decrease as they want to. And subsequently, affect Return on Equity Ratio. The revenue also could be manipulated. For example, early recognition of Sales Revenue before the period that it should be. See the disadvantage for detail. The second thing is Shareholder Equity. Shareholder Equity here include all equity items in the Financial Statements. However, for fairness interpretation, Return on Equity, Average Shareholder Equity should be used. It is calculated by the average of both the beginning and ending of Shareholder Equity of an Entity. The advantages of return on equity (ROE) are many; it is easy to calculate and understand by most non accounting managers, investors, and shareholders. As we can see, this ratio is very easy to calculate. All of the information is available in the financial statements and it is calculated based on the logical basis. Non-accounting manager, investors, and shareholders are also able to confirm the accuracy of this ratio; the basis is very easy to understand by most types of managers. The not only manager who has experiences in accounting could easily understand, but operation manager or division managers also easy to use and interpret; most of the investors and shareholders are bench-marking the ROE from their own companies with the market figure or

competitors. Especially, the one in the same industry. It provides them with a good starting point to assess their companies' performance ¹⁹. Return on equity also has some drawbacks; return on Equity (ROE) is the profitability ratio that use by investors and shareholders to assess how profitable the company is compared to others, budget or expectation. That is the reason why this ratio create any kind of risks to shareholders whenever it becomes the first priority in performance measurement; the common reason why it is risky is that this ratio is the financial ratio (figure). The figure could be manipulated by the management. Management of the company needs to make sure it gets a better result. For example, if this ratio is used as the main key performance indicator for deciding management bonus. Then, management might try to play around with the figure; management may try to manipulate the Return on Equity (ROE) by not investing the new fixed assets or do not make proper maintenance. It also keeps using the old assets that significantly affect the operating expenses through depreciation. This ratio also could be manipulated by using the depreciation rate that could be a positive effect Return on Equity (ROE). All of these will affect the future of the entity¹⁹.

2.1.1.3 Return on Capital Employed

Return on Capital Employed is one of the profitability ratios that use to assess the profits before interest and tax that the company could generate from its business by using shareholders' capital employed. Capital employed is the fund that shareholders injected into the company plus other capital and long-term debt. In other words, the fund that the company could use to generate profits. Capital employed at the end of a specific period could be calculated by eliminating total liabilities from total assets at that period in the balance sheet. Return on Capital Employed is different from Return on Equity for two reasons. First, it is using earnings before interest and tax while return on equity taking account net income. Second, this ratio use capital employed while

returning on equity taking account only equity fund. Capital employed is different from equity. Equity or shareholder equity is the accumulation of capital employed, retain earning and other equity items. Return on capital employed not measure the net profit that the company generates over the capital employed. But it taking account earnings before interest and tax over the capital employed. This ratio ignores the interest expenses and tax expenses that the company pays during the years. Tax and Interest are sound uncontrollable by management ²⁰.

Return on Capital Employed is calculated by Earning before Interest and Tax / Capital Employed
The most important parts to calculate this ratio are Profit before Interest and Tax, and Capital Employed. The calculation is different from Return on Equity. This ratio is changing from time to time because of the changing of these two important items. If earnings before interest and tax (EBIT) is increased, return on capital employed (ROCE) is increased and if Capital Employed is increasing, return on capital employed (ROCE) is decreased. You can find earnings before interest and tax in the income statement of the entity that being assess that ratio. We sometimes call this profit as operating profits because it is the profits after deducting the costs of goods sold and operating expenses. And capital employed is the balance sheet item and you can calculate by using the above formula. This is the fund that the company uses to generate the above profits equity and long-term liabilities. Return on capital employed (ROCE) measures the return to all of Capital (Total Assets less Current Liabilities) while return on equity (ROE) measure only returns on Shareholders' Equity. That is the reason why we pick up different profit to assess ²¹.

The benefits of return on capital employed is that; the calculation of Return on capital employed is quite simple and that is the reason why it is mostly used to assess the performance of entity or investment project; it is easy to interpret and most of the non-accounting managers could easily understand; another benefit of return on capital employed is that this ratio could be used to assess

the entity or investment project in different size and different tax and interest perspective. As the ratio is measured in percentage so it is easy and sensible to see and assess the performance of different entities or projects that have different sizes. Not like residual income or another absolute financial measurement. The different entities might face different tax and interest expenses; this ratio is also suitable to assess the entity or investment project that have different tax and interest perspective as it uses only Earnings before Interest and tax. For example, the group companies may have different projects with different sizes of invested capital as well as the different tax rates. This ratio allows the group company to assess the performance by using this ratio since the tax charged as well as interest expenses are excluded from the calculation ²². The drawbacks of return on capital employed (ROCE) is that this ratio is using information from historical financial data and it could be manipulated by smart chief executive officer (CEO). This ratio is used to assess the performance of the company or project and more importance to assess the performance of the management team. While using this ratio to assess the performance, management could manipulate this ratio by using the accounting techniques or by not investing new assets²².

Another popular that is much closed to Return on capital employed is Return on Invested Capital (ROIC) and is used widely in financial analysis. The reason for its popularity is that like return on asset (ROA), return on invested capital (ROIC) can be used by both equity and debt holders. Also, like return on asset (ROA), it provides data about return to the company as a whole and is not affected by leverage. The formula is $\text{Return on Invested Capital} = \text{EBIT} / \text{Invested Capital}$. Invested Capital is not the same as Capital listed on the balance sheet. Neither is it the balance sheet total. Invested Capital is a term analysts have coined in the recent past to denote capital that has been listed for the long term in the company's operations. Invested capital is derived by

starting from the Balance Sheet Liabilities total and then subtracting the current liabilities from it. This is because current liabilities are not sustainable sources of long term financing and therefore cannot qualify as capital ²³ . The Return on Invested Capital (ROIC) metric measures the company's efficiency at allocating its resources to generate the maximum return. Thus return on invested capital (ROIC) shows the relationship between invested capital and return. It must be thought about as having Ns X in earnings for every naira in invested capital. There are assumptions of return on invested capital (ROIC); the Return on Invested Capital (ROIC) used earnings before interest and tax (EBIT) which is a pre-tax figure. This ratio does not consider that companies can make significant differences to their profitability with the help of tax planning strategies. Some analysts use both pre-tax and post-tax return on invested capital (ROIC) numbers to get a better picture of the company's operations; the Return on Invested Capital (ROIC) assumes that the book values stated are accurate. In many cases, the book values and the market values of assets are very different. One such example is land. Thus, return on invested capital (ROIC) becomes a misleading figure. This is because many times analysts consider the opportunity cost based on market value and the return on invested capital (ROIC) drops drastically ¹⁶. Return on invested capital (ROIC) does not provide break up about whether income has been earned from regular operations or from one time activities. Return on Invested Capital (ROIC) is useful in case of companies that have done many acquisitions. Since it is difficult to segregate the cash flows of the two merged companies, ROIC with and without the acquisition serves as a measure of gauging success ²³.

2.1. 2 Asset quality

Loans and advances to customers are major assets of banks. Shareholders expect these assets to earn returns through various investments especially interests from loans to customers to ensure

profitability of the bank²⁴. Asset quality involves the evaluation of assets of bank that will facilitate the measurement of the level and size of credit risk that connect with its operation to ensure profitability resulting in improved financial performance²⁵. Asset quality is a measure of how well a loan or asset is performing. It is a measurement of the level and size of credit risk that may prevent loan performance from yielding the greatest benefit to the organization.

Asset quality is a micro-prudential determinant of the soundness and profitability of commercial banks. It relates to the left side of a bank balance sheet and is focused on the quality of loans that generate earnings for the bank. In 1997, the BASEL Committee on Banking Supervision identified seven of twenty-five core principles of effective banking supervision. Maintaining sound asset quality necessitates the careful granting of loans that must be scrutinized as well as compliance with banking rules. Poor asset quality, as well as good asset quality, have an impact on financial performance and the soundness of the banking system as a micro-determinant of profitability ¹¹.

Asset Quality is an evaluation of a particular asset, stating the amount of credit risk associated with it. The creation of loan assets exposes organizations to a risk of default of their investment. Asset quality refers to the manner in which the borrower meets his/her contractual obligations in the given time. Asset quality rating is critical in bringing a high credit rating to an organization, as it shows the management's capability to control and monitor credit risks associated with these assets²⁵. Asset quality refers to the overall risk attached to the various assets held by an individual or institution. This term is most commonly used by banks determine how many of their assets are at financial risk and how much allowance for potential losses they must make. The most common assets requiring a strict determination of asset quality are loans, which can be non-performing assets if borrowers default on repayment obligations. Risk managers often assess

the quality of assets by assigning a numerical ranking to each asset depending upon how much risk is involved²⁶.

Asset quality is one of the most critical areas in determining the overall condition of a bank. The primary factor affecting overall asset quality is the quality of the loan portfolio and the credit administration program. Loans typically comprise a majority of a bank's assets and carry the greatest amount of risk to their capital. Securities may also comprise a large portion of the assets and also contain significant risks. Other items which can impact asset quality are other real estate, other assets, off-balance sheet items and, to a lesser extent, cash and due from accounts, and premises and fixed assets ²⁷.

Asset Quality Rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios, other real estate owned, and other assets, as well as off-balance sheet transactions. The ability of management to identify and manage credit risk is also reflected here. The evaluation of asset quality should consider the adequacy of the Allowance for Loan and Lease Losses (ALLL) and weigh the exposure to counter-party, issuer, or borrower default under actual or implied contractual agreements. All other risks that may affect the value or marketability of an institution's assets, including, but not limited to, operating, market, reputation, strategic, or compliance risks, should also be considered. An asset quality rating refers to the assessment of credit risk associated with a particular asset, such as a bond or stock portfolio. The level of efficiency in which an investment manager controls and monitors credit risk heavily influences the rating bestowed. And because asset quality is an important determinant of risk that profoundly impacts liquidity and costs, analysts go to great lengths to make sure they issue the most accurate evaluations possible. After all, their pronouncements can greatly affect the overall condition of a business, bank, or portfolio for years to come. The general idea behind asset

quality ratings is to assess the individual risk associated with each specific asset. Although there may be different techniques used by risk managers, the most basic way to rate assets is on a scale of one to five. A ranking of one would indicate that the asset, like a government bond, has little to no risk attached to it, while a ranking of five indicates that there is a distinct possibility that the asset in question, like a so-called junk bond from a corporation with a low credit rating, will return nothing to the institution holding it²⁶. Before assigning an asset quality rating, several factors are usually considered. The factors should be considered in the context of any local and national conditions and systemic weaknesses that might affect the performance of bank. The possible factors which may influence assessment of examiner include the following; the adequacy of the standard of underwriting, effectiveness of practice of credit administration and quality of practices of risk identification.; the distribution , severity, level , and restructured, trend of problem, classified, delinquent, nonaccrual, and nonperforming assets for both on- and off-balance sheet transactions; the off balance sheet transactions arising from credit risk such as credit derivative, unfunded commitments, lines of credit, commercial and standby letters of credit; the quality and diversification of the investment portfolios and loan ; the extent of exposure to counter-parties in trading activities and securities underwriting activities; the existence of asset concentrations; the adequacy of investment policies and loan, practices and procedures; the capacity of management to properly administer its assets, including the timely identification and collection of problem assets ; the effectiveness of internal controls and management information systems; the volume and nature of credit documentation exceptions²⁶ .

When assigning component ratings by examiner, the above factors, among others, should be evaluated and considered ongoing trends. It should not be according to current adverse classification levels and risk management practices. The same classification levels and

management practices might be looked on more or less favorably depending on any improving or deteriorating trends in one or more factors²⁰. The asset quality rating definitions are applied after a thorough evaluation of existing and potential risks and the mitigation of those risks. The definitions of each rating is stated as follow: a rating of 1 indicates strong asset quality and credit administration practices. Identified weaknesses are minor in nature and risk exposure is modest in relation to capital protection and management's abilities. Asset quality in such institutions is of minimal supervisory concern; a rating of 2 indicates satisfactory asset quality and credit administration practices. The level and severity of classifications and other weaknesses warrant a limited level of supervisory attention. Risk exposure is commensurate with capital protection and management's abilities; a rating of 3 is assigned when asset quality or credit administration practices are less than satisfactory. Trends may be stable or indicate deterioration in asset quality or an increase in risk exposure. The level and severity of classified assets, other weaknesses, and risks require an elevated level of supervisory concern. There is generally a need to improve credit administration and risk management practices; a rating of 4 is assigned to financial institutions with deficient asset quality or credit administration practices. The levels of risk and problem assets are significant, inadequately controlled, and subject the financial institution to potential losses that, if left unchecked, may threaten its viability ; a rating of 5 represents critically deficient asset quality or credit administration practices that present an imminent threat to the institution's viability²⁰. Low asset quality rating means that the investments have a low rate of return and higher chances of default as compared to the high rating assets. Similarly, high asset quality assets boast of a high return as well as low chance of default. A rating of 1 means that the asset is a low risk asset meaning good in quality. As you go towards 5, the risk associated with the asset increases thus depicting increasing asset quality problems²⁸.

The CAMELS ratio is an analysis method used to measure the soundness of bank. The method uses several criteria, namely, Capital, Asset Quality, Management, Earning and Liquidity. It is used to evaluate the solvency and liquidity of commercial banks. Supervisor of banks uses CAMELS as a scoring system when comparing tires with six factors. This approach helps banks in conducting performance appraisals as well as assisting regulators to carry out their supervisory functions. The components of CAMELS are Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity. Capital Adequacy assesses the compliance of bank with regulations on the minimum capital reserve amount. The rating is establish by Regulators by assessing the current capital position of financial bank and over several years. Future capital position is predicted based on the plans of bank for the future, such as whether they are planning to pay out dividends or acquire another bank. The CAMELS examiner would also look at the composition of capital, trend analysis, and liquidity of the capital²⁹. The rating factors of capital adequacy are ; The composition of the Balance Sheet; Overall financial condition of the institutions; Growth plans and prospects along with its management; Earning strength and quality; Dividend reasonableness; Access to the various sources of capital like capital markets; Quality and level of money infused; Management's ability to fulfil the additional capital requirement; Off-balance Sheet activities exposed to risk; Estimation of the problem assets in terms of its nature, volume and trends; Capital adequacy for valuation reserves and loss due to lease or loan allowances²⁹.

Assets relate to the quality of a bank's assets. Asset quality is important, as the value of assets can decrease rapidly if they are high risk. For example, loans are a type of asset that can become impaired if money is lent to a high-risk individual. The examiner looks at the bank's investment policies and loan practices, along with credit risks such as interest rate risk and liquidity risk. The

quality and trends of major assets are considered. If a financial institution has a trend of major assets losing value due to credit risk, then they would receive a lower rating²⁸. The rating factors of asset quality are ; management information system, loan portfolio management, written policies and procedures and internal control; the volume of problem assets, overdue or rescheduled loans; considering the bank's capacity while the growth of institutional loans; reserves for loss on loans in case of problem credit and other related assets; investment diversification and concentration of assets; management's ability to regulate all the assets and recover problem assets; nature and volume of credit documentation exceptions; level of exposure to counterparties involved in trading and securities underwriting activities; credit risk analysis, non-performing assets, problem trends, nonaccrual, severity, distribution, restructuring, classifying and level of on and off-balance sheet transactions; appropriate risk identification practices, underwriting standards adequacy and credit administration practice ²⁹.

Management capability measures the ability of an institution's management team to identify and then react to financial stress. The category depends on the quality of a bank's business strategy, financial performance, and internal controls. In the business strategy and financial performance area, the CAMELS examiner looks at the institution's plans for the next few years. It includes the capital accumulation rate, growth rate, and identification of the major risks. For internal controls, the exam tests the institution's ability to track and identify potential risks. Areas within internal controls include information systems, audit programs, and recordkeeping. Information systems ensure the integrity of computer systems to protect customer's personal information. Audit programs check if the company's policies are being followed. Lastly, record keeping should follow sound accounting principles and include documentation for ease of audits²⁸. The rating factors of management are ;Internal control, policies and audit competence; the efficiency

of the management information system and risk monitoring system; level of support from the management or the board; adherence to the laws, rules and regulations; management's ability to plan, manage and respond to risks; taking corrective measures on the advice of supervisory authorities and auditors; willingness to meet the banking community requirements; maintaining reasonable compensation policies; institution's overall performance and risk profile²⁹.

Earnings help to evaluate an institution's long term viability. A bank needs an appropriate return to be able to grow its operations and maintain its competitiveness. The examiner specifically looks at the stability of earnings, return on assets (ROA), net interest margin (NIM), and future earning prospects under harsh economic conditions. While assessing earnings, the core earnings are the most important. The core earnings are the long term and stable earnings of an institution that is affected by the expense of one-time items²⁸. The rating factors of earning are ;Earning source; Earning stability, trends and level; level of operational expenses; market risks exposure in terms of foreign exchange, interest rates and price fluctuations; retained earnings as a source of adequate capital; maintaining provisions for loan allowances and loss on the lease; managing the forecasting process, management information system and budgeting system ²⁹ .

For banks, liquidity is especially important, as the lack of liquid capital can lead to a bank run. This category of CAMELS examines the interest rate risk and liquidity risk. Interest rates affect the earnings from a bank's capital markets business segment. If the exposure to interest rate risk is large, then the institution's investment and loan portfolio value will be volatile. Liquidity risk is defined as the risk of not being able to meet present or future cash flow needs without affecting day-to-day operations²³. The rating factors of liquidity are ; Deposit stability and trend; ability to acquire funds from money market and other sources of capital; institution's ability to

sell off the pools of assets which are difficult to be sold individually; the holding of assets which are readily convertible into cash without any loss; maintaining adequate liquid sources of funds to meet day to day expenses without creating burden over the institution; the extent of reliance on the short term sources of the fund like borrowings, brokered deposits, . to invest in long term assets; the degree of diversification of the various sources of funds; management's ability to analyze and regulate the institution's liquidity position, and ensuring effective implementation of the management information system, fund management strategies, liquidity policies and contingency funding plans²⁹ .

Sensitivity is the last category and measures an institution's sensitivity to market risks. For example, assessment can be made on energy sector lending, medical lending, and agricultural lending. Sensitivity reflects the degree to which earnings are affected by interest rates, exchange rates, and commodity prices, all of which can be expressed by Beta ²⁸. The rating factors of sensitivity are; management efficiency in identifying, analyzing and controlling the level of market risk; analysis of the interest rate risk involved in non-trading positions; responsiveness of the financial institutions towards the fluctuation in commodity prices, interest rates, equity prices, foreign exchange rates; assess trading and international operations risk²⁹.

The composite rating of the components determines the weight or importance given to each element individually. The weight of individual element is ; Capital Adequacy 20%: The capital acquisition and its source, play a significant role in finding out the CAMELS rating of the bank; Asset Quality 20%: Assets here basically refers to the loans provided by these financial institutions shown in the balance sheet, which are judged by their quality; Management 25%: Management of risk at each step, right from planning, organizing, staffing and controlling

involves CAMELS rating; Earnings 15%: The earning potential, sustainability, quality and trend are analyzed by the supervisory level; Liquidity 10%: The movement and availability of liquid cash and cash equivalents also affects the rating; Sensitivity 10%: The last component is the institution's sensitivity or responsiveness towards the market risk²³. For each category, a score is given from one to five. One is the best score and indicates strong performance and risk management practices within the institution. On the other hand, five is the poorest rating. It indicates a high probability of bank failure and the need for immediate action to ratify the situation. If an institution's current financial condition falls between 1 and 5, it is called a composite rating²⁷. A scale of 1 implies that a bank exhibits a robust performance, is sound, and complies with risk management practices. A scale of 2 means that an institution is financially sound with moderate weaknesses present. A scale of 3 suggests that the institution shows a supervisory concern in several dimensions. A scale of 4 indicates that an institution has unsound practices, thus is unsafe due to serious financial problems. A rating of 5 shows that an institution is fundamentally unsound with inadequate risk management practices. A higher number rating will impede a bank's ability to expand through investment, mergers, or adding more branches. Also, the institution with a poor rating will be required to pay more in insurance premiums²⁸.

Each rating and its analysis is interpreted ; One is "Strong"- the top-rated financial institutions are the ones which range between a rating of 1.0 to 1.4; they have the most favourable financial, operational and managerial conditions; Two is "Satisfactory" - The banks which are suitable but has some identified weaknesses and are rated between 1.5 to 2.4; Three is "Less Than Satisfactory" -these financial institutions are rated between 2.5 to 3.4 and require supervisory concern to overcome several financial, operational and managerial weaknesses; Four is "Deficient"- the banks or other financial institutions which lie between a range of 3.5 to 4.4 are

at an alarming stage. It pertains many economic weaknesses which may lead to loss or risk of failure; five is “Critically Deficient”- the most inferior rating is between 4.5 to 5. Here, the financial institutions have crucial financial weaknesses and need serious attention; otherwise, it will lead to a high degree of failure ²⁴. Banks that are given an average score of less than two are considered to be high-quality institutions. Banks with scores greater than three are considered to be less-than-satisfactory institutions ²⁸.

The CAMELS rating system is highly efficient to determine the risk level associated with financial institutions. The purpose that CAMELS served are; Financial Condition- to determine the financial health and soundness of the institution, the CAMELS rating system is widely used; Operational Condition- CAMELS rating system analyzes the institution’s liquidity position and manages risk is to ensure sound operational condition; Managerial Condition- It also indicates management’s efficiency of handling risks, managing sources of funds, liquidity position and earnings potential of the institution ³⁰. Asset quality has Components; the Gross Non-Performing Assets (NPAs) to Gross Advances ratio is a measure of the quality of assets in a situation, where the management has not provided for loss on NPAs (Non-Performing Assets). Here Gross (Non-Performing Assets) NPAs are measured as a percentage of Gross Advances. Lower ratio indicates better quality of advances ¹¹. Gross Non-Performing Assets(NPAs) to Gross Advances = Gross Non-Performing Assets (NPAs) /Gross Advances; Net Non-Performing Assets (NPAs) to Net Advances - This ratio is the most standard measure of Assets Quality. This ratio measures Net Non- Performing Assets as a percentage of Net Advances. Net Non-Performing Assets (NPAs) are Gross Non-Performing Assets (NPAs) net of provisions on Non-Performing Assets (NPAs) and interest in suspense account. Net Non-Performing Assets (NPAs) to Net Advances = Net Non-Performing Assets (NPAs) / Net Advances; Total Investments to Total Assets - this

ratio indicates the aggressiveness of banks in investing rather than lending. It is the ratio of Total Investments to Total Assets. It highlights alternative avenues for parking funds. Higher ratio means lack of credit take-off in economy and much proportion of total assets is utilized in investments that should not be the case with banks because the primary business of the banks is to lend. This ratio indicates how much proportion or percentage of total assets is in the form of investments $\text{Total Investment to Total Assets Ratio} = \frac{\text{Total Investments}}{\text{Total Assets}}$; Net NPAs to Total Assets- this ratio indicates the efficiency of the bank in assessing credit risk and to an extent recovering the debts. This ratio is arrived at by dividing the Net NPAs by Total Assets. Net NPAs are calculated by adjusting provisions against Gross NPAs. Lower ratio indicates the better performance of banks; Earning Quality & Profitability- the quality of earnings is very important criterion which determines the ability of a bank to earn consistently. It basically determines the profitability of the banks. It also explains the sustainability and growth in earnings in the future. This parameter has gained importance in the light of the argument that much of a bank's income is earned through activities like investments, treasury operations, and corporate advisory services and so on ; Spread to Total Assets- the difference between the total income and the total expenses of a bank gives taxable income. However, considering the intermediation function, it is the Net Interest Income ($\text{NII} = \text{Interest earned} - \text{Interest expended}$) that is more crucial for banks. For the long term sustenance of the bank, this should be positive. The deregulated interest rate environment, the pressure built by competition for attracting deposits, liberalization and other banking norms & regulations affect the interest rates and thereby Net Interest Income (NII). This ratio shows the ability of a bank to keep the interest on deposits low and interest on advances high. It is an important measure of a bank's core income (income from lending operations). A higher spread indicates the better earnings, given the total

assets. This ratio is calculated as: $\text{Spread to Total Assets} = \text{Spread} / \text{Total Assets}$ (Where Spread = Interest earned – Interest expended) ¹¹.

Earnings per Share is the ratio that measures the profitability of the firm on per Equity Share basis. This ratio measures the earnings available to an equity shareholder on a per share basis. Return on Assets of a company determines its ability to utilize the Assets employed in the company efficiently and effectively to earn a good return. This ratio measures the percentage of profits earned per rupee of Assets and thus is a measure of efficiency of the company in generating profits on its Assets. Higher ratio indicates efficiency of management in employing its funds efficiently and economically $\text{ROA} = \text{Net Profit} / \text{Total Assets}$. Interest Income is a basic source of revenue for banks. The Interest Income to Total Income Ratio indicates the ability of the bank in generating income from its lending activities. In other words, this ratio measures the income from lending operations as a percentage of the total income generated by bank in a year. Interest Income includes Interest on Advances, Discount on Bills, Income from Investments, Interest on Deposits with RBI and Other Inter-Bank Funds. $\text{Interest Income to Total Income} = \text{Interest Income} / \text{Total Income}$ ¹¹. Non-Interest Income to Total Income is the ratio measures the income from operations other than lending as a percentage of Total Income. Non- Interest Income is the Income earned by the banks excluding income on advances and deposits with RBI. Non-Interest Income includes Commission, Exchange, Brokerage, Profit on Redemption & Sale of Investment (Less loss on Investments), Profit on Sale of Land, Buildings & Other Assets, Profit on Exchange Transactions (Less Loss on Exchange Transactions), Income earned by way of Dividends from Subsidiaries, Companies and/or Joint Ventures abroad/in India and Miscellaneous Income. Profit Margin Ratio of a company determines its ability to withstand competition and adverse conditions like rising costs, falling prices or declining sales in future.

This ratio measures the percentage of net profit to total income and thus is a measure of efficiency of the company. $PMR = \text{Net Profit} / \text{Total Income}$ ¹¹ .

In this study the proxy of asset quality that is of concerned are Total Loans and Advances, Performing Loans and Advances, Deposit, Capital Adequacy, and Total Assets.



2.1.2.1 Gross Loans and Advances

Gross loans and advances are loans and advances to customers, finance lease receivables and cash, cash equivalent. It comprises of overdrafts, term loans, project finance, advance under finance leases, credit cards, mortgage. It is a gross loans which comprises of performing, impairment and non-performing. A loan is a sum of money that one or more individuals or companies borrow from banks or other financial institutions so as to financially manage planned or unplanned events. In doing so, the borrower incurs a debt, which he has to pay back with interest and within a given period of time. From the angle point of borrowers, it is borrowing while form the angle of bank, it is lending³¹. The recipient and the lender must agree on the terms of the loan before any money changes hands. In some cases, the lender requires the borrower to offer an asset up for collateral, which will be outlined in the loan document. A common loan for households is a mortgage, which is taken for the purchase of a property. Loans can be given to individuals, corporations, and governments. The main idea behind taking out one is to get funds to grow one's overall money supply. The interest and fees serve as sources of revenue for the lender ³².

The term loan is a sum of money that is given out to someone as a credit in agreement that the receiver will repay in future the value or principal amount. At times , the lender may include in

addition to repayment of the principal sum. Loans can be categorized according to the purpose; it can be for a specific project, it may be lend out one time to the borrower or the loans can be given out as an open ended line of credit which is limited to a specific amount (limit). There are various forms of loans; there are secured loans, unsecured loans , commercial loans and loans for personal use. Many at times, certain clauses are added to the loans; the clause may include the maximum interest or amount that can be added to the loan, there are covenants that will state the period of time that repayment will be made. There are many reasons that necessitate Loans to be given out to the customers. Among reasons are; loans can be given to purchase assets, investing, renovation of properties, to repay debt and to start businesses . Loans can also be given out in form assistance for companies that already in operation. Loans is part of tool that assist economy growth by increasing supply of money in circulation and also encourage competition among companies by given out funds to new business to kick start their operation. The major revenues of banks come from interest and fees on the laons given out to their various customers and many of their customers especially retailers depends on the usage of credit facilities as well as credit cards³³. The interest rate is a major consideration in given out loans to customers. The roles of interest rate is very significant because it become a cost to the customers. Loans that have higher interest rates will have higher monthly repayment. It may also take a longer period before the repayment can be concluded. For instance, if a bank lend N5,000 to customer to be paid on a five-year installment or term loan with a 4.5% interest rate, the customer faces a monthly payment of N93.22 for the following five years. In contrast, if the interest rate is 9%, the payments climb to N103.79. Similarly, if a person owes N10, 000 on a credit card with a 6% interest rate and they pay N200 each month, it will take them 58 months, or nearly five years, to pay off the balance. With a 20% interest rate, the same balance, and the same N200 monthly

payments, it will take 108 months, or nine years, to pay off the card ³³. The interest rate on loans can be programmed at simple or compound interest. Simple interest when interest is on the principal loan. Many at times Banks do not change simple interest on the customer. Compound interest is when interest is placed on interest and it means more money in interest has to be paid by the customer. The interest charge on compound interest will be applied on the principal as well as accumulated interest on the previous periods. According to the bank, at the end of the first year, the customer will be expected to repay principal plus interest for that year. At the end of the second year, the customer will also be expected to repay principal and the interest for the first year plus the interest on interest for the first year²⁷. In case of compound interest, the interest owed by customer is usually higher than simple interest because of interest charged on principal and accrued interest of the previous months. Loans can be classified into short term loans, medium term loans and long term loans. Short term loans are loans given to person (s) or companies to support business need or temporary personal need and both interest and principal must be repaid within a year from getting the facility. It is suitable for small business or newly formed companies that are not qualified for a credit line³⁴. Bank gives out short term loans in various ways. Among them are; merchant cash advances which is in form cash advance but operate as loan. The bank give out the money to the borrower while the customer allows bank to access her credit facility for loans repayment; line of credit is given in form business credit card. A credit limit is set on the card and the customer can access the fund as the needs arise. The customer makes monthly installment payment against the loans that has been borrowed; payday loans are emergency loans which is easy to obtain by customer. Both principal and interests are collected by bank in one lump sum when the payday is due.; invoice financing is facility available to customer that have invoice that is yet to be paid. The bank loans the amount and

charges interest based on the number of weeks that invoice remains outstanding. When the money is paid, the bank will collect her money including the outstanding interest before the remaining balance is released to the customer ³⁵. Medium term loans are loans that the repayment period is between two and five years. The loans are good option for small businesses that is looking for traditional loan with a specific set repayment. The loans are good for business that are experienced positive growth in their revenues and the company is in need for capital to further expand. Long term loans are loans that the repayment period is more than five years. This loan is good for business that wants to borrow a large amount and also wants to have a lower monthly payment³².

The loans can further classified into secured and unsecured, open-end and closed-end, and conventional types. A secured loan is one that is backed by some form of collateral. For instance, most financial institutions require borrowers to present their title deeds or other documents that show ownership of an asset, until they repay the loans in full. Other assets that can be put up as collateral are stocks, bonds, and personal property. Most people apply for secured loans when they want to borrow large sums of money. Since lenders are not typically willing to lend large amounts of money without collateral, they hold the recipients' assets as a form of guarantee ³². Some common attributes of secured loans include lower interest rates, strict borrowing limits, and long repayment periods. Examples of secured borrowings are a mortgage, boat loan, and auto loan. While an unsecured loan means that the borrower does not have to offer any asset as collateral. With unsecured loans, the lenders are very thorough when assessing the borrower's financial status. This way, they will be able to estimate the recipient's capacity for repayment and decide whether to award the loan or not. Unsecured loans include items such as credit card purchases, education loans, and personal loans ³². An open-ended loan give liberty to an

individual has the freedom to borrow over and over. Examples of this loans are Credit cards and lines of credits although they both have credit restrictions. A credit limit is the highest sum of money that one can borrow at any point. Depending on the financial needs of an individual, he or she may choose to use all or just a part of his credit limit. Every time this person pays for an item with his credit card, the remaining available credit decreases ³². While the closed-end loans restrict an individuals from further borrowing until they have repaid them. Every repayment of the closed-end loan, reduces the loan balance. However, if the borrower wants to borrow additional loans, he or she will need to apply for another loan from scratch. The process entails presenting documents to prove that they are credit-worthy and waiting for approval. Auto loan, Mortgage and student loans are examples of close end loans³².

A revolving loans are loans that can be spent, repaid, and spent again, while a term loans are loans paid off in equal monthly installments over a set period. A credit card is an unsecured, revolving loan, while a home equity line of credit is a secured, revolving loan. In contrast, a car loan is a secured, term loan³³. Personal loans are most of time unsecured and easy to access once the borrower has average credit history. The good news for borrower is that he or she can usually spend the money as they like. The person can use the money for vacation or buy household items. Student loans are loans given to student to pursue their career in education. The interest rates are very reasonable, and the student do not have to pay the loans back while he or she is still a full-time student. Six or eight years, leaving new graduates with huge debts as they embark on their new careers³⁴. Mortgage loans are loans given to borrower to purchase property or house. These loans are secured by the house or property that the borrower is buying. That means if borrower do not make your payments in a timely manner, the bank or lender can take over the house or property back! Mortgages help people get into homes that would otherwise take years to save for.

They are often structured in 10-, 15- or 30-year terms, and the interest pay is tax-deductible and fairly low compared to other loans⁴³. Small business loans are loans give to startup companies, that is, companies that just start business. The company will need to provide business plan to show the validity of what they are doing. These are often secured loans, so the company will have to pledge some personal assets as collateral in case the business fails³⁶.

The merits of taking term loans are; the repayment of the loan is not on demand and so the loan is available for generally three to ten years unless the borrower breach the loan conditions; the loans facility can be tied to the lifetime of the property/equipment or other assets the borrower is collecting the money to pay for; at the inception of the term of the loan the borrower may be able to negotiate a repayment holiday, meaning that borrower will only pay interest for a certain amount of time while repayments on the capital are frozen; while borrower must pay interest on loan, he or she does not have to give the bank a percentage of his /her profits or a share in the company; interest rates may be fixed for the loan so the borrower will know the level of repayments throughout the life of the loan; there may be an arrangement or processing fee that is paid at the inception of the loan but not throughout its life. If it is an on-demand loan, an annual renewal fee may be payable³⁶.

While the term loans also have some challenges. Among them are ; loans usually have certain terms and conditions or covenants especially the larger ones that borrower must adhere to, such as meeting a particular turnover on the account every month, setting aside a lump sum every month apart from normal repayment, provision of progress report on the usage of the loan every quarter; due to the nature of loans, the borrowers could be paying interest on facility they are not using; the regular repayment of the borrowers could be interrupted if the customers of the borrowers fails to pay as at when due thereby creating cash flow problems.; many at times, the

loans are secured against the assets of the business of borrower or personal possessions of borrowers, eg home. This could put the property of the borrower at risk in case he or she default in repayment of the facility; in case the customer wants to repay the facility before the end of the term especially if the interest rate on the facility is fixed, the customer may likely pay an extra charge on the outstanding³⁷. There are other facilities that are similar loans that customers can utilize for their business. There is a short term finance which comprises of overdrafts and bridging finance; overdrafts facility is used with business accounts and is a flexible source of working capital to meet short term needs; bridging finance is used by company to maintain cash flow while awaiting funds from drawdown of loans or confirmed sources of future income. There is invoice finance which offer access to working capital by unlocking the value of invoices, the interest rates and charges will be applied on the cash advanced. Invoice discounting allows borrower to draw on funding secured against approved invoices³⁷. Asset finance and leasing options allow borrower to spread the ownership associated with buying assets. When he or she buys assets through leasing finance, the leasing bank buys the equipment for borrower to use, in exchange for regular payments. Leasing or hire purchase can help borrower to maintain cashflow and allow greater flexibility in upgrading equipment. Commercial mortgages are long term finances provided by banks to finance the purchase of business premises. The mortgage will usually be repayable over a 15-year period. Borrower can get advice on the best providers of commercial mortgages from your bank's business adviser or a commercial mortgage broker. Fixed asset loans are long term loans for assets that cannot easily be turned into cash - eg property, plant or machinery. The loans can be fixed for up to ten years. With this type of loan, the asset itself is the collateral and can be repossessed if borrower do not maintain repayments.

Banks may also provide a range of specialist services to fund expansions, mergers or acquisitions³⁷.

2.1.2.2 Performing Loans and Advances

The loans and advance is said to be performing when the borrowers remains financial healthy and pays the agreed instalments and interest as scheduled. It means any loan or advances for which the last payment of principal, interest and any escrow amounts that is required to be paid by the terms of the note or collateral documents is less than sixty days. It is a loan where the repayments are made as at when due ³⁸. Performing loans and advances are those facilities in which borrowers repay agreed-upon installments and interest as soon as they become due, with no outstanding obligations.

Performing loans and advances include Overdrafts, Terms loans, project finance, credit cards, and mortgages. Overdraft facility takes place when a customer does not have sufficient amount that cover a transaction or withdrawn but bank extend credit to the customer to cover the shortfall. It is an extension of credit from the bank that is granted when an account reaches zero. The overdraft allows the account holder to continue withdrawing money even when the account has no funds in it or has insufficient funds to cover the amount of the withdrawal. There are two type of overdraft; authorized bank overdraft and unauthorized bank overdraft. Authorized bank overdraft is the arrangement that is made well in advance between the account holder and their bank. Both parties agree to a borrowing limit that can be used on all normal payment methods. Of course, the arrangement comes with a service fee that varies from bank to bank. Usually, the fee is charged daily, weekly, or monthly, plus interest, which can be as high as a 15% to 20% annual percentage rate. Considering the sometimes very high fees, an overdraft arrangement can

be very expensive, especially if the borrowed amount is very small. That is why account holders should be very careful to avoid overdrafts, even authorized ones. Unauthorized bank overdraft is the overdraft that has not been agreed upon in advance and the account holder has spent more than his account's remaining balance. Unauthorized overdrafts can also happen even if there has been a prior agreement, if the account holder has gone beyond the agreed overdraft amount. Unauthorized bank account overdrafts incur higher fees, which makes them more expensive ³⁹.

Term loan is a loan approved for either short-term or long-term. And the loan is disbursed by any financial institution. Short term loans are loans that are repaid within twelve (12) while long term loans are loans that the repayments are longer than twelve (12) and could reach five (5) or exceed the year. The amount of loan offered shall be repaid in regular payments, such as Equated Monthly/quarterly/biyearly/yearly Instalments equated over a defined period of time. Term loans can be offered in either or both fixed and floating rate of interest. The repayment tenure of a term loan for business purposes is usually between twelve (12) months to sixty (60) months. Various lending products are offered as Term loans such as personal loan, home loan, auto loan, education loan and gold loan. Term loan can be either secured or unsecured. Term loan is secured when borrower will need to submit collateral security to the bank before the loan can be accessed. Unsecured loans are offer to borrower without request for the submission of collateral facility. Term loans can be used by borrower for various business purposes, such as for business expansion, buying office or business space/land, to manage cash flow, to purchase equipment, machinery or raw materials, to meet working capital requirements, , paying-off rent and salaries, hiring new staff, debt consolidation ⁴⁰.

Project finance is the funding of long term projects or long term infrastructure. For instance industrial projects, public infrastructure, public services through a defined financial structure. The funding can consist of a mixture of debt and equity. The cashflows generated from the project will enable the borrower to service the repayment of debt and equity while the assets of project, interest and right will serve as secondary collateral. Project finance is especially attractive to both the private sector and Government because companies can finance major projects off-balance sheet (OBS) and also for long gestation projects or for joint venture arrangements or collaboration. The debt and equity used to finance the project are paid back from the cash flow generated by the project. Project financing is for projects which carry high risks on the capital employed. There is no revenue for the companies participating until the commencement of operations. During the construction phase, there may be one or two off take agreements, but no revenue streams. There is no recourse available to the parties funding the projects ⁴¹. Credit card give access to the holder to use the card to withdrawal or utilize amount that is above what the holder has in his/her card. There is usually a limit that is placed on each cardholder. This depend on bank that must have profiled the capacity of customer. Holder can use the credit on the card to purchase goods and services from merchants that accept. There are various types of credit cards banks and financial institutions. Among them are, Mastercard, Visa, American Express and Discover. Holders of some credit cards enjoy certain incentives; incentives like discount for the holders use the cards in certain hotels, airlines, in certain retailers and there may also be a cashback on purchase⁴².

Mortgage is a loan provided by a mortgage lender or banks that enables borrower to purchase a home or property. The amount of the loan can cover the entire cost of the property or less. The loan must be paid back over time. The home purchased will serve as collateral on the money an

individual is lent to purchase the home. There are two most common types of mortgages; fixed rate and adjustable rate mortgages. Fixed-rate mortgages provide borrowers with an established interest rate over a set term of typically fifteen (15), twenty (20), or thirty (30) years. With a fixed interest rate, the shorter the term over which the borrower pays, the higher the monthly payment. Conversely, the longer the borrower takes to pay, the smaller the monthly repayment amount. However, the longer it takes to repay the loan, the more the borrower ultimately pays in interest charges. The greatest advantage of a fixed-rate mortgage is that the borrower can count on their monthly mortgage payments being the same every month throughout the life of their mortgage, making it easier to set household budgets and avoid any unexpected additional charges from one month to the next. Even if market rates increase significantly, the borrower doesn't have to make higher monthly payments. Adjustable-rate mortgages (ARMs) come with interest rates that can and usually, do change over the life of the loan. Increases in market rates and other factors cause interest rates to fluctuate, which changes the amount of interest the borrower must pay, and, therefore, changes the total monthly payment due. With adjustable rate mortgages, the interest rate is set to be reviewed and adjusted at specific times. For example, the rate may be adjusted once a year or once every six months⁴³.

Performing loan becomes non-performing loan when the borrower is unlikely to repay the loan or if the borrower fails to repay agreed or instalments more than ninety (90) days. Non-performing loans are asset quality that had been weak and considered determinants of profitability because, high levels of non-performing loans adversely affect the net profit of bank through provisioning of doubtful debts and write-offs of bad debts; which normally affect profitability and capital levels. Whenever the non-performing loans are more than the capital of the bank in a relatively large number of banks it will result into a bank crisis, which will

ultimately turns into a financial crisis⁴⁴. A non-performing loan (NPL) is a loan in which the borrower fails to make scheduled payments for a specified period. The actual elements of non-performing status can vary depending on the specific terms and conditions of the loan. "No payment" is a zero payments of either principal or interest. The specified period is different depending on the sector, industry and the type of loan. Generally the period is usually 90 days or 180 days⁴⁵. A non-performing loan (NPL) is a term used by banks for loans and advances on which both the principal and interest are past due and no interest payments have been made for a period of time. In other word, loans become non-performing loans (NPLs) when they are outstanding for ninety (90) days or more, though some financial institutions use a shorter window in considering a loan or advance past due. A loan is categorized into a non-performing loan when the borrower fails to repaid both principal and interest within a specified period. The loan will no longer generating income for the lender or financial institution because the interest is not being paid by the borrower. In such a case, the loan is considered "in arrears." As soon as a loan is classified as non-performing loan (NPL), it means that the probability of receiving repayments from borrower are significantly lower. However, a borrower could start making repayments to a loan that has already been categorized as a non-performing loan. In this situation, the non-performing loan becomes a re-performing loan⁴⁶. A loan is considered to be in arrears when principal or interest payments are late or missed. A loan is in default when the lender considers the loan agreement to be broken and the borrower is unable to meet his obligations⁴⁵. Loans will not move to the non-performing loan (NPL) category until a considerable period of non-payment has passed. Bank as a lenders will consider all the factors that may make a borrower to pay interest and principal late and extend a grace period. After a month or so, banks

may consider a loan overdue. It is when the grace period (typically, 90 days of non-payment) is over that the loan then becomes a non-performing loan⁴⁶.

Banks may attempt to recoup the outstanding debt by foreclosing on whatever property or asset that has been used to secure the loan. For example, if an individual access mortgage loan and it becomes a non-performing loan (NPL), the bank will generally send notice of foreclosure on the home because it is being used as collateral for the loan ⁴⁶. There are various ways that make performing loan change the status to non-performing loan. Firstly, when loan in which 90 days' worth of interest has been capitalized, refinanced, or delayed due to an agreement or an amendment to the original agreement. Secondly, loan in which payments are less than 90 days late, but the lender no longer believes the debtor will make future payments. Thirdly, when a loan in which the maturity date of principal repayment has occurred, but some fraction of the loan remains outstanding⁴⁵. A loan can also become non-performing when loan installments of principal and interest are at least 90 days due, and the lender no longer believes the borrowers will honor their debt obligations. In this case, the loan is written off as a bad debt in the lender's books of accounts⁴⁶.

The non-performing loans can also be further sub classified into standard assets, sub-standard assets, doubtful debts and loss assets. Standard assets represent non-performing loans (NPLs) that have been past due for anywhere from 90 days to 12 months, with a normal risk level. Sub-Standard Assets are non-performing Loans (NPLs) that have been past due for more than 12 months. They have a significantly higher risk level, combined with a borrower that has less than ideal credit. Banks usually assign a haircut (reduction in market value) to such NPLs because they are less certain that the borrower will eventually repay the full amount⁴⁵. Doubtful Debts are non-performing loans in the doubtful debts category that have been past due for at least 18

months. Banks generally have serious doubts that the borrower will ever repay the full loan. This class of non-performing loans seriously affects the bank's own risk profile. While loss assets are non-performing assets with an extended period of non-payment. With this class, banks are forced to accept that the loan will never be repaid, and must record a loss on their balance sheet. The entire amount of the loan must be written off completely ⁴⁵.

Banks are mandated by law to report their ratio of non-performing loans to the amount of total loans. Non-performing loan ratio is used to measure the level of the credit risk of bank and quality of outstanding loans. A high ratio means the bank carry a greater risk of loss if it fails to recover the owed amounts, while a low ratio means that the outstanding loans pose a low risk to the bank. Non-performing loans (NPLs) reduce earnings of banks and can become the reason for huge losses and have negative effect on the sound performance of bank. High levels of non-performing loans affect banks from lending to businesses and households. Eventually, it would negatively affect the economy⁴⁷. Non-performing loans affects banks in many ways. Whenever the loan become non performing, interest income is the first casualty. The interest income pay by borrowers on the loan will be reduced or stopped which will ultimately affects negatively the profit of the bank. The loan advanced to borrower which represents principal become difficult to recover when borrower is unable to repay their loans as at when due. This principal represents the deposit of their customers. This will erode the depositors' funds which may likely create financial crisis for the bank. Also non-performing loans will affect cash flow that the banks can lend to customers. It reduces the cash flow available for lending thereby making banks to tightening their credit policies. The result will slow down the growth of economy and many companies will be denied access to funds. Non-performing asset serves as an indicator of the ability of banks to manage their loan portfolio efficiently. The efficiency of banks in recovering

their principal and earning interest can be measured by comparing their nonperforming assets ratio against those of peer banks. Dividing the amount of nonperforming assets by the total gross loans will yield this ratio. A lending bank's efficiency rating deteriorates as the ratio increases⁴⁷.

Changing of performing loan to non-performing loan can be attributed to some factors. Among them are; when a bank lend to corporate bodies or persons that are creditworthy, this could lead to non-performing loan; When directors of companies divert loans elsewhere from actual purpose that the loans was taken. When loans channel toward non-viable projects; Due to government economy policies, the banks may be persuaded to lend to preferred sectors. For instance, the bank may be persuaded to lend to agriculture sector which may likely turn to non-performing loan in the future; the bank may lack efficient recovery process that may assist in recovery of fund from overdue and evasive customers⁴⁶. The key factors behind the high non-performing loans portion in banks can be either inappropriate credit risk management or irresponsible borrowing (and lending) or economic downturn in a country. Other possible factors could be poor supervision and governance, aggressive lending and acquisition strategies, high exposure to sectors that were most impacted by the financial crisis and lax credit controls⁴⁸. The proper credit risk management in banks has a very important impact on the quantity of non-performing loans. Banks can develop their internal credit risk assessment models that analyse the financial and other data of loan applicants. The main target of data analysis results is the correctly assessed default probability that reflects the risk of a debtor's possible insolvency. Also, the credit policy in banks determines the ease to obtain a credit, changing the acceptability of the credit risk level. Aiming to earn more profit from loans, interest income, banks can be motivated to lend more money if they do not exceed the safe levels of the central bank regulation.

Especially this can be observed in the period of economic growth when the financial ratios of companies and personal incomes of inhabitants are higher⁴⁸.

The other problem is the irresponsible borrowing of the inhabitants that have a limited financial sophistication. The excessive expectations of the future income without understanding the basic consistent patterns in the economy can cause serious financial problems in households. The slump of personal income and the decreasing market value of assets financed by the bank can lead to the situation in which the takeover of assets from debtors cannot redeem all their debts. Due to the inability of many loan applicants to make a responsible decision, the central bank regulative instruments for commercial banks play an important role in reducing the problem of non-performing loans⁴⁸. Provision for non-performing loans is an income statement expense set aside as an allowance for uncollected loans and loan payments. This provision is used to cover different kinds of loan losses such as non-performing loans, customer bankruptcy, and renegotiated loans that incur lower-than-previously-estimated payments. Provision for non-performing Loans are then added to the loan loss reserves, a balance sheet item that represents the total amount of loan losses subtracted a company's loans⁴⁹. Banks are required to set aside a portion of their income as provision for the loan assets so as to be prepared for any contingent losses that may arise in the event of non-recovery of loans. The amount of provision to be kept by the bank/Financial institutions, will depend on the probability of loan recovery. This probability of loan recovery is identified based on the asset classification of the loan asset. The minimum provision that a bank has to create for various types of assets is as follows: Asset classification- for Standard assets - the minimum provision for Small and Medium Enterprises (SME) and Agriculture is 0.25%, Commercial Residence is 0.75%, commercial is 1%, and others is 0.40%. Substandard Assets is 15% of secured asset while 25% for the unsecured portion, 25%

provision for facility up to one year and 40% provision for facility between one year and three year. Loss asset – it is 100% provision⁴⁹.

As seen above the provisioning norms for non-performing asset increases as the quality of the asset deteriorates from regular to Special Mention Accounts (SMA) to non-performing asset (NPA) status. As such, a higher proportion of non-performing asset (NPA) will reduce the profitability of the bank and could also result into losses for the bank, thereby eroding its capital base⁵⁰. Special Mention Accounts (SMA) is the loan account in which principal or interest payment or both are overdue but for a period less up to 90 days. It may also refer to an account which is showing any other non-financial signs of stress. Special mention account (SMA) is more of a precautionary measure to recognize a financial stress early and therefore take corrective action to contain that stress and prevent an account from turning into an NPA⁵⁰. Apart from the above, there are rules set by the Central Bank for all banks to set aside a certain amount for non-performing asset as provisioning. The amount depends on the category of the non-performing asset. 10 percent of allowance for the total unpaid amount without any budget for securities should be set aside for provision. If the non-performing asset falls under substandard category, the sum of 20 percent on the outstanding amount will be provided for. But if the loan is unsecured or doubtful. 100 percent will be provided for. When loan is classified as non-performing, income on the loan is not recognized on accrual basis but it is booked as income only when it is actually received. However, interest on advances against term deposits and Life policies may be taken to income account on the due date, provided adequate margin is available in the accounts. An income will be reversed from income account If an account becomes non-performing loan for first time during the year and the unrealized interest has been taken to profit and loss account on accrual basis pertaining to the current year as well as pertaining to the

preceding year. Bank is expected to value asset pledge for loan inclusive non-performing loan especially the immovable properties once in two years by valuers. The valuers must be approved by Board⁵¹.

Credit risk arises when a corporate or individual borrower fails to meet their debt obligations. It is the probability that the lender will not receive the principal and interest payments of a debt required to service the debt extended to a borrower .On the side of the lender, credit risk will disrupt its cash flows and also increase collection costs, since the lender may be forced to hire a debt collection agency to enforce the collection. The loss may be partial or complete, where the lender incurs a loss of part of the loan or the entire loan extended to the borrower ⁵².The interest rate charged on a loan serves as the lender's reward for accepting to bear credit risk. In an efficient market system, banks charge a high interest rate for high-risk loans as a way of compensating for the high risk of default. For example, a corporate borrower with a steady income and a good credit history can get credit at a lower interest rate than what high-risk borrowers would be charged .Conversely, when transacting with a corporate borrower with a poor credit history, the lender can decide to charge a high interest rate for the loan or reject the loan application altogether. Lenders can use different methods to assess the level of credit risk of a potential borrower in order to mitigate losses and avoid delayed payments ⁵¹.There are different types of credit risk; credit default risk occurs when the borrower is unable to pay the loan obligation in full or when the borrower is already 90 days past the due date of the loan repayment. The credit default risk may affect all credit-sensitive financial transactions such as loans, bonds, securities, and derivatives. The level of default risk can change due to a broader economic change. It can also be due because of a change in a borrower's economic situation, such as increased competition or recession, which can affect the company's ability to set aside principal

and interest payments on the loan; Concentration risks the level of risk that arises from exposure to a single counterparty or sector, and it offers the potential to produce large amounts of losses that may threaten the lender's core operations. The risk results from the observation that more concentrated portfolios lack diversification, and therefore, the returns on the underlying assets are more correlated; Country risk is the risk that occurs when a country freezes foreign currency payments obligations, resulting in a default on its obligations. The risk is associated with the country's political instability and macroeconomic performance, which may adversely affect the value of its assets or operating profits. The changes in the business environment will affect all companies operating within a particular country ⁵².

Credit risk management is the practice of mitigating losses by understanding the adequacy of a capital of bank and loan loss reserves at any given time. The global financial crisis and the credit crunch that followed put credit risk management into the regulatory spotlight. As a result, regulators began to demand more transparency. They wanted to know that a bank has thorough knowledge of customers and their associated credit risk. And new Basel III regulations will create an even bigger regulatory burden for banks. To comply with the more stringent regulatory requirements and absorb the higher capital costs for credit risk, many banks are overhauling their approaches to credit risk. But banks who view this as strictly a compliance exercise are being short-sighted. Better credit risk management also presents an opportunity to greatly improve overall performance and secure a competitive advantage⁵³. In simple terms, credit risks are calculated based on the ability of customer to repay the amount lent to them. Before a bank or an alternative lender issues a consumer loan they will assess the credit risk of the individual on what is more commonly known as the five C's: credit history, capacity to repay, capital, and finally the overall loan's conditions and collateral. For other debt instruments, such as bonds, investors

will also assess risk, often by reviewing its credit rating. Ratings agencies like Moody's and Standard & Poor use various CRM techniques to evaluate the credit risk of investing in thousands of corporate and state-backed bonds on a continual basis. Ratings agencies use a relatively simple method for conveying the credit worthiness of a bond, with investors looking for a safe investment likely to lean towards purchasing AAA-rated bonds which carry a low default risk. Meanwhile, investors that have a strong appetite for risk, may look at lower rated bonds, more commonly referred to as junk bonds, which carry a significantly higher chance of default in exchange for higher yields than higher rated, investment grade debt⁵⁴.

Increasingly, companies and financial institutions are investing heavily in credit risk measurement, with many spending significant levels of capital to create in-house teams that focus solely on developing CRM processes and tools to better assess credit risks. Over the years, with the rise of fintech, new technology has empowered businesses to better analyse data to assess the risk profile of various investment products and individual customers. But it is important to note that it is impossible for any lender to ever fully know whether a borrower will default on a loan or not. However, by applying relevant risk modelling in tandem with the latest credit risk measurement technology and CRM techniques it is possible to keep default rates low and reduce the severity of losses⁵³. Banks used credit risk analysis models to determine the probability of default of a potential borrower. The models provide information on the level of credit risk of a borrower at any particular time. If the lender fails to detect the credit risk in advance, it exposes them to the risk of default and loss of funds. Lenders rely on the validation provided by credit risk analysis models to make key lending decisions on whether or not to extend credit to the borrower and the credit to be charged. Credit risk modeling is a technique used by lenders to determine the level of credit risk associated with extending credit to a

borrower .With the continuous evolution of technology, banks are continually researching and developing effective ways of modeling credit risk. A growing number of financial institutions are investing in new technologies and human resources to make it possible to create credit risk models using machine learning languages, such as Python and other analytics-friendly languages. It ensures that the models created produce data that are both accurate and scientific ⁵⁴. Banks will need to minimize the level of credit risk, this can only be done if bank can forecast credit risk with greater accuracy. The banks should consider these factors when assessing the level of credit risk; the probability of default (POD) is the likelihood that a borrower will default on their loan obligations. For individual borrowers, POD is based on a combination of two factors, i.e., credit score and debt-to-income ratio. The POD for corporate borrowers is obtained from credit rating agencies. If the lender determines that a potential borrower demonstrates a lower probability of default, the loan will come with a low interest rate and low or no down payment on the loan. The risk is partly managed by pledging collateral against the loan; Loss given default (LGD) refers to the amount of loss that a lender will suffer in case a borrower defaults on the loan. For example, assume that two borrowers, A and B, with the same debt-to-income ratio and an identical credit score. Borrower A takes a loan of N10, 000 while B takes a loan of N200, 000. The two borrowers present with different credit profiles, and the lender stands to suffer a greater loss when Borrower B defaults since the latter owes a larger amount. Although there is no standard practice of calculating LGD, lenders consider an entire portfolio of loans to determine the total exposure to loss; exposure at Default (EAD) evaluates the amount of loss exposure that a lender is exposed to at any particular time, and it is an indicator of the risk appetite of the lender. EAD is an important concept that references both individual and corporate borrowers. It is calculated

by multiplying each loan obligation by a specific percentage that is adjusted based on the particulars of the loan ⁵⁴.

Banks make use of credit report to assist them to reduce the incidence of non-performing loans. Credit report is a report on the bill payment history, current debits, loans, and other financial information about individual and corporation. The report is generated by credit bureau. Credit bureaus is a company that collects and maintains individual credit information and sells it to lenders, creditors, and consumers in the form of a credit report. They are information warehouses. They gather information about you and millions of other consumers and sell that information to financial institutions /lenders and others who want to know about your borrowing behavior. Whenever an individual apply for a loan or line of credit, banks want to know what the chances are that the borrowers will able to repay the money. To help them figure that out, they look at the history of borrowing: has the customer borrowed money in the past, and did borrower repay those loans? Credit bureaus have the information that financial institutions use to make those decisions. Credit bureaus function as databases of information about individual and corporate bodies. After banks collect the information, they use that information to create a credit score, which most banks use as criteria for approving a line of credit. The raw data, before it is used to create a credit score, is known as credit reports of individuals and corporate bodies. Credit reports show what the credit bureaus know about the borrowers. Credit bureaus simply gather and sell data. They do not decide whether or not loan will be approved ⁵⁵.

The credit bureaus maintain a number of details related to individuals and corporate bodies about their credit history, starting from the time the first credit account was opened. For instance, the credit bureau collects information about credit accounts: repayment history; the amount of credit

is available; the amount of credit that have been used; outstanding debt collections; and details on public records like bankruptcy, tax liens, foreclosure, and repossession. Credit bureaus also maintain non-credit information about the customer, including current and previous addresses, current and previous employers, and date of birth. Credit bureaus depend on banks and other businesses to provide them with consumer information. Many of the companies that individuals and corporate bodies carry out business with send regular updates on their open accounts. Credit bureaus also get information about borrowers from public court records. Credit bureaus use different sources for obtaining information and they generally do not share information with each other. As such, the credit report of borrowers may vary slightly from bureau to bureau. Banks and credit card issuers are the most obvious users of the information provided by credit bureaus. A host of other companies turn to credit bureaus to make decisions about you. Employers, insurance companies, landlords, and debt collectors all request information from the credit bureaus. Credit bureaus provide prescreening lists to banks and insurance companies to help these companies decide which consumers may take advantage of their products. Credit card issuers, for example, may request a list of consumers with high credit card balances to send these consumers offers for balance transfer credit cards ⁵⁶.

There are numerous credit bureaus, and each one works differently. However, most big lending decisions are based on information stored at their companies. Personal information helps the credit reporting companies to identify borrowers and distinguish him or her from other borrowers. That usually includes: Name, address, Social Security Number, date of birth; previous addresses; Employment history. Bankruptcies are the only public record to appear in credit reports, as of spring 2020. To comply with stricter reporting standards under the National Consumer Assistance Plan, by April 2018 the credit reporting companies purged all tax liens and civil

judgments, including foreclosures, evictions, and wage garnishments. Every time somebody asks the credit reporting companies about your credit, they make a record of it. These inquiries stay on your credit report for about two years. They may lower your credit score by a few points at first, but that usually only lasts for less than a year. Tradelines are records of your loans and lines of credit, which is perhaps the most significant information collected by the credit reporting companies. They detail the vital characteristics of each loan. They may go by a variety of names depending on the credit reporting company, but the general characteristics are: Type of loan; Creditor name ; Date opened ; Date of last activity; Loan balance; Maximum balance; Account status; Comments; Your liability on the account; Amount past due; Minimum payment due; Amount of your last payment. Credit bureaus get information from several sources, and then they package and sell that information to others: **Lenders:** Much of the data comes from lenders. If you've borrowed money in the past, there's a good chance that your lender reported that loan to one or more credit bureaus. Some lenders don't report your borrowing activity, but most do. If you are trying to build credit because you do not have a credit history, or you need to rebuild a troubled history, it's best to work with lenders that report to credit bureaus; **Public records:** Credit bureaus also get information from public records. For example, they might want to know if you have ever filed for bankruptcy. Lenders could also look up that information, but it's easier for them to buy it from a credit bureau; **Other sources:** Other sources of information are increasingly used to create "alternative" credit reports. Bills you pay for utilities, memberships, and more can sometimes affect your ability to borrow. The major credit reporting companies do not collect information on the following: Bounced checks; Race; Ethnicity; Gender; Political views; Income. Some information is kept at the credit reporting companies, but not displayed on

your credit reports. Negative items that have been closed out more than seven years ago generally fall into this category⁵⁵.

2.1.2.3 Deposit

Deposit is a money held at a bank. It is a money pay into bank for safekeeping with the intention to collect it at a later date or agreed date to fulfill customer's desire. It is a transaction involving a transfer of money to another party for safekeeping. However, a deposit can refer to a portion of money used as security or collateral for the delivery of a good. It is an amount of money that is paid into a bank account⁵⁷. A deposit account is a bank account maintained by a financial institution in which a customer can deposit and withdraw money. Deposit accounts can be savings accounts, current accounts or any of several other types of accounts. Deposit encompasses two different meanings. One kind of deposit involves a transfer of funds to another party for safekeeping. By this definition, it refers to the money an investor transfers into a savings or checking account held at a bank or credit union⁵⁸. The money deposited still belongs to the person or company that deposited the money, and that person or company can withdraw the money at any time, transfer it to another person's account, or use the money to purchase goods. Often, a person must deposit a certain amount of money in order to open a new bank account, known as a minimum deposit. Depositing money into a typical checking account qualifies as a transaction deposit, which means that the funds are immediately available and liquid, without any delays⁵⁸.

Deposit also refers a portion of funds that is used as a security or collateral for the delivery of a good. Some contracts require a percentage of funds paid before the delivery as an act of good faith. For example, brokerage firms often require traders to make an initial margin deposit in

order to enter into a new futures contract. A deposit can be made by individuals or entities such as corporations⁵⁸. There are situation where bank give interest on the deposit kept by customer with them in form of interest. At a fixed interval a small percentage of the account's total is added to the amount of money already in the account. Interest can compound at different rates and frequencies depending on the bank or institution: Bank maintains different types of deposit account for their customers. These accounts have different features depending on the preference of the customer. Some of the deposit accounts are; Savings Bank Account is suitable for people who have a definite income and are looking to save money. For example, the people who get salaries or the people who work as laborers. This type of account can be opened with a minimum initial deposit that varies from bank to bank. Money can be deposited at any time in this account ⁵⁹. Withdrawals can be made either by signing a withdrawal form or by issuing a cheque or by using an ATM card. Normally banks put some restriction on the number of withdrawal from this account. Interest is allowed on the balance of deposit in the account. The rate of interest on savings bank account varies from bank to bank and also changes from time to time. A minimum balance has to be maintained in the account as prescribed by the bank ⁵⁹.

Current Deposit Account is used by big businessmen, companies, and institutions such as schools, colleges, and hospitals to make payment through their bank accounts. Since there are restrictions on the number of withdrawals from a savings bank account, that type of account is not suitable for them. They need to have an account from which withdrawal can be made any number of times⁵⁹. Banks open a current account for them. Like a savings bank account, this account also requires a certain minimum amount of deposit while opening the account. On this deposit, the bank does not pay any interest on the balances. Rather the account holder pays a certain amount each year as an operational charge ⁵⁹. These accounts also have what we call the overdraft facility. For the

convenience of the accountholders banks also allow withdrawal of amounts in excess of the balance of the deposit. This facility is known as an overdraft facility. It is allowed to some specific customers and up to a certain limit subject to previous agreement with the bank concerned ⁵⁹. Fixed Deposit Account is used by customers that may like to put away money for a longer time. Such deposits offer a higher interest rate. If money is deposited in a savings bank account, banks allow a lower rate of interest. Therefore, money is deposited in a fixed deposit account to earn interest at a higher rate ⁵⁹. This type of deposit account allows the deposit to be made of an amount for a specified period. This period of deposit may range from 15 days to three years or more during which no withdrawal is allowed. However, on request, the depositor can encash the amount before its maturity. In that case, banks give lower interest than what was agreed upon. The interest on a fixed deposit account can be withdrawn at certain intervals of time. At the end of the period, the deposit may be withdrawn or renewed for a further period. Banks also grant a loan on the security of the fixed deposit receipt ⁵⁹.

Recurring Deposit Account is the account a person has to agree to deposit a fixed amount once in a month for a certain period. The total deposit along with the interest therein is payable on maturity. However, the depositor can also be allowed to close the account before its maturity and get back the money along with the interest till that period ⁵⁹. The account can be opened by a person individually, or jointly with another, or by the guardian in the name of a minor. The rate of interest allowed on the deposits is higher than that on a savings bank deposit but lower than the rate allowed on a fixed deposit for the same period. The Recurring Deposit Accounts may be of; Home Safe Account or Money Box Scheme: For regular savings, the bank provides a safe or box (Gullak) to the depositor. The safe or box cannot be opened by the depositor, who can put money in it regularly, which is collected by the bank's representative at intervals and the amount is credited to the

depositor's account. The deposits carry a nominal rate of interest; Cumulative-cum-Sickness deposit Account: A certain fixed sum is deposited at regular intervals in this account. The accumulated deposits over time along with interest can be used for payment of medical expenses, hospital charges,; Home Construction deposit Scheme/Saving Account: In this account, we can deposit the money regularly either for the purchase or construction of a flat or house in future. The rate of interest offered on the deposit, in this case, is relatively higher than in other recurring deposit accounts⁵⁹. Savings accounts is an account suitable for people who have a definite income and are looking to save money. Customer deposits money in return for interest in as much as the customer has the right to withdrawal without prior notice from the deposit at any time. For example, middle income earners who get salaries or professionals that want to deposit their small savings. The account is easy to open with a minimum initial deposit that varies from bank to bank. Money can be deposited at any time in this account. Withdrawals can be made either by signing a withdrawal form or by issuing a cheque or by using an ATM card. Normally banks put some restriction on the number of withdrawal from this account. Interest is allowed on the balance of deposit in the account. The rate of interest on savings bank account varies from bank to bank and also changes from time to time. A minimum balance has to be maintained in the account as prescribed by the bank⁵⁹.

2.1.2.4 Capital Adequacy

Capital adequacy is a measure of ability of banks or other financial institution to pay its debts if people or organizations are unable to pay back the money they have borrowed from the bank or financial institution⁶⁰. Capital Adequacy is the statutory minimum capital reserve that a bank, financial institution or investment firm must have available and regulatory authority

expects the relevant firms to maintain these minimum levels of capital at all times. The capital adequacy is calculated as a percentage of its risk weighted assets. Usually Capital Adequacy is referred to as the required Regulatory Capital of a bank or financial institution. Regulators always ensure that banks, financial institutions, and investment firms have enough capital to guarantee the business remain stable. This measure protects depositors within the industry and also the larger economy as well as preventing failures of institutions, such as banks which can have wider-scale repercussions ⁶¹.

The capital adequacy ratio (CAR) is a ratio that calculate available capital of bank. This is showed as a percentage of a risk weighted credit exposures. The capital adequacy ratio is also called capital-to-risk weighted assets ratio (CRAR) and it is meant to protect depositors, promote the stability and efficiency of financial systems around the world⁶². Capital Adequacy Ratio (CAR) is also the proportion of the bank's tier 1 and tier 2 equity (Qualifying capital or Equity) as a proportion of its risk weighted assets (loans). It is the proportion of a bank's own equity in relation to its risk exposure. If a bank for example, has ₦200 billion risk weighted assets and has a qualifying capital of ₦60 billion then its capital adequacy ratio is ₦60 billion/₦200 billion which is equal to 30%. The capital adequacy ratio (CAR) for banks in Nigeria currently stands at 10% and 15% for national/regional banks and banks with international banking license, respectively ⁶³. Two types of capital are measured: tier-1 capital is a capital that can absorb losses without a bank being required to cease trading or winding up while tier-2 capital is a capital that can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors⁶². Tier-1 capital or core capital consists of equity capital, ordinary share capital, intangible assets and audited revenue reserves. Tier-1 capital is used to absorb losses and does not require a bank to cease operations. Tier-1 capital is

the capital that is permanently and easily available to cushion losses suffered by a bank without it being required to stop operating. A good example of a bank's tier one capital is its ordinary share capital ⁶¹. Tier-2 capital comprises unaudited retained earnings, unaudited reserves and general loss reserves. This capital absorbs losses in the event of a company winding up or liquidating. Tier-2 capital is the one that cushions losses in case the bank is winding up, so it provides a lesser degree of protection to depositors and creditors. It is used to absorb losses if a bank loses all its Tier-1 capital ⁶⁴.

The capital adequacy ratio is calculated by dividing capital of bank by its risk-weighted assets. The capital used to calculate the capital adequacy ratio is divided into two tiers. The two capital tiers are added together and divided by risk-weighted assets to calculate a bank's capital adequacy ratio of bank. Risk-weighted assets are calculated by looking at a bank's loans, evaluating the risk and then assigning a weight. When measuring credit exposures, adjustments are made to the value of assets listed on a lender's balance sheet. All of the loans the bank has issued are weighted based on their degree of credit risk. For example, loans issued to the government are weighted at 0.0%, while those given to individuals are assigned a weighted score of 100.0% ⁶¹.

$$CAR = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weighted Assets}} \quad CAR = \text{Risk Weighted Assets} \quad 61.$$

Risk-weighted assets are used to determine the minimum amount of capital that must be held by banks and other institutions to reduce the risk of insolvency. The capital requirement is based on a risk assessment for each type of bank asset. For example, a loan that is secured by a letter of credit is considered to be riskier and requires more capital than a mortgage loan that is secured

with collateral⁶¹. Basel Committee on Banking supervision in respect of capital adequacy ratio recommends that Tier 2 capital should not constitute more than 50% of the qualifying capital, that is, 100% of Tier 1. Banks that are designated as systemically important banks (SIBs) would be required to maintain a minimum capital adequacy ratio (CAR) of 15% out of which Tier 2 capital should not constitute more than 25% of the qualifying capital. In other words, Tier 1 capital should be at least 75% of the bank's qualifying capital. In addition, SIBs in Nigeria would be required to set aside Higher Loss Absorbency (HLA) or additional capital surcharge of 1% to their respective minimum required CAR. This should be met with Common Equity Tier 1 (CET1) capital⁶. The aim of the additional loss absorbency requirement is to ensure that the SIBs have a higher share of their balance sheet funded by instruments that re-enforce the resilience of the institution as a going concern. In a situation where the foreign subsidiary of a Nigerian bank is considered systemically important by the host authority, the Central Bank of Nigeria and the host authorities would make arrangements to coordinate and cooperate on the appropriate HLA requirement, within the constraints imposed by the relevant laws in the host jurisdiction⁶³. Capital adequacy ratios (CARs) are crucial to the survival of banks. It makes sure that banks have enough cushion to absorb a reasonable amount of losses before they become insolvent and consequently lose money of the depositors. The ratios ensure the efficiency and stability of the financial system of a country by lowering the risk of banks becoming insolvent. Bank with a high capital adequacy ratio is considered safe and likely to meet its financial obligations ⁶¹. It helps the banks to maintain capital based on the riskiness of each loan exposure. For instance, two banks with the same loan book size but a different level of portfolio risk will be required to maintain corresponding bank capital. Higher the risk, the higher the capital required. The ratio is a good indicator for the investors to understand the overall risk of the loan book of a bank ⁶⁵.

During the process of winding-up, the funds that belong to depositors are given a higher priority than the capital of bank and so depositors of funds can only lose their savings if a bank registers a loss exceeding the amount of capital it possesses. The higher the capital adequacy ratio of bank, the higher the degree of protection of assets of depositor. Capital adequacy ratios (CAR) fails to account for expected losses during a bank run or financial crisis that can distort capital of bank and cost of capital. Many analysts and bank executives consider the economic capital measure to be a more accurate and reliable assessment of a bank's financial soundness and risk exposure than the capital adequacy ratio⁴⁵. The calculation of economic capital, which estimates the amount of capital a bank needs to have on hand to ensure its ability to handle its current outstanding risk, is based on the bank's financial health, credit rating, expected losses and confidence level of solvency. By including such economic realities as expected losses, this measurement is thought to represent a more realistic appraisal of a bank's actual financial health and risk level⁶².

2.1.2.5 Total Assets

Total assets is the sum of the book values of all assets owned by an individual, company, banks. The value of a company's total assets is obtained after accounting for depreciation that is associated with the assets ⁶⁶. The total assets of banks include cash and balance with central banks, treasury bills, assets pledged as collateral, Due from other banks, Derivate assets, loans and advances, investments securities, investment in subsidiaries, Deferred Tax, other assets, property and equipment, intangible assets. Cash and balances with Central banks represent cash held (including mandatory cash reserve requirements) with Central banks of the various jurisdictions in which the bank operates. The fair value of these balances is their carrying amounts. Due from other banks represents

balances with local and correspondence banks, inter-bank placements and items in the course of collection. The fair value of the current account balances, floating placements and overnight deposits are their carrying amounts. Treasury bills represent short term instruments issued by the Central banks of the jurisdiction where the bank has operations. The fair value of treasury bills and bonds are determined with reference to quoted prices (unadjusted) in active markets for identical assets. The fair values of quoted equity securities are determined by reference to quoted prices (unadjusted) in active markets for identical instruments ⁶⁷.

The fair value of the unquoted equity is determined on the basis of the discounted cashflow methodology which takes into account the discounted stream of estimated future income and free cashflows of the investment. Subsequently, the percentage holding of the Bank is then applied on the derived company value. Where available the fair value of unquoted equity is determined using recent market observable data. Loans and advances are carried at amortized cost net of provision for impairment. The estimated fair value of loans and advances represents the discounted amount of estimated future cash flows expected to be received. Expected cash flows are discounted at current market rates to determine fair value. Other financial assets/financial liabilities represent monetary assets, which usually have a short recycle period and as such, whose fair values approximate their carrying amount. Derivative is a financial contract whose value is derived from the performance of underlying market factors, such as interest rates, currency exchange rates, and commodity, credit, and equity prices ⁶⁷.

2.1.3 Internal Control System

Internal controls are the system used by an organization to manage risk and diminish the occurrence of fraud , consisting of the control environment , the accounting system and control activities. They are the mechanisms, rules, and procedures implemented by a company to ensure the integrity of financial and accounting information, promote accountability, and prevent fraud. Besides complying with laws and regulations and preventing employees from stealing assets or committing fraud, internal controls can help improve operational efficiency by improving the accuracy and timeliness of financial reporting⁶⁸.

An effective internal control system will improve organizational objectives, as well as the firm's profitability, growth, and continuity. Internal control is an organizational system designed to prevent fraud and error, protect assets, and monitor the effective implementation of a policy. It is an important aspect of organizational management that assists managers in achieving set objectives by efficiently utilizing the firm's resources. A company's poor performance can be attributed to a lack of effective internal control in the system. As a result, there is a link between the bank's performance and internal control ⁶⁹.

The internal control system is a procedure that is integral to steps or activities carried out on an ongoing basis by the management and employees in order to create belief that is satisfactory enough for the realization of organizational goals with effective and efficient activities, reliability of financial. One of the factors that affect the financial performance of company is internal control. The accounting system requires internal control because the accounting system as an information system is a subject that often has problems either intentionally or unintentionally. If an internal control system is good, accounting procedures can be easily

directed, supervised, and detected in the event of fraud so that financial statements achieve their objectives and present reliable and excellent financial information ⁶⁹.

Internal control is a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance: that information is reliable, accurate and timely; of compliance with applicable laws, regulations, contracts, policies and procedures; of the reliability of financial reporting. Internal controls are intended to prevent errors and irregularities, identify problems and ensure that corrective action is taken. In many cases, process owners within your department perform controls and interact with the control structure on a daily basis, sometimes without even realizing it because controls are built into operations. Internal control system is a system which has the features of maintaining the assets of a company, ensuring accuracy and reliability of information and reports related to accounting and other operations, and increasing the effectiveness of the operations. it is the sum of all internal controls and policies within an organization that protect assets and data. The system also covers all assessment and methods that are adopted in order to detect the suitability of operations in accordance with the policies determined by management, implementing a chart of accounts and reporting system, specifying the duties, authority and responsibility and organization plan of the cooperation. In other words, internal control system which is created by management and implemented by management and employees is a process which is designed to ensure reasonable assurance to achieve pre-specified objectives⁷⁰.

Internal controls are typically comprised of control activities such as authorization, documentation, reconciliation, security, and the separation of duties. And they are broadly divided into preventative and detective activities. Preventive control activities aim to deter

errors or fraud from happening in the first place and include thorough documentation and authorization practices. Separation of duties, a key part of this process, ensures that no single individual is in a position to authorize, record, and be in the custody of a financial transaction and the resulting asset. Authorization of invoices and verification of expenses are internal controls. In addition, preventative internal controls include limiting physical access to equipment, inventory, cash, and other assets. Detective controls are backup procedures that are designed to catch items or events that have been missed by the first line of defense. Here, the most important activity is reconciliation, used to compare data sets, and corrective action is taken upon material differences. Other detective controls include external audits from accounting firms and internal audits of assets such as inventory. Internal controls are broadly divided into preventative and detective activities. Preventive control activities aim to deter errors or fraud from happening in the first place and include thorough documentation and authorization practices. Detective controls are backup procedures that are designed to catch items or events that have been missed by the first line of defense. Some preventive internal controls are Separation of duties, a key part of the preventive internal control process, ensures that no single individual is in a position to authorize, record, and be in the custody of a financial transaction and the resulting asset. Authorization of invoices, verification of expenses, limiting physical access to equipment, inventory, cash, and other assets are examples of preventative internal controls. Detective internal controls attempt to find problems within a company's processes once they have occurred. They may be employed in accordance with many different goals, such as quality control, fraud prevention, and legal compliance. Here, the most important activity is reconciliation, used to compare data sets, and corrective action is taken if there are material differences. Other detective controls include external audits from accounting firms and

internal audits of assets such as inventory⁷¹. The internal control system consists of the formal policies and procedures that do the following: ensure assets are properly used; ensure that the accounting system is functioning properly; monitor operations of the organization to ensure maximum efficiency; ensure that assets are kept secure; ensure that employees are in compliance with corporate policies. A properly designed and functioning internal control system will not eliminate the risk of loss, but it will reduce the risk. Different organizations face different types of risk, but when internal control systems are lacking, the opportunity arises for fraud, misuse of the organization's assets, and employee or workplace corruption⁶⁸.

The effectiveness of internal control system is assess under the COSO Framework to achieve objectives as determined by management. The objectives are divided into three; Operations objectives, Reporting objectives and Compliance objectives. Operations Objectives is related to the effectiveness and efficiency of the entity's operations, including operational and financial performance goals, and safeguarding assets against loss. In the 1992 Framework, the operations objective was limited to effective and efficient use of the entity's resources. Reporting Objectives is related to internal and external financial and non-financial reporting to stakeholders, which would encompass reliability, timeliness, transparency, or other terms as established by regulators, standard setters, or the entity's policies. In the 1992 Framework, the reporting objective was called the financial reporting objective and it was described as relating to the preparation of reliable financial statements. Compliance Objectives is related to adhering to laws and regulations that the entity must follow. In the 1992 Framework, the compliance objective was described as "relating to the entity's compliance with applicable laws and regulations. COSO 2013 framework has five components and seventeen principles. The components are; control environment, risk assessment, control activities, information and communication, and

monitoring. Control Environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization. The board of directors and senior management establish the tone at the top regarding the importance of internal control and expected standards of conduct. The seven factors in the 1992 Framework relating to an effective control environment are integrity and ethical values; commitment to competence; board of directors or audit committee; management's philosophy and operating style; organizational structure; assignment of authority and responsibility; and human resource policies. These factors are captured in the Control Environment's five principles in the 2013 Framework, which are: the organization demonstrates a commitment to integrity and ethical values; the board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control; Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives; the organization demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives; the organization holds individuals accountable for their internal control responsibilities in the pursuit of objectives. The 2013 Framework links the various components of internal control and demonstrates that the control environment is the foundation for a sound system of internal control⁷⁰.

Risk Assessment involves a dynamic and iterative process for identifying and analyzing risks to achieving the entity's objectives, forming a basis for determining how risks should be managed. Management considers possible changes in the external environment and within its own business model that may impede its ability to achieve its objectives. The 1992 Framework focused on management's process for objective setting at an entity-wide and activity level, risk analysis, and managing change. The 2013 Framework recognizes that many organizations are taking a risk-

based approach to internal control and that the Risk Assessment includes processes for risk identification, risk analysis, and risk response; that risk tolerances and an acceptable level of variation in performance should be considered in the assessment of acceptable risk levels; and the discussion of risk severity includes velocity and persistence in addition to impact and likelihood. Most significantly, the Risk Assessment component now includes a separate principle to address the risk of fraud in the organization ⁷⁰. The 2013 Framework includes more extensive discussion about the types of fraud (fraudulent financial reporting, misappropriation of assets, and illegal acts) and management override of controls and the organization's response to fraud risk. The 2013 Framework states that a system of internal control over financial reporting is designed and implemented to prevent or detect, in a timely manner, a material omission from or a misstatement of the financial statements due to error or fraud. Assessment of this principle may require additional attention by organizations that did not focus their assessment of fraud risk at the specific financial statement account, transaction, or assertion level ⁷⁰.

The four principles relating to Risk Assessment are; organization specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives; organization identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed; organization considers the potential for fraud in assessing risks to the achievement of objectives; organization identifies and assesses changes that could significantly impact the system of internal control ⁷¹.

Control Activities are the actions established by the policies and procedures to help ensure that management directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may

encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities⁷⁰. The three principles relating to Control Activities are; organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels; organization selects and develops general control activities over technology to support the achievement of objectives; organization deploys control activities through policies that establish what is expected and in procedures that put policies into action⁷¹.

Information and Communication. Information is necessary for the entity to carry out internal control responsibilities in support of achievement of its objectives. Communication occurs both internally and externally and provides the organization with the information needed to carry out day-to-day internal control activities. Communication enables personnel to understand internal control responsibilities and their importance to the achievement of objectives. The importance of having the right information communicated to managers at the right time has become a key to successful business operations and effective internal control as organizations have become more complex in their structure and global operations and become more dependent on technology. Changes in the Information and Communication component include; an expanded discussion about the verification of the source of information and its retention when information is used to support reporting objectives to external parties Additional discussion on the impact of regulatory requirements on the reliability and protection of information; an examination of the impact of technology and other communications mechanisms on the speed, means, and quality of the flow of information ; additional consideration of how the organization interacts with third-party

service providers outside of its legal and operational boundaries ⁷³. The three principles relating to Information and Communication are; organization obtains or generates and uses relevant, quality information to support the functioning of internal control; organization internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control; organization communicates with external parties about matters affecting the functioning of internal control. Monitoring Activities would address how all of the components of internal control are applied and whether the overall system of internal control operates effectively. Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to effect the principles within each component, are present and functioning. Findings are evaluated and deficiencies are communicated in a timely manner, with serious matters reported to senior management and to the board. The 2013 Framework distinguishes between a management review control as a control activity and a monitoring activity. A management review control that is a control activity responds to a specified risk and is designed to detect and correct errors. However, a management review control that is a monitoring activity would ask why the errors exist, and then assign the responsibility of fixing the process to the appropriate personnel. A monitoring activity assesses whether the controls in each of the five components are operating as intended ⁷¹.

Ongoing evaluations are built into the routine operations and are performed on a real-time basis. A separate evaluation is conducted periodically by objective management personnel, internal audit, and external parties. The scope and frequency of separate evaluations is a matter of management judgment. The two principles relating to Monitoring Activities are; organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the

components of internal control are present and functioning; organization evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate⁷¹.



Objectives of Internal control should ensure that that there is efficient conduct of business whereby controls should be in place to ensure that processes flow smoothly and operations are free from disruptions. This mitigates against the risk of inefficiencies and threats to the creation of value in the organization. Controls should be in place to ensure that assets are deployed for their proper purposes, and are not vulnerable to misuse or theft. A comprehensive approach to his objective should consider all assets, including both tangible and intangible assets. Control must be in place to prevent and detect fraud and other unlawful acts. Controls in place must be capable to addressing those lapses. There must be completeness and accuracy of financial records in respect of financial statements. Systems should be capable of recording transactions so that the nature of business transacted is properly reflected in the financial accounts. There must timely preparation of financial statements. The companies have legal obligations to submit their account, accurately and on time. They also have a duty to their shareholders to produce meaningful statements. Internal controls may also be applied to management accounting processes, which are necessary for effective strategic planning, decision taking and monitoring of organizational performance⁷¹.

The responsibility for internal controls for smaller and unincorporated business such as sole traders and unlimited partnerships, often lies with the owners themselves. In most cases, the owners are fully engaged in the business itself, and if employees are engaged, it is usually within

the capability of the owners to remain fully aware of transactions and the overall state of the business. As organisations grow, the need for internal controls increases, as the degree of specialisation increases and it becomes impossible to remain fully aware of what is going on in every part of the business. In a limited company, the board of directors is responsible for ensuring that appropriate internal controls are in place. Their accountability is to the shareholders, as the directors act as their agents. In turn, the directors may consider it prudent to establish a dedicated internal control function. The point at which this decision is taken will depend on the extent to which the benefits of function will outweigh the costs. The directors must pay due attention to the control environment. If internal controls are to be effective, it is necessary to create an appropriate culture and embed a commitment to robust controls throughout the organization ⁷¹.

2.2 Theoretical Review

2.2.1 Commercial Loan Theory (Real Bills Doctrine theory)

This theory was evolved from 18th century economic thought, such as Adam Smith's, the wealth of Nations in 1776 ⁷². The commercial loan or the real bills doctrine theory states that a commercial bank should forward only short-term self-liquidating productive loans to business organizations. Loans meant to finance the production, and evolution of goods through the successive phases of production, storage, transportation, and distribution are considered as self-liquidating loans. The theory is part of theories of liquidity management. This theory also states that whenever commercial banks make short term self-liquidating productive loans, the central bank should lend to the banks on the security of such short-term loans. This principle assures

that the appropriate degree of liquidity for each bank and appropriate money supply for the whole economy⁷³.

The central bank was expected to increase or erase bank reserves by rediscounting approved loans. When business started growing and the requirements of trade increased, banks were able to capture additional reserves by rediscounting bills with the central banks. When business went down and the requirements of trade declined, the volume of rediscounting of bills would fall, the supply of bank reserves and the amount of bank credit and money would also contract. According to this theory, limiting banks to only or primarily issuing money that is adequately backed by equally-valued assets (collateral) will not contribute to inflation⁷⁴.

By contrast, proponents of quantity theory argue that any increases in the money supply tend to create inflation. The quantity theory of money is a theory that variations in price relate to variations in the money supply . It argues that an increase in money supply creates inflation and vice versa. The Irving Fisher model is most commonly used to apply the theory. Other competing models were formulated by British economist John Maynard Keynes, Swedish economist Knut Wicksell, and Austrian economist Ludwig von Mises⁷².The real bill theory is also heavily criticized by economists favoring free banking, who argue that the government should not be involved in managing the money supply and that open commercial competition provides the optimal stabilization of money creation⁷⁶. Supporters of this include Fred Foldvary, David D. Friedman, Friedrich Hayek, George Selgin, Lawrence H. White, Steven Horwitz,¹ and Richard Timberlake⁷⁴. And also the supporters of this theory is Antal Fekete who has been advancing what he calls “ Adam Smith’s real bills doctrine for many years and Professor Juan Ramon Rallo, Thomas Sargent ⁷⁵ .

This theory is relevant to this study. Commercial loan theory provides liquidity by ensuring that loans given out liquidate themselves automatically. The loans that are given out are for short term and for productive business which prevent risk of running into bad debts thereby reducing incidence of non performing loans. Such loans are usually high on productivity thereby earn income for the bank which will continually guarantee the profitability.

2.2.2 Shiftability Theory

This theory was put forward by H.G. Moulton who stated that whenever there is need for liquidity, the commercial banks can move their assets, provided there is no material loss, to other banks in exchange for cash without waiting for the maturity of the assets. In banking, Shiftability is an approach to keep banks liquid by supporting the shifting of assets. When a bank is short of ready money, it is able to sell or repo its assets to a more liquid bank. The approach lets the system of banks run more efficiently: with fewer reserves or investing in long-term assets. In other words, for an asset to be perfectly shiftable, it must be directly transferable without any loss of capital whenever there is a need for liquidity⁷⁶. This is specifically used for short term market investments, like treasury bills and bills of exchange which can be directly sold whenever there is a need to raise funds by banks. But in general circumstances when all banks require liquidity, the shiftability theory need all banks to acquire such assets which can be moved to the central bank which is the lender of the last resort⁷⁷. The theory states that banks should invest some of their funds available for investment in securities and credit instruments that have secondary market so that they can be converted to cash as and when a need arises to address declining liquidity. The theory contends that highly marketable securities held by banks is an excellent source of liquidity and that shiftability, marketability or transferability of a

bank's assets is a basis for ensuring liquidity. The theory further contends that highly marketable security held by a bank is an excellent source of liquidity⁷⁷.

In 1830 the capital of banks was about three times the deposits, but less than one hundred years later depositors had come to represent approximately 68 percent of the equity in banks. This increase in the proportion of deposits had many worried about the possibility of a run on the banks and the inability to get much needed cash. It was shown that short-term commercial lending oftentimes did not mature or liquidate at maturity due to changing business cycles. Growing opposition began to showcase the need for an improved banking system that could avoid forced liquidation of this short-term paper that came about more or less periodically. It proposed that banks, rather than relying on the liquidity of these assets in a crisis, should be able to shift these earning assets to another institution with a better cash position thereby creating the reserves needed. This ability to shift assets provides liquidity to otherwise non-liquid assets. The key piece of legislation that led to this reality was the Banking Act of 1935. One of its amendments provided that, a federal reserve bank may discount any commercial, agricultural or industrial paper for liquidity purposes. It also allowed necessary advances to its member banks secured by "*any* sound asset" that would otherwise be described as ineligible by the orthodox theory to provide bank reserves. Although there was much resistance to this idea and many believed it would be better to return to pre-war practices, it was Marriner Stoddard Eccles, an author of the Banking Act of 1935 that continued to push that bank asset liquidity in times of stress was dependent on the ability of a Central bank⁷⁷.

The criticism of the theory are that; only shiftability of assets does not provide liquidity to the banking system. It completely relies on the economic conditions; this theory neglects acute depression, the shares and debentures cannot be shifted to others by the banks. In such a situation,

there are no buyers and all who possess them want to sell them; a single bank may have shiftable assets in sufficient quantities but if it tries to sell them when there is a run on the bank, it may adversely affect the entire banking system; if all the banks simultaneously start shifting their assets, it would have disastrous effects on both the lenders and the borrowers⁷⁷.

The theory is relevant to this study because it shows that banks can move their assets to other banks whenever there is a need for liquidity rather than waiting for when the customers will repay their outstanding. It focuses on the effect of asset quality on the profitability of a bank as it provides a clear explanation on how it affects its financial performance. It encourages banks to create assets in respect of tenor and whenever they need to convert them to liquid, a bank can move assets to other banks. This theory may likely be what the Central Bank of Nigeria adopted to buy off toxic assets from the balance sheet of banks in Nigeria in 2011 when Asset Management Corporation of Nigeria (AMCON). Shares and debentures of large enterprises are welcomed as liquid assets accompanied by treasury bills and bills of exchange. This theory has motivated term lending by banks.

2.2.3 Liabilities Management Theory

Liability management is the procedure whereby the banks maintain a balance between the maturities of their assets and their liabilities in order to maintain liquidity, profitability and to facilitate lending while also maintaining healthy balance sheets. The liabilities include money of depositor as well as funds borrowed from other financial institutions. A bank practicing liability management looks after these funds and also hedges against changes in interest rates. Banks are left with a surplus after successfully matching assets and liabilities, which can be actively managed to maximize return on investment and boost profitability. A bank can face a mismatch

between assets and liabilities because of illiquidity or changes in interest rates; and liability management reduces the likelihood of a mismatch ⁷⁸.

Haynes, Kirton and Redington are the proponents of the liability management theory in 1952. Their theory was based on the analysis of the financial structure of life insurance fund and the relationship between the assets and liabilities of that insurance fund. The problem was how to determine the allocation of assets to make them as far as possible, equally as vulnerable as the liabilities to those influences especially fluctuations in the market rate interest⁷⁹.

This theory was further developed in the 1960s. This theory states that, there is no need for banks to lend self-liquidating loans and maintain liquid assets as they can borrow reserve money in the money market whenever necessary. A bank can hold reserves by building additional liabilities against itself via different sources. These sources comprise of issuing time certificates of deposit, borrowing from other commercial banks, borrowing from the central banks, raising of capital funds through issuing shares, and by ploughing back of profits. Time Certificates of Deposits are deposits that have different maturities ranging from 90 days to less than 12 months. They are transferable in the money market. Thus, a bank can have connection to liquidity by selling them in the money market⁸⁶. But this source has two demerits. First, if during a crisis, the interest rate layout in the money market is higher than the ceiling rate set by the central bank, time deposit certificates cannot be sold in the market. Second, they are not reliable source of funds for the commercial banks. Bigger commercial banks have a benefit in selling these certificates as they have large certificates which they can afford to sell at even low interest rates. So the smaller banks face trouble in this respect¹¹.

Borrowing from other Commercial Banks is a situation where bank may build additional liabilities by borrowing from those banks that have excess reserves. But these borrows are only for a very short time, that is for a day or at the most for a week. The interest rate of these types of borrowings relies on the controlling price in the money market. But borrowings from other banks are only possible when the economic conditions are normal economic. In abnormal times, no bank can afford to grant to others. Borrowing from the Central Bank is when banks also build liabilities on themselves by borrowing from the central bank of the country. They borrow to satisfy their liquidity requirements for short-term and by discounting bills from the central bank. But these types of borrowings are comparatively costlier than borrowings from other sources¹¹.

Raising Capital Funds is when Commercial banks hold funds by distributing fresh shares or debentures. But the availability of funds through these sources relies on the volume of dividend or interest rate which the bank is prepared to pay. Basically banks are not prepared to pay rates more than paid by manufacturing and trading enterprises. Thus they fail to get enough funds from these sources⁸⁰. Ploughing Back of Profits is considered as an alternative source of liquid funds for a commercial bank. But how much it can obtain from this source relies on its rate of profit and its dividend policy. Larger banks can depend on these sources rather than the smaller banks¹¹.

The theory's critics claimed that due to each department's unique characteristics, applying the theory across all bank departments would necessitate a proper framework, which would be very challenging. Additionally, the application of theory will require a long-term plan that calls for datasets and prospective predictions; however, the information may not be easily accessible. It

must also be converted into quantifiable mathematical measures if it is available. The proper coordination of the theory's application across the bank's entire balance sheet will involve many different departments. This could be difficult and time-consuming¹³⁵.

The Board of Directors would have overall responsibility for Asset and Liability Management in any organization and should lay out the organization's philosophy in relation to this. However, the Asset-liability Committee (ALCO) is in charge of deciding on and implementing business strategies that are consistent with the policies in place. ALCO is typically made up of senior management, including the Chief Executive Officer⁷⁹.

The theory is relevant to this study in that it shows relationship among liabilities, assets and profitability. The theory highlights the key factors to the survival of the bank in term of liquidity, interest on deposit, interest on loans and profitability. It highlights the danger of mismatch between asset and liability, that is, the tenor of funds collected from customers which become the liability on the part of bank and the tenor on the loans given out to customer as asset. The issue of mismatch occurs when short term deposit is loan out as long term. This will create illiquidity when the customers come for their fund and affect the profit of the bank. The theory also highlights that bank can build additional liabilities which can be discounted in the money market whenever need arises. The theory shows that the optimal utilization of theory will require proper internal control system which will require the management of the bank to institute appropriate control in respect of Liabilities and Assets of the banks. It is relevant to the study because it focuses on the profitability of bank and long term viability by targeting the net interest margin ratio and return on equity subject to balance sheet constraints such as credit quality meeting liquidity and obtaining sufficient capital.

The liabilities management theory is the most relevant to this study because it covers assets, liabilities and profitability of banks. The next theory is commercial loans theory which encourages banks to lend out short term loans in order to be adequately liquidity. Third theory is shiftability theory.

2.3 Review of Empirical Studies

Empirical review deals with the original research (such as scientific experiments, surveys, and research studies). They are researches based on experience and observation rather than systematic logic

Asset Quality and Return on Asset

Return on Asset (ROA) is an indicator that helps to understand how much profit an institution can generate from investments made into assets. A study was carried to investigate the effect of asset quality on the profitability of the bank in Turkey. The study covered a period from 1st quarter of 2005 to 3rd quarter of 2016, two way fixed effect panel regression analysis was used in the study, and including 1809 observation belongs to 55 Banks in Turkey. Asset quality was represented by non-performing loans while profitability of the bank was represented by return on Asset. Asset quality was measured with the ratio of non-performing (follow up) loans to total assets and ratio of provision for non-performing (loans to total loans). Asset quality is required to measure, oversee, examine effectively of the impacts of non-performing loans and accordingly to initiate effective economic policies. Regulators have been aiming to ensure high asset quality are put in force by both national and international organizations and risk models developed. The result revealed that asset quality of banks has significant importance on financial system of the country and national economy. It also affects the return on asset (profitability) of bank. It was

found that there is a significant, negative relationship between asset quality (non-performing loans) and return on asset (profitability). Low asset quality (non-performing loans) affects return on assets (profitability) of bank negatively. The higher non-performing loans, the lower asset quality, leads to the lower return on asset, and the lower non-performing loans, the higher asset quality, leads to the higher return on asset. The result further showed that increase of the non-performing loans which represent asset quality leads to decreases in return on asset (profitability) and decrease of the non-performing loans leads to increase in return on asset (profitability). In conclusion, asset quality may affect economic growth as well as the bank profitability ⁸¹.

Another study examined the effect of bank specific factors on asset quality of listed deposit money banks in Nigeria. Asset quality was represented by non-performing assets whereas the independent variables include Return on Asset, Interest Income Spread, Income Diversity and Credit Growth Rate. The study used a correlation research design for which data were collected from the published annual financial reports and accounts of the concerned deposit money banks listed in Nigeria for seven years ((2012-2018) and analyzed using multiple regression analysis with the aid of STATA software. The population consisted of the 14 listed deposit money banks on the Nigerian stock exchange as at 31st December, 2018. The study revealed that return on asset (ROA) has a negative and significant effect on Asset Quality of listed deposit money banks (DMBs) in Nigeria which means that banks with higher profitability are proven to have lower non-performing assets. This may be because they can maintain suitable credit administration practices. The study also found evidence that return on asset plays a vital role in explaining changes in asset quality of deposit money banks in Nigeria. Therefore, the study concludes that profitability is a determinant of asset quality of listed deposit money banks (DMBs) in Nigeria. While Income Diversity and Interest Income Spread have a favorable and considerable impact on

deposit money banks (DMB) Asset Quality in Nigeria. Credit Growth Rate, on the other hand, had a favorable but negligible influence on Asset Quality of Nigerian listed DMBs. The study encourages that management of listed DMBs in Nigeria should aim to balance their profit pursuit with better asset quality. The study recommends that the managements of listed deposit money banks (DMBs) in Nigeria should strive a balance between their profit pursuit and non-performing assets. This is because an aggressive pursuit of profit will affect the quality of the deposit money banks (DMBs) asset ⁸².

The study was on the determinants of Asian banks' profitability with focus on the role of poor asset quality in Asia. Fixed effect estimation for the panel data of the sample that consist of 947 banks from twelve Asian economies over the period of 2001-02015 were used. The study found that poor asset quality is significantly and negatively associated with return on asset (ROA). This means that any increase in poor asset quality will indicate a lower return on asset for the bank because more loans are likely to be provisioned or directly written-off if this ratio gets bigger. The probability of loan recoveries does matter. When indicators suggest that some loans will not be recovered, banks must record such a loss and charge it to the income statement. Eventually, such banks suffer from underperformance, which is reflected as lower returns on the assets during that period ⁸³.

The study examined the key determinants of performance of bank and evidence from Middle East, Indian sub-continent and African banks. Random effect model was used as an estimation tool on 93 banks in Middle East, Africa and Indian subcontinent over period from 2009 through 2016. The findings reveal that there are significant relationships between Return on Asset (bank's performance) and its loan growth. Growth in bank asset classes significantly influence Return on Asset and therefore any change in central bank's policy that promotes reduction in

bank's liquidity requirement is seen timely and favorable to the bank management. Return on Asset and Loan Growth are positively correlated. While Non-performing loan (NPL) and Capital Adequacy Ratio (CAR) are found to be negatively correlated with Return on Asset (ROA) which suggest that any percentage increase in these two variables will exert some detrimental effect on bank's long-run profitability. However, these two variables do not have statistically significant relationship with Return on Asset (ROA). As a whole, it is showed that loan growth plays a very important role in supporting bank's long term return on asset ⁸⁴.

There was an examination on impact of bank internal factors on profitability of commercial banks in Sri Lanka. Panel data were collected from published financial statement of nine commercial banks listed on Colombo Stock Exchange (CSE) for the period of ten years from 2006 to 2015. Fixed effect and random effect models were performed to investigate the best model to evaluate the impact of bank internal factors on profitability of commercial banks in Sri Lanka. Profitability was represented by Return on Assets while bank internal factors were represented by Assets Quality, Capital adequacy, Operating cost efficiency, Non-performing loans, Bank size, Liquidity, and Managerial efficiency. The result revealed that assets quality has no significant impact on the return of asset of commercial banks in Sri Lanka. While non performing loans have negative and significant impact on return on asset. The study recommended that management can use some credit risk strategies such as reduce percentages of non-performing loans on total loans and advances, screening the details of the customers according to the CAMELS and 5C methods, providing loans to their customers, diversification of loans and analyze capacity of loans receivers with the help of rating agencies ⁸⁵.

The study investigated to determine whether assets quality and capital have an effect on credit risk and profitability in both conventional and Islamic banks in Indonesia. The population used

for the study was 115 banks. Purposive sampling technique was used and 39 banks as samples, consisting of twenty nine conventional banks and ten Islamic banks. The result show that assets quality has a positive and significant effect on Return on asset (profitability) on conventional banks but has a negative effect on Islamic banks . it shows that conventional banks are far better at managing asset quality ⁸⁶.

The study examined impact of nonperforming assets on financial performance of scheduled commercial banks operating in India. The study used performance data of 87 commercial banks made up of twenty (20) public, twenty two (22) private and forty five (45) foreign banks for the period of 15 years from year 2004/2005 to 2019/2019. Secondary data used for the study was collected website of the Reserve Bank of India . Regression mode; and time trend analysis were used . Asset quality was represented by Non Performing loans while profitability was represented by Return on assets. The finding revealed that non performing assets (NPA) shows a significant increasing trend for public, private, and foreign banks which adversely affect the quality of assets of the banks. The impact of non performing assets (NPA) on the return on asset (ROA) of commercial banks in India as it led to reduction in profitability and increase in the cost for all scheduled commercial banks operating in India ⁸⁷.

The study was on the Effect of Specific Factors on Bank Profitability: Evidence from Nepalese Banks. It examined the impact of assets quality, capital adequacy ratio, assets diversification and operating efficiency on the profitability of banks. Profitability was represented by Return on asset. The study employed bank scope data of eight commercial banks during the period of 2002/03 – 2016/17. Ninety six (96) observations were made in the study. The ordinary least squares model was used to analyze the data. The results showed that assets quality, operating

efficiency, and capital adequacy ratio have significantly effect on Return on Asset of bank .while diversification does not affect Return on Asset ⁸⁸.

Another study investigated the relationship between asset quality and performance of deposit money banks in Nigeria over a period of 30 years ranging from 1986 to 2016. The population of this study comprised of all the financial institutions operating in Nigeria. It used time series data ranging from 1986 to 2016 collected from the Nigeria deposit insurance corporation annual reports and accounts, Central Bank of Nigeria financial stability report and Central Bank of Nigeria statistically bulletin for various years. Performance of Bank was represented by Return on asset (ROA) as a dependable variable while the variable of asset quality was represented ratio of non-performing loan to total loan (NPL), ratio of liquid assets to total assets (LAT) and ratio of liquid assets to short term liabilities (LAS). Both the descriptive and econometric techniques were utilized to analyze the time series data. The result revealed that there is a short run relationship between asset quality and Return on Asset. Also, the co-integration result revealed the presence of a long run relationship between asset quality and Return on Asset of banks in Nigeria while the granger causality result showed evidence of causality between asset quality and Return on Asset of bank e in Nigeria. The study concluded that t maintaining sound assets quality position is critical to the long term performance, survival and sustainability of Deposit Money Banks in Nigeria ⁸⁹.

The study on bank Soundness and Sustainability-Evidence from Middle East, Indian Sub-Continent and African Banks was conducted. It was carried out to examining the effects of bank's liquidity (LR), non-performing loans (NPL), capital adequacy ratio (CAR), loan growth (FEXP) and default risk premium (FQL) on the performance of bank as measured by return on assets (ROA). Pooled OLS as an estimation tool on Ninety Three (93) commercial banks in

Middle East, Africa and Indian subcontinent over a period from 2009 through 2016. The finding revealed that Non Performing loan which represented asset quality does not have significant relationship with Return on Asset (ROA) but it was found to be negatively correlated suggesting that any percentage increase in this variable will exert some detrimental effect on long-run profitability of bank ⁹⁰.

The study re-examined the impact of credit risk on the profitability of Banks in Ghana. Panel data covering the period of 2010-2015 was gathered from twenty (20) banks. Credit risk was measured by asset quality, non-performing loan, and liquidity. While Profitability was measured by Return on Asset (ROA). The findings revealed that credit risk does have negative effects on the return on asset (profitability) of banks in Ghana. Between the variables of credit risk and its control variables, asset quality, non-performing loans, operating cost, and growth did have a significant effect on Return on Asset (profitability) while liquidity has an insignificant effect on Return on Asset (Profitability). Asset quality, non-performing loan, liquidity, and operating cost have a negative relation with Return On Asset (profitability) while growth has a positive relation. It was found that non-performing loans played a major role in depleting Return on Asset (profitability). Non-performing loan (NPL) is a risk indicator which determines the quality of loans, hence banks with huge non-performing loans have poor asset quality and are less profitable. The study recommended that banks should tighten credit control policies because credit is always the core of banking operation and the focus of banks concerning risk has to be on managing credit risk. Better risk management indicates that banks operate at lower relative risk (efficiency in operation) and at the lower conflict of interests between parties. This will help in improving the liquidity of banks and hence increase its profit level. This is essential in ensuring

sustainable profit in banks operations leading to the long-term success of any banking organization as well as the industry as a whole ⁹¹.

The study investigated the impact of credit risk management on the profitability of commercial banks in Nigeria. The purpose was to show how credit risk parameters are related to the expected performance of commercial banks in Nigeria. Both primary data and secondary data were used. The primary data were sourced through questionnaires while secondary data were sourced through annual report of selected banks. Regression analysis was used to analyse and drawn relationship between credit risk parameters (Non-performing loan and capital adequacy ratio) and the profitability ratio (return on asset) of five big Nigerian banks.. The conclusion drawn from the data analysis shows that there is a strong relationship between credit risk parameters and returns of the bank implying that credit risk management has a strong impact on the profitability of commercial banks in Nigeria. The result showed that Non performing loans and Capital adequacy ratio have significant effect on the return on asset of banks ⁹².

The study investigated loan portfolio quality and efficiency of Quoted Deposit Money Banks (DMBs) in Nigeria. The population of the study consists of all the quoted Deposit Money Banks in Nigeria with sample of selected eight (8) Deposit Money Banks with international authorization in Nigeria as at December, 2019 which served as sample. Secondary data were adopted and collected from the annual audited report and account of these banks and the Nigerian Deposit Insurance Corporation annual report is used to extract the relevant data for the study. Bank efficiency represented dependent variables while Value at Risk, Loan Loss Provisioning and Capital adequacy represented independent variables. The result found that loan portfolio value at risk (VaR) have a negative effect on efficiency of quoted Deposit Money Banks in Nigeria, where the high quality loan portfolio is generated and well managed, the effect

will be minimal, but otherwise it be damaging on the Banks earnings. The study recommended the management and Board of quoted Deposit Money Banks in Nigeria should intensify efforts by encouraging quality loan portfolio and monitor every delinquency triggers in order to avoid bad loans and provisioning. Also the bank should also strike a limit on dilution of equity and adhere strictly to regulatory guidelines on capitalization ⁹³.

The study examined a Comparative Evaluation of Profitability of Conventional Banks versus Islamic Banks in Bangladesh. Two hundred and seventy (270) bank-years were considered as sample from the thirty (30) listed banks of DSE of which twenty three (23) are conventional and seven (7) are Islamic banks during the period of 2010 to 2018 (3rd quarter for 2018). Return on Asset (ROA) and Return on Equity (ROE) represented dependent variable while Total Equity to Total Assets (TETA), Total Loan to Total Assets (TLTA), Deposit to Total Assets (DTA), Debt Equity Ratio (DER) represented independent variable. The result revealed that conventional banks are more profitable than Islamic banks. Return on Asset (ROA) and Profit Expense Ratio on conventional banks is higher than Islamic bank but there is no significant difference in Return on equity (ROE). It also found that Total Equity to Total Assets (TETA) and Deposit to Total Assets (DTA) of conventional banks is significantly affect Return on Asset but for Islamic banks only Total Equity to Total Assets (TETA) affects Return on Asset significantly. In case of conventional banks, Deposit to Total Assets (DTA) affects Return on Equity significantly and for Islamic banks, Total Equity to Total Assets (TETA) and Debt Equity Ratio (DER) affects Return On Equity significantly ⁹⁴.

The study examined the determinants of capital adequacy among selected commercial banks in Ghana. A study design was employed and the design was situated within the quantitative method.

A balanced panel approach was employed in investigating the determinants of capital adequacy among selected commercial banks in Ghana whilst comparing estimates of pooled OLS, random and fixed effects models and the generalized least square models to ascertain the robustness of the model. Eight banks were sampled for the periods 2009-2016. Secondary data was collected from the annual reports of selected banks as well as the Ghana Banking Survey authored by Price Waterhouse Coopers Ghana (PWC). The result showed that all the independent variables (Return on assets, liquid funds to total deposit ratio, non-performing loans ratio, return on equity) statistically and significantly influence capital adequacy. While non-performing loans negatively relate to Capital Adequacy Ratio, loan fund to total deposit (LFTD) and Return on Asset (ROA) positively impact Capital Adequacy Ratio or asset quality. Return on Equity was not statistically significant. The results suggested that capital adequacy was good for the health and sustenance of commercial banks. This is because capital adequacy is able to cushion the banks against losses and banking risks. The study recommended that banks should also ensure strict compliance with regulatory requirements concerning Capital Adequacy Ratio, risk management and loans administration since they may have a toll on the profitability and sustenance of the banks⁹⁵.

The study analyzed Capital Adequacy, Asset Quality, Management Efficiency, Earning Quality and Liquidity (CAMEL) in relation to bank performance. The study employed the quantitative research design and the panel data from 2013-2017, representing twenty one (21) banks from ten countries. Dependent variable was represented by Return on Asset (ROA) as bank performance while capital adequacy ratio, asset quality ratio, management capability ratio; Earnings ratio, Liquidity ratio, represented independent variable. The results showed that asset quality, management quality, and liquidity ratio has a negative effect on Return on Asset (ROA). When

non-performing loans of total assets, interest expense of total deposits, and total liquid assets of total assets increase then the Return on Asset (ROA) will decrease ⁹⁶.

The study examined the effect of non-performing loans on profitability for public and private banks in the Turkish banking system with the help of panel regression analysis. The panel regression analysis for the period 2010.Q1-2020.Q4 for three (3) public capital, eight (8) private capital, and sixteen (16) foreign capital banks in the banking system were used. Independent variable was represented by Non Performing to total loan, control variable was represented by Loan to deposit ratio while dependent variable was represented by Return on Asset. Result found that when the Non-Performing Loans/Total Loans variable increased by one (1) unit, the Return on Asset (ROA) variable decreased by 0.230 units, and when the Loan/Deposit Ratio increased by one (1) unit, the return on Asset (ROA) variable increased by 0.115 units. The result showed that non-performing loans had a decreasing effect on the return on assets in the Turkish banking system in parallel ⁹⁷.

The study investigated the impact of financial leverage on the financial performance of conventional banks listed on the Indonesia Stock Exchange. The dependent variable was represented by return on assets and return on equity. While independent variables were represented by debt ratio, debt to equity ratio, interest coverage ratio, and cash coverage ratio. The sample used twenty one (21) conventional banks for ten years from 2010-2019. Secondary data was collected. Purposive sampling was used as sampling technique. Panel data regression was used for data analysis. The results found that the debt ratio positively affects return on assets and return on equity. The debt-equity ratio has a positive effect on return on assets but has a negative and significant effect on return on equity. Interest coverage ratio has no effect on return on assets and return on equity, and cash coverage ratio has no effect on return on assets and

return on equity. Maximizing shareholder profits and financial performance can be made by considering the debt ratio and debt-equity ratio ⁹⁸.

The study investigated factors that determine the profitability of commercial banks in Kosovo. Secondary data was collected from eight (8) commercial banks and some macroeconomic indicators for period of 7 years, respectively from 2012 – 2018. The analysis used regression analysis for a time series covering a period of seven (7) years (2012 - 2018), Return on Asset (ROA) and Return on Equity represented profitability as dependent variable while Non-performing loans which measured asset quality, Capital Adequacy, Size of banks, Inflation, Economic growth represented Independent variables. The result showed that Non performing loans which represented asset quality have a significant negative effect on both return on asset and return on equity. Increase in Non-performing loan will reduce the return on asset (profitability) ⁹⁹.

The study examined bank-specific factors affecting non-performing loans in developing Countries. One hundred and fifteen banks that are listed on the Indonesian Stock Exchange were used as population and sample of thirty six banks were selected that resulted to two hundred and eighty eight (288) observation. The study covered period from 2008 to 2015. Five bank specific variables were used to represent independent variable. Credit growth, Return on Asset (profitability), operating efficiency, capital, income diversification represented independent variables. Non-performing loan (asset quality) represented dependent variable. The result revealed that there is negative relationship between profitability and the Non-performing loans. The negative relationship between profitability and Non-performing loan (NPL) suggested that the more profit a bank gets, the less likely the bank would have Non performing loans (NPLs). Banks that is highly profitable can perform proper management practices, including undertaking

day-today operations as well as managing loan portfolios. They can afford a sufficient operating budget, they can perform adequate loan management such as underwriting, monitoring, and controlling. This is a preventive action to mitigate potential default risk to finally lower the possibility of having loan defaults in the banks' asset ¹⁰⁰.

The study investigated the impact of Non-performing loans on profitability of bank. The study used causality research design using panel data from 2007 to 2015 for sixteen (16) commercial banks in Tanzania. The study adopted multiple regression analysis estimation methods, Descriptive statistics, Ordinary Least-Squares (OLS) regression. The Fixed Effects (FE) and Random Effects (RE) assumptions were adopted. Dependable variable of profitability was represented by Return on Asset, Non-performing loan to Total gross Loan represented Independent Variable while Liquidity , Capital Adequacy, Gross Domestic Product represented Control Variable. The result showed that non-performing loans is negatively associated with the Return on Asset in commercial banks in Tanzania. An Increase in Non-performing loans (Asset Quality) will result in decrease in Return on Asset (Profitability) ¹⁰¹.

The study was conducted to examine the effect of bank capital, liquidity and asset quality on banking profitability in Indonesia. The data was collected from annual reports of company from 2011 to 2020. Return on assets represented the dependent variable while Non performing loan , capital adequacy and loan to deposit ratio represented independent variables. Multiple regression analysis using panel data models was adopted. The result revealed that Non performing loans have negative effect on profitability¹² .

The study investigated the relationship between non-performing loans and the performance of deposit money banks in Nigeria. Ten banks were selected. Secondary data on-performing was used which was taken from annual financial reports of the banks. Return on Asset represented

the dependent variable while the independent variable was represented by non-performing loans to total loans (NPL), nonperforming loans net of provisions to capital (NPLNP), liquid assets to total assets (LA), and capital to total assets (CAP). A correlation matrix was used to analyze the data. The result showed that non-performing loans to total loans is negative and has an insignificant effect on the return on assets of the banks. That is non-performing loans to total loans have a negative insignificant relationship with the performance of deposits money banks in Nigeria; have no significant relationship with the performance of deposits money banks in Nigeria. The study recommends that the regulatory agency such as the Central Bank of Nigeria and the Nigerian Deposit Insurance Corporation should formulate rules that will reduce the occurrence of Loans for which repayment of principal or interest has been overdue for three months or more Insurance Corporation should formulate rules that will reduce the occurrence of Loans for which repayment of principal or interest has been overdue for three months or more ¹⁰².

The study investigated whether the determinants of profitability of commercial banks affect the financial performance of commercial banks in Kosovo. The study covered ten commercial banks in Kosovo from 2010- 2015. The study adopted an explanatory approach by using balanced panel data research design to achieve the objectives. The dependent variables of financial performance was measured by Return on Average Equity (ROAE), Return on Average Assets (ROAA) and Net Interest Margin (NIM) while independent variables were measured by asset quality (Non performing loans to Gross loans), Management efficiency (expenditures to income), Liquidity (Liquidity Assets/Short Term liabilities), GDP, Capital adequacy ratio and inflation. Three models of financial performance were used to highlight the influencing factors. The models were based on regression analysis. The results showed that asset quality which was represented by non-performing loans to total gross loans has a positive relationship to all three

bank performance indicator. This indicates that better asset quality or low non-performing loans to total gross loans will result in higher profitability (ROA, ROE and NIM). While Capital adequacy ratio has the weakest relationship with all the three dependent variables ¹⁰³.

The study examined the effect of credit risk management on financial performance of the Jordanian commercial banks. The study covered thirteen commercial banks. The data was collected from annual financial report of the banks between 2005 to 2013. The panel regression model was employed to analysis the effect of credit risk management indicators (Capital adequacy ratio (CAR), Credit interest/Credit facilities ratio, Facilities loss/Net facilities ratio, Facilities loss/Gross facilities ratio, Leverage ratio, Non-performing loans/Gross loans ratio) on the financial performance of banks. The financial performance (profitability) which represented dependent variables was measured by ROA and ROE. The result showed that there is a positive effect of Non-performing loans/Gross loans ratio on the banks financial performance (ROA, ROE). There is no effect of the Capital adequacy ratio, Credit interest/Credit facilities ratio on the banks financial performance (ROA, ROE)¹⁰⁴.

The purpose of the study was to examine the Impact of non-performing loans on financial performance in Commercial banks in Sri Lanka. The study covered nine commercial banks in Sri Lanka. Data were collected from annual financial reports of commercial banks. Correlation analysis was used to find out the relationship between the independent variable (Non-Performing Loans) and dependent variable (Financial Performance) while linear regression analysis was used to investigate the impact of Non-Performing Loans on the Financial Performance for the period of 2012- 2017. ROA and ROE represented the dependent variables while Non-performing represented independent variable. The result revealed that non-performing loans have significant and negative relationship with financial performance (ROA, ROE)¹⁰⁵.

The study investigated the effect of capital adequacy ratio and non-performing loans on return on asset. The study covered ten conventional banks listed on the Indonesia stock exchange. The study used secondary data that cover from 2015 to 2019. The quantitative descriptive with data analysis methods was employed. Independent variables was measured by Non performing and Capital adequacy while dependent variable was measured by Return on asset. The result showed that Non-Performing Loans had a significant negative effect on Return on Assets, while Capital Adequacy Ratio has no significant effect on ROA¹⁰⁶.

The study examined the Impact of Financial Variables on Firm Profitability of selected commercial banks in Oman. The study covered five leading commercial banks which spanned period of thirteen years from 2007 to 2019. : An Empirical Study of Commercial Banks in Oman. Return on asset measured profitability (net profit) while total assets, total deposit, Net loans and advances, net loans to deposit NII to interest income and Capital adequacy ratio. The result revealed that the correlation matrix of the selected variables has a positive relationship with net profit, assets, deposits, loans, and interest income. However, the findings also shows a negative relationship between net profit and net loans to total deposits ratio. The study found net loans is the main independent variable that influences the profitability of the banks since the key source of revenue comes from the lending operations. The assets, total capital adequacy ratio have a mixed effect on the profitability of commercial banks. The total deposits and capital adequacy ratio have a negative effect on profitability mainly because excessive liquidity will increase the cost of capital and reduce the return on investment ¹⁰⁷.

Asset Quality and Return on Equity

Return of equity is the amount of net income returned as a percentage of shareholders equity. It measures profitability of bank by revealing how much profit a bank generates with the money shareholders have invested ¹¹.

Study was conducted on Impact of non-performing loans on asset quality, profitability and lending behavior of banks in Oman. Six commercial banks listed in Muscat Securities market was considered for the study. The study was conducted from the year 2010 to 2019. The data were collected from Muscat Securities market website in respect of the six banks. The data were analysis using Multiple Regression. Independent variables were represented by the independent variables like credit risk, asset quality, capitalization and bank size while dependent variable of

non-performing loans was represented by Return on equity (ROE). The result revealed that there exists a significant relationship between Return on Equity (ROE) and the independent variables. It indicates that bankers should take utmost precaution before issuing loans. If non-performing loans tend to increase in a bank, it affects not only its profitability but also its reliability. So it is the responsibility of the banks to appraise the credit worthiness of the borrowers in order to reduce non-performing assets to the minimum extent possible ¹⁰⁸.

The study analysis and compare the impact of Capital Adequacy, Asset Quality, Management Quality, Earning Ability and Liquidity (CAMEL) model on the profitability for both domestic and foreign commercial banks during the period 2000-2014. Estimated fifteen years panel data for 20 commercial banks using both pooled OLS as well as fixed effect model were used. Return on Equity (ROE), Return on Asset (ROA) and Net Interest Margin (NIM) represented the dependent variable of Profitability. The findings showed that Asset Quality (AQ) measured by nonperforming to total loans has a negative and significant effect on Return on Equity (ROE) that is the higher non-performing loans will results in decrease in Return on Equity (ROE) of banks for domestic banks in Saudi Arabia. Asset Quality represented by performing loans to total loan ratio has a negative and significant effect on Return on Equity for foreign banks showing that more non-performing loans erode the Return on Equity (profitability). These indicate that increased non-performing loans have a detrimental effect on the Return on Equity (profitability) of domestic banks and foreign banks in Saudi Arabia ¹⁰⁹.

The study investigated bank specific determinants of EU banks Profitability after 2007 financial crisis. The research model of profitability of was developed by analysing the systemically quoted banks in the European Union, in the 2007–2019 period, by using an adequate panel data analysis technique. Bank profitability was represented by return on equity (ROE). The result revealed that

Non performing loans which represented asset quality has significant influence on the return on equity (Profitability) ¹¹⁰.

The study examined the Relationship between Risk Management and profitability of Commercial Banks in Albania. Profitability was measured Four variables were considered; return on Equity and Return on Asset represented dependent variables while Non-performing loans (Asset Quality) and Capital Adequacy represented independent variables. The data were collected from the annual reports of Albanian Association of Banks for a period of seven year (2008-2015). Quantitative data analysis and multiple regression model were used. The result showed that there is a negative relationship between asset quality and Return on Equity (profitability). Asset Quality remains the most important risk faced by commercial banks, so its accurate measurement and credit risk management is of crucial importance. The relationship between asset quality and return on Equity (profitability) was expected to be negative, given that the more unprofitable loans a bank has, the more the return on equity of bank will be reduced ¹¹¹.

The study investigated the effects of non-performing loan on profitability of commercial banks in Nepal. A panel data were collected from twelve commercial banks of five years from 2013-2014 to 2017-2018 period with the total observations of sixty. The multiple regression model was used to analysis the data. The Pooled ordinary least square model, fixed effect model and random effect model were employed to analyzed profitability. The variable of profitability was measured by return on equity (ROE) as dependent variable while independent variables were measured non-performing loan (asset quality), capital adequacy ratio (CAR), liquidity (LIQ), size of banks (SIZE) and inflation (INF) . The result revealed that the Non-Performing Loans (low Asset quality) has significant and negatively associated with Return on Equity (ROE). The study concluded that non-performing loan has major role in determining Return on Equity

(Profitability). The effect of nonperforming loan on profitability is very strong and has rational effect of national economy ¹¹².

The study evaluated the effects of credit risk on performance of banks in Nigeria from 2005-2016 covering the period of post-merger. The study adopts Generalized Method of Moments Estimation approach. The data were obtained from annual reports of thirteen deposit money banks selected include stand-alone banks and banks that retained their brand names after the 2005 bank consolidation exercise. Profitability was represented by Return on Equity and Return On Asset as dependent variables while Credit Risk was represented by Non-performing loan (asset quality), Loan to deposit ratio and Capital adequacy ratio as independent variable. The result found that non-performing loan (asset quality) has a negative statistically significant effect on both Return on Equity and Return on Asset (Profitability). This means the more non-performing loan, the less the profitability (return on Equity and Return on Asset) of banks. Loan deposit ratio was not statistically significant on the profitability of bank. The study recommended that banks should maintain Credit Policies that clearly outline the view of business development priorities and its risk appetite which will ensure that loan deposit ratio in line with the regulatory benchmark is maintained ¹¹³.

The study investigated the Determinants of Financial Performance of Private Commercial Banks in Ethiopia using CAMEL Approach. The study included all banks that have audited financial report from 2016 to 2020. Panel/longitudinal data were used for the study. The study used secondary data over the period of 2016 to 2020. Data was collected from audited financial report of each private commercial bank included in the sample and annual report of NBE. All data that has been collected on annual base and the figures for the variables were on June 30 of each year under study. Dependent variable was represented by Return on Equity, Return Asset and Earning

per share while independent variable was represented by asset quality, capital adequacy, management quality, Earning Quality, and Liquidity. The result revealed that asset quality has an insignificant effect on both Return on Equity and Return on asset of private commercial banks in Ethiopia. The study concluded that capital adequacy affects both return on equity and return on asset. Also there is positive and significant effect between capital adequacy and financial performance. An increase in capital adequacy would lead to a positive and significant increase in financial performance of the commercial banks. This shows that capital adequacy has an effect on financial performance ¹¹⁴.

The study investigated the relationship between credit risk, liquidity risks and bank profitability within the Middle East and North African (MENA) countries. Data related to a sample of conventional banks observed during the period 2004–2015 were selected and the Seemingly Unrelated Regression (SUR) method performed in the empirical section. Profitability, Credit Risk, liquidity risk, interaction term represented dependent variable while Bank size, capital adequacy ratio represented Bank Specific. Growth of Gross domestic Product and inflation represented macroeconomic conditions, Government stability and Law and order represented institutional quality. Profitability was represented by Return on Equity and Return Asset. The result indicated that the profitability of the MENA banks is negatively and significantly sensitive to an increase in credit and liquidity risks. Also the bank profitability decreases significantly the level of credit and liquidity risks and this negative effect is confirmed for either the separate or the interaction effects of these two risks ¹¹⁵.

The study was on a critical evaluation of profitability of State Bank of India (SBI) and its associates in India in relation to Non-Performing Asset (NPA). The Study critically evaluated the trend in movement of non-performing assets of SBI and its associates in India from 2005 to

2017 and thereby facilitating an evaluation of the effectiveness of Non-Performing Asset (NPA) CAMEL Components management in the post-millennium period. Secondary data were collected and Statistical packages like Microsoft Excel and SPSS were used to analyze the data. The study utilized statistical techniques such as correlation, regression and ANOVA to explain the causes of Non-Performing Asset (NPA). The result showed that an increase in Net Non-Performing Asset (NPA) of State Bank of India (SBI) and its associates do not have any significant impact on its Return on Equity, net profit, Return on Investment, Return on Advances and Net Interest Margin ¹¹⁶.

The study examined the impact of the COVID-19 pandemic on banking sector profitability in Uganda from March 2000 to March 2021, consisting of 85 observations. Using the autoregressive distributed lag (ARDL Bound) testing approach to co-integration while controlling for bank specific and macroeconomic determinants of bank profitability. Bank profitability was proxied by return on Equity (ROE), return on assets (ROA), and net interest margin (NIM). Non-performing loans ratio (NPLS) was used as a proxy for credit default risk. While the effects of the COVID-19 pandemic on Return on Equity, Return on Asset and net interest margin was captured using a dummy for the COVID-19 pandemic crisis, which takes on the value of 1 during the pandemic (March 2020 to March 2021). The study applied the ARDL estimation technique and E-views version 9.0 statistical package software. The result revealed that in the short run Non performing loans ratio (asset Quality) only have a statistically significant negative effect on Return on Equity and Return On Asset while in the long run Non performing loans (asset Quality) only have a statistically significant effect on Net interest margin but the effect is positive. The result suggested that in the short run, an increasing in Non-performing loans (asset Quality) due to bad loans or poor loan quality will reduce Return

on Equity and return on Equity as a result of the fall in interest revenue and rising provisioning costs ¹¹⁷.

The study investigated Non-Performing Asset and its Effects on Profitability of Nepalese Commercial Banks. The study used secondary data from Banking and Financial Statistics, Bank Supervision Report published by Nepal Rastra Bank and annual reports of the banks. The study covered the period from 2010 to 2017 for three government banks and ten non-government banks with twenty four and eighty observations respectively. The regression models were estimated to test the significance and impact of non-performing loan on profitability on Nepalese commercial banks. Return on asset and return on equity represented profitability as dependent variable while Non-performing loan, Capital Adequacy, Loan loss provision, total loan, Bank size represented independent variables. The result showed that non-performing loan (NPL), non-performing loan to total loan (NPLTL), loan loss provision (LLP) have negative impact on Return on equity (firm profitability) ¹¹⁸.

The study investigated the effect of Credit Risk on Financial Performance of Commercial Banks in Kenya. The total population for the study was forty three commercial banks while a census sampling method was adopted to select thirty one banks. Secondary data from annual financial statement from selected commercial banks were collected from 2014 to 2018. Descriptive statistics (mean and standard deviation) and multiple regression method were used to explain the characteristics of the study variables and examined the effect of credit risk on performance of bank. Return on Equity represented profitability as dependent variable while Non-Performing Loan (asset quality), Loan and Advances, Loan Loss Provision represented independent variable. The result revealed that Non-Performing loans and loan loss provision had Non-significant effect on the return on Equity (profitability) ¹¹⁹.

The study investigated the impact of determinant factors of profitability of banks on the financial performance of commercial banks in Kosovo. The study covered period from 2010 to 2015. The effects of bank specific factors as expressed within the CAMEL approach and macroeconomic factors were evaluated. A balanced panel data of sixty observations of ten commercial banks were analysed using multiple regression analysis of three performance indicators. They are Return on average equity (ROAE), Return on average Assets (ROAA) and Return on Net interest margin. They represented variables of Profitability. The independent variables were represented by Asset quality, Capital Adequacy ratio, Management Efficiency, Liquidity, Gross Domestic Product (GDP), Inflation. The result revealed that Asset quality has positive relationship with Return on average Equity (Profitability) and is statically significant ¹²⁰.

The study evaluated the impact of determinants of profitability on the commercial banks of Bangladesh. The period of data collected spanned from 2010 to 2017. The sample of the study covered thirty Dhaka Stock Exchange listed commercial banks. Multiple regressions analysis was used to analysis the data. Profitability was represented by Return on Equity as dependent variable while independent variables were represented by Asset Quality (non-performing loans), Net interest margin, other operating income, total Deposit to total asset, investment to total assets operating expenses to total Assets. The result showed that Asset Quality has no significant impact on the Return of Equity (profitability) but has a negative relationship with Return on Equity (Profitability). It implies that if non-performing loan increases, Return on Equity will be decreased ¹²¹.

A study was conducted to examine the effect of asset quality and operational efficiency on the financial performance of Islamic banks in Malaysia. The study covered a period from 2010 to 2019. Annual reports from sixteen Islamic banks were collected and panel data analysis was used.

Return on equity and Return on asset represented financial performance as dependent variable while independent variable was represented by asset quality which was measured by Non performing funding and operational efficiency. The result showed that asset quality has significant effects on the return on equity and return on asset. There is a significant negative effect of asset quality on the return on equity and return on asset. That is, if Non performing funding is decreased this could to increase in the profitability. The higher the asset quality the higher the profitability because bad debt provision will be decreasing¹²². The study investigated the impact of Non-performing Loans on the Performance of Selected Commercial Banks in Nigeria. The study covered period from 2000 to 2013. Secondary data was obtained from annual report of the selected banks and data was analysed using ordinary least square method and ratio analysis. Return on equity and return on asset were used to measure performance of bank while independent variable was represented by Ratio of Non-Performing Loan to Loans and Advances (NPL/LA), Ratio of Loans and Advances to Total Assets, LLP, ratio of Loan Loss Provision to Loans and Advance. The result revealed that return on asset and return on equity have inverse relationship with non-performing loans and loan loss provision respectively while they are positively related to loans and advances. The conclusion therefore is that the effects of non-performing loans on Commercial Banks' performance is negative and cannot be underestimated, and poses a fundamental danger to the very existence of the Banks as corporate business entities¹²³.

The study examined the effect of Capital Adequacy Ratio, Operational Cost per Operational Revenue, Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Return On Asset (ROA) and Return On Equity (ROE). Eighteen banks were selected using purposive sampling technique. The period covered from 2012 to 2016. The study used quantitative approach. The result revealed that Capital adequacy ratio, Non-performing loan, loan to Deposit ratio has significant effect on Return On Asset. Capital Adequacy Ratio, Non-performing loan, Loan to Deposit ratio has significant effect on Return On Equity. Capital Adequacy Ratio has not significant effect on Return on Asset¹²⁴.

Asset Quality And Return On Capital Employed

Return on capital employed (ROCE) is a profitability ratio that measures how efficiently a bank can generate profits from its capital employed by comparing net operating profit to capital employed. In other words, return on capital shows investors how many naira's in profit each naira of capital employed generates. Return on capital employed is an important ratio in that it measures the relationship between the net profit and the capital employed or the total net assets. The return on capital employed shows the effect of sales, different assets, and various costs on the total company results or position. It shows the overall profitability of the business. It can also be called ratio return on investment or primary ratios ¹¹.

The study investigated the effect of liquidity management on the performance of banks in Nigeria. Eighteen (18) quoted banks in Nigeria were selected using judgmental sampling technique. The period covered from 2011 to 2017. Ninety financials statements sourced from Nigeria Stock Exchange and Central Bank of Nigeria Statistical Bulletin were used. The data collected were analysed using basic statistical tools that provided descriptive analogies such as

mean, median, standard deviation and ordinary least square (OLS). The dependable variables of profitability were represented by Return on Capital Employed, Return On Asset and Return on Equity while independent variables were represented by Asset Quality, Liquid Asset and Capital Adequacy. The result revealed that there is a positive relationship between Return on Capital Employed and Asset quality. Asset quality has a significant positive effect on the Return on Capital Employed (Profitability). This indicates that liquidity management contributes positively to the Return on Capital employed (profitability) of Deposit Money Banks in Nigeria. Banks with proper liquidity management will increase their profitability over time. The study suggested banks should place high priority on liquidity management in order to increase the overall net worth of their shareholders and minimize potential default risks ¹²⁵.

Another study examined the influence of financial distress on financial performance for commercial banks in Kenya. The purpose of the study was to examine the effects of asset quality distress, capital distress, liquidity distress, and operating inefficiency on the performance of commercial banks in Kenya. The population covered one hundred and twenty nine employees of commercial banks in Kenya. The sample size covered ninety nine employees of commercial banks in Kenya. Independent variables were represented by Asset Quality Distress, Liquidity Distress, and Operating inefficiency while dependent variables were represented by Return On Capital employed, Return On asset, Return on Equity and Return on Investment. A modified Likert scale questionnaire was developed and divided into three parts. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation and the information generated was presented in form of graphs, charts and tables. The finding revealed that asset quality distress has no effect on Return On Capital Employed (financial performance) of commercial banks in Kenya. The study concluded that asset quality distress has no significant

effect on financial effect on Return on Capital Employed (financial performance) of commercial banks in Kenya¹²⁶.

The study examined the effect of capital adequacy on financial performance of Deposit money banks quoted in Nigeria. Independent variable was represented by capital adequacy, dependent variable was represented by Return on Capital Employed while control variables (Asset Quality, Bank Size, Inflation and Financial Development) were introduced. The study used ex-post facto research design and employed a panel data set involving fourteen (14) deposit money banks quoted in Nigeria over a ten-year period ranging from 2009 to 2017 financial year. The data was analyzed using descriptive statistics and inferential statistics. The result showed that Asset quality, Bank Size, Inflation and financial development have significantly influence the effect of Capital Adequacy on financial performance of deposit money banks quoted in Nigeria. And that capital adequacy has significant relation with financial performance of DMBs in Nigeria. Banks with adequate capital are perceived to have more safety and such advantage can be translated into higher profitability. In accordance with the results there is positive and significant relationship between capital adequacy and return on capital employed suggested that banks with more equity capital are perceived to have more safety and such advantage can be translated into higher profitability if truly the capital employed is properly managed. The higher the capital employed, the more profitable a bank should be¹²⁷.

Another study investigated the effect of liquidity on financial performance of deposit money banks in Nigeria. The study adopted the ex-post facto research design as the data utilized there was historical. Data was sourced from the financial statements of banks studied sample of five banks was used for the study. Secondary data were collected from the banks for ten years period, 2007 - 2016. Dependable variable of financial performance was measured by return on capital

employed and return on asset while independent variable of Liquidity was measured by Asset quality, Liquid assets to total assets, Liquid assets to total deposits. The data were analyzed using multiple regression analysis. Results show that asset quality has positive and significant on Return on Capital Employed. The study emphasized the fact that efficient liquidity management can significantly influence returns on capital employed by a bank and as well impact positively on the profitability of bank and thus its stability¹²⁸.

Internal Control system, Asset quality and Profitability

Internal control system is the policies combined with procedures established by management to protect the integrity of assets and ensure efficiency of operations. It prevents losses and helps management maintain an effective means of performance in term of profitability. It safeguards the company resources against loss which may occur due to waste, abuse, mismanagement, errors or even fraud .The system consists of the formal policies and procedures that ensure that assets created by banks are adhered to in order to minimize the non-performing loans/assets, ensure that the accounting system is functioning properly, monitor operations of the organization to ensure maximum efficiency, ensure that assets are kept secure, ensure that employees are in compliance with corporate policies. A properly designed and functioning internal control system will not eliminate the risk of loss but it will reduce the risk. Different organizations face different types of risk but when internal control systems are lacking , the opportunity arises for fraud, misuse of the organization's assets and employee or workplace corruption ¹²⁹.

The study investigated the Impact of Internal Control on the Profitability of Microfinance Institutions in Senegal. Panel data of ten years for one hundred and ten (110) microfinance institutions in Senegal were sampled through proportionate stratified sampling and analyzed

using linear multiple regression model. The dependent variable of profitability was represented by four variables; earning per share (EPS), Return on Asset (ROA), Return on Equity (ROE) and Profit Margin (PM). Dependent variable was represented by Control Environment (CE), Risk Assessment (RA), *Control Activities (CA)*, *information and Communication (IC)*, *Monitoring (M)*. The results showed that bank specific factors have significantly effect on the profitability of Micro Finance institutions. The internal control components have positive and significant effect on Return On Asset (ROA), Earnings per share (EPS), Profit margin (PM) and Return On Equity (ROE). The study recommended the managers of shareholding companies should concentrate on internal control systems with all their components, to maximizing the wellbeing of their entities. Even when we found that there is a high degree of compliance with all components of internal control, we found that the relationship between profitability and control environment, information and communication and monitoring is positive but insignificant ¹³⁰.

The study examined the effect of internal control on Organization performance in reference to Moha Soft Drinks Company, Ethiopia. The study used descriptive research design. Both Qualitative and quantitative data were collected. Questionnaires and interview guides were used for the collection of the data. The study population was employees of Moha Soft Drinks Company, Hawassa Pepsi factory with a total number of one hundred and sixty three (163) employees in all departments. The study revealed that internal control system has a positive and significant effect on the performance of the organization ¹³¹. The study investigated the effect of internal control systems on the performance of commercial banks Nigeria. Survey method was employed and a stratified random sampling was used. Three hundred and eighty two (382) questionnaires were administered to staff of Nigerian commercial banks. Data collected were analysed using Statistical Package for social sciences (SPSS) and Smart PLS 3. The result

revealed that there is a significant and positive relationship between the four components of internal control (Control Environment, Control activities, monitoring and risk assessment and the performance of bank ¹³².

The study examined the effects of the internal control system on the risk, profitability, and compliance of the U.S. banking sector using a quantitative approach. It investigated how the components of the internal control system affect the profitability, credit risk, and compliance of the United States banking sector. The components of the internal controls were quantified based on the COSO Framework, Basel Committee Frameworks. Eleven independent variables were analysed in three different regression models, with profitability, credit risk, and compliance being the dependent variables in each model. A panel set of data was used which comprised two hundred and ten (210) biggest United States bank holding companies. Fixed-effects regression was applied in the three models, while the years under examination were from 2013 to 2017. The results revealed that Risk Assessment, Control Activities, and Information and Communication components strongly affect credit risk. Internal controls significantly affect the profitability and compliance of banks in United States except for the Risk Assessment component. Control Activities component and the Information and Communication component have a significant and positive relationship with the profitability of banks ¹³³. The study investigated the effect of the productive asset quality and non-performing loan on profitability. Secondary data was used for the study which was collected from the financial statements of PT Bank Negara Indonesia Tbk, Makassar Regional office. The period of the study was from 2011 to 2019. Thirty six samples was used and multiple linear analysis techniques was used for the analysis. The result revealed that earning asset quality has a positive and significant effect on profitability. It shows that an increase in asset quality will result to an increase in profitability. While non-performing loans

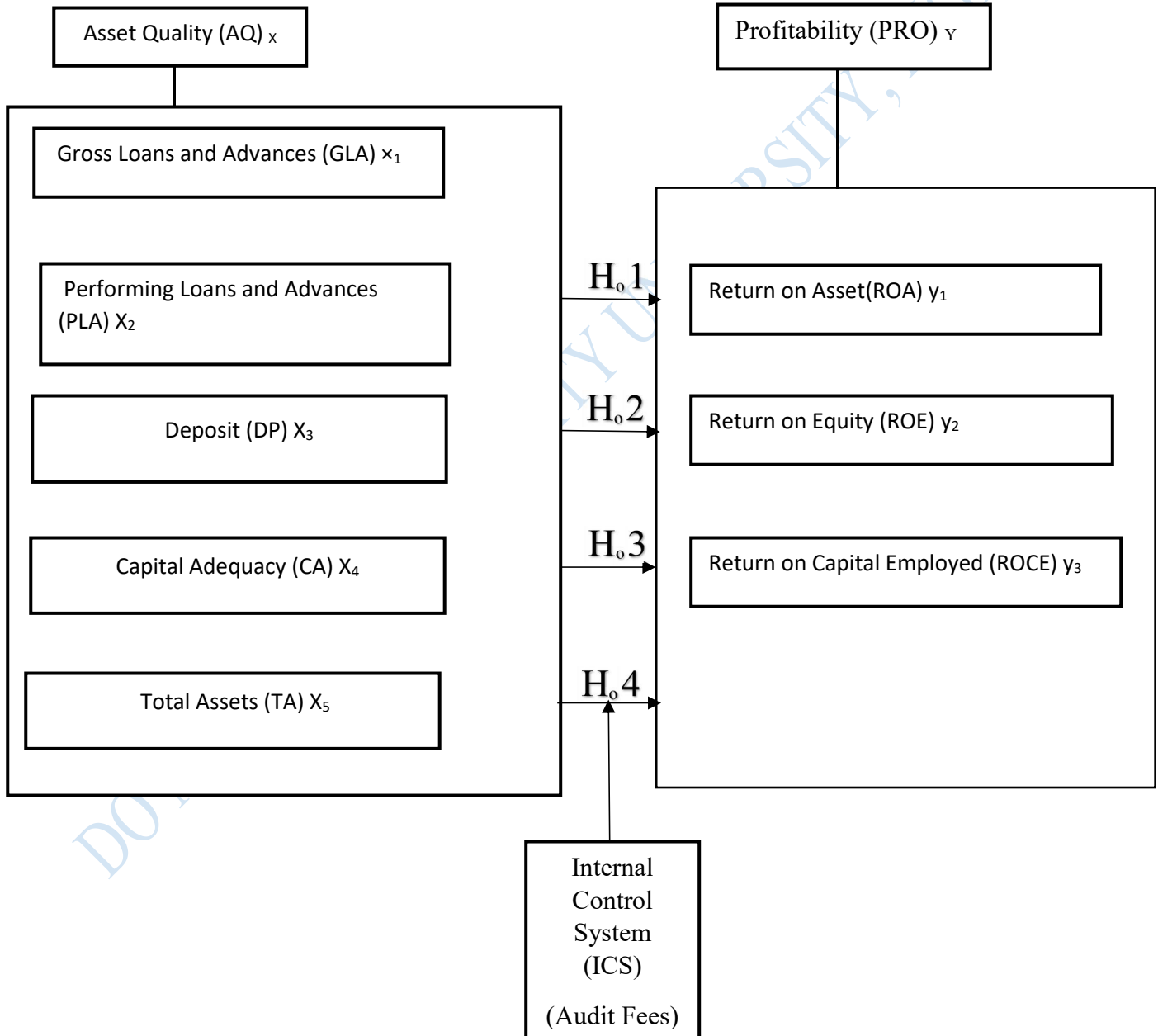
have a negative and significant effect on the profitability. That is an increase in the non performing loan will lead to decrease in profitability¹³⁴.

2.4 Conceptual Framework

2.4.1 Conceptual Model

Independent

Dependent



Researcher's Conceptual Model (2022)

The conceptual model of this study is developed based liabilities Management theory and shiftability theory. The two theories explain the interaction of asset quality , internal control system and profitability. The model shows how the independent variable, moderating variable and dependent variable are related. Asset quality measured by: Gross Loans, Performing Loans, Deposit, Capital Adequacy, and Total Asset is the independent variable. Profitability measured by: Return on Asset, Return on Equity and Return on Capital Employed is the dependent variable and the moderating variable is the internal control system. The independent variable was represented by Asset quality and measured by Gross Loans, Performing Loans, Deposit, Capital Adequacy, and Total Asset. Moderating variable was measured by Internal Control System.

Therefore, the four null hypothesis will be linked as follows: AQ dimension and ROA; AQ dimension and ROE; AQ dimension and ROCE; ICO, AQ and PRO.

The above formulated null hypothesis were subjected to statistical tests to determine the direction of the results, conclusion and possible recommendation of this study.

2.4.2 Model Specification

The model specified is based on empirical studies on the asset qualities and profitability of selected deposit money banks and was adapted from the study on effect of the Asset Quality on the Bank Profitability⁸¹.

This shows the relationships among variables;

$$Y = f(X)$$

Y = Dependent Variable

X= Independent Variable

Where

Y = Profitability

X = Asset Quality

Y = (ROA₁ ,ROE₂ ,ROCE₃)

X = (GL₁ ,PLA₂ ,DEP₃ ,CA₄, TA₅)

Where: Dependable Variable

y₁ =Return on Asset

y₂=Return on Equity

y₃=Return on Capital Employed

Independent Variable

x₁= Gross Loans

x₂= Performing Loans and Advances

x₃= Deposit

x₄= Capital Adequacy

x₅= Total Assets

The Modelling structure of the study on the asset qualities and profitability of selected deposit money banks was adapted from the study on effect of the Asset Quality on the Bank Profitability 81.

ROA= $f(\text{GLA,PLA,DEP,CA,TA})$ ----- Equation 1

ROE= $f(\text{GLA,PLA,DEP,CA,TA})$ ----- Equation 2

ROCE= $f(\text{GLA,PLA,DEP,CA,TA})$ ----- Equation 3

Transforming equation 1,2 and 3 above to econometrics model we have;

$$ROA = \alpha + \beta_1 GLA + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e \quad \text{-----} \quad 4$$

$$ROE = \alpha + \beta_1 GLA + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e \quad \text{-----} \quad 5$$

$$ROCE = \alpha + \beta_1 GLA + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e \quad \text{-----} \quad 6$$

$$PRO = \alpha + \beta_1 AQ + \beta_2 ICS + \beta_3 AQ * ICS \text{-----} \quad 7$$

Where;

AQ: Asset Quality

ROA: Return on Asset

ROE: Return on Equity

ROCE: Return on Capital Employed

PRO: PRO

ICS : Internal Control System

GLA : Gross Loans and Advances

PLA : Performing Loans and Advances

DEP : Deposit

CA : Capital Adequacy

TA : Total Assets

μ : Error Term

β_0 : Regression Intercept

$\beta_1 - \beta_5$: Coefficient of the independent Variables to the dependent variables

2.5 Summary of Literature Reviewed

Asset Quality, Internal Control System and Profitability

This section will address the summary of gaps found in empirical literature concerning asset quality(measured as Gross Loans, Performing advance and Loans, Deposit, Capital adequacy and Total Assets), Profitability (measured as Return on asset, Return on equity and Return on capital employed) and Internal control system. The article review showed that there appear to be shortage of work on Asset Quality, Internal Control System and profitability of deposit money banks in Nigeria. Some of the studies reviewed are mostly from developed countries like Asia, Europe, and few African countries. For instance, a study was conducted on the effect of the asset quality on the bank profitability with particular focus on the roles of poor asset quality in Asia ⁸¹. Similarly another study investigated the impact of bank internal factors on profitability of commercial banks in Sri Lanka⁸⁵. A study examined the impact of non-performing assets on financial performance of scheduled banks operating in India ⁸⁷. Another study investigated the effect of specific factors on Bank profitability from Nepalese Banks ⁸⁸. A study examined the determinants of Capital Adequacy among the Commercial Banks in Ghana ⁹⁵. A study investigated Influence Of Financial Distress On Performance Of Commercial Banks In Kenya ¹²⁶ . A study was conducted on the Impact of Internal Control on the Profitability of Microfinance Institutions in Senega¹³⁰.

Also a review of related studies in Nigeria shows that there few/scanty empirical evidences on the interaction of asset quality, internal control system and profitability of deposit money banks in Nigeria and the data used in the studies were not recent. Such studies include; a study on Bank Specific Factors and Asset Quality of Listed Deposit Money Banks in Nigeria ⁸². A study on ^{Asset} Quality and Deposit Money Banks Performance in Nigeria⁸⁹. A study on effect Of Credit Risk on Profitability of Banks in Nigeria ¹¹³. A study on effect of Liquidity Management on the Performance of Deposit Money Banks in Nigeria ¹²⁵. These findings showed that more need to

be done if Banks are to increase their profitability. In spite of the progress in literature on the individual the interaction of Asset quality and internal control system on the performance of deposit money banks. However little is known on how asset quality and internal control system interact to enhance / affect profitability of Deposit Money Banks in Nigeria. Hence , the need to address this gap in literature by examining the interaction of asset quality, internal control system and profitability of deposit money banks in Nigeria.

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Chapter Three

Methodology

This chapter describes the research design, population of the study, sample and sampling techniques, description of the research instrument, validity of research instrument, reliability of research instrument, data collection and data analysis.

3.1 Research Design

The study adopted ex-post facto research design which entails the utilization of historical/past data to forecast future trends. Ex Post facto design is a quasi-experimental study which exams how an independent variable, present prior to the study, affects a dependent variable. An ex- post facto research is an empirically based investigation which does not involve the researchers' direct control over the independent variable because they have already led to effects which can no more be manipulated. The conclusions regarding the relationship the variables are inferred without intervening or varying the independent or dependent variable. Ex Post facto research uses data already collected not necessarily amassed for research purposes.

The use of ex post facto also aligned with the earlier studies in this area ^{1,2}.

3.2 Population of the Study

The universal population of this study include all deposit money banks in Nigeria that were in operational as at March 31, 2021 over the period 2010– 2020. Non Interest banks, Merchant Banks and Financial Holding Companies are excluded from the above population. The banks were group into three categories; international, national and regional ^{3,4,5}.

The banks in International Category are (8): Access Bank, Fidelity Bank, First City Monument Bank, First Bank Nigeria, Guaranty Trust Bank, Union Bank, United bank for Africa, Zenith Bank.

The banks in National Category are (11): Citi bank Nigeria, Eco Bank Nigeria, Heritage Bank, Keystone bank, Polaris Bank, Stanbic IBTC, Standard Chartered Bank ,Sterling Bank , TitanTrust Bank Limited, Unity Bank, Wema Bank. The banks in Regional Category are (4) : Sun Trust Bank, Providous Bank, Globus Bank and Parallax Bank.

3.3 Sample and Sampling Techniques

Purposive sampling method was used to select seven banks for the study. The selection was based on the performance. The banks selected were subjected to performance test. The performance of the banks was measured under return on assets, return on equity and return on capital employed. The banks that their performance fell below industry standard were selected (appendix 1,2,3,4,5,6,7,8,9,10,11,12). The seven banks selected are Access Bank, Fidelity Bank, Sterling Bank, Union Bank, United Bank for Africa, Unity Bank and Wema Bank.

3.4 Description of the Research Instrument

The data were collected from annual financial statements of the selected deposit money banks.

Profitability is measured by Return on asset, Return on equity and Return on capital employed^{7,8,9}.

Asset quality is measured by Gross Loans and advances, Performing Loans and advances, Deposit, Capital Adequacy ratio, Total Assets^{10,11,12,13}.

Internal control system is proxy with Audit fees^{14,15,16}.

Model Specification

The model specified is based on empirical studies on the asset qualities and profitability of selected deposit money banks,

This shows the relationships among variables;

$$Y = f(X)$$

Y = Dependent Variable

X = Independent Variable

Where

Y = Profitability

X = Asset Quality

$$Y = (ROA_1, ROE_2, ROCE_3)$$

$$X = (GLA_1, PLA_2, DEP_3, CA_4, TA_5)$$

Where: y_1 = Return on Asset

y_2 = Return on Equity

y_3 = Return on Capital Employed

x_1 = Gross Loans and Advances

x_2 = Performing Loans and Advances

x_3 = Deposit

x_4 = Capital Adequacy

x_5 = Total Assets

The Modelling structure of the study on the asset qualities and profitability of selected deposit money banks is adapted from the study ⁶.

$$ROA = f(GLA, PLA, DEP, CA, TA) \text{ ----- Equation 1}$$

$$ROE = f(GLA, PLA, DEP, CA, TA) \text{ ----- Equation 2}$$

$$ROCE = f(\text{GLA}, \text{PLA}, \text{DEP}, \text{CA}, \text{TA}) \text{ ----- Equation 3}$$

Transforming equation 1,2 and 3 above to econometrics model we have;

$$ROA = \alpha + \beta_1 \text{GLA} + \beta_2 \text{PLA} + \beta_3 \text{DEP} + \beta_4 \text{CA} + \beta_5 \text{TA} + e \text{ ----- 4}$$

$$ROE = \alpha + \beta_1 \text{GLA} + \beta_2 \text{PLA} + \beta_3 \text{DEP} + \beta_4 \text{CA} + \beta_5 \text{TA} + e \text{ ----- 5}$$

$$ROCE = \alpha + \beta_1 \text{GLA} + \beta_2 \text{PLA} + \beta_3 \text{DEP} + \beta_4 \text{CA} + \beta_5 \text{TA} + e \text{ ----- 6}$$

$$\text{PRO} = \alpha + \beta_1 \text{AQ} + \beta_2 \text{ICS} + \beta_3 \text{AQ} * \text{ICS} \text{----- 7}$$

Where;

ROA: Return on Asset

ROE : Return on Equity

ROCE: Return on Capital Employed

GLA : Gross Loans and Advances

PLA : Performing Loans and Advances

DEP : Deposit

CA : Capital Adequacy

TA : Total Assets

PRO : Profitability

AQ : Asset Quality

ICS : Internal Control System

μ : Error Term

β_0 : Regression Intercept

β_1 - β_5 : Coefficient of the independent Variables to the dependent variables

Model Specification

Three models are analysed and are specified as:

$$\ln ROA_t = \beta_0 + \beta_1 \ln GLA_t + \beta_2 \ln PLA_t + \beta_3 \ln DEP_t + \beta_4 \ln CA_t + \beta_5 \ln TA_t + \mu_t \dots \dots \dots 3.1.$$

$$\ln ROE_t = \beta_0 + \beta_1 \ln GLA_t + \beta_2 \ln PLA_t + \beta_3 \ln DEP_t + \beta_4 \ln CA_t + \beta_5 \ln TA_t + \mu_t \dots \dots \dots 3.2$$

$$\ln ROCE_t = \beta_0 + \beta_1 \ln GLA_t + \beta_2 \ln PLA_t + \beta_3 \ln DEP_t + \beta_4 \ln CA_t + \beta_5 \ln TA_t + \mu_t \dots \dots \dots 3.3$$

$$\ln ASI_t = \beta_0 + \beta_1 \ln FPI_t + \beta_2 \ln EXC_t + \beta_3 \ln INT_t + \beta_4 \ln INF_t + \mu_t \dots \dots \dots 3.2.$$

$$ROA = \alpha + \beta_1 GLA + \beta_2 PLA + \beta_3 DEP + \beta_4 CA + \beta_5 TA + e$$

Where β_1 to β_4 are the coefficients of the variables

$\ln ROA_t$ is log of return on asset

$\ln ROE_t$ is log of return on equity

$\ln ROCE_t$ is log of return on capital employed

$\ln GLA_t$ is the log of gross loan and advance

$\ln PLA_t$ is log of Performing loan and advance

$\ln DEP_t$ is log of deposit

CAP_t is capital adequacy

TA is total asset

μ is the error term.

3.5 Validity of Research Instrument

The data used in this study is validated by reputable professional audit firms. The financial statements of the banks were audited and prepared in accordance with institutional and statutory requirements by reputable professional audit firms.

3.6 Reliability of the Research Instrument

The financial statements of the banks were audited and prepared in accordance with institutional and statutory requirements by reputable professional audit firms.

3.7 Data Collection

Secondary data was used for this study. The data were collected from the published annual financial audited reports of the seven selected banks. These publications are prepared and published by the banks on their official websites and yearly publications and was audited by reputable audit firms.

The period covered from 2010 to 2020.

3.8 Data Analysis

The data analyzed for this study was collected from annual financial reports of the seven selected banks from 2010 to 2020. It was analyzed based on descriptive statistics, inferential statistics and Ordinary Least Square (OLS) regression. The panel study employed the Pooled Ordinary Least Square (POLS), Fixed and Random Effects Regression Models. The panel data collected for 7 banks sampled for this study between the periods 2010 to 2020 were analyzed using Fixed and Random Effect Models, while Hausman test was used to select the best model.

The rationale behind random effects model is that, unlike the fixed effects model, the variation across entities is assumed to be random and uncorrelated with the predictor or independent variables included in the model. Similarly, hypotheses were tested using the Ordinary Least Square (OLS) technique of estimation for both Banks aggregate and firm –specific data.

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Chapter Four

Results and Discussion of Findings

This chapter presents the analysis of data collected and the discussion of the findings.

4.1 Presentation of Data

Data for Aggregate banks

Table 4.1 Descriptive Analysis of Asset Quality and Internal Control System for Year 2010

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	254,445.00	152,401.00	598,922.00	-9.51%	845,231.00	95.00
UBA	602,587.00	571,127.00	1,119,063.00	17.20%	1,432,632.00	90.00
ACCESS	435,783.00	403,178.00	440,542.00	26.50%	726,960.00	144.00
FIDELITY	205,685.00	158,516.00	327,351.00	44%	478,020.00	65.00
STERLING	108,993.00	99,312.00	199,274.00	13%	259,579.00	68.00
WEMA	70,567.00	38,637.00	121,507.00	43.83%	203,144.00	75.00
UNITY	128,561.00	113,934.00	222,145.00	11.24%	305,221.00	124.00

Source: Author's Compilation 2022

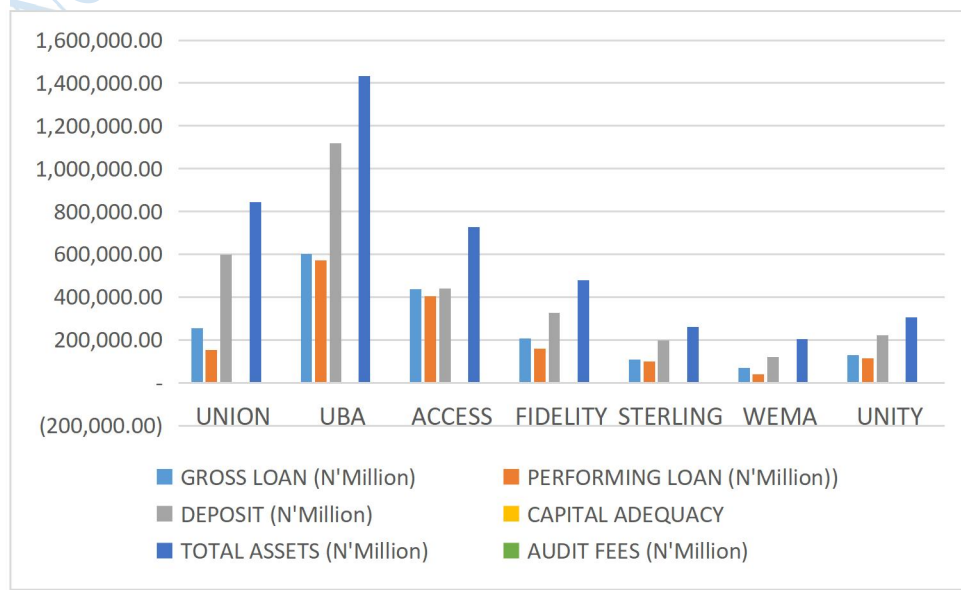


Figure 4.1 Descriptive of Asset Quality and Internal Control System for banks for 2010

Source: Author's Compilation 2022

From above United Bank of Africa had the highest value of Gross loan of N602 billion while Wema bank had the lowest value of Gross loan. Access bank had the second highest value of gross loan followed by Union Bank , Fidelity Bank , sterling bank, and Unity Bank. UBA also had the highest value of Performing loans while Wema bank had the lowest value of performing. the bank that had the second value of performing loan is Access bank , fidelity bank came third while Union Bank, Sterling Bank, and Unity Bank came fourth , fifth and sixth respectively. in term of Deposit , UBA had the highest value of deposit while Wema bank had the lowest. Union Bank had the second highest value of deposit, Access bank followed Union Bank while Fidelity bank, Unity bank and Sterling came fourth, fifth and sixth respectively. Fidelity and Wema banks had the highest percentage of Capital Adequacy while Union bank had a negative percentage of Capital Adequacy while the percentage of capital adequacy of UBA, Sterling bank, and Unity bank were below 20% except Access bank that had percentage that was above 20%. UBA had the highest value of Total Asset while Wema had the lowest value of Total asset. Union Bank had the second highest value of total asset followed Access bank, Fidelity bank, Unity bank and Sterling bank. Access bank paid the highest audit fees followed by Unity bank, Union bank, UBA,Wema, Sterling, and Fidelity

Table 4.2 Descriptive Analysis of Asset Quality and Internal Control System for Year 2011

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	154,365.00	146,560.00	399,234.00	20.79%	843,763.00	108.00

UBA	608,873.00	596,457.00	1,216,464.00	21.70%	1,655,465.00	100.00
ACCESS	484,502.00	463,131.00	522,599.00	21.00%	945,966.00	200.00
FIDELITY	266,234.00	255,257.00	561,089.00	30%	739,508.00	75.00
STERLING	166,885.00	159,734.00	406,515.00	17%	504,427.00	80.00
WEMA	70,076.00	60,143.00	147,387.00	27.00%	222,238.00	75.00
UNITY	122,821.00	113,635.00	266,877.00	15.77%	373,859.00	65.00

Source: Author's Compilation 2022

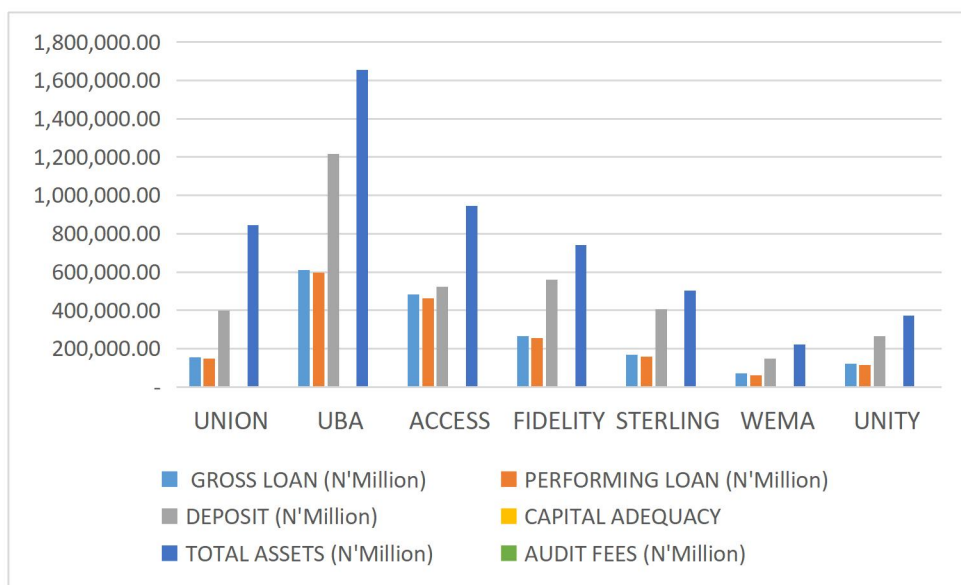


Figure 4.2 Descriptive Analysis of Asset Quality and Internal Control System For Year 2011

Source: Author's Compilation 2022

From above UBA had the highest value under Gross loan and Wema had the lowest value. Access had the second highest value on Gross loan followed by Fidelity, Sterling, Union and Unity respectively. Under the Performing loan, UBA had the highest value, followed by Access, Fidelity, Sterling, Union and Unity while Wema had the lowest value. UBA had the highest deposit while Wema had the lowest deposit. Fidelity had the second highest deposit, this

was followed by Access, Sterling, Union, Unity and Wema respectively. Fidelity had the highest capital Adequacy while Unity had the lowest percentage. Wema had the second highest percentage of capital adequacy, Union, UBA and Access had same value of capital adequacy. UBA came top on the total assets and it was followed by Access, Union, Fidelity, Sterling, Unity respectively while Wema was at the bottom of the scale of Total assets. Access had the highest value of Audit Fees, this was followed by Union, UBA, Sterling, Fidelity, Wema and Unity respectively.

Table 4.3 Descriptive Analysis of Asset Quality and Internal Control System for Year 2012

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	148,790.00	136,982.00	482,005.00	20.00%	886,468.00	80.00
UBA	579,297.00	570,714.00	1,461,131.00	23.80%	1,933,065.00	179.00
ACCESS	589,796.00	554,592.00	1,093,979.00	21.00%	1,515,754.00	250.00
FIDELITY	358,884.00	345,500.00	716,749.00	29%	914,360.00	113.00
STERLING	236,131.00	229,420.00	463,726.00	15%	580,225.00	120.00
WEMA	83,749.00	73,745.00	174,302.00	-16.00%	245,704.00	90.00
UNITY	194,781.00	189,041.00	270,060.00	8.90%	395,720.00	80.00

Source: Author's Compilation 2022

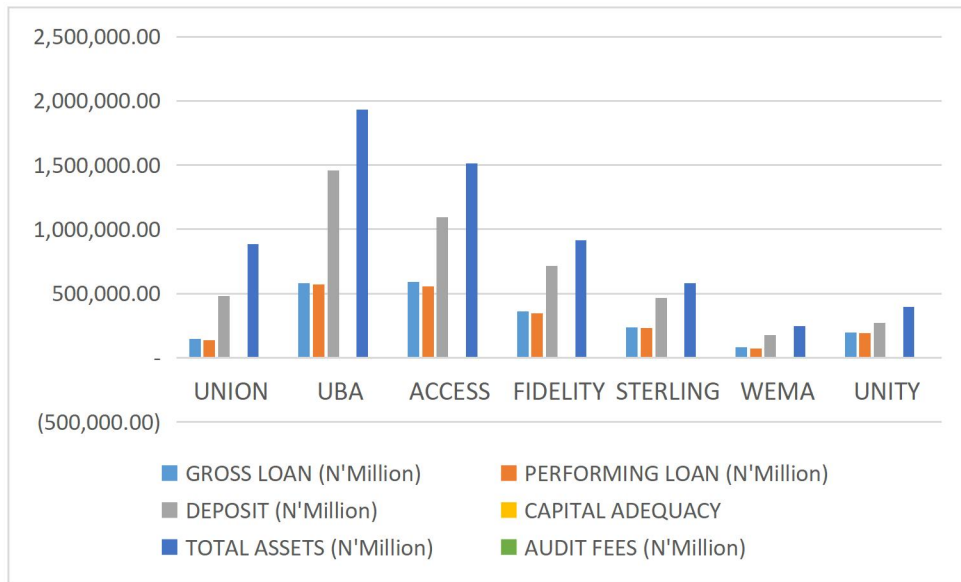


Figure 4.3 Descriptive Analysis of Asset Quality and Internal Control System for Year 2012

Source: Author's Compilation 2022

From the above Access had the highest value under Gross Loan while Wema had the lowest value. UBA had the second highest value of Gross loan, Fidelity came third on the Gross loan, this followed by Sterling, Unity and Union respectively. UBA had the highest performing loan, followed by Access, Fidelity, Sterling, Unity, Union and Wema respectively. Wema had the lowest performing loan. UBA had the highest value of deposit, Access came second in the ranking while Wema came last based on their lowest value in term of deposit. Fidelity, Union, Sterling, Unity ranked 3rd, 4th, 5th and 6th respectively under the deposit. Fidelity had the highest capital adequacy, followed by UBA, Access, Union and Unity while Wema had a negative capital adequacy. UBA had the highest value of total asset, Access bank came second in the ranking. Fidelity, Union, Sterling, Unity and Wema came 3rd, 4th, 5th, 6th and 7th respectively. Access paid the highest fees, followed by UBA, Sterling, Fidelity, Wema, Union and unity.

Table 4.4 Descriptive Analysis of Asset Quality and Internal Control System for Year 2013

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	230,720.00	210,118.00	479,956.00	25.00%	882,097.00	84.00
UBA	805,259.00	796,942.00	1,797,376.00	21.90%	2,217,417.00	180.00
ACCESS	748,540.00	735,300.00	1,217,176.00	18.00%	1,704,094.00	255.00
FIDELITY	442,649.00	426,076.00	806,320.00	26%	917,762.00	125.00
STERLING	328,664.00	321,743.00	570,511.00	14%	644,339.00	180.00
WEMA	102,708.00	98,631.00	217,734.00	27.00%	330,872.00	90.00
UNITY	225,634.00	195,229.00	303,270.00	-13.81%	403,629.00	80.00

Source: Researcher Compilation 2022

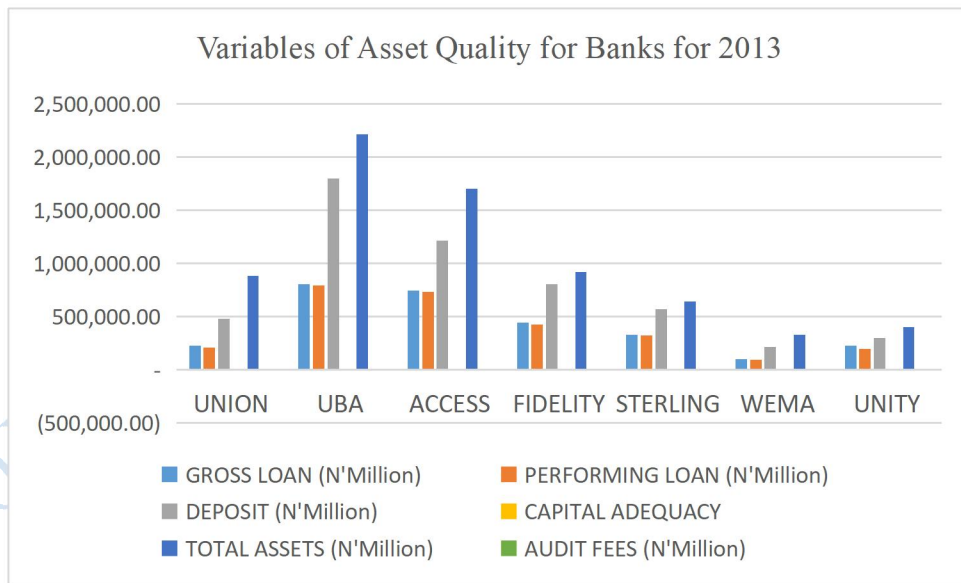


Figure 4.4 Descriptive Analysis of Asset Quality and Internal Control System for Year 2013

Source: Researcher Compilation 2022

From the above UBA had the highest Gross loan and this is followed by Access, Fidelity, Sterling, Union, Unity and lastly Wema respectively. Under performing loan, UBA had the highest value while Wema had the lowest value. Access came second on the ranking under Performing loan. Fidelity, Sterling, Union, and Unity were ranked third, fourth, fifth and sixth respectively under Performing loan. Wema had the highest capital adequacy, this is followed by Fidelity, Union, UBA, Access, and Sterling. Unity had a negative capital adequacy. UBA had the highest total asset, Access came second on the ranking. Fidelity, Union, Sterling, Unity and Wema ranked third, fourth, fifth and sixth respectively. Access paid the highest fee, followed by UBA, Sterling, Fidelity, Wema, Union, and Unity respectively.

Table 4.5 Descriptive Analysis of Asset Quality and Internal Control System for Year 2014

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	325,748.00	302,372.00	507,431.00	16.40%	920,230.00	98.00
UBA	895,109.00	884,587.00	1,812,277.00	16.00%	2,338,858.00	200.00
ACCESS	1,036,914.00	1,019,908.00	1,324,800.00	17.00%	1,981,955.00	260.00
FIDELITY	559,137.00	541,686.00	820,034.00	24%	1,187,025.00	150.00
STERLING	380,924.00	371,246.00	665,944.00	14%	824,539.00	198.00
WEMA	152,292.00	149,293.00	258,956.00	18.22%	382,562.00	110.00
UNITY	266,124.00	219,335.00	273,934.00	2.02%	413,305.00	80.00

Source: Author's Compilation 2022

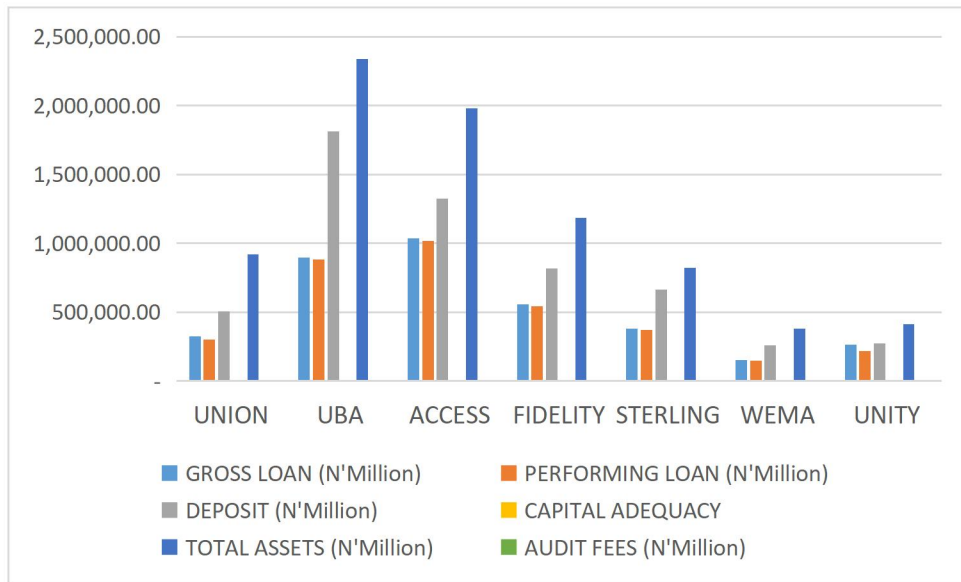


Figure 4.5 Descriptive Analysis of Asset Quality and Internal Control System for Year 2014

Source: Researcher Compilation 2022

From the above Access had the highest Gross loan, this is followed by UBA, Fidelity, Sterling, Union, Unity and Wema respectively. Wema had the lowest value of Gross loan. Access had the highest value of performing loan, UBA had the second highest value of performing loan while Fidelity, Sterling, Union, Unity and Wema came third, fourth, fifth, sixth and seventh respectively. Under Deposit, UBA had the highest value, this is followed by Access, Fidelity, Sterling, Union, Unity and Wema respectively. Fidelity is the highest in under capital adequacy, this is followed by Wema, Access, Union, UBA, Sterling and unity respectively. UBA had the highest value under Total Asset while Wema had the lowest value. Access had the second highest, this is followed by Fidelity, Union, Sterling, and Unity respectively. Access paid the highest fees, this is followed by UBA, Sterling, Wema, Union and Unity respectively.

Table 4.6 Descriptive Analysis of Asset Quality and Internal Control System for Year 2015

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	370,949.00	348,984.00	569,116.00	15.30%	998,137.00	131.00
UBA	835,737.00	822,694.00	1,627,060.00	20.00%	2,216,337.00	290.00
ACCESS	1,270,121.00	1,243,215.00	1,528,213.00	18.00%	2,411,944.00	300.00
FIDELITY	598,978.00	578,203.00	769,636.00	19%	1,231,722.00	150.00
STERLING	354,474.00	338,726.00	590,889.00	17%	799,451.00	198.00
WEMA	188,022.00	185,596.00	284,977.00	15.09%	396,743.00	110.00
UNITY	311,897.00	246,143.00	231,440.00	-21.40%	443,321.00	80.00

Source :Author's Compilation 2022

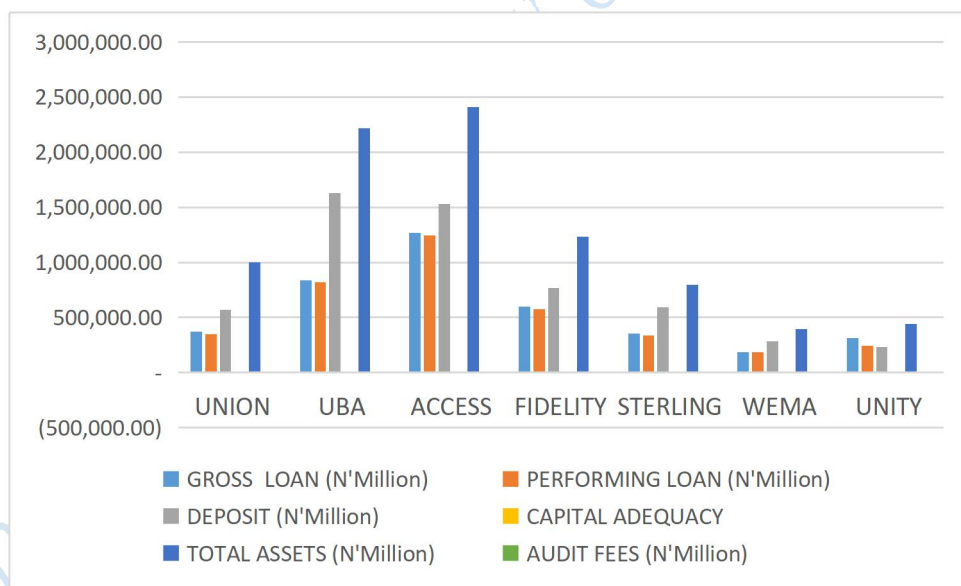


Figure 4.6 Descriptive Analysis of Asset Quality and Internal Control System for Year 2015

Source: Researcher Compilation 2022

From the above Access had the highest value of Gross loan, this is followed by UBA, Fidelity, Union, Sterling, Unity and Wema respectively. Access also had the highest value of Performing loan while Wema had lowest value of Performing loan. UBA had the second highest value of performing, this is followed by Fidelity, Union, Sterling ,and Unity. UBA had the highest value of Deposit, this is followed by Access, Fidelity, Sterling, Union, Wema while Unity had lowest value of Deposit. UBA had highest Capital adequacy , this is followed by Fidelity, Access, Sterling, Union and Wema respectively while Unity had negative capital adequacy. Access had highest value of Total asset, this is followed by UBA, Fidelity, Union, Sterling, Unity and Wema. Access paid the highest audit fee while Unity paid the lowest. UBA paid the second highest, this is followed Sterling, Fidelity, Union and Wema respectively

Table 4.7 Descriptive Analysis of Asset Quality and Internal Control System for Year 2016

	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees(N'million)
UNION	518,349.00	489,890.00	633,827.00	13.30%	1,123,483.00	131.00
UBA	1,120,096.00	1,090,355.00	1,698,859.00	20.00%	2,539,585.00	319.00
ACCESS	1,624,837.00	1,594,562.00	1,813,042.00	19.50%	3,094,960.00	350.00
FIDELITY	743,120.00	718,401.00	792,971.00	17.23%	1,298,141.00	150.00
STERLING	476,714.00	468,250.00	584,734.00	10.66%	830,805.00	199.00
WEMA	229,840.00	227,008.00	283,328.00	11.07%	421,221.00	120.00
UNITY	378,758.00	277,214.00	264,196.00	-46.98%	492,681.00	80.00

Source : Author's Compilation 2022

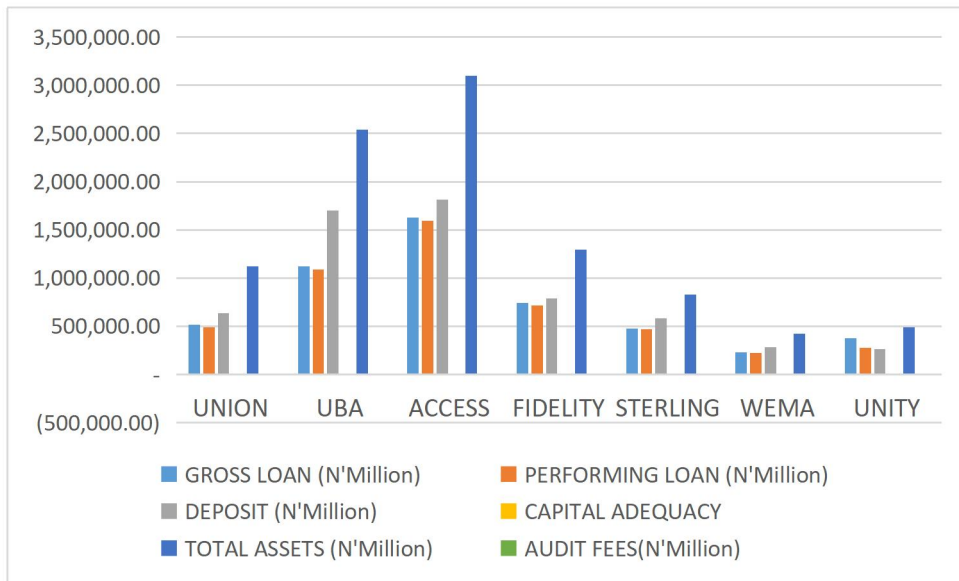


Figure 4.7 Descriptive Analysis of Asset Quality and Internal Control System for Year 2016

Source: Researcher Compilation 2022

From the above Access had the highest value of Gross loan and Wema had the lowest value of gross loan. UBA had the second highest Gross loan, this is followed by Fidelity, Union, Sterling, and Unity respectively. Under the category of Performing loan, Access had the highest value, this is followed by UBA, Fidelity, Union, Sterling, Unity, and Wema which had the lowest value. Access had the highest value of Deposit and Unity had the lowest value of Deposit. UBA had the second highest value of Deposit, this is followed by Fidelity, Union, Sterling, and Wema respectively. UBA had the highest percentage of Capital adequacy , this is followed by Access, Fidelity, Union, Wema, and Sterling respectively while Unity had negative capital adequacy. Access had the highest value of Total asset, this is followed by UBA, Fidelity, Union, Sterling, Unity and Wema respectively. Access paid the highest Fess while Unity paid the Lowest. The second bank that the highest was UBA, this is followed by Sterling, Fidelity, Union, Wema and Unity respectively.

Table 4.8 Descriptive Analysis of Asset Quality and Internal Control System for Year 2017

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	531,807.00	488,555.00	796,708.00	17.80%	1,334,921.00	159.00
UBA	1,204,426.00	1,173,214.00	1,877,736.00	20.00%	2,931,826.00	321.00
ACCESS	1,827,572.00	1,771,282.00	1,910,773.00	18.20%	3,499,683.00	380.00
FIDELITY	795,315.00	768,737.00	775,276.00	16.03%	1,379,214.00	200.00
STERLING	617,577.00	598,073.00	684,834.00	11.73%	1,068,798.00	215.00
WEMA	220,076.00	215,840.00	254,487.00	14.32%	385,388.00	120.00
UNITY	9,467.00	8,958.00	252,310.00	-198.07%	156,508.00	80.00

Source : Researcher Compilation 2022

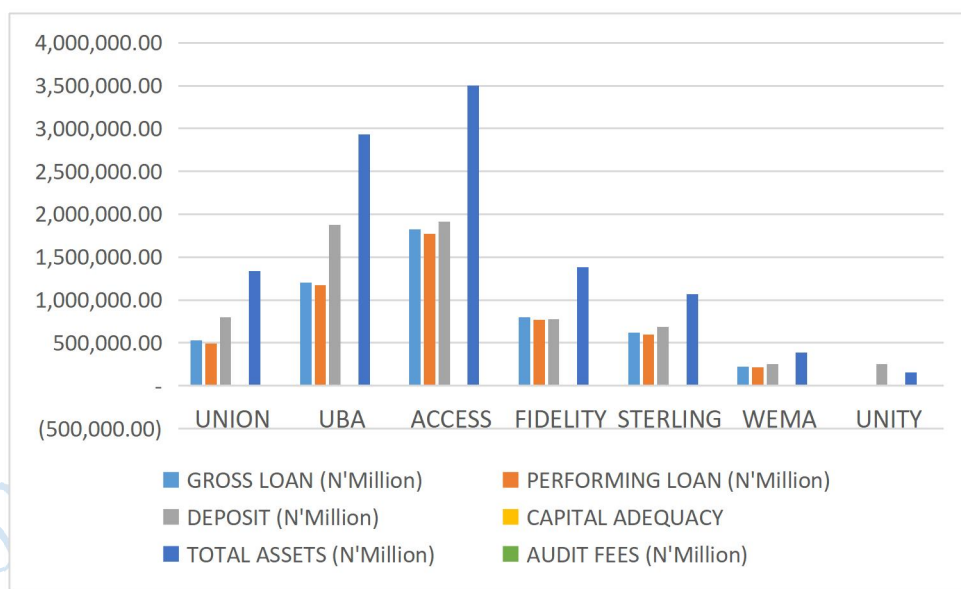


Figure 4.8 Descriptive Analysis of Asset Quality and Internal Control System for Year 2017

Source: Researcher Compilation 2022

From the above Access had the highest value of Gross Loan, this is followed by UBA, Fidelity, Sterling, Union, and Wema while Unity had the lowest value. Access had the highest performing loan and this is followed by UBA, Union, Fidelity, Sterling, Wema and Unity respectively. Access also had the highest value of Deposit and this is followed Union, Fidelity, Sterling, Wema and Unity. This is similar to position of deposit in figure 4.7 except that Fidelity was in third while Union was in fourth position unlike Figure 4.8. UBA had the highest value of Capital adequacy, and this followed Access, Union, Fidelity, Wema, and Sterling respectively while Unity had negative capital adequacy. Access had the highest value of Total Assets and Unity had the lowest total asset. UBA had the second highest value of total asset, this is followed by Fidelity, Union, Sterling, and Wema respectively. Access paid the highest fee, this is followed by UBA, Sterling, Fidelity, Union, Wema and Unity respectively.

Table 4.9 Descriptive Analysis of Asset Quality and Internal Control System for Year 2018

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit (N'Million)	Fees
UNION	473,396.00	428,037.00	844,413.00	16.40%	1,324,297.00	192.00	
UBA	1,274,112.00	1,213,801.00	2,424,108.00	20.00%	3,591,305.00	350.00	
ACCESS	1,759,037.00	1,681,761.00	2,058,738.00	17.22%	3,968,114.00	420.00	
FIDELITY	906,624.00	849,880.00	979,413.00	16.65%	1,719,883.00	200.00	
STERLING	640,678.00	621,017.00	760,608.00	12.86%	1,085,876.00	215.00	
WEMA	261,583.00	252,189.00	369,314.00	18.01%	477,915.00	133.00	
UNITY	44,401.00	43,657.00	241,936.00	-198.50%	235,976.00	80.00	

Source : Author's Compilation

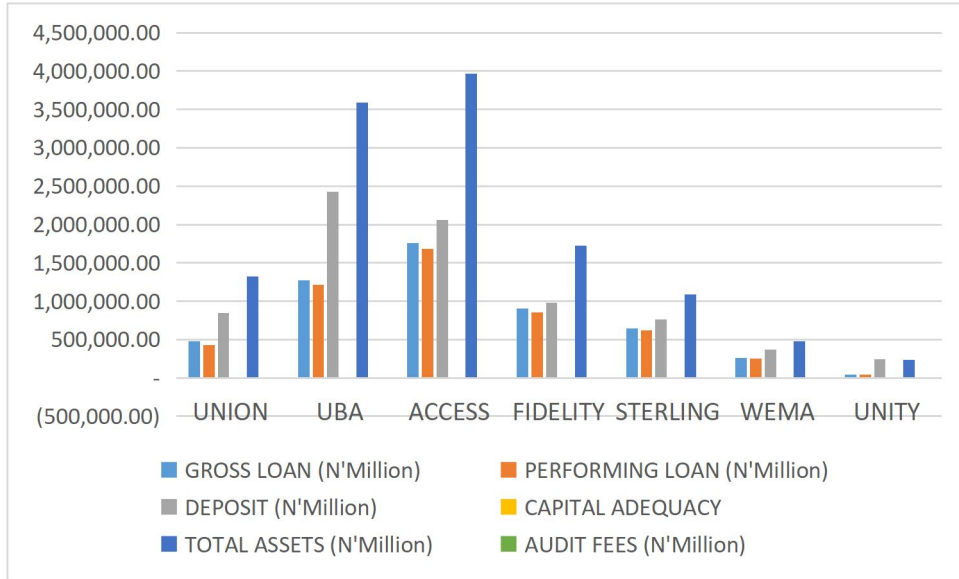


Figure 4.9 Descriptive Analysis of Asset Quality and Internal Control System for Year 2018

Source: Researcher Compilation 2022

From the above Access had the highest value of Gross loan while Unity the lowest value of gross loan. UBA had the second highest value of gross loan, this is followed by Access had the Performing loan, this is followed UBA, Fidelity, Sterling, Union, Wema and Unity respectively. This is also similar to the position of performing loan under Figure 4.8. UBA had the highest value of Deposit, this is followed by Access, Fidelity, Union, Sterling, Wema, and Unity respectively. UBA had the highest value of capital adequacy , this is followed by Wema, Access, Fidelity, Union and sterling while Unity had negative capital adequacy. Access had the highest Total asset while Unity had lowest value of Total asset. The second highest bank with the total asset is UBA, this is followed by Fidelity, Union, Sterling and Wema. Access paid the highest fee while Unity paid the lowest fee. UBA was the second highest that paid fee, this is followed by Sterling, Union, Fidelity, and Wema.

Table 4.10 Descriptive Analysis of Asset Quality and Internal Control System for Year 2019

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees(N'Million)
UNION	595,298.00	550,613.00	886,328.00	15.91%	1,711,739.00	175.00
UBA	1,557,358.00	1,503,380.00	2,764,388.00	21.50%	4,136,493.00	360.00
ACCESS	2,662,623.00	2,481,623.00	3,668,339.00	17.65%	6,311,041.00	603.00
FIDELITY	1,178,389.00	1,126,974.00	1,225,213.00	18.29%	2,114,037.00	200.00
STERLING	631,698.00	618,732.00	892,660.00	14.70%	1,165,509.00	213.00
WEMA	301,368.00	289,239.00	577,283.00	13.60%	704,955.00	140.00
UNITY	106,913.00	104,017.00	257,691.00	-201.59%	293,052.00	75.00

Source :Author's Compilation 2022

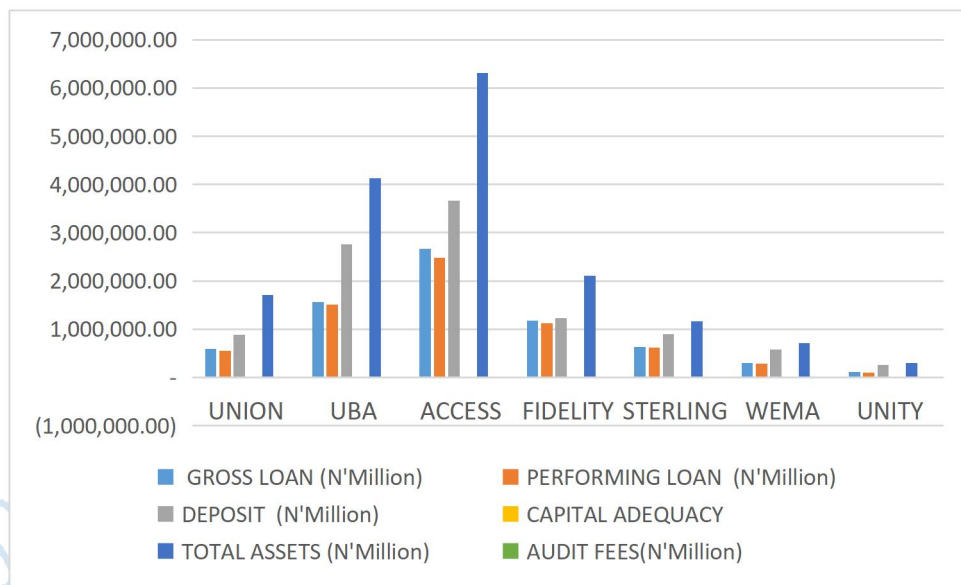


Figure 4.10 Descriptive Analysis of Asset Quality and Internal Control System for Year 2019

Source: Researcher Compilation 2022

From above Access had highest value of Gross loan, this is followed by UBA, Fidelity, Sterling,

Union, Wema and Unity respectively. Under the Performing loan, Access had the highest value while Unity had the lowest. UBA had the second highest value of performing loan, this is followed by Fidelity, Sterling, Union, and Wema. Access had the highest value of Deposit and this is followed by UBA, Fidelity, Sterling, Union, Wema and Unity respectively. UBA had the highest percentage of capital adequacy and this is followed Fidelity, Access, Union, Sterling and Wema respectively while Unity had a negative percentage of capital adequacy . Access had the highest value of Total Asset and this is followed by UBA, Fidelity, Union, Sterling, Wema and Unity respectively. Access had the highest value of audit fees paid and this is followed by UBA, Sterling, Fidelity, Union, Wema and Unity respectively.

Table 4.11 Descriptive Analysis of Asset Quality, Internal Control and Profitability for Year 2020

Bank	Gross Loan (N'Million)	Performing Loan (N'Million)	Deposit (N'Million)	Capital Adequacy	Total Assets (N'Million)	Audit Fees (N'Million)
UNION	736,712.00	692,803.00	1,131,116.00	15.76%	2,073,758.00	172.00
UBA	1,874,858.00	1,812,536.00	3,824,143.00	19.70%	5,207,833.00	300.00
ACCESS	2,937,918.00	2,818,875.00	4,832,744.00	17.22%	7,624,979.00	603.00
FIDELITY	1,393,624.00	1,326,106.00	1,699,026.00	18.18%	758,148.00	200.00
STERLING	613,359.00	596,827.00	950,835.00	17.98%	1,281,830.00	190.00
WEMA	375,039.00	360,076.00	804,873.00	15.01%	968,582.00	170.00
UNITY	206,205.00	202,080.00	356,615.00	-101.47%	492,020.00	65.00

Source: Author's Compilation

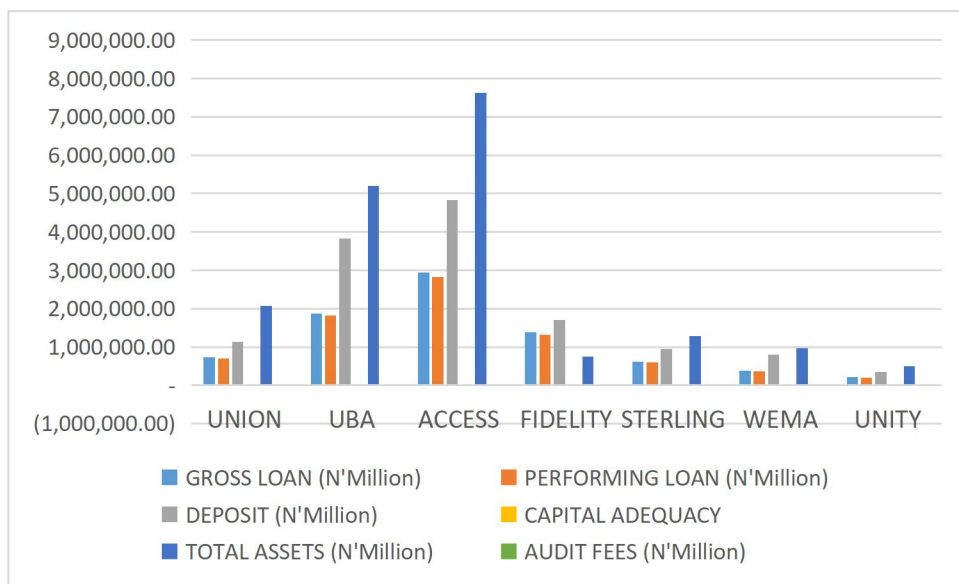


Figure 4.11 Descriptive Analysis of Asset Quality and Internal Control System for Year 2020

Source: Researcher Compilation 2022

From the above Access had the highest value of Gross loan, this was an increase of 10% over the gross loan of Access in 2019. UBA had the second highest value of gross loan in 2020, this was an increase of 20% over the gross loan of UBA in 2019. Fidelity, Union, Sterling, Wema, and Unity had the third, Fourth, Fifth and sixth highest value of Preforming loan. Access had the highest value of Deposit, this was an increase of 31% over 2019 deposit of Access. UBA had the second highest value of Deposit, this was an increase of 38% over the deposit of UBA for 2019. Fidelity, Union, Sterling, Wema and Unity had third, fourth, fifth, sixth and seventh highest value of deposit. UBA had the highest percentage of capital adequacy, this is followed by Fidelity, Sterling, Access, Union, and Wema respectively. Unity had a negative percentage of capital adequacy. Access had the highest value of total asset, this represent and increase of 21%

over the total asset of Access for 2019. UBA had the second highest value of total asset, this is an increase of 25% over the total asset of UBA for 2019. Union, Sterling, Wema, Fidelity, Unity had third, fourth, fifth, sixth and seventh highest value of total assets. Access paid the highest value of Fees, this is followed UBA, Fidelity, Sterling, Union, Wema and Unity respectively.

Table 4.12 Descriptive Analysis of Return on Assets (ROA) for Banks

Year	Union	UBA	Access	Fidelity	Wema	Unity	Sterling	CBN
2010	13.96	0.15	1.78	1.22	7.99	4.05	1.61	4.13
2011	-9.87	-0.99	1.44	0.81	-3.65	0.65	1.33	0.25
2012	0.36	2.45	2.40	1.96	-2.00	1.56	1.20	2.41
2013	0.58	2.10	1.54	0.71	0.48	-5.59	1.17	2.25
2014	2.35	1.71	2.02	1.16	0.62	2.59	1.09	2.47
2015	1.78	2.15	2.44	1.13	0.65	1.06	1.29	2.50
2016	1.41	1.87	2.07	0.75	0.62	0.44	0.62	1.27
2017	0.96	1.45	1.52	1.37	0.60	-9.53	0.79	2.38
2018	1.39	1.14	1.85	1.33	0.70	-3.65	0.87	1.99
2019	1.42	1.52	1.17	1.34	0.74	1.15	0.87	2.48
2020	1.19	1.09	1.05	0.97	0.47	0.42	0.87	2.17

Source : Researcher Compilation 2022

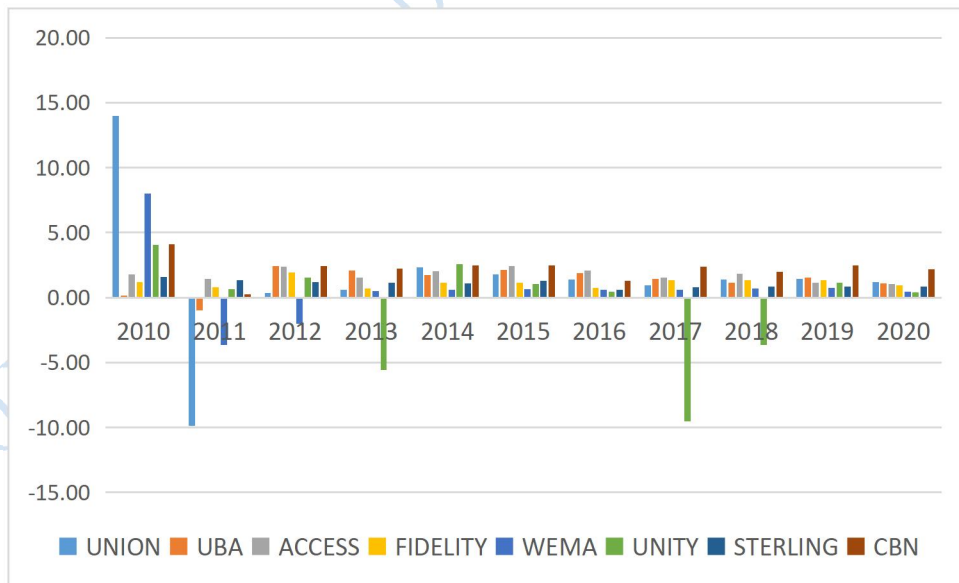


Figure 4.12 Descriptive Analysis of Return on Assets (ROA) for Banks
Source: Researcher Compilation 2022

From the above In Year 2010 both Union and Wema had return on asset which is above CBN figure while the return on asset of other banks were below the figure of CBN. In year 2011 return on asset of Access, Fidelity, Unity and Sterling were above CBN figure while the figure of ROA for the remaining banks return on asset were below CBN Figure. in 2012 , only figure of UBA was above CBN figure while the remaining figures of other banks were below CBN figure. In Year 2013, the figure on Return on asset of banks were below CBN figure. In year 2014, Only figure on return on asset of Unity was above CBN figure while the figures of remaining banks were below CBN figure. in Year 2015, the figures of banks were below figure of CBN. In year 2016 , the figures of Union, UBA, and Access were above CBN figure. In year 2017, 2018,2019 and 2020, the figures of banks were below the CBN figure.

Table 4.13 Descriptive Analysis of Return on Equity (ROE) for Banks

Year	Union	UBA	Access	Fidelity	Wema	Unity	Sterling	CBN
2010	86.84	1.15	7.09	4.33	109.44	28.12	15.87	65.40
2011	-9.87	-9.63	7.35	4.37	-120.76	5.47	16.33	3.79
2012	1.85	21.50	15.30	11.10	-78.56	12.01	16.93	18.94
2013	2.73	17.91	10.69	4.72	3.86	-80.04	13.04	18.88
2014	11.06	14.22	14.57	7.97	5.42	14.02	10.63	21.22
2015	7.68	14.09	16.35	7.58	4.69	5.68	10.77	19.66
2016	6.32	12.16	15.18	5.25	5.34	2.63	6.05	10.03
2017	3.99	10.54	11.34	9.27	4.63	6.16	0.79	20.60
2018	9.21	11.26	16.70	11.79	6.59	2.71	9.66	20.60
2019	10.54	14.05	13.55	12.15	9.41	-1.21	8.52	26.88
2020	9.96	11.91	12.24	9.74	7.74	-0.01	8.21	24.85

Source : Author's Compilation

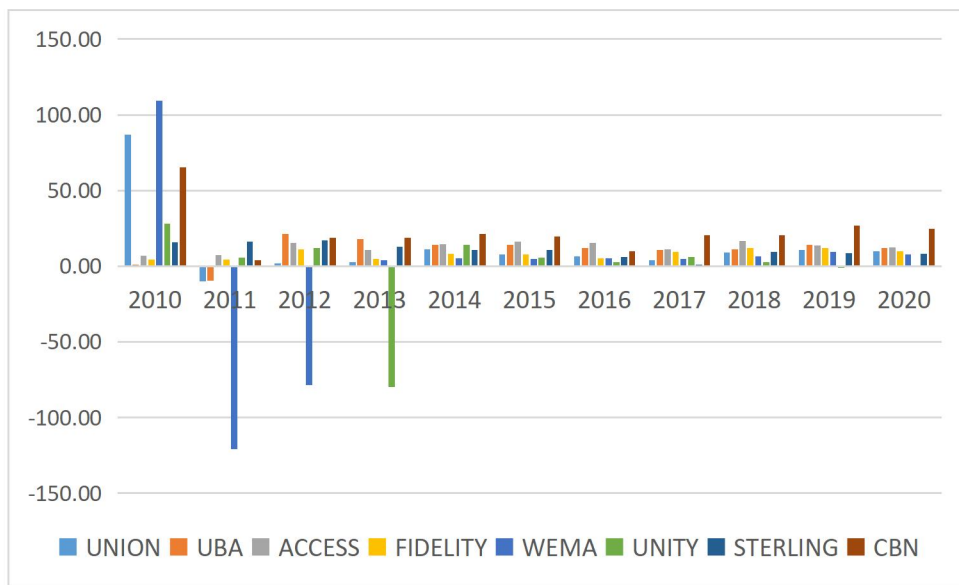


Figure 4.13 Descriptive Analysis of Return on Equity (ROE) for Banks
Source: Researcher Compilation 2022

From the above in Year 2010, the figure of Union bank and Wema bank was above CBN figure while UBA had the lowest figure of return on equity. The return on equity for Access, Fidelity, Unity and Sterling were also below the CBN figure. In Year 2011, the figures of return on equity for Access, Fidelity, Unity and Sterling were above the figure of CBN while the figure of Union, UBA and Wema were below the figure of CBN. In year 2012, return on equity for UBA was above figure, this was better that year when the company had a negative return on equity. The remaining bank, Union , Access,Fidelity, Wema, Unity and Sterling were below Figure of CBN. The seven banks had a return on equity which were below the figure of CBN in year 2013. In Year 2014 , the figure of return on equity for some banks were improved when we compared it with previous year but all the banks were below the CBN figure. in Year 2015, the same scenario in year 2014 also applied, the figures of return on equity for all banks were below figure of CBN. The figures on return on equity for both UBA and Access were above figure of CBN in year

2016 while the figures of equity for the remaining banks, Union, Fidelity, Wema, Unity, Sterling were below figure of CBN. All the figures of banks for year 2017 in respect of return on equity were below figure of CBN. The return on equity for year 2018 for all banks were below the figure on return from CBN. The same previous position on return on equity for banks in 2018 also took place in 2019 for all banks. in year 2020, all banks had figures of return on equity which were below the figure of return on equity from CBN.

Table 4.14 Descriptive Analysis of Return on Capital Employed (ROCE) for Banks

Year	Union	UBA	Access	GTB	Fidelity	Wema	Unity	Sterling
2010	-34.91	1.97	9.68	22.16	6.19	87.38	30.15	14.01
2011	-64.04	-14.52	8.62	26.31	6.03	-111.93	6.91	8.45
2012	2.00	20.96	19.39	34.95	13.22	-386.70	12.55	18.26
2013	2.24	19.97	13.20	30.48	5.52	4.70	-119.24	14.67
2014	10.08	15.03	16.83	30.66	8.96	7.07	17.88	12.69
2015	7.86	15.00	18.08	27.87	7.64	6.61	2.84	11.53
2016	6.39	14.75	19.11	32.29	5.97	6.75	2.19	7.02
2017	4.10	13.17	14.28	31.87	9.99	6.15	5.88	8.30
2018	9.33	15.18	17.07	37.24	12.90	9.47	2.66	9.94
2019	10.70	15.69	15.23	33.04	12.97	12.23	-1.31	8.58
2020	10.27	12.21	13.79	29.20	10.26	10.02	-0.81	9.04

Source : Author's Compilation 2022

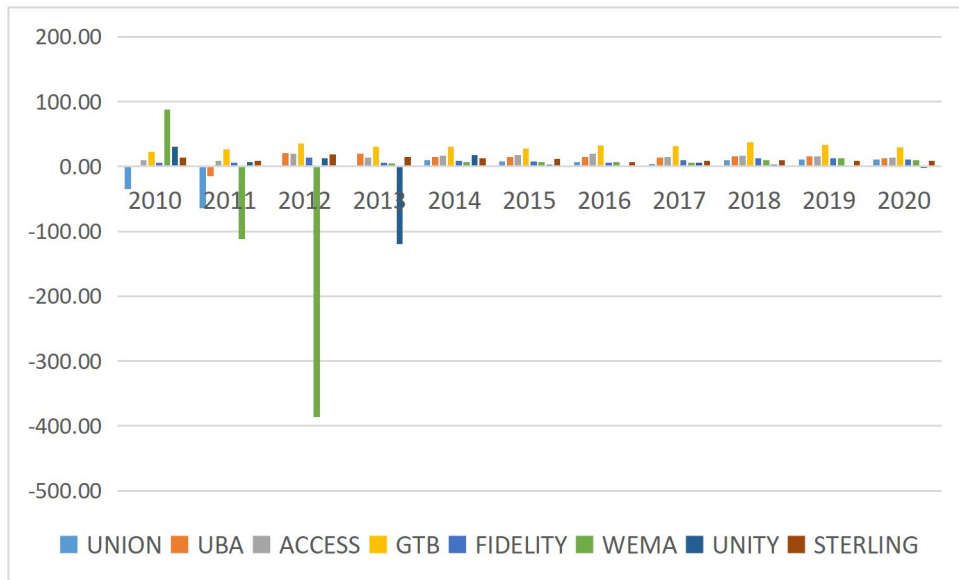


Figure 4.14 Descriptive Analysis of Return on Capital Employed (ROCE) for Bank
 Source: Researcher Compilation 2022

From the above , only GTB bank had return on capital employed that was above 20% in year 2010, the remaining banks, Union, UBA, Access, Fidelity, Wema, Unity and Sterling had return on capital employed below 20%. In the year 2011, the return on capital employed for banks were below 20% except for GTB that had return on Capital employed above 20%. in year 2012 , the return on capital employed of UBA and GTB were above 20% while the remaining banks, Union, Access, Fidelity, Wema, Unity, and Sterling had return on capital employed below 20%. in year 2013, all the banks, Union, UBA, Access, Fidelity, Wema, Unity and Sterling had return on capital employed below 20%. In 2014, the previous scenario was repeated, all the banks, Union, UBA, Access, Fidelity, Wema, Unity, Wema, Unity and Sterling had return on Capital employed below 20% except GTB. Year 2015, 2016, 2017, 2018, 2019 and 2020, all the banks Union, UBA, Access, Fidelity, Wema, Unity, Sterling had return on capital employed below 20% except GTB.

Individual Bank

Table 4.15 Descriptive Analysis of Asset Quality, Internal Control and Profitability
Of Union Bank from 2010 -2020.

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	13.96	86.84	- 34.91	254,445.00	152,401.00	598,922.00	-9.51%	845,231.00	95.00
2011	-9.87	-9.87	- 64.04	154,365.00	146,560.00	399,234.00	20.79%	843,763.00	108.00
2012	0.36	1.85	2.00	148,790.00	136,982.00	482,005.00	20.00%	886,468.00	80.00
2013	0.58	2.73	2.24	230,720.00	210,118.00	479,956.00	25.00%	882,097.00	84.00
2014	2.35	11.06	10.08	325,748.00	302,372.00	507,431.00	16.40%	920,230.00	98.00
2015	1.78	7.68	7.86	370,949.00	348,984.00	569,116.00	15.30%	998,137.00	131.00
2016	1.41	6.32	6.39	518,349.00	489,890.00	633,827.00	13.30%	1,123,483.00	131.00
2017	0.96	3.99	4.10	531,807.00	488,555.00	796,708.00	17.80%	1,334,921.00	159.00
2018	1.39	9.21	9.33	473,396.00	428,037.00	844,413.00	16.40%	1,324,297.00	192.00
2019	1.42	10.54	10.70	595,298.00	550,613.00	886,328.00	15.91%	1,711,739.00	175.00
2020	1.19	9.96	10.27	736,712.00	692,803.00	1,131,116.00	15.76%	2,073,758.00	172.00

Source: Author's Compilation 2022

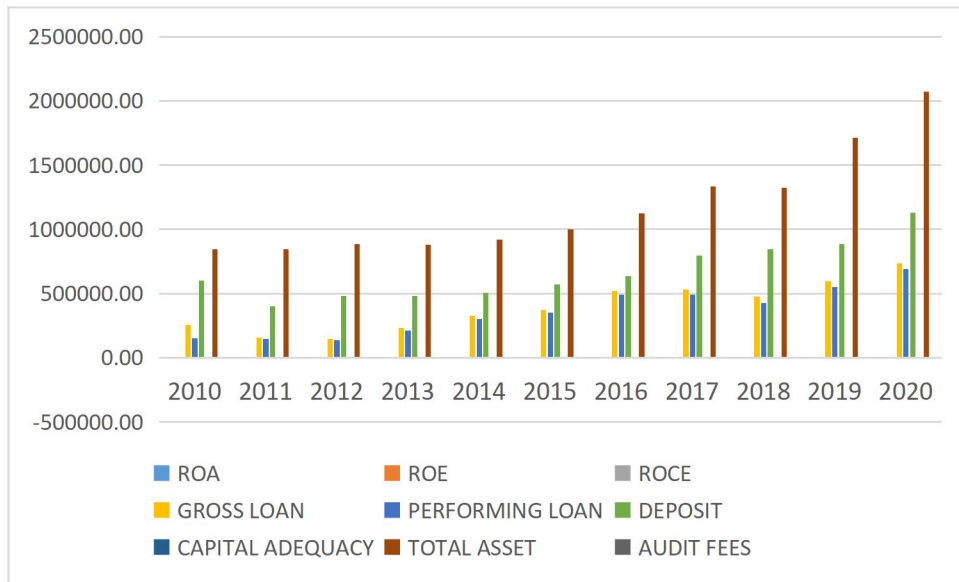


Figure 4.15 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Union Bank from 2010 -2020.

Source: Researcher Compilation 2022

From the above, Union bank had the highest ROA in year 2010 and it was followed by year 2014, 2015, 2019, 2016, 2018,2020,2017,2013.and 2012. The lowest ROA occurred in 2011 which produced negative figure. The bank had the highest ROE in year 2010 and this is followed by Year 2014, 2019,2020, 2018,2015,2016,2017,2013 and 2012. The lowest ROE occurred in 2011 with a negative figure. The ROCE of Union bank from 2010 to 2020 was below 20% , the highest ROCE was 2020 and 2014 while the bank had the lowest ROCE in year 2010 and 2011 with a negative figure. The Gross loan of the Union was highest in year 2020 while the lowest was in year 2012. Performing loans of the bank was highest in 2020 while the lowest performing for the bank was lowest in year 2012. Deposit of the bank was highest in year 2020 while the lowest deposit of the bank was in year 2011. The capital adequacy ratio of the bank was highest in 2013, this was followed by year2011, 2012,2017,,2014,2018,2019,2020 and 2016. The lowest capital adequacy was in year 2010 with a negative figure. The bank had the highest total asset in Year 2020 and the lowest value in year 2011. the second highest value of total asset was in year

2019 and this is followed year 2017, 2018,2016,2015,2014,2012,2013,2010 and 2011. The highest audit fees paid by bank was in year 2018 and this is followed by year 2019, 2020,2015,2016,2011, 2014,2010,2013 and 2012.

Table 4.16 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of UBA from 2010 -2020

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	0.15	1.15	1.97	602,587.00	571,127.00	1,119,063.00	17.20%	1,432,632.00	90.00
2011	0.99	-9.63	14.52	608,873.00	596,457.00	1,216,464.00	21.70%	1,655,465.00	100.00
2012	2.45	21.50	20.96	579,297.00	570,714.00	1,461,131.00	23.80%	1,933,065.00	179.00
2013	2.10	17.91	19.97	805,259.00	796,942.00	1,797,376.00	21.90%	2,217,417.00	180.00
2014	1.71	14.22	15.03	895,109.00	884,587.00	1,812,277.00	16.00%	2,338,858.00	200.00
2015	2.15	14.09	15.00	835,737.00	822,694.00	1,627,060.00	20.00%	2,216,337.00	290.00
2016	1.87	12.16	14.75	1,120,096.00	1,090,355.00	1,698,859.00	20.00%	2,539,585.00	319.00
2017	1.45	10.54	13.17	1,204,426.00	1,173,214.00	1,877,736.00	20.00%	2,931,826.00	321.00
2018	1.14	11.26	15.18	1,274,112.00	1,213,801.00	2,424,108.00	20.00%	3,591,305.00	350.00
2019	1.52	14.05	15.69	1,557,358.00	1,503,380.00	2,764,388.00	21.50%	4,136,493.00	360.00
2020	1.09	11.91	12.21	1,874,858.00	1,812,536.00	3,824,143.00	19.70%	5,207,833.00	300.00

Source: Author's Compilation 2022

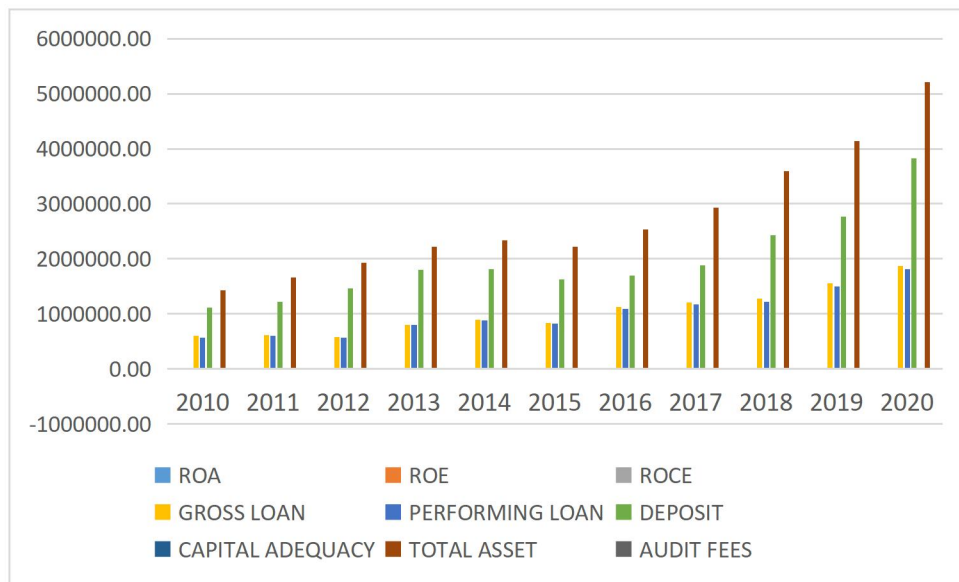


Figure 4.16 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of UBA from 2010 -2020

Source: Researcher Compilation 2022

From the above UBA had the ROA in Year 2012 and the lowest ROA 2011. The second highest ROA was in year 2015 and this was followed by year 2013, 2016,2019,2017,2019, 2020, 2010 and 2011 with a negative figure. The ROE of UBA was highest in year 2012 and this was followed by year 2013, 2014, 2015, 2019,2016,2020,2018,2017,2010 and 2011 with a negative value. The ROCE of UBA was above 20% in 2012 while the lowest ROCE was in year 2011. The ROCE for the remaining years were below 20%. UBA had the highest gross loan in year 2020 and the lowest gross loan in year 2012. The second highest gross loan was in year 2019 and this was followed by year 2018, 2017,2016,2014,2015,2013,2011 and 2010. The highest performing loans was in in year 2020 and this was followed by year 2019, 2018,2017,2016,2014,2015,2013,2011,2010 and 2012. The highest deposit was in year 2020 and this was followed by year 2019, 2018,2017,2014,2013,2016,2015,2012,2011 and 2010. Capital adequacy ratio was highest in Year 2012 and this was followed by year 2013,2011,2019,2015,2016,2017,2018,2019,2010 and 2014. The highest value of total asset is in

year 2020, this was followed by year 2019, 2018,2017,2016,2014,2013,2015,2012,2011 and 2010. the highest audit fees was in year 2019 and this was followed by year 2018, 2017,2016,2020,2015,2014,2013,2012,2011 and 2010.

Table 4.17 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Access Bank from 2010 -2020.

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	1.78	7.09	9.68	435,783.00	403,178.00	440,542.00	26.50%	726,960.00	144.00
2011	1.44	7.35	8.62	484,502.00	463,131.00	522,599.00	21.00%	945,966.00	200.00
2012	2.40	15.30	19.39	589,796.00	554,592.00	1,093,979.00	21.00%	1,515,754.00	250.00
2013	1.54	10.69	13.20	748,540.00	735,300.00	1,217,176.00	18.00%	1,704,094.00	255.00
2014	2.02	14.57	16.83	1,036,914.00	1,019,908.00	1,324,800.00	17.00%	1,981,955.00	260.00
2015	2.44	16.35	18.08	1,270,121.00	1,243,215.00	1,528,213.00	18.00%	2,411,944.00	300.00
2016	2.07	15.18	19.11	1,624,837.00	1,594,562.00	1,813,042.00	19.50%	3,094,960.00	350.00
2017	1.52	11.34	14.28	1,827,572.00	1,771,282.00	1,910,773.00	18.20%	3,499,683.00	380.00
2018	1.85	16.70	17.07	1,759,037.00	1,681,761.00	2,058,738.00	17.22%	3,968,114.00	420.00
2019	1.17	13.55	15.23	2,662,623.00	2,481,623.00	3,668,339.00	17.65%	6,311,041.00	603.00
2020	1.05	12.24	13.79	2,937,918.00	2,818,875.00	4,832,744.00	17.22%	7,624,979.00	603.00

Source: Author's Compilation 2022

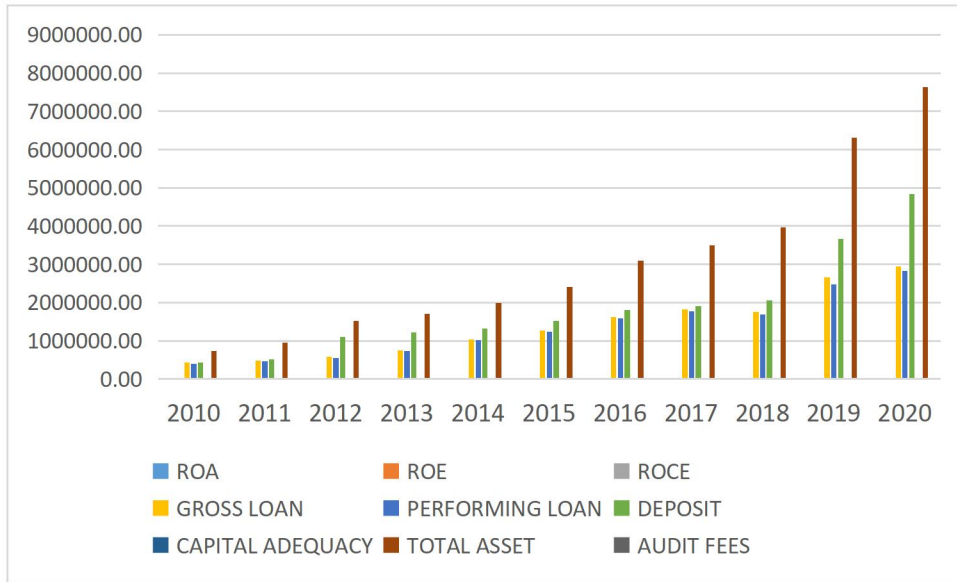


Figure 4.17 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Access Bank from 2010 -2020.

Source: Researcher Compilation 2022

From the above the highest ROA was in year 2015 and this was followed by year 2012, 2016, 2014, 2018, 2010, 2017, 2013, 2011, 2019 and 2020. ROE of Access was highest 2018 and this was followed by year 2015, 2012, 2016, 2014, 2019, 2020, 2017, 2013, 2011 and 2010. The ROCE of Access for year 2010 to 2020 were below 20%. The highest gross loans was in Year 2020 and this was followed by year 2019, 2017, 2018, 2016, 2015, 2014, 2013, 2012, 2011 and 2010. The highest performing loans was in year 2020 and this was followed by year 2019, 2017, 2018, 2016, 2015, 2014, 2013, 2012, 2011 and 2010. The highest deposit was in year 2020 and the lowest was in year 2010. the second highest deposit was in year 2019 and this was followed by year 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. The highest capital adequacy ratio was in year year 2010 and the lowest was in year 2014. the second highest was in year 2011 and 2012 and tis was followed by year 2016, 2017, 2013, 2015, 2019, 2018, 2020 and 2014. The highest value of total asset was in year 2020 and this was followed by year 2016, 2018,

2017,2016,2015,2014,2013,2012 , 2011 and 2011. The highest audit fees paid was in year 2020 and 2019 and this was followed by year 2018,2018,2016,2015,2014,2013,2012,2011 and 2010.

Table 4.18 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Fidelity Bank from 2010 -2020.

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	1.22	4.33	6.19	205,685.00	158,516.00	327,351.00	44%	478,020.00	65.00
2011	0.81	4.37	6.03	266,234.00	255,257.00	561,089.00	30%	739,508.00	75.00
2012	1.96	11.10	13.22	358,884.00	345,500.00	716,749.00	29%	914,360.00	113.00
2013	0.71	4.72	5.52	442,649.00	426,076.00	806,320.00	26%	917,762.00	125.00
2014	1.16	7.97	8.96	559,137.00	541,686.00	820,034.00	24%	1,187,025.00	150.00
2015	1.13	7.58	7.64	598,978.00	578,203.00	769,636.00	19%	1,231,722.00	150.00
2016	0.75	5.25	5.97	743,120.00	718,401.00	792,971.00	17.23%	1,298,141.00	150.00
2017	1.37	9.27	9.99	795,315.00	768,737.00	775,276.00	16.03%	1,379,214.00	200.00
2018	1.33	11.79	12.90	906,624.00	849,880.00	979,413.00	16.65%	1,719,883.00	200.00
2019	1.34	12.15	12.97	1,178,389.00	1,126,974.00	1,225,213.00	18.29%	2,114,037.00	200.00
2020	0.97	9.74	10.26	1,393,624.00	1,326,106.00	1,699,026.00	18.18%	758,148.00	200.00

Source: Author's Compilation 2022

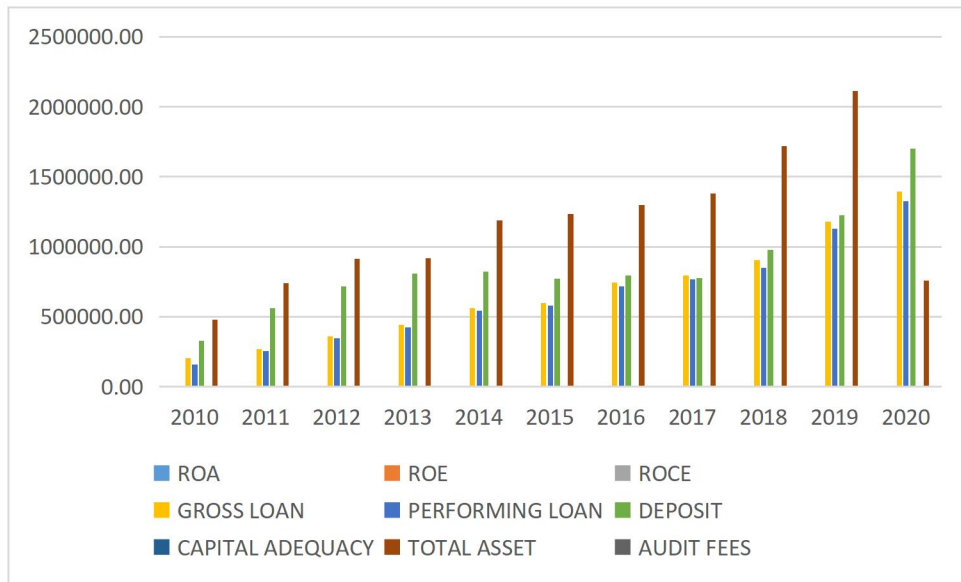


Figure 4.18 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Fidelity Bank from 2010 -2020.

Source: Researcher Compilation 2022

From the above The ROA was highest in Year 2012 and this was followed by year 2017, 2019,2018,2014,2015,2010,2020, 2011,2016 and 2013. The ROE was highest in year 2019 and the lowest was in year 2010. The second highest ROE was in year 2018 and this was followed by 2012, 2020,2017, 2014,2015,2011,2010 and 2016. The highest gross loans was in year 2020 and this was followed by year 2020, 2019,2018,2017,2016,2015,2014,2013,2012,2011 and 2010. Performing loans was highest in year 2020 and these were followed by year 2019,2018,2017,2016,2015,2014,2013,2012,2011 and 2010. The deposit was highest in year 2020 and these were followed by year 2019, 2018,2014,2013,2016,2017,2012,2011 and 2010. Capital adequacy ratio was highest in year 2010 and the lowest was in year 2017. The second highest capital adequacy ratio was in year 2011 and these were followed by year 2012,2013,2014,2015,2019,2020,2016 and 2018. The highest total asset was in year 2019 and these were followed by year 2018,2017,2016,2015,2014,2016,2012,2011,2020 and 2010. The

highest audit fees was paid in year 2017,2018,2019,2020 while the lowest audit fees was paid in year 2010.

Table 4.19 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Sterling Bank from 2010 -2020

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	1.61	15.87	14.01	108,993.00	99,312.00	199,274.00	13%	259,579.00	68.00
2011	1.33	16.33	8.45	166,885.00	159,734.00	406,515.00	17%	504,427.00	80.00
2012	1.20	16.93	18.26	236,131.00	229,420.00	463,726.00	15%	580,225.00	120.00
2013	1.17	13.04	14.67	328,664.00	321,743.00	570,511.00	14%	644,339.00	180.00
2014	1.09	10.63	12.69	380,924.00	371,246.00	665,944.00	14%	824,539.00	198.00
2015	1.29	10.77	11.53	354,474.00	338,726.00	590,889.00	17%	799,451.00	198.00
2016	0.62	6.05	7.02	476,714.00	468,250.00	584,734.00	10.66%	830,805.00	199.00
2017	0.79	0.79	8.30	617,577.00	598,073.00	684,834.00	11.73%	1,068,798.00	215.00
2018	0.87	9.66	9.94	640,678.00	621,017.00	760,608.00	12.86%	1,085,876.00	215.00
2019	0.87	8.52	8.58	631,698.00	618,732.00	892,660.00	14.70%	1,165,509.00	213.00
2020	0.87	8.21	9.04	613,359.00	596,827.00	950,835.00	17.98%	1,281,830.00	190.00

Source: Author's Compilation 2022

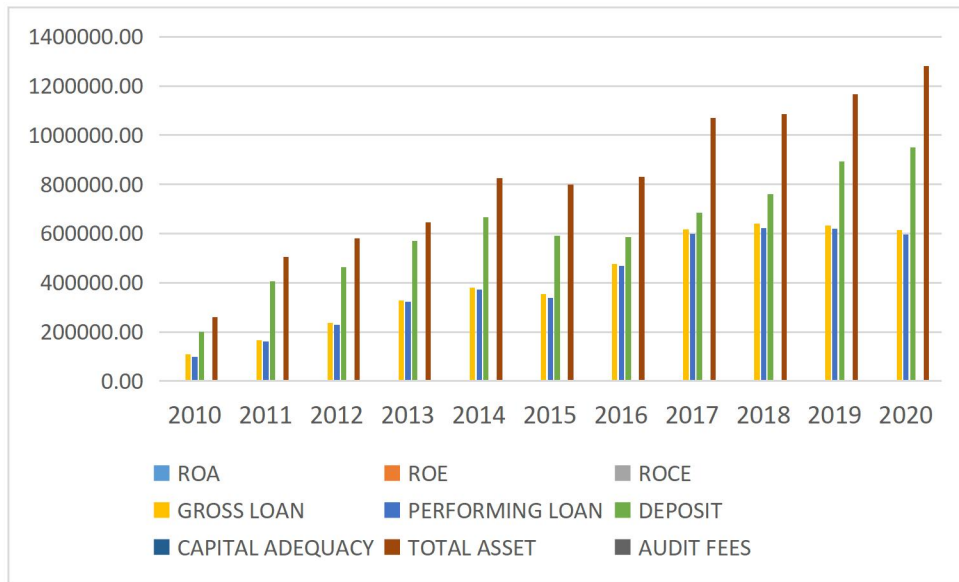


Figure 4.19 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Sterling Bank from 2010 -2020

Source: Researcher Compilation 2022

From the above the highest ROA was in year 2010 and the lowest was in year 2016. The second highest ROA was in year 2011 and these were followed by year 2015,2012,2013,2014,2018,2019,2020 and 2017. The highest ROE was in year 2012 and these were followed by 2011, 2010,2013,2015,2014,2018,2019,2020,2017 and 2016. The ROCE for year 2010 to 2020 were 20%. The highest gross loans was in year 2018 while the lowest gross loans was in year 2010. The second highest gross loans was in year 2019 and these were followed by year 2020, 2017,2016,2014,2015,2012 and 2011. The highest performing loans was in year 2018 and the lowest was in year 2010. the second highest performing loans was in year 2019 and these were followed by 2017, 2020, 2016, 2014,2015,2013,2012 and 2011. The highest deposit was in year 2020 and these were followed by 2019,2018,2017,2014,2015,2016,2013,2012,2011 and 2010. The highest capital adequacy ratio was in year 2020 and the lowest was in year 2016. The second highest capital adequacy ratio is in year 2011 and 2015 and these were followed by 2012, 2019, 2013,2014,2010,2018 and 2017.

The highest total asset was in year 2020 and this was followed year 2019,2018,2017,2016,2014,2015,2013,2012,2011 and 2010. The highest audit fees paid was in year 2017and 2018 while the lowest was in year 2010. The second highest audit fees paid was in year 2019 and this was followed by year 2016,2014,2015,2020,2013,2012 and 2011.

Table 4.20 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Wema Bank from 2010 -2020

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	7.99	109.44	87.38	70,567.00	38,637.00	121,507.00	43.83%	203,144.00	75.00
2011	-3.65	120.76	111.93	70,076.00	60,143.00	147,387.00	27.00%	222,238.00	75.00
2012	-2.00	-78.56	386.70	83,749.00	73,745.00	174,302.00	-16.00%	245,704.00	90.00
2013	0.48	3.86	4.70	102,708.00	98,631.00	217,734.00	27.00%	330,872.00	90.00
2014	0.62	5.42	7.07	380,924.00	371,246.00	665,944.00	14%	824,539.00	198.00
2015	0.65	4.69	6.61	188,022.00	185,596.00	284,977.00	15.09%	396,743.00	110.00
2016	0.62	5.34	6.75	229,840.00	227,008.00	283,328.00	11.07%	421,221.00	120.00
2017	0.60	4.63	6.15	220,076.00	215,840.00	254,487.00	14.32%	385,388.00	120.00
2018	0.70	6.59	9.47	261,583.00	252,189.00	369,314.00	18.01%	477,915.00	133.00
2019	0.74	9.41	12.23	301,368.00	289,239.00	577,283.00	13.60%	704,955.00	140.00
2020	0.47	7.74	10.02	375,039.00	360,076.00	804,873.00	15.01%	968,582.00	170.00

Source: Author's Compilation 2022

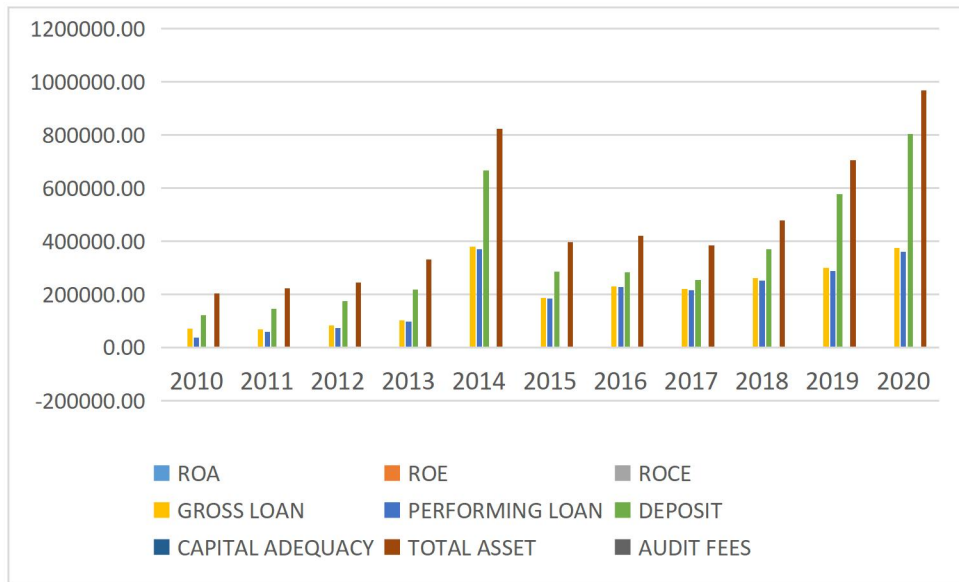


Figure 4.20 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Wema Bank from 2010 -2020

Source: Researcher Compilation 2022

From the above the highest ROA in year 2010 and the lowest was in year 2011 with negative value. The second highest ROA was in year 2019 and this was followed by 2018, 2015, 2014, 2016, 2013, 2020 and 2012. The highest ROE was in year 2010 and the lowest was in year 2011. The second highest ROE was in year 2019 and this was followed by year 2020, 2018, 2014, 2016, 2017, 2013 and 2012. The ROCE of year 2010 was above 20% while the remaining years were below 20%. The highest gross loans was in year 2014 and this was followed by year 2020, 2019, 2018, 2016, 2017, 2015, 2013, 2010 and 2011. The highest performing loans was in year 2014 and the lowest was in year 2010. The second highest performing loans was in year 2020 and this was followed by year 2019, 2018, 2016, 2017, 2015, 2013, 2012, and 2011. The highest deposit was in year 2020, this was followed by year 2014, 2019, 2018, 2015, 2016, 2017, 2013, 2012, 2011 and 2010. The highest capital adequacy ratio was in year 2010 and this was followed by year 2011, 2013, 2018, 2015, 2020, 2014, 2019, 2016 and 2012. The highest total asset was in year 2020 and this was followed by year 2014, 2019,

2018,2016,2015,2017, 2013,2012, 2011 and 2010. The highest audit fees paid was in the year 2014, and this was followed by year 2020, 2019,2018,2016,2017,2015,2012,2013,2011 and 2010.

Table 4.21 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Unity Bank from 2010 -2020

YEAR	ROA	ROE	ROCE	GROSS LOAN	PERFORMING LOAN	DEPOSIT	CAPITAL ADEQUACY	TOTAL ASSET	AUDIT FEES
2010	4.05	28.12	30.15	128,561.00	113,934.00	222,145.00	11.24%	305,221.00	124.00
2011	0.65	5.47	6.91	122,821.00	113,635.00	266,877.00	15.77%	373,859.00	65.00
2012	1.56	12.01	12.55	194,781.00	189,041.00	270,060.00	8.90%	395,720.00	80.00
2013	-5.59	80.04	119.24	225,634.00	195,229.00	303,270.00	-13.81%	403,629.00	80.00
2014	2.59	14.02	17.88	266,124.00	219,335.00	273,934.00	2.02%	413,305.00	80.00
2015	1.06	5.68	2.84	311,897.00	246,143.00	231,440.00	-21.40%	443,321.00	80.00
2016	0.44	2.63	2.19	378,758.00	277,214.00	264,196.00	-46.98%	492,681.00	80.00
2017	-9.53	6.16	5.88	9,467.00	8,958.00	252,310.00	-198.07%	156,508.00	80.00
2018	-3.65	2.71	2.66	44,401.00	43,657.00	241,936.00	-198.50%	235,976.00	80.00
2019	1.15	-1.21	-1.31	106,913.00	104,017.00	257,691.00	-201.59%	293,052.00	75.00
2020	0.42	-0.01	-0.81	206,205.00	202,080.00	356,615.00	-101.47%	492,020.00	65.00

Source: Author's Compilation 2022

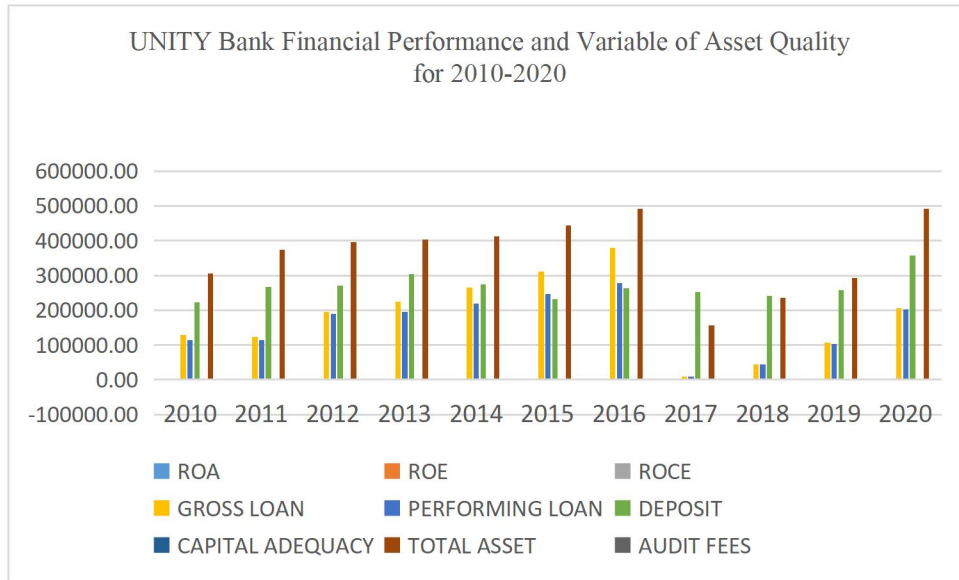


Figure 4.21 Descriptive Analysis of Asset Quality, Internal Control and Profitability Of Unity Bank from 2010 -2020

Source: Researcher Compilation 2022

From the above the highest ROA was in year 2010 and the lowest was in year 2017. The second highest value of ROA was in year 2014 and this was followed by year 2012, 2019,2015,2011,2016,2020,2018 and 2013. The highest ROE was in year 2010 and this was followed by 2014, 2012,2017,2015,2011,2018,2016,2020,2019 and 2013. The ROCE for year 2010 was above 20% while the remaining years were less than 20%. The highest gross loans was in year 2016 while the lowest gross loans was in year 2017. The second highest gross loans was in year 2015 and this was followed by year 2014, 2013,2020,2012,2011,2010, 2019 and 2018. The highest performing loans was in year 2016 and this was followed by year 2015, 2014,2020, 2013, 2012,2010, 2011 , 2019 and 2018. The highest deposit was in year 2020 and this was followed by year 2013, 2014,2012,2011,2016, 2019,2017,2018,2015 and 2010. The capital adequacy ratio was highest in year 2011 and this was followed by year 2010, 2012 and 2014. The remaining years, 2013,2015,2016,2017,2018,2019 and 2020 had negative capital ratios. The highest total assets was highest in year 2016 and this was followed by year

2020,2015,2014,2013,2012,2011,2010,2019,2018 and 2017. The highest audit fees paid was in year 2010 and this was followed by year 2012,2013,2014,2015,2016,2017,2018, 2019,2011 and 2020.

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4.2 Test of Hypothesis

Banks Aggregate Analysis

Table 4.22 Regression Result on the Effect of Asset Quality on ROA

Dependent Variable: ROA			
Variables	Pooled OLS	Fixed Effect	Random Effect
C	- 12.356** (0.012)	-6.920 (0.440)	12.356** (0.014)
Ln Gross Loan	17.730*** (0.000)	18.342*** (0.000)	17.370*** (0.000)
Ln Performing Loan	-15.507*** (0.000)	-15.953*** (0.000)	-15.507*** (0.000)
Ln Deposit	0.705 (0.577)	0.379 (0.799)	0.705 (0.586)
Capital adequacy	0.797 (0.245)	-2.116 (0.204)	-1.547 (0.252)
Ln Total Assets	-1.548 (0.241)	0.020 (0.983)	0.797 (0.256)
R ²	0.434	0.458	0.434
F	10.891	4.989	10.891
F (Prob)	0.001		
Observations	77	77	77
Model	POLS	Fixed	Random

***, ** and * indicate significance at 1%, 5% and 10% respectively.

Source: Author's Computation (2022)

Table 4.23 : Hausman Test for ROA

Chi square: 2.791

Prob: 0.732

Source: Author's Computation (2022)

The table 4.23 above represents Hausman test probability ($0.732 > 0.05$) value which shows that the random effect estimator is more efficient than the fixed effect estimator.

The random effect results presented in table 4.22 above shows a significantly positive relationship between gross loan and return on assets at 1 percent significance level. This means that a percentage increase in gross loan will increase return on assets by 17.370 units given that gross loan is expressed in the logarithmic form. Performing loan on the other hand is seen to exert a negative influence on financial performance as measured by return on assets with a percentage increase in performing loans reducing return on assets by 15.507 units. Deposits, capital adequacy and total assets are seen not to have significant effects on financial profitability of the banks as measured by ROA.

Also, the result shows that the test statistics $F_{(1, 74)} = 10.89$, $p = 0.001$, with level of significance for a variable considered is below 0.05 implying that the H_0 hypothesis which states that there is no significant effect of Asset Quality on return on asset of DMBs in Nigeria is rejected. Hence, Asset Quality has significant effect on return on asset of DMBs in Nigeria.

Table 4.24 Regression Result on the Effect of Asset Quality on ROE

Dependent Variable: ROE

Variables	Pooled OLS	Fixed Effect	Random Effect
C	- 164.712*** (0.002)	-161.019 (0.102)	-165.723*** (0.005)
Ln Gross Loan	128.062*** (0.000)	134.674*** (0.000)	129.186*** (0.000)
Ln Performing Loan	-130.388*** (0.000)	-137.830*** (0.000)	-131.733*** (0.000)
Ln Deposit	21.186 (0.126)	19.673 (0.229)	21.170 (0.144)
Capital adequacy	0.686 (0.926)	-1.857 (0.857)	0.424 (0.958)
Ln Total Assets	-6.626 (0.643)	-4.670 (0.795)	-6.335 (0.675)
R ²	0.238	0.268	0.235
F	4.442	2.164	4.359
F (Prob)	0.004		
Observations	77	77	77
Model	POLS	Fixed	Random

Source: Author's Computation (2022)

Table 4.25 : Hausman Test for ROE

Chi square: 1.108 Prob: 0.953

Source: Author's Computation (2022)

Given that the Hausman test probability((0.953 > 0.05) value in table 4.25 shows that random effect estimator is more efficient than the fixed effect estimator, results are reported based on the random effect estimates. There is a positive and significant relationship between gross loan and return on equity as a percentage increase in gross loan is seen to increase return on equity by 129 units. Conversely, there is a negative relationship between performing loans and return on assets as a percentage increase in performing loans will reduce ROE by 131 units. Deposits, capital adequacy and total assets are seen not to have significant effects on financial profitability of the banks as measured by ROE.

Also, the result shows that the test statistics $F_{(1, 74)} = 4.442$, $p = 0.004$, with level of significance for a variable considered is below 0.05 implying that the H_0 hypothesis which states that there is no significant effect of Asset Quality on return on equity of DMBs in Nigeria is rejected. Hence, Asset Quality has significant effect on return on equity of DMBs in Nigeria.

Table 4.26 : Regression Result on the Effect of Asset Quality on ROCE

Dependent Variable: ROCE

Variables	Pooled OLS	Fixed Effect	Random Effect
C	- 222.522*	-257.056	-220.*
	(0.053)	(0.226)	(0.077)
Ln Gross Loan	35.553	24.654	34.464
	(0.604)	(0.733)	(0.624)
Ln Performing Loan	-26.859	-26.784	-27.084
	(0.686)	(0.704)	(0.691)
Ln Deposit	21.463	24.851	21.511
	(0.474)	(0.481)	(0.491)
Capital adequacy	-0.332	16.665	1.675
	(0.984)	(0.457)	(0.922)
Ln Total Assets	12.930	3.654	11.892
	(0.677)	(0.925)	(0.716)
R ²	0.077	0.121	0.068
F	1.193	0.811	1.037
F (Prob)	0.069		
Observations	77	77	77
Model	POLS	Fixed	Random

Source: Author's Computation (2022)

Table 4.27 : Hausman Test for ROCE

Chi square: 1.669 Prob: 0.893

Source: Author's Computation (2022)

Given that the Hausman test probability ($0.893 > 0.05$) value in table 4.27 shows that random effect estimator is more efficient than the fixed effect estimator, results are reported based on the random effect estimates.

The random effect results in table 4.26 show that all variables employed in measuring asset quality, gross loan, performing loan, deposits, capital adequacy and total assets do not significantly influence ROCE.

Also, the result shows that the test statistics $F_{(1, 74)} = 1.193$, $p = 0.069$, with level of significance for a variable considered is above 0.05 implying that the H_0 hypothesis which states that there is no significant effect of Asset Quality on return on capital employed of the DMBs in Nigeria is accepted. Hence, Asset Quality on return on capital employed has no significant effect on return on asset of DMBs in Nigeria.

Table 4.28 : Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability

Dependent Variable: TOTAL PROFITABILITY

Variables	Pooled OLS	Fixed Effect	Random Effect
C	3.159 (0.985)	-80.319 (0.708)	3.159 (0.985)
ICS*Capital Adequacy	1.366* (0.080)	5.646** (0.044)	1.365** (0.088)
ICS*Performing Loan	-0.002 (0.985)	-0.023 (0.862)	-0.002 (0.986)
ICS*Deposit	2.621 (0.634)	2.209 (0.778)	2.621 (0.642)
ICS*Gross Loan	2.621 (0.634)	-1.083 (0.849)	1.253 (0.803)
ICS*Total Assets	25.111* (0.053)	2.425* (0.096)	25.111** (0.062)
R ²	0.066	0.105	0.066
F	1.013	0.694	1.013
F (Prob)	0.071		
Observations	77	77	77
Model	POLS	Fixed	Random

Source: Author's Computation (2022)

Table 4.29 : Hausman Test for Total Profitability

Chi square: 2.258 Prob: 0.812

Source: Author's Computation (2022)

The Hausman test probability ($0.81 > 0.05$) value in table 4.29 shows that the random effect estimator is more efficient than the fixed effect estimator. The random effect results presented in table 4.28 shows a significantly positive relationship between the interaction of internal control with total assets and capital adequacy at 10 percent significance level. A percentage increase in the interactive effect of internal control with total assets will increase total profitability by 25.1 units. Similarly, a percentage increase in the interactive effect of capital adequacy will increase total profitability by 1.365 units. The interaction of internal control with other variables employed in measuring asset quality; gross loan, performing loan, deposits, do not significantly influence total profitability.

Also, the result shows that the test statistics $F_{(1, 74)} = 1.013$, $p = 0.071$, with level of significance for a variable considered is above 0.05 implying that the H_0 hypothesis which states that Internal Control System has no significant moderating effect on the interaction between assets quality and profitability of DMBs in Nigeria is accepted. Hence, Internal Control System has no significant moderating effect on the interaction between assets quality and profitability of DMBs in Nigeria.

BANK SPECIFIC ANALYSIS

Table 4.30 Regression Result on the Effect of Asset Quality on ROA for UBA

Dependent Variable: ROA				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-10.957	16.290	-0.672	0.531
Ln Gross Loan	-25.557	5.567	-4.591	0.000***
Ln Performing Loan	34.267	28.717	1.193	0.286
Ln Deposit	-0.579	7.373	-0.078	0.940
Capital adequacy	33.739	7.822	4.313	0.000***
Ln Total Assets	0.561	0.104	5.409	0.000***
R ²	= 0.92			
Adjusted R ²	=0.87			
D.W. Statistics	=1.8			

Source: Author's Computation (2022)

The table shown above reveals that there is a negative and significant relationship between gross loan and return on asset for UBA. This means that a percentage increase in gross loan will reduce ROA by 25 units. However, there exists a positive and significant relationship between capital adequacy and total assets on ROA as a percentage increase in both will increase ROA by 33.7 and 0.5 units respectively. Performing loan and deposits are seen not to have significant effects on ROA.

Table 4.31 Regression Result on the Effect of Asset Quality on ROE for UBA

Dependent Variable: ROE				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-145.387	132.745	-1.095	0.323
Ln Gross Loan	-230.666	238.555	-0.967	0.378
Ln Performing Loan	212.101	233.897	0.907	0.406
Ln Deposit	20.669	60.050	0.135	0.898
Capital adequacy	12.549	4.884	2.569	0.023***
Ln Total Assets	17.435	6.048	2.882	0.013***
R ²	= 0.92			
Adjusted R ²	=0.87			
D.W. Statistics	=2.51			

Source: Author's Computation (2022)

The table shown above reveals that there is a positive and significant relationship between capital adequacy and return on assets for UBA. This means that a percentage increase in capital adequacy will increase ROE by 12 units. Similarly, there is a positive and significant relationship between total assets and return on assets for UBA. This means that a percentage increase in total assets will increase ROE by 17 units. However, there is no significant relationship between gross loan, performing loan, deposits on ROE.

Table 4.32 Regression Result on the Effect of Asset Quality on ROCE for UBA

Dependent Variable: ROCE				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-173.556	166.975	-1.039	0.346
Ln Gross Loan	-211.894	300.070	-0.706	0.511
Ln Performing Loan	197.561	294.210	0.671	0.532
Ln Deposit	13.620	6.656	2.046	0.061*
Capital adequacy	33.739	7.822	4.313	0.000***
Ln Total Assets	0.561	0.104	5.409	0.000***
R ²	= 0.28			
Adjusted R ²	=-0.42			
D.W. Statistics	=2.36			

Source: Author's Computation (2022)

The table shown above reveals that deposit, capital adequacy reveals that there is a positive and significant relationship between capital adequacy and ROCE for UBA. This means that a percentage increase in capital adequacy will increase ROCE by 12 units. Similarly, there is a positive and significant relationship between total assets and return on assets for UBA. This means that a percentage increase in total assets will increase ROCE by 17 units. However, there is no significant relationship between gross loan, performing loan, on ROE.

Table 4.33 Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability for UBA

Dependent Variable: PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	-32.641	31.550	-1.034	0.348
ICS*Capital Adequacy	6.053	3.123	1.938	0.085***
ICS*Performing Loan	0.035	0.024	1.503	0.193
ICS*Deposit	71.445	53.710	1.330	0.241
ICS*Gross Loan	(0.634) 61.856	74.474	0.830	0.444
ICS*Total Assets	-198.7613	71.077	-2.796	0.038**

$R^2 = 0.69$

Adjusted $R^2 = 0.39$

D.W. Statistics = 1.96

Source: Author's Computation (2022)

The table shown above reveals that the interaction of internal control with capital adequacy as well as the interaction of internal control with total assets exert positive and negative effects on total profitability for UBA respectively. A percentage increase in the interaction between internal control with capital adequacy deposit will increase total profits by 6.053 units. Conversely, a

percentage increase in the interaction between internal control with total assets will reduce total profits by 198 units, while other variables remain insignificant.

Table 4.34 Regression Result on the Effect of Asset Quality on ROA for UNION BANK

Dependent Variable: ROA				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-0.678	58.264	-0.012	0.991
Ln Gross Loan	21.458	2.574	8.336	0.000***
Ln Performing Loan	-24.500	27.502	-0.891	0.412
Ln Deposit	-29.100	7.433	-3.914	0.003**
Capital adequacy	1.979	0.528	3.749	0.005*
Ln Total Assets	-20.029	16.074	-1.246	0.268
R ²	= 0.83			
Adjusted R ²	=0.67			
D.W. Statistics	=2.15			

Source: Author's Computation (2022)

The table shown above reveals that there is a positive and significant relationship between gross loan, capital adequacy and return on asset for UBA. This means that a percentage increase in gross loan and capital adequacy will increase ROA by 21 and 1.9 units respectively. However, there exists a negative and significant relationship between deposits and total assets on ROA for Union Bank as a percentage increase in both will reduce ROA by 29 and 20 units respectively. Performing loan and total assets are seen not to have significant effects on ROA.

Table 4.35 Regression Result on the Effect of Asset Quality on ROE for UNION BANK

Dependent Variable: ROE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-35.176	84.883	-0.414	0.695
Ln Gross Loan	158.147	45.475	3.477	0.017**
Ln Performing Loan	-150.311	40.067	-3.751	0.013**
Ln Deposit	-4.877	26.449	-0.184	0.861
Capital adequacy	-67.495	51.024	-1.323	0.243
Ln Total Assets	0.442	23.418	0.019	0.986
R ²	= 0.98			
Adjusted R ²	=0.97			
D.W. Statistics	=1.96			

Source: Author's Computation (2022)

The table shown above reveals that gross loan has a positive and significant relationship with ROE for Union Bank. A percentage increase in gross loan will increase ROE by 158 units. Conversely, performing loan has a negative and significant effect on ROE as a percentage increase in performing loan will reduce ROE by 150 units. However, deposit, capital adequacy and total assets do not have any significant effect on ROE for Union Bank.

Table 4.36 Regression Result on the Effect of Asset Quality on ROCE for UNION BANK

Dependent Variable: ROCE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-157.942	388.641	-0.406	0.701
Ln Gross Loan	-21.458	2.574	-8.336	0.000*
Ln Performing Loan	12.383	3.389	3.653	0.002*
Ln Deposit	148.058	121.099	1.222	0.276
Capital adequacy	113.629	233.613	0.486	0.647
Ln Total Assets	-150.863	107.219	-1.407	0.218
R ²	= 0.64			
Adjusted R ²	=-0.28			
D.W. Statistics	=2.25			

Source: Author's Computation (2022)

The table shown above reveals that gross loan has a negative and significant relationship with ROCE for Union Bank. A percentage increase in gross loan will reduce ROCE by 21 units. Conversely, performing loan has a positive and significant effect on ROCE as a percentage increase in performing loan will increase ROCE by 12 units. However, deposit, capital adequacy and total assets do not have any significant effect on ROE for Union Bank.

Table 4.37 Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability for Union Bank

Dependent Variable: PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	2101.098	2717.583	0.772	0.474
ICS*Capital Adequacy	-1.429	0.159	-8.976	0.000*
ICS*Performing Loan	-20.079	6.898	-2.911	0.013**
ICS*Deposit	2.299	19.767	0.116	0.912
ICS*Gross Loan	13.371	4.537	2.947	0.012**
ICS*Total Assets	-332.284	253.759	-1.309	0.247

R² = 0.78

Adjusted R² = 0.55

D.W. Statistics = 2.22

Source: Author's Computation (2022)

The table shown above reveals that the interaction of internal control with capital adequacy as well as the interaction of internal control with performing loan exert negative effects on total profitability for Union bank respectively. A percentage increase in the interaction between internal control with capital adequacy will reduce total profits by 1.4 units, while a percentage increase in the interaction between internal control with performing loan will reduce total profits

by 20 units. Conversely, a percentage increase in the interaction between internal control with gross loan will increase total profits by 13 units, while other variables remain insignificant.

Table 4.38 Regression Result on the Effect of Asset Quality on ROA for Wema Bank

Dependent Variable: ROA				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-73.741	39.450	-1.869	0.120
Ln Gross Loan	19.256	5.440	3.539	0.016**
Ln Performing Loan	-15.971	4.347	-3.674	0.014**
Ln Deposit	-17.431	12.089	-1.441	0.209
Capital adequacy	0.409	5.060	0.081	0.939
Ln Total Assets	19.547	15.681	1.247	0.268
R ²	= 0.84			
Adjusted R ²	=0.68			
D.W. Statistics	=1.94			

Source: Author's Computation (2022)

The table shown above reveals that there is a positive and significant relationship between gross loan and return on asset for Wema bank. This means that a percentage increase in gross loan will increase ROA by 19 units. However, there exists a negative and significant relationship between performing loan and ROA for Wema Bank as a percentage increase in performing loan reduce ROA by 16 units, while other variables remain insignificant.

Table 4.39 Regression Result on the Effect of Asset Quality on ROE for Wema Bank

Dependent Variable: ROE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-1982.323	984.042	-2.014	0.100
Ln Gross Loan	336.148	135.716	2.477	0.056*
Ln Performing Loan	-262.295	108.422	-2.419	0.060**
Ln Deposit	-444.769	301.540	-1.475	0.200
Capital adequacy	17.091	126.218	0.135	0.898
Ln Total Assets	515.324	391.136	1.317	0.245

R² = 0.76

Adjusted R² = 0.52

D.W. Statistics = 1.96

Source: Author's Computation (2022)

The table shown above reveals that gross loan has a positive and significant relationship with ROE for wema Bank. A percentage increase in gross loan will increase ROE by 336 units. Conversely, performing loan has a negative and significant effect on ROE as a percentage increase in performing loan will reduce ROE by 262 units. However, deposit, capital adequacy and total assets do not have any significant effect on ROE for Wema Bank.

Table 4.40 Regression Result on the Effect of Asset Quality on ROCE for Wema Bank

Dependent Variable: ROCE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-2534.518	747.205	-3.391	0.019**
Ln Gross Loan	148.304	103.052	1.439	0.209
Ln Performing Loan	14.977	82.327	0.182	0.863
Ln Deposit	-462.522	228.966	-2.020	0.099*
Capital adequacy	712.332	95.840	7.432	0.000***
Ln Total Assets	483.015	296.999	1.623	0.165
R ²	= 0.97			
Adjusted R ²	= -0.94			
D.W. Statistics	= 1.81			

Source: Author's Computation (2022)

The table shown above reveals that deposits has a negative and significant relationship with ROCE for Wema Bank. A percentage increase in deposits will reduce ROCE by 462 units. Conversely, capital adequacy has a positive and significant effect on ROCE as a percentage increase in capital adequacy will increase ROCE by 712 units. However, other variables do not have any significant effect on ROCE for Wema Bank.

Table 4.41 Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability for Wema Bank

Dependent Variable: PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	-3887.535	4944.692	-0.786	0.467
ICS*Capital Adequacy	264.810	64.119	4.129	0.009***
ICS*Performing Loan	0.099	0.219	0.456	0.667
ICS*Deposit	-43.112	38.251	-1.127	0.311
ICS*Gross Loan	0.936	83.976	0.011	0.991
ICS*Total Assets	647.730	1088.249	0.595	0.578

R² = 0.87

Adjusted R² = 0.75

D.W. Statistics = 2.42

Source: Author's Computation (2022)

The table shown above reveals that only the interaction of internal control with capital adequacy has a significant effect on total profitability for Wema bank. A percentage increase in the interaction between internal control and capital adequacy will increase total profits by 264 units, while other variables remain insignificant.

Table 4.42. Regression Result on the Effect of Asset Quality on ROA for Sterling Bank

Dependent Variable: ROA				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	2.237	4.782	0.468	0.659
Ln Gross Loan	7.718	3.486	2.214	0.047**
Ln Performing Loan	-15.382	4.075	-3.774	0.003***
Ln Deposit	1.190	0.844	1.411	0.217
Capital adequacy	1.981	4.396	0.451	0.671
Ln Total Assets	-1.151	0.704	-1.636	0.163
R ²	= 0.93			
Adjusted R ²	=0.87			
D.W. Statistics	=1.93			

Source: Author's Computation (2022)

The table shown above reveals that there is a positive and significant relationship between gross loan and return on asset for Sterling bank. This means that a percentage increase in gross loan will increase ROA by 7.7 units. However, there exists a negative and significant relationship between performing loan and ROA for Sterling Bank as a percentage increase in performing loan reduce ROA by 15 units, while other variables remain insignificant.

Table 4.43 Regression Result on the Effect of Asset Quality on ROE for Sterling Bank

Dependent Variable: ROE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	94.133	124.473	0.756	0.484
Ln Gross Loan	-16.771	3.420	-4.904	0.000***
Ln Performing Loan	24.869	130.328	0.191	0.856
Ln Deposit	13.371	4.537	2.947	0.012***
Capital adequacy	52.086	114.433	0.455	0.668
Ln Total Assets	-19.233	3.693	-5.208	0.000***
R ²	= 0.85			
Adjusted R ²	=0.70			
D.W. Statistics	=1.95			

Source: Author's Computation (2022)

The table shown above reveals that gross loan and total assets have negative and significant relationship with ROE for Sterling Bank. A percentage increase in gross loan and total assets will reduce ROE by 16 and 19 units respectively. Conversely, deposits has a positive and significant effect on ROE as a percentage increase in deposits will increase ROE by 13 units. However, other variables do not have any significant effect on ROE for Sterling Bank.

Table 4.44 Regression Result on the Effect of Asset Quality on ROCE for Sterling Bank

Dependent Variable: ROCE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	130.649	165.526	0.788	0.465
Ln Gross Loan	-52.954	160.748	-0.329	0.755
Ln Performing Loan	64.891	173.312	0.374	0.723
Ln Deposit	13.371	4.537	2.947	0.012***
Capital adequacy	71.829	152.175	0.472	0.657
Ln Total Assets	-21.011	2.318	-9.062	0.000***
R ²	= 0.67			
Adjusted R ²	= -0.48			
D.W. Statistics	= 1.92			

Source: Author's Computation (2022)

The table shown above reveals that deposits has a positive and significant relationship with ROCE for Sterling Bank. A percentage increase in deposits will increase ROCE by 13 units. Conversely, total assets has a negative and significant effect on ROCE as a percentage increase in capital adequacy will reduce ROCE by 21 units. However, other variables do not have any significant effect on ROCE for Sterling Bank.

Table 4.45 Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability for Sterling bank

Dependent Variable: PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	-10.847	61.898	-0.175	0.867
ICS*Capital Adequacy	-0.223	0.098	-2.270	0.044**
ICS*Performing Loan	0.000	0.012	0.028	0.978
ICS*Deposit	3.342	4.486	0.745	0.489
ICS*Gross Loan	-5.723	1.501	-3.811	0.002***
ICS*Total Assets	-15.866	3.768	-4.210	0.001***

R² = 0.72

Adjusted R² = 0.44

D.W. Statistics = 2.33

Source: Author's Computation (2022)

The table shown above reveals that only the interaction of internal control with capital adequacy, gross loan and total assets all have significantly negative effect on total profitability for Sterling bank. A percentage increase in the interaction between internal control and capital adequacy, gross loan and total asstes will reduce total profits for Sterling bank by 0.2, 5.7 and 15.9 units respectively, while other variables remain insignificant

Table 4.46 Regression Result on the Effect of Asset Quality on ROA for Fidelity Bank**Dependent Variable: ROA**

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-11.721	14.025	-0.836	0.441
Ln Gross Loan	-0.386	0.096	-4.012	0.003*
Ln Performing Loan	0.137	0.065	2.112	0.064***
Ln Deposit	-0.103	0.030	-3.425	0.001*
Ln Total Assets	0.627	0.658	0.953	0.384
Capital adequacy	4.343	11.414	0.380	0.719
R ²	= 0.69			
Adjusted R ²	=0.61			
D.W. Statistics	=2.13			

Source: Author's Computation (2022)

The table shown above reveals that there is a negative and significant relationship between gross loan as well as between deposits and return on asset for Fidelity bank. This means that a percentage increase in gross loan and deposits will reduce ROA by 0.3 and 0.1 units. However, there exists a negative and significant relationship between performing loan and ROA for Fidelity Bank as a percentage increase in performing loan reduce ROA by 0.1 units, while other variables remain insignificant.

Table 4.47 Regression Result on the Effect of Asset Quality on ROE for Fidelity Bank**Dependent Variable: ROE**

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-155.998	79.134	-1.971	0.106
Ln Gross Loan	35.587	8.328	4.273	0.001***
Ln Performing Loan	-21.458	2.574	-8.336	0.000*
Ln Deposit	4.367	1.338	3.263	0.005***
Capital adequacy	5.778	64.403	0.089	0.932
Ln Total Assets	5.958	3.713	1.605	0.169
R ²	= 0.63			
Adjusted R ²	=0.47			
D.W. Statistics	=1.97			

Source: Author's Computation (2022)

The table shown above reveals that gross loan and deposits have positive and significant relationship with ROE for Fidelity Bank. A percentage increase in gross loan and deposits will increase ROE by 35 and 4 units respectively. Conversely, performing loan has a negative and significant effect on ROE as a percentage increase in performing loan will reduce ROE by 21 units. However, other variables do not have any significant effect on ROE for Fidelity Bank.

Table 4.48 Regression Result on the Effect of Asset Quality on ROCE for Fidelity Bank

Dependent Variable: ROCE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-166.750	90.133	-1.850	0.123
Ln Gross Loan	18.902	50.258	0.376	0.722
Ln Performing Loan	-37.711	14.431	-2.613	0.024**
Ln Deposit	9.433	13.968	0.675	0.529
Capital adequacy	17.852	6.232	2.864	0.015**
Ln Total Assets	6.569	4.229	1.553	0.181

R² = 0.67

Adjusted R² = -0.48

D.W. Statistics = 1.92

Source: Author's Computation (2022)

The table shown above reveals that performing loan has a negative and significant relationship with ROCE for Fidelity Bank. A percentage increase in performing loan will reduce ROCE by 37 units. Conversely, capital adequacy has a positive and significant effect on ROCE as a percentage increase in capital adequacy will increase ROCE by 17 units. However, other variables do not have any significant effect on ROCE for Fidelity Bank.

Table 4.49 Regression Result on the Effect of Internal Control System on the Interaction between Asset Quality and Profitability for Fidelity Bank

Dependent Variable: PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	-89.043	90.365	-0.985	0.369
ICS*Capital Adequacy	16.535	8.008	2.065	0.056*
ICS*Performing Loan	0.009	0.013	0.686	0.523
ICS*Deposit	1.742	2.741	0.635	0.552
ICS*Gross Loan	-0.749	0.101	-7.389	0.000***
ICS*Total Assets	-1.943	27.929	-0.069	0.947

R² = 0.56

Adjusted R² = 0.34

D.W. Statistics = 2.15

Source: Author's Computation (2022)

The table shown above reveals that the interaction of internal control with capital adequacy has a significant effect on total profitability for Fidelity bank. A percentage increase in the interaction between internal control and capital adequacy will increase total profits by 16 units. Conversely, interaction of internal control with gross loan has a significantly negative effect on total

profitability for Fidelity as a percentage increase in gross loan interacted with internal control will reduce total profits by 0.7 units, while other variables remain insignificant.

Table 4.50 Regression Result on the Effect of Asset Quality on ROA for UNITY BANK

Dependent Variable: ROA

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	134.073	98.462	1.362	0.231
Ln Gross Loan	-20.239	13.055	-1.550	0.182
Ln Performing Loan	0.012	0.025	2.239	0.015**
Ln Deposit	-17.615	5.591	-3.150	0.009***
Ln Total Assets	4.367	1.338	3.263	0.005***
Capital adequacy	0.089	1.439	0.062	0.953
R ²	= 0.75			
Adjusted R ²	= 0.50			
D.W. Statistics	= 2.32			

Source: Author's Computation (2022)

The table shown above reveals that there is a positive and significant relationship between performing loan and return on asset as well as between total assets and return on asset for Unity bank. This means that a percentage increase in performing loan and total asset will increase ROA by 0.012 and 4.4 units respectively. However, there exists a negative and significant relationship between deposits and ROA for Unity Bank as a percentage increase in deposit will reduce ROA by 17 units, while other variables remain insignificant.

Table 4.51 Regression Result on the Effect of Asset Quality on ROE for Unity Bank**Dependent Variable: ROE**

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	1021.637	1019.038	1.002	0.362
Ln Gross Loan	-333.792	120.335	-2.757	0.014**
Ln Performing Loan	97.129	127.139	0.764	0.479
Ln Deposit	-248.918	130.557	-1.906	0.115
Capital adequacy	-3.945	14.892	-0.265	0.802
Ln Total Assets	135.620	49.075	2.763	0.014**
R ²	= 0.43			
Adjusted R ²	=0.31			
D.W. Statistics	=2.22			

Source: Author's Computation (2022)

The table shown above reveals that gross loan has a positive and significant relationship with ROE for Unity Bank. A percentage increase in gross loan will increase ROE by 35 and 4 units respectively. Conversely, total assets has a negative and significant effect on ROE as a percentage increase in total assets will reduce ROE by units. However, other variables do not have any significant effect on ROE for Unity Bank.

Table 4.52. Regression Result on the Effect of Asset Quality on ROCE for Unity Bank

Dependent Variable: ROCE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	1307.688	1468.445	0.890	0.414
Ln Gross Loan	-222.237	194.711	-1.141	0.305
Ln Performing Loan	109.986	38.824	2.833	0.013**
Ln Deposit	-240.788	84.934	-2.835	0.012**
Capital adequacy	-8.349	21.459	-1.880	0.119
Ln Total Assets	322.112	234.702	1.372	0.228
R ²	= 0.63			
Adjusted R ²	=-0.49			
D.W. Statistics	=2.21			

Source: Author's Computation (2022)

The table shown above reveals that performing loan has a positive and significant relationship with ROCE for Unity Bank. A percentage increase in performing loan will increase ROCE by 109 units. Conversely, deposits has a negative and significant effect on ROCE as a percentage increase in deposits will reduce ROCE by 240 units. However, other variables do not have any significant effect on ROCE for Unity Bank.

Table 4.53 Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability for Unity Bank

Dependent Variable: TOTAL PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	885.482	822.792	1.076	0.331
ICS*Capital Adequacy	15.866	3.768	4.210	0.001***
ICS*Performing Loan	-0.432	0.091	-4.754	0.000***
ICS*Deposit	-159.097	69.335	-2.295	0.070**
ICS*Gross Loan	1.076	0.164	6.542	0.000***
ICS*Total Assets	903.101	372.745	2.423	0.059*

R² = 0.55

Adjusted R² = 0.22

D.W. Statistics = 2.54

Source: Author's Computation (2022)

The table shown above reveals that the interaction of internal control with capital adequacy, total assets, and gross loan have significant effect on total profitability for Unity bank. A percentage increase in the interaction between internal control and capital adequacy, total assets, and gross loan will increase total profits by 15, 903 and 1 units respectively. Conversely, interaction of internal control with performing loan and deposits has a significantly negative effect on total profitability for Unity bank as a percentage increase in these when interacted with internal

control will reduce total profits by 0.4 and 159 units respectively. Other variables remain insignificant.

Table 4.54 Regression Result on the Effect of Asset Quality on ROA for Access Bank

Dependent Variable: ROA				
Variable	Coefficient	Standard Error	T-Statistics	Probability
C	5.946	8.955	0.664	0.536
Ln Gross Loan	-2.461	17.806	-0.138	0.895
Ln Performing Loan	3.181	16.208	0.196	0.852
Ln Deposit	3.695	1.557	2.373	0.030**
Ln Total Assets	-0.256	0.044	-5.774	0.000***
Capital adequacy	-1.296	16.851	-0.077	0.942
R ²	= 0.29			
Adjusted R ²	=-0.42			
D.W. Statistics	=2.45			

Source: Author's Computation (2022)

The table shown above reveals that there is a positive and significant relationship between deposit and return on asset for Access bank. This means that a percentage increase in deposit will increase ROA by 3.69 units. However, there exists a negative and significant relationship between total assets and ROA for Access Bank as a percentage increase in total assets will reduce ROA by 0.2 units, while other variables remain insignificant.

Table 4.55 Regression Result on the Effect of Asset Quality on ROE for Access Bank

Dependent Variable: ROE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	9.099	59.200	0.154	0.884
Ln Gross Loan	10.182	117.712	0.086	0.934
Ln Performing Loan	-7.483	107.151	-0.069	0.947
Ln Deposit	6.684	14.815	0.451	0.671
Capital adequacy	-57.958	111.404	-0.520	0.625
Ln Total Assets	-5.723	1.501	-3.811	0.002***
R ²	= 0.42			
Adjusted R ²	=-0.35			
D.W. Statistics	=2.38			

Source: Author's Computation (2022)

The table shown above reveals that total assets has a negative and significant effect on ROE as a percentage increase in total assets will reduce ROE by 5.7 units. However, other variables do not have any significant effect on ROE for Unity Bank.

Table 4.56 Regression Result on the Effect of Asset Quality on ROCE for Access Bank

Dependent Variable: ROCE

Variable	Coefficient	Standard Error	T-Statistics	Probability
C	-64.457	7.318	-8.807	0.000***
Ln Gross Loan	-0.884	0.123	-7.130	0.000***
Ln Performing Loan	-3.347	5.859	-0.571	0.583
Ln Deposit	-0.894	0.101	-8.808	0.000***
Capital adequacy	3.575	0.705	5.066	0.001***
Ln Total Assets	-2.265	0.632	-3.583	0.007***
R ²	= 0.94			
Adjusted R ²	=-0.85			
D.W. Statistics	=1.81			

Source: Author's Computation (2022)

The table shown above reveals that capital adequacy has a positive and significant relationship with ROCE for Unity Bank. A percentage increase in capital adequacy will increase ROCE by 3.57 units. Conversely, gross loan, deposits and total assets have a negative and significant effect on ROCE as a percentage increase in gross loan, deposits and total assets will reduce ROCE by 0.88, 0.89 and 2.2 units respectively.

Table 4.57 Regression Result on the Effect of Internal Control on the Interaction between Asset Quality and Profitability for Access Bank

Dependent Variable: TOTAL PROFITABILITY

Variables	Coefficient	Standard Error	T-Statistics	Probability
C	16.535	8.008	2.065	0.056*
ICS*Capital Adequacy	1.436	1.064	1.349	0.197
ICS*Performing Loan	-0.037	0.013	-2.843	0.009***
ICS*Deposit	-0.099	0.145	-0.684	0.502
ICS*Gross Loan	-0.256	0.044	-5.774	0.000***
ICS*Total Assets	0.122	0.095	1.287	0.212
R ²	= 0.75			
Adjusted R ²	= 0.72			
D.W. Statistics	= 1.93			

Source: Author's Computation (2022)

The table shown above reveals that the interaction of internal control with performing loan and gross loan have significant effect on total profitability for Access bank. A percentage increase in the interactive effect of internal control and performing loan as well as a percentage increase in the interactive effect of internal control and gross loan will reduce total profits by 0.03 and 0.25 units respectively. Other variables remain insignificant.

4.3 Discussion of Findings

The finding of this study revealed that asset quality has an impact on the return of asset of DMBs in Nigeria. This means that changes in asset quality will affect return on asset. Conceptually, the result is consistent with the asset quality concept, which states that both asset quality have an impact on financial performance and the soundness of the banking system. It is also consistent with the concept of return on asset, which states that the bank's ability to efficiently utilize its assets affects its profitability.

The result is in agreement with the study whose results on the effect of asset quality on the profitability of the banks in Turkey showed that there is a significant relationship between asset quality and return on asset¹. The study on the determinants of Asian banks' profitability with focus on the role of poor asset quality in Asian agreed with the result. The result of the study showed that poor asset quality has significant and negative relation with return on asset. This means that an increase in poor asset quality in form of non-performing loan reduce the profitability which will automatically lead to decrease return on asset while an improvement in the asset quality in the form of reducing and recovery of non performing will increase the return on asset (Profitability)⁴. The study on bank specific factors affecting non-performing loans in developing countries agreed with the above result. The result revealed that asset quality which was represented by non performing has significant and negative effect on return on asset. it suggested that the more profit bank get, the less likely the bank would have non-performing loans (asset quality)⁵.

The findings in the study on the investigation to determine whether assets quality and capital have effect on credit risk and profitability in both conventional and Islamic banks in Indonesia corroborates the above result. The study revealed that asset quality has a positive and significant

effect on return on asset. An increase in asset quality will affect the profitability of the bank thereby increase return on asset ⁶. Another study that examined the relationship between asset quality and performance of deposit money banks in Nigeria agreed with above result. The study revealed that asset quality in both short run and long run has significant relationship with return on asset. The findings showed that the effect of asset quality on the return on asset is not limited to short period , it also affect the long period of the banks in term of return on asset (profitability)⁷.

The study on reexamined the impact of credit risk on the profitability in Ghana also aligned with the result. The finding revealed that asset quality have a negative effect on the return on asset⁸. The study on the effect of specific factors on bank profitability supported the above result that asset quality has significant effect on return on asset⁹. The above findings aligned with the study on the impact of non-performing assets on financial performance of scheduled commercial banks operating in India. The result revealed that asset quality has significant effect on the return on asset. The increase in non-performing assets which represented asset quality led to the reduction in return of asset and the reduction of non-performing asset will led to increase in return on asset ¹⁰. Another study on the factors that determine the profitability of commercial banks in Kosovo aligned with the above finding. The result showed that asset quality which was represented by non performing loans has significant negative effect on the return on asset (Profitability). That is , an increase in non performing will reduce the return on asset (profitability) and the less value of the non performing loans, the more return on asset (profitability) that bank would have¹¹. Another study on the effect of bank specific factors on asset quality of listed deposit banks in Nigeria aligned with the result that asset quality has significant effect on the return of asset. It showed that asset quality has negative and significant effect on return on asset. The more of asset

quality that was represented by non performing the lower the return on asset while an improvement in asset quality in form of reduction and recovery will lead to increase in return of asset (profitability) ¹².

The study on analyzed capital adequacy, asset quality, management efficiency, earning quality and Liquidity (CAMEL) in relation to bank performance corroborates above result. The study revealed that asset quality has significant and negative effect on the return on asset¹³. Another author refutes the above result in research paper on the examination on impact of bank internal factors on profitability of commercial banks in Sri Lanka. The study revealed that asset quality has no significant impact on the return of asset. It means no matter the improvement or increase in the asset quality, the position of return on asset will not change ². Another study on bank soundness and sustainability from Middle East, Indian sub continents and African Banks also disagreed with the result. The finding showed that asset quality does not have significant relationship with return on asset but it was found that any increase in the variable may have some negative effect on return on asset in the long run. The return on asset will not be affected by asset quality but in the long run or future, the increase in non-performing which represent asset quality may likely reduce the return on asset (profitability)³.

Theoretically, the finding is consistent with liability management theory which states efficient balancing between asset and liabilities will have an impact on the bank's profitability.

Furthermore, the result showed that; there is a significantly positive functional relationship between gross loan and return on asset (profitability) of the deposit money banks at 1 percent significance level. This means that a percentage increase in gross loan will increase return on assets (profitability) by 17.370 units given that gross loan is expressed in the logarithmic form. This aligns with the study on determinants of commercial banks profitability through analysis of

financial performance indicators and the effect of credit risk management on financial performance of the Jordanian commercial banks who found that Gross loans has positive effects on the return on assets (financial performance) of firms^{14,15}; Performing loan on the other hand is seen to exert a negative influence on financial performance as measured by return on assets with a percentage increase in performing loans reducing return on assets by 15.507 units. This is in line with the study on Impact of non-performing loans on financial performance despite the improvement in asset quality the loan still had a negative influence on the financial performance¹⁶; Deposits, capital adequacy and total assets are seen not to have significant effects on financial profitability of the banks as measured by ROA. This corroborates findings in the study of effect of CAR and NPL on ROA who observed an insignificant influence of capital adequacy on ROA for banks in Indonesia and also study on the impact of financial variables on firm profitability who recorded an insignificant relationship between total assets and total deposits for Oman banks^{17,18}.

The study can conclude that asset quality has an impact on return on asset (profitability) based on conceptual relevance, empirical support, and theoretical relevance as stated above.

The finding from the second objective revealed that asset quality has effect on the return on equity. This implies that changes in asset quality will have effect on return on equity. Conceptually, The outcome is consistent with the asset quality concept, which states that asset quality have an impact on financial performance and the soundness of the banking system. It is also consistent with the concept of return on equity, which states that the bank's ability to efficiently utilize shareholders' equity affects its profitability.

The finding of this study support liability management theory which states efficient balancing between asset and liabilities will have an affect the profit of the bank.

The result aligned with study on the analysis and comparison of the impact of Capital adequacy, Asset quality, Management Quality, Earning ability and Liquidity (CAMEL) . The result revealed that asset quality has a negative and significant effect on return on equity. It means an increase asset quality by 1% will reduce return on equity by 1%¹⁹. Another study on the impact of determinant factors of profitability of banks on the financial performance of commercial banks in Kosovo aligned with the result. The result showed that asset quality has significant and positive effect on the return on equity²⁰. Another study on relationship between Risk Management and Profitability of commercial Banks in Albania also agreed with the result. The finding revealed that asset quality has a negative and significant effect on the return on equity. This is a confirmation that the asset quality in form of unprofitable loan (non performing loans) will reduce the return on equity, the higher the non performing loans the lower the return on equity will become²¹.

This study on Non-performing asset and its effect on profitability of Nepalese Commercial banks shared the same position with the result. The result revealed that asset quality (non performing loans) has significant and negative effect on return on equity²². This is in agreement with the study on impact of non-performing loans on asset quality and lending behaviours of banks in Oman. The result revealed that there is a significant relationship between asset quality and return on equity²³.

Another study on bank specific determinants of EU banks profitability after 2007 financial crisis agreed with the result. The result revealed that asset quality represented by non performing loans has significant effect on the return on equity (profitability)²⁴. Another study on the effect of non performing loan on profitability of commercial banks in Nepal aligned with the result. The result

showed that asset quality has significant and negative effect of return on equity. The effect of asset quality in form of non performing loans has a very strong impact on return on equity²⁵. Another finding on effect of credit risk on performance of banks in Nigeria from 2005- 2016 corroborates the result. The finding revealed that asset quality has significant and negative effect on return on equity. This means, the more of non performing in form of asset quality , the less the return on equity(profitability) of bank²⁶.

Study on the effect of credit risk on financial performance of commercial banks in Kenya disagreed with the result. The result revealed that asset quality (non performing loans) had non significant effect on the return on equity²⁷. Study on the impact of the COVID-19 pandemic on banking sector profitability in Uganda agreed with the result. The result revealed that asset quality (non performing loan) in the short run have a significant and negative effect on return on equity while there will be no effect in the long run. An increase in the non performing loan (asset quality) due to bad loans will reduce return on equity in short run as a result of rising in provisioning and fall in interest on loans²⁸.

Another study on Critical evaluation of profitability of State Bank of India (SBI) and its associates in India in relation to Non performing asset (NPA) also disagreed with the result. The result showed that asset quality do not have significant effect on the return on equity²⁹ . Study on the determinants of financial performance of Private Commercial Banks in Ethiopia disagreed with the result. The finding stated that asset quality has insignificant effect on return on equity. The effect of asset quality have little or no impact on the return on equity, there are other variables apart from asset quality that affect return on equity³⁰.The study on the impact of determinants of profitability on the commercial banks of Bangladesh disagreed with the result.

The finding revealed that asset quality (non performing loan) has no significant effect on return on equity but has positive relationship with return on equity ³¹.

In addition, the result showed that there is a positive and significant relationship between gross loan and return on equity as a percentage increase in gross loan is seen to increase return on equity by 129 units. This result corroborated with study on impact of non-performing loans on performance selected commercial banks in Nigeria. The result showed that loans has positive effect on return on equity³². Another study on the effect of Capital Adequacy Ratio (CAR), Operational Cost per Operational Revenue [Biaya Operasional Per Pendapatan Operasional (BOPO)], Non Performing Loan (NPL), and Loan to Deposit Ratio (LDR) on Return On Asset (ROA) and Return On Equity (ROE) also corroborates the result ³³; Conversely, there is a negative relationship between performing loans and return on assets as a percentage increase in performing loans will reduce ROE by 131 units; Deposits, capital adequacy and total assets are seen not to have significant effects on financial profitability of the banks as measured by ROE.

The study can conclude that asset quality has effect on return on equity based on the conceptual relevance, empirical support, and theoretical relevance discussed above.

The finding from the third objective showed that asset quality has no effect on return on capital employed of the DMBs in Nigeria. This means that changes in asset quality will not have effect on effect on the return on capital employed. Conceptually, the result is consistent with the concept of return on capital employed, which states that the bank's inability to efficiently utilize capital employed, which includes shareholders' equity and long-term debt, will affect the bank's profitability. Theoretically, the result is consistent with liabilities management theory which state that inefficient matching of asset and liabilities will affect performance of bank.

The result aligned with study on the influence of financial distress on financial performance for commercial banks in Kenya . The result revealed that asset quality has no effect on the return on capital employed³⁶ . This is contrary to study on the effect of liquidity management on the performance of banks in Nigeria. The result showed that asset quality has positive and significant effect on return on capital employed. This indicates that banks with proper liquidity will increase their return on capital employed over time³⁴. Another study on the effect of capital adequacy on the financial performance of Deposit money banks quoted in Nigeria agreed with result. The result showed that asset quality have significant effect on the return on capital employed of deposit money banks in Nigeria³⁵.

The study on the effect of liquidity on financial performance of deposit money banks in Nigeria aligned with the result. The result showed that asset quality has positive and significant effect on Return on Capital Employed. This show that efficient liquidity management can significantly influence returns on capital employed by a bank and as well impact positively on the profitability of bank and ensure its stability¹²⁸.

Furthermore, the result showed that all variables employed in measuring asset quality; gross loan, performing loan, deposits, capital adequacy and total assets do not have effect on return on capital employed (ROCE). It means the increase or decrease in gross loan, performing loan, deposits, capital adequacy and total assets will not affect the position of the return on capital employed.

Based on the conceptual relevance, empirical support, and theoretical relevance discussed above, the study concludes that asset quality has no significant impact on return on capital employed.

The finding from fourth objective revealed that Internal control system has no moderating effect on the interaction between assets quality and profitability of DMBs in Nigeria. That means ,

internal control system does not affect the relationship between assets quality and profitability of DMBs in Nigeria. Conceptually, the result is consistent with the concept of internal control system, which states that an ineffective internal control system will affect organizational objectives as well as the bank's profitability, and also with the concept of asset quality, which states that asset quality have an impact on financial performance and the soundness of the banking system. It is also consistent with the concept of profitability, which states that the profit of organization does not depend on one factor but other factors within and outside the business. Theoretically, the result aligned with the critics of the liability management theory that said the implementation of theory will require effective coordination across the departments may be very challenging and tasking based on the uniqueness of each department.

The result partially agree with study on the impact of internal control on the profitability of Microfinance institutions in Senegal agreed with the result. The finding showed that there is positive relationship between internal control system and profitability but is not significant³⁹. Study on effect of internal control system on the performance of commercial banks in Nigeria disagreed with the result. The finding stated that there is significant and positive relationship between the components of internal control and profitability (performance)³⁷. Another study on the effect of internal control on organization performance in reference to Moha soft drinks companies also disagreed with the result. The finding revealed that internal control system has a positive and significant on the profitability of organization¹³¹. A study on the effects of the internal control system on the risk, profitability, and compliance of the banking sector aligned with the disagreement. The finding revealed that internal control system have a significant and positive effect on profitability of banks³⁸.

Furthermore, there is significant and positive relationship between interaction of internal control with total assets and capital adequacy at 10 percent significance level. A percentage increase in the interactive effect of internal control with total assets will increase total 25.1 units. Similarly, a percentage increase in the interactive effect of capital adequacy will increase total profitability by 1.365 units; The interaction of internal control with other variables employed in measuring asset quality; gross loan, performing loan, deposit do not have influence on total profitability. Based on the conceptual relevance, empirical support, and theoretical relevance discussed above, the study concludes that internal control systems have no moderating effect on the interaction between asset quality and profitability of Nigerian DMBs.

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Chapter Five

Conclusion

5.1 Summary of Findings

From the analysis in chapter four, the following findings were derived and these include; Asset quality has impact on Return on Asset of DMBs in Nigeria. Gross loans have positive and significant effect on Return on Asset of DMBs in Nigeria .Performing loans have negative and significant effect on Return on Asset of DMBs in Nigeria. Deposits have no significant effect on Return on Asset of DMBs in Nigeria. Capital Adequacy have no significant effect on Return on Asset of DMBs in Nigeria. Total assets have no significant effect on Return on Asset of DMBs in Nigeria.

Asset quality have effect on Return on Equity of DMBs in Nigeria. Gross Loans have positive and significant effect on Return on Equity of DMBs in Nigeria. Performing loans have negative

and significant effect on Return on Equity of DMBs in Nigeria. Deposit have no effect on Return on Equity of DMBs in Nigeria. Capital Adequacy have no effect on Return on Equity of DMBs in Nigeria. Total Assets have no effect on Return on Equity of DMBs in Nigeria.

Asset quality have no effect on Return on capital employed of DMBs in Nigeria. Gross loans have no effect on Return on Capital Employed of DMBs in Nigeria. Performing loans have no effect on Return on Capital Employed of DMBs in Nigeria. Deposits have no effect on Return on Capital Employed of DMBs in Nigeria. Capital adequacy have no effect on Return on Capital Employed of DMBs in Nigeria. Total assets have no effect on Return on Capital Employed (ROCE) of DMBs in Nigeria

Internal control system has no moderating effect on the interaction between assets quality and profitability of DMBs in Nigeria .The interaction of internal control with total assets have a positive and significant influence on total profitability. The interaction of internal control with Capital adequacy have a positive and significant influence on total profitability. The interaction of internal control with gross loans do not have significant influence on total profitability. The interaction of internal control with performing loans do not have significant influence on total profitability. The interaction of internal control with deposits do not have significant influence on total profitability

5.2 Conclusion

Overall the study intended to; examine the impact of asset quality on return on asset of DMBs in Nigeria; assessing the effect of asset quality on return of equity of DMBs in Nigeria; investigate the effect of asset quality on return on capital employed of DMBs in Nigeria; determine the

moderating effect of internal control system on the interaction between asset quality and profitability of DMBs in Nigeria.

On the basis of findings, the study concluded that asset quality has effect on; the return of asset; return on equity. Asset quality has no effect on return on capital employed of DMBs in Nigeria. And there is no moderating effect of internal control system on the interaction between asset quality and profitability of DMBs in Nigeria.

5.3 Recommendations

Based on the findings of the study, the following recommendations are to be considered and implemented

- 1) Deposit, Capital adequacy and Total assets were found to have no significant effect on return on asset.
 - a. The bank should review and re-strategise their policy on deposit mobilization which will focus more on aggressive deposit mobilization with preference for cheap deposits (savings, Time). The strategies should also come up with innovative products and relevant technologies that will minimize the impact of competition in the area of deposit from Payment Service banks(PSBs). This new initiative will assist bank to have more funds to give out as loans which will generate additional income as interest on loans and also generate pool income as a result of cheap deposit that will be mobilized.
 - b. On the issue of capital adequacy, the bank should raise additional capital through sales of shares. This will make bank to give out additional loans to customers which will generate income and increase performance of bank. On

issue of Total assets, the bank should review their total assets to see if there are assets that are dormant, where it is necessary, the unused / dormant and other assets that are not yielding income should be sold or modified to bring in income.

- c. On issue of performing loans, credit policy on granting, monitoring and recovery of loans should be reviewed regularly in order to prevent performing loans from turning to non-performing.

2) Deposit, Capital adequacy, Total assets were found to have no significant effect on return on equity.

- a. The bank should deploy effective marketing strategies that will enable them to mobilize cheap deposits especially savings and time deposits and counter the surge of competitors especially Payment Service Banks (PSBs) that will enable them to maintain their existing customers and attract new customers . This will affect the profitability of bank and increase their marketing share. Regulatory should also review downward the cash reserve ratio of banks in Nigeria. The will make deposit available for the banks to give out as loans that will earn income and also improve capital adequacy ratio. Bank should also minimize or eliminates charges (maintenance fees, stamp duty charges on transfers and other hidden charges) that discourages people from bringing their money to banks.

- b. On the issue of capital adequacy, the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also

increase ROE. Bank should restructure their capital structure that will yield positive result, it may be in term of equity versus debt. This will assist bank to maintain healthy capital base and have a positive effect on return on equity.

- c. On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset Management Company that can manage the assets for profit, or give them out to asset management companies.
- d. On the issue of performing loan, credit policy on granting, monitoring and recovery of loans should be reviewed regularly in order to prevent performing loans from turning to non-performing.

3) All the sub variables (Gross Loans, Performing loans, deposit, Capital adequacy and Total assets) do not have effect on return on capital employed. The bank should implement policy(es) that will provide effective coordination and synergy among the various departments(Marketing, Risk Management, Personal Banking & Operations, Treasury) that are responsible for each sub variable. This should be done at board level.

4) Bank should embark on comprehensive review of internal control system on Gross loans, Performing loans and Deposits. Review on internal control system on Gross loans should start from the initiation, authorization, disbursement, monitoring , recovery. The review of internal control system on performing loans should cover authorization, monitoring, recognition of income and recovery. Review of internal control system on deposit must cover the types of deposits, treatment of deposits,

duration and authorization of payment. The interaction of internal control system with total assets and capital adequacy should be enhanced through regular review of internal controls system that guide their operations.

Firm Specific

UBA

Effect of Asset Quality on ROA for UBA

The bank should put more efforts on Performing loans and deposits as well as Gross loan.

- a) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due.
- b) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of Payment Services Banks (PSBs) on their existing and potential marketing share.
- c) On the Gross loan, the banks should review their existing to check if there are under pricing loans that can be repriced to the current economy reality and the policy on

initiation, authorization, monitoring should be review to reflect current economy reality.

Effect of Asset Quality on ROE for UBA

The management of the bank should work more on Gross loan, Performing loan , and deposits.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.
- b) Management should also review the entire portfolio of performing loans to check whether the loans are classified appropriately in term of types, duration , pricing and performance.
- c) The strategies on deposits should be review in line with current situation. The bank should deploy innovative products that will cut across demographics especially youths considering the percentage of youths in Nigeria. The bank should also deployed appropriate technologies that will enable the bank to compete favourably

especially in the area of online banking and curtail the impact of competitors especially the Payment Service Banks (PSBs).

Effect of Asset Quality on ROCE for UBA

For the bank to improve their return on capital employed, the bank will need to work on gross loans and Performing loans.

- a) The bank should review the entire portfolio of loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.
- b) Management should also review the entire portfolio of performing loans to check whether the loans are classified appropriately in term of types, duration , pricing and performance

Effect of Interaction of Internal Control System on Asset quality and Profitability for UBA

The bank should improve interaction of internal control system with Performing loans, Deposit, Gross loans as well as total assets.

- a) Internal control system on Performing loan should be review especially on the area of initiation, authorization, disbursement , monitoring, Pricing.
- b) Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.

- c) Internal control system on gross loan should be reviewed especially areas of pricing , recognition of incomes and categorization of non performing loans to discover whether incomes are recognized appropriately.

Union Bank

Effect of Asset Quality on ROA for Union

The bank should improve on their Performing loans, total assets as well as Deposit.

- a) The bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery.
- b) On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.
- c) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of Payment Services Banks (PSBs) on their existing and potential marketing share.

Effect of Asset Quality on ROE for Union Bank

The bank should improve on Deposit, Capital Adequacy, Total assets as well as Performing loans.

- a) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share.
- b) On the issue of capital adequacy, the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROE.
- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.
- d) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality

and also make sure that appropriate incomes are recognized as at well due.
This will increase profitability of the bank.

Effect of Asset Quality on ROCE for Union Bank

The bank should on Deposit, Capital adequacy, total assets as well as Gross Loan .

- a) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share.
- b) On the issue of capital adequacy, the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROCE.
- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.
- d) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non

performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery

Effect of Interaction of Internal Control System on Asset quality and Profitability for Union Bank

The bank should improve interaction of internal control system with Deposit, Total assets, Capital adequacy and performing loans.

- a) Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.
- b) Internal control system on the total assets should be reviewed especially on the area of recognition of performing asset and non performing asset and also cover area of recognition of assets that are owned by the banks, under lease or safe keeping.
- c) Internal control system on capital adequacy should be reviewed on the areas of equity, preference shareholders and reserves of the bank in line with the total assets.
- d) Internal control system on Performing loan should be reviewed especially on the area of initiation, authorization, disbursement , monitoring, Pricing as to determine the loans that are performing and non performing and to discover if the appropriate incomes are recognized.

Wema Bank

Effect of Asset Quality on ROA for Wema Bank

The bank should improve on Deposit, Capital adequacy, total assets as well as Performing loans.

- a) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share.
- b) On the issue of capital adequacy, the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROA.
- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing. In case of non-performing assets, the banks should sell them, or lease them or

rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

- d) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.

Effect of Asset Quality on ROE for Wema Bank

The bank should improve on Deposit, Capital adequacy, Total assets as well as Performing loan.

- a) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share.
- b) On the issue of capital adequacy, the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROE.
- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing.

In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

- d) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.

Effect of Asset Quality on ROCE for Wema Bank

The bank should improve on Gross loan , Performing loan, Total assets as well as Deposit.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.
- b) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.

- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets that are performing and assets that are not performing. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.
- d) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share.

Effect of Interaction of Internal Control System on Asset quality and Profitability for Wema Bank

The bank should improve interaction of internal control system with Performing loan, Deposit, Total assets, and Gross loan.

DO NOT

- a) Internal control system on Performing loan should be reviewed especially on the area of initiation, authorization, disbursement , monitoring, Pricing as to determine the loans that are performing and non performing and to discover if the appropriate incomes are recognized. Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.
- b) Internal control system on the total assets should be reviewed especially on the area of recognition of performing asset and non performing asset and also cover

area of recognition of assets that are owned by the banks, under lease or safe keeping.

- c) Internal control system on gross loan should be reviewed especially areas of pricing , recognition of incomes and categorization of non performing loans to discover whether incomes are recognized appropriately.

Sterling Bank

Effect of Asset Quality on ROA for Sterling Bank

The bank should improve on Deposit, Capital adequacy, total assets as well as Performing loans.

- a) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .
- b) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROA.

- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.
- d) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.

Effect of Asset Quality on ROE for Sterling Bank

The bank should improve on Performing loan, Capital adequacy as well as Gross Loans.

- a) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.
- b) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROE.

- c) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.

Effect of Asset Quality on ROCE for Sterling Bank

The bank should improve on Gross loan , Performing loan, Capital adequacy as well as Total assets.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.
- b) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.
- c) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise

additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROCE.

- d) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

Effect of Interaction of Internal Control System on Asset quality and Profitability for Sterling Bank

The bank should improve interaction of internal control system with Performing loan, Deposit, Total assets, Gross loan, Capital adequacy.

- a) Internal control system on Performing loan should be reviewed especially on the area of initiation, authorization, disbursement , monitoring, Pricing as to determine the loans that are performing and non performing and to discover if the appropriate incomes are recognized.
- b) Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.
- c) Internal control system on the total assets should be reviewed especially on the area of recognition of performing asset and non performing asset and also cover area of recognition of assets that are owned by the banks, under lease or safe keeping.

- d) Internal control system on gross loan should be reviewed especially areas of pricing , recognition of incomes and categorization of non performing loans to discover whether incomes are recognized appropriately.
- e) Internal control system on capital adequacy should be reviewed on the areas of equity, preference shareholders and reserves of the bank in line with the total assets.

Fidelity Bank

Effect of Asset Quality on ROA for Fidelity Bank

The bank should improve on Deposit, Capital adequacy, total assets as well as Gross loan.

- a) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .
- b) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROA.

- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.
- d) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery

Effect of Asset Quality on ROE for Fidelity Bank

The bank should improve on Performing loan, Capital adequacy as well as Total asset.

- a) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.
- b) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This

will provide extra capital that bank will give out to their customers as loans and also increase ROE.

- c) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

Effect of Asset Quality on ROCE for Fidelity Bank

The bank should improve on Gross loan , Performing loan, Deposit as well as Total assets.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.
- b) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.

- c) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank
- d) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

Effect of Interaction of Internal Control System on Asset quality and Profitability for Fidelity Bank

The bank should improve interaction of internal control system with Performing loan, Deposit, Total assets, and Gross loan,

- a) Internal control system on Performing loan should be reviewed especially on the area of initiation, authorization, disbursement , monitoring, Pricing as to determine the loans that are performing and non performing and to discover if the appropriate incomes are recognized
- b) Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.

- c) Internal control system on the total assets should be reviewed especially on the area of recognition of performing asset and non performing asset and also cover area of recognition of assets that are owned by the banks, under lease or safe keeping.
- d) Internal control system on gross loan should be reviewed especially areas of pricing , recognition of incomes and categorization of non performing loans to discover whether incomes are recognized appropriately.

Unity Bank

Effect of Asset Quality on ROA for Unity Bank

The bank should improve on Gross Loan, Deposit, and Capital adequacy.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery
- b) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing

share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .

- c) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROA.

Effect of Asset Quality on ROE for Unity Bank

The bank should improve on Performing loan, Capital adequacy, Deposit as well as Gross Loans.

- a) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.
- b) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROE.

- c) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .
- d) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.

Effect of Asset Quality on ROCE for Unity Bank

The bank should improve on Gross loan , Deposit, Capital adequacy as well as Total assets.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.

- b) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .
- c) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROCE.
- d) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

Effect of Interaction of Internal Control system on Asset quality and Profitability for Unity Bank

The bank should improve interaction of internal control system with Performing loan and Deposit.

- a) Internal control system on Performing loan should be reviewed especially on the area of initiation, authorization, disbursement , monitoring, Pricing as to determine the loans that are performing and non performing and to discover if the appropriate incomes are recognized.
- b) Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.

Access Bank

Effect of Asset Quality on ROA for Access Bank

The bank should improve on Gross Loan, Performing Loan, Capital adequacy as well as total assets.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery
- b) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality

and also make sure that appropriate incomes are recognized as at well due.
This will increase profitability of the bank.

- c) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROA.
- d) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

Effect of Asset Quality on ROE for Access Bank

The bank should improve on Gross Loan, Performing loan, Deposit, Capital adequacy as well as Total assets.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery

- b) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.
- c) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .
- d) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROE.
- e) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies

Effect of asset quality on ROCE for Access Bank

The bank should improve on Gross loan , Performing Loan, Deposit, Capital adequacy as well as Total assets.

- a) The bank should review the entire portfolio of Gross loans of bank to check if loans are classified appropriately, if the loans are priced in line with current economy reality, if there are loans that suppose to have been moved to non performing, if interest on loans are appropriately recognized. The bank should also review the process of initiation, authorization, disbursement , monitoring, Pricing, and recovery.
- b) Bank should review policy on performing loan especially in the area of initiation, authorization, monitoring, Pricing, and recovery. This will enable the bank to price the loans appropriately in line with current economy reality and also make sure that appropriate incomes are recognized as at well due. This will increase profitability of the bank.
- c) The bank should review their strategies on deposit mobilization especially in the area of attracting cheap deposits (saving and time) and should also offer innovative products and appropriate technology that will attract more customers and counter and minimize the effect of competitors especially Payment Services Banks (PSBs) on their existing and potential marketing share. The bank should also minimize/ costs (maintenance cost, stamp duty charges) that discourage customers from bringing their deposits to bank .
- d) On the issue of capital adequacy, the bank should restructure their capital portfolio especially in the area of equity, short and long term debt. This will

enable them to have a healthy capital base and if possible the bank should raise additional capital either through retained earnings or issue of fresh equity. This will provide extra capital that bank will give out to their customers as loans and also increase ROCE.

- e) On the issue of total assets, the bank should take inventories of the total assets to determine the assets both performing and non performing assets. In case of non-performing assets, the banks should sell them, or lease them or rent them out or form asset management Company that can manage the assets for profit, or give them out to asset management companies.

Effect of Interaction of Internal Control System on Asset Quality and Profitability for Access Bank

The bank should improve interaction of internal control system with Capital adequacy, Performing loan, Deposit, Gross loan, and Total assets.

- a) Internal control system on capital adequacy should be reviewed on the areas of equity, preference shareholders and reserves of the bank in line with the total assets.
- b) Internal control system on Performing loan should be reviewed especially on the area of initiation, authorization, disbursement , monitoring, Pricing as to determine the loans that are performing and non performing and to discover if the appropriate incomes are recognized.
- c) Internal control system on deposit should also be review in the area of opening of accounts, lodgments of deposits, pricing.

- d) Internal control system on gross loan should be reviewed especially areas of pricing , recognition of incomes and categorization of non performing loans to discover whether incomes are recognized appropriately.
- e) Internal control system on the total assets should be reviewed especially on the area of recognition of performing asset and non performing asset and also cover area of recognition of assets that are owned by the banks, under lease or safe keeping.

5.4 Contribution to Knowledge

The study has contributed to knowledge in conceptual term by adding new definitions to the existing concept. For instance, on the concept of asset quality, it was defined as “Asset quality is a measure of how well a loan or asset is performing. Asset quality is a measurement of the level and size of credit risk that may prevent loan from yielding the greatest benefit to the organization”. On the concept of Gross loans and advances, it was defined as “Gross loans and advances are loans and advances to customers, finance lease receivables and cash, cash equivalent. It comprises of overdrafts, term loans, project finance, advance under finance leases, credit cards, mortgage. It is a gross loans which comprises of performing, impairment and non performing”. On the concept of Performing loans and advances, it was defined as “Performing loans and advances are those facilities in which borrowers repay agreed-upon installments and interest as soon as they become due, with no outstanding obligations “. on the concept of Deposit, it was defined as “It is a money pay into bank by customer or transfer to the account of the customer for safekeeping with the intention to collect it at a later date or agreed date to fulfill customer’s desire “. Also conceptual model of this study which was done by the researcher also contributed to knowledge.

Empirically, this study contributes to the existing empirical literatures by reporting the significant effect of asset quality on the performance of the Deposit money banks and the moderating effect of internal control system on the interaction between asset quality and profitability of DMBs in Nigeria.

Theoretically, Commercial loan theory and liability management theory were the major theories used in this study. According to the Commercial loan theory states that commercial banks should give out productive loans to business organization. This will ensure appropriate liquidity and income for the commercial banks. This study gave an additional application of this theory to the effect of asset quality on the performance of Deposit commercial banks. The second theory of liability management states that the banks maintain a balance between the maturities of their assets and their liabilities in order to maintain liquidity and to facilitate lending while also generating profit as well as maintaining healthy balance sheets. This theory shows that the effectiveness of the underline assumption can only be successful by institute appropriate internal control system. This study gave additional application of this study on moderating effect of internal control system on the interaction between asset quality and profitability of DMBs in Nigeria.

The selected banks for this study were subjected to performance test in order to determine if actually their profit was declining. The performance test carried out on those banks were return on asset, return on equity and return on capital employed. Also a moderating variable of internal control system was introduced to the study. Also the analysis, results and discussions of this study covered both the aggregate of the selected banks and individual bank. These processes were not followed by previous studies.

5.5 Suggested Areas for Further Research

To overcome the limitation of the study, the researcher suggests that there is a need for further investigation as follows;

1. The present study examined the Asset quality, Internal Control System and Profitability of Deposit Money banks in Nigeria; however, the scope might limit the findings of this study. The future should study phenomenon by considering Non Interest Banks. The scope could be expanded by including Micro Finance banks and Payment service Banks.
2. The research make use of secondary data. Future studies perhaps may employ a mixed research to provide a more detailed result on the effect of asset quality on profitability as well as effect of internal control system with interaction of asset quality and profitability of DMBs.

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APPENDIX

1. Return on Asset for banks from 2010 to 2020

YEAR	FIRST	UNION	UBA	ZENITH	ACCESS	GTB	FIDELITY	WEMA	UNITY	STERLING	STANBIC	CBN
2010	1.38	13.96	0.15	1.86	1.78	3.42	1.22	7.99	4.05	1.61	1.89	4.13
2011	1.93	-9.87	0.99	1.90	1.44	3.15	0.81	-3.65	0.65	1.33	0.75	0.25
2012	2.57	0.36	2.45	3.93	2.40	5.26	1.96	-2.00	1.56	1.20		2.41
2013	1.83	0.58	2.10	2.90	1.54	4.49	0.71	0.48	-5.59	1.17	1.40	2.25
2014	2.27	2.35	1.71	2.70	2.02	4.19	1.16	0.62	2.59	1.09	2.41	2.47
2015	0.00	1.78	2.15	2.63	2.44	4.14	1.13	0.65	1.06	1.29	0.69	2.50
2016	1.41	1.41	1.87	2.78	2.07	4.85	0.75	0.62	0.44	0.62	1.51	1.27
2017	3.44	0.96	1.45	3.25	1.52	5.71	1.37	0.60	-9.53	0.79	2.11	2.38
2018	3.46	1.39	1.14	3.34	1.85	6.15	1.33	0.70	-3.65	0.87	3.12	1.99
2019	5.02	1.42	1.52	3.28	1.17	5.65	1.34	0.74	1.15	0.87	2.92	2.48
2020	11.26	1.19	1.09	2.78	1.05	4.39	0.97	0.47	0.42	0.87	2.51	2.17

Source: Author's Compilation 2022

2. Average Return on Asset for Banks

BANK	FIRST	UNION	UBA	ZENITH	ACCESS	GTB	FIDELITY	WEMA	UNITY	STERLING	STANBIC	CBN
AVERAGE ROA	3.142	1.4127	1.331	2.850725	1.7525	4.674	1.15921	0.656	-0.622	1.064279	1.92978	2.21

Source : Author's Compilation 2022

3. Return on Equity for Banks from 2010 to 2020

YEAR	FIRST	UNION	UBA	ZENITH	ACCESS	GTB	FIDELITY	WEMA	UNITY	STERLING	STANBIC	CBN
2010	7.91	86.84	1.15	9.51	7.09	17.80	4.33	109.44	28.12	15.87	8.30	65.40
2011	12.70	-9.87	-9.63	11.10	7.35	20.34	4.37	-120.76	5.47	16.33	10.07	3.79
2012	19.12	1.85	21.50	21.87	15.30	29.76	11.10	-78.56	12.01	16.93		18.94
2013	15.49	2.73	17.91	17.65	10.69	25.95	4.72	3.86	-80.04	13.04	11.53	18.88
2014	18.76	11.06	14.22	18.04	14.57	24.13	7.97	5.42	14.02	10.63	24.93	21.22
2015	0.01	7.68	14.09	18.06	16.35	23.25	7.58	4.69	5.68	10.77	6.51	19.66
2016	10.30	6.32	12.16	19.35	15.18	26.59	5.25	5.34	2.63	6.05	13.71	10.03
2017	3.54	3.99	10.54	22.21	11.34	27.60	9.27	4.63	6.16	0.79	20.42	20.60
2018	3.56	9.21	11.26	24.51	16.70	32.61	11.79	6.59	2.71	9.66	29.30	20.60
2019	5.19	10.54	14.05	22.85	13.55	28.90	12.15	9.41	-1.21	8.52	25.97	26.88
2020	11.80	9.96	11.91	21.86	12.24	25.37	9.74	7.74	-0.01	8.21	24.57	24.85

Source : Author's Compilation 2022

4. Average Return on Equity for Banks

BANK	FIRST	UNION	UBA	ZENITH	ACCESS	GTB	FIDELITY	WEMA	UNITY	STERLING	STANBIC	CBN
AVERAGE ROE	9.85	12.757	10.83	18.82	12.75924	25.7	8.02566	-3.837	-0.41	10.61745	17.53122	22.8

Source : Author's Compilation 2022

5. Return on Capital employed for Banks from 2010 to 2020

YEAR	FIRST	UNION	UBA	ZENITH	ACCESS	GTB	FIDELITY	WEMA	UNITY	STERLING	STANBIC
2010	9.69	-34.91	1.97	12.26	9.68	22.16	6.19	87.38	30.15	14.01	9.47
2011	14.06	-64.04	14.52	15.36	8.62	26.31	6.03	-111.93	6.91	8.45	8.01
2012	22.38	2.00	20.96	21.47	19.39	34.95	13.22	-386.70	12.55	18.26	
2013	21.91	2.24	19.97	19.91	13.20	30.48	5.52	4.70	-119.24	14.67	10.79
2014	19.23	10.08	15.03	21.04	16.83	30.66	8.96	7.07	17.88	12.69	28.60
2015	0.61	7.86	15.00	21.07	18.08	27.87	7.64	6.61	2.84	11.53	4.64
2016	11.02	6.39	14.75	22.70	19.11	32.29	5.97	6.75	2.19	7.02	13.57
2017	8.32	4.10	13.17	24.53	14.28	31.87	9.99	6.15	5.88	8.30	21.30
2018	12.30	9.33	15.18	28.46	17.07	37.24	12.90	9.47	2.66	9.94	30.56
2019	12.64	10.70	15.69	25.68	15.23	33.04	12.97	12.23	-1.31	8.58	2.83
2020	10.94	10.27	12.21	23.20	13.79	29.20	10.26	10.02	-0.81	9.04	24.08

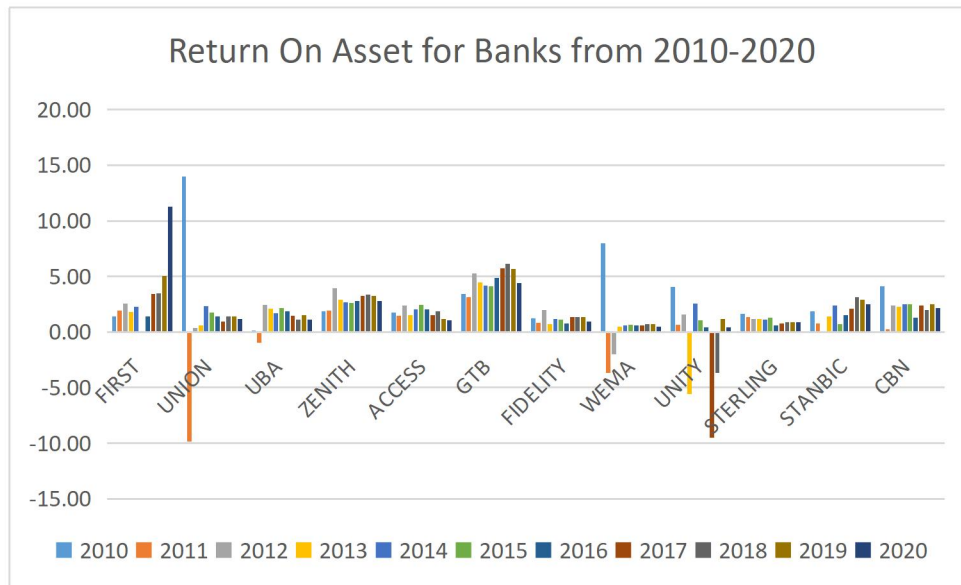
Source: Author's Compilation 2022

6. Average Return on Capital Employed for Banks

BANK	FIRST	UNION	UBA	ZENITH	ACCESS	GTB	FIDELITY	WEMA	UNITY	STERLING	STANBIC
AVERAGE ROCE	13.01	-3.27	11.8	21.425	15.025	30.552	9.0594	-31.66	-3.66	11.13497	15.3858

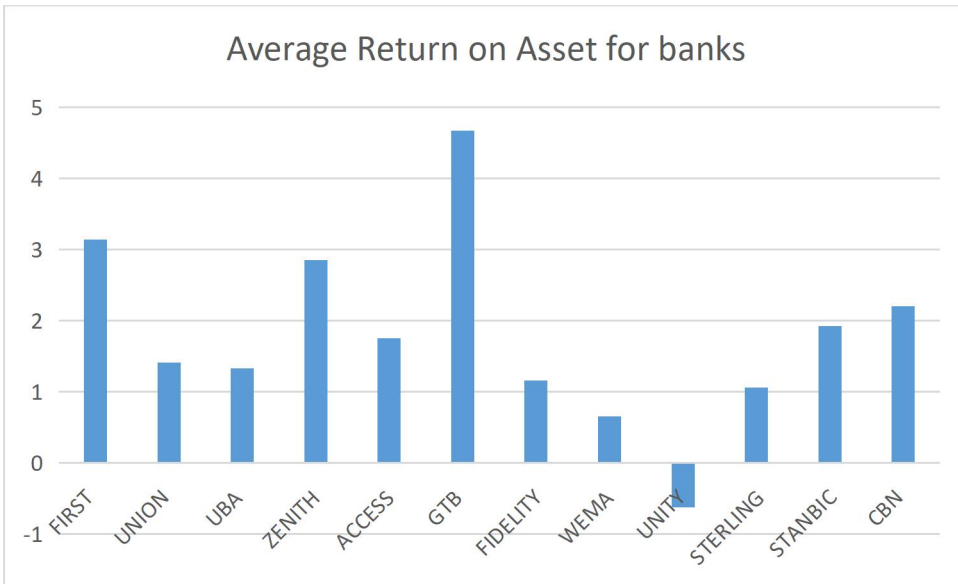
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7. Return on Asset for Banks from 2010 – 2020



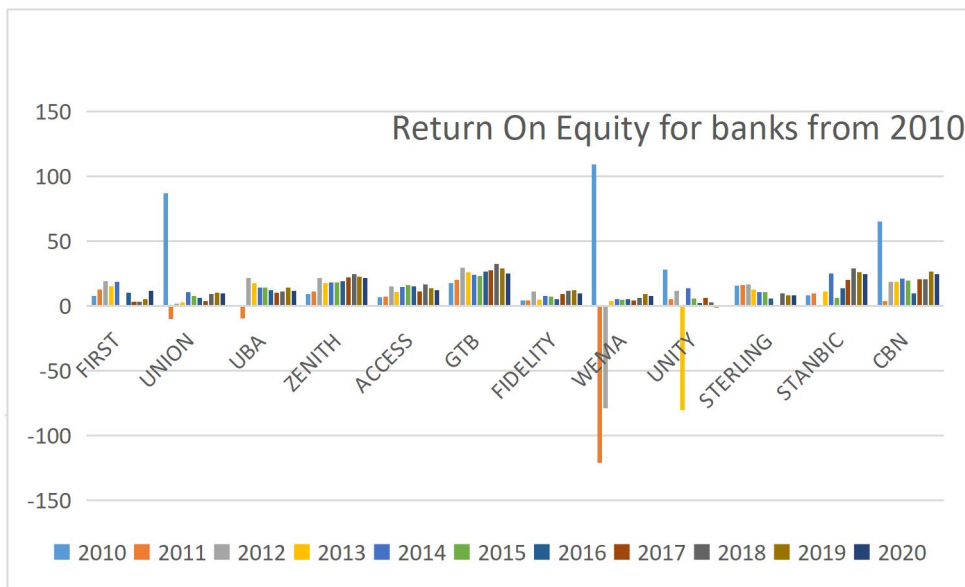
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8. Average return on Asset for Banks



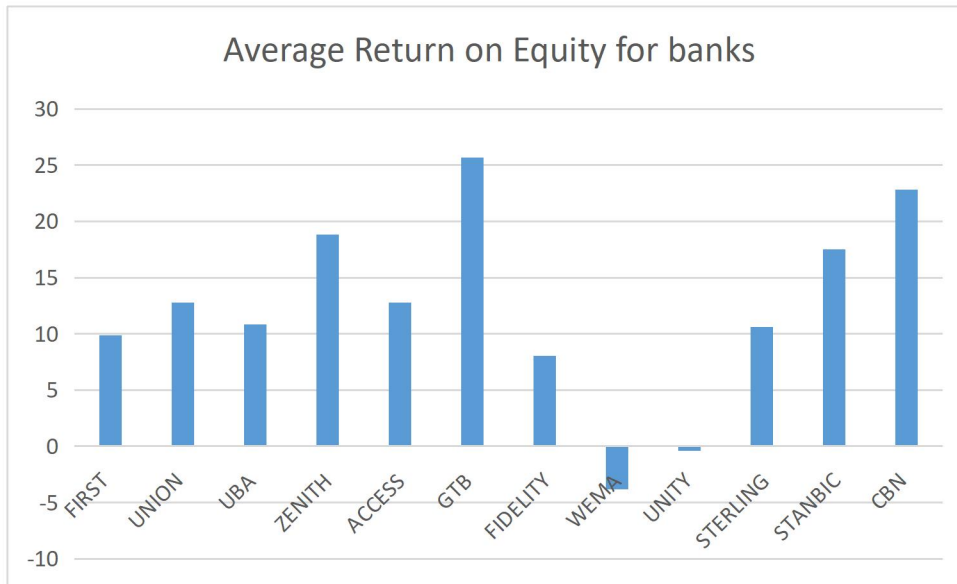
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9. Return on Equity for Banks from 2010 - 2020



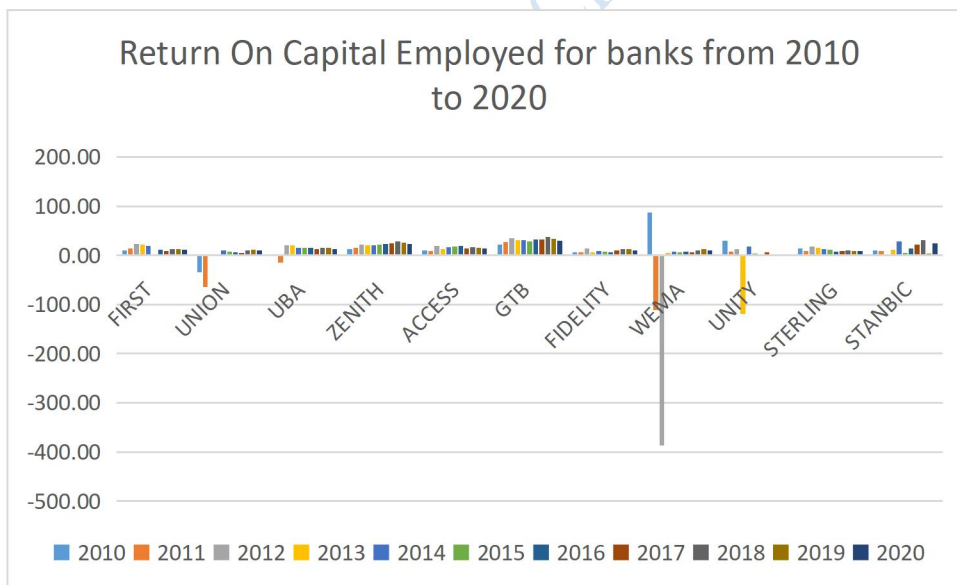
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10. Average Return on Equity for Banks



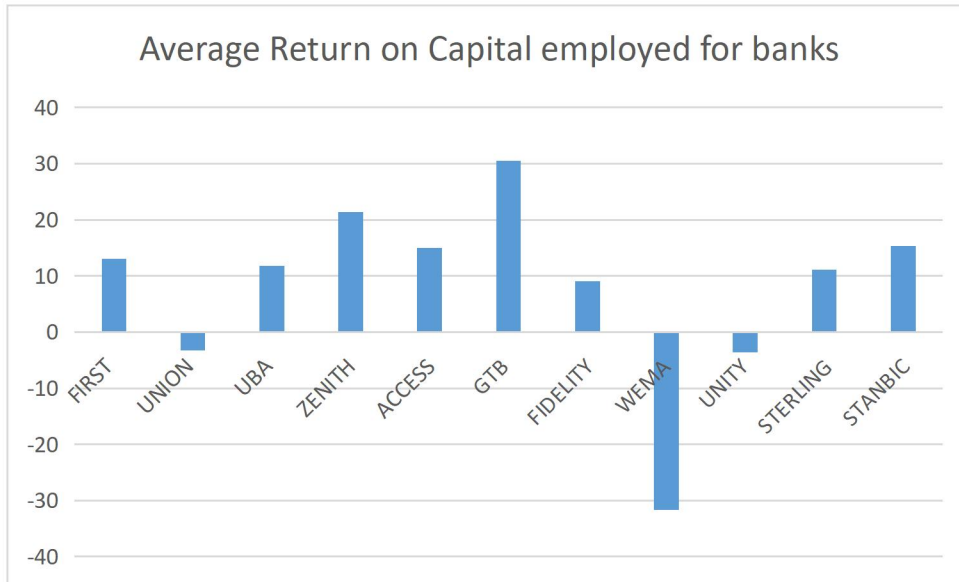
Source : Author's Compilation 2022

11. Return on Capital Employed for Banks from 2010 – 2020



Source : Author's Compilation 2022

12. Average Return on Capital Employed for banks from 2010 - 2020



Source : Author's Compilation 2022

Bio –Data

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Signature

Date

University Compliance Certificate

This is to certify this thesis by Olayinka Abraham Oluseyi with matric number **LCU/PG/001379** in the department of Management and Accounting, Lead City University, Ibadan, is in Full compliance with the approved University format and style.

Signature

Date