



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

Effect of Financial Inclusion on Financial Performance of Microfinance Banks in Nigeria

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Abstract

The purpose of this study was to investigate how financial inclusion affects Nigerian microfinance institutions' financial performance spanning 2012 - 2022. The study specifically looked at the combined effects on return on asset (ROA) of the number of deposit accounts, rural bank branches, and loans and advances. The study used the ex post facto research design. The top ten (10) microfinance banks by capital base were the subject of the study. The Central Bank of Nigeria provided the data. The study used panel regression models, which include both random and fixed factors. The study's findings demonstrated that loans and advances, rural bank branches, and the quantity of deposit accounts all significantly and favorably affect return on assets. The study came to the conclusion that financial inclusion is a viable panacea for improving financial performance of microfinance banks in Nigeria. From the findings and conclusion, the study recommended that Microfinance banks should intensify efforts in getting more people to open accounts through banking outreach and relax stringent requirements for account opening. More bank branches should also be opened especially in the rural areas in order to give financial access to the poor rural dwellers. Microfinance banks should expand their network of branches, helping to bring finance services available and affordable to people, especially in remote and rural areas.

Key words: financial inclusion, Microfinance Banks, Nigeria, Panel Regression, ROA.

Introduction

It is commonly known that financial inclusion, is crucial to reducing poverty, creating jobs, promoting inclusive growth, and enhancing the banking industry's performance. This explains why financial inclusion, is still at the forefront of discussions about international development today. Due to its apparent relevance as a driver of economic growth, financial inclusion has



Taraba State University, Jalingo
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Vol 2 (1), 2025

gained more attention of financial development authorities across the globe. The provision of economic services through a variety of vendors to all members of society who may require them is known as inclusive finance. Specifically, it refers to a financial system that provides services to as many individuals as feasible inside a nation. Financial inclusion is an avenue for conveying financial services at affordable fees to some low-income sectors of the Nigerian economy (Harley, et'al, 2017). According to Aruwa et'al (2023), financial inclusion is a situation in which everybody has access to banking and insurance offerings, accompanied by financial literacy and talents. He stated that poor access to finance by majority of people leads to poverty, which is one of the main problems of many economies in the world. It has additionally been described as the nation of the financial device where every member of the society has right of entry to appropriate financial services, for effective management of financial products and resources; sourced the needed finance for their organization and use financial leverage to accelerate the income and earnings of the financial establishment (Uruakpa et al., 2019).

One of the reasons for a large number of unbanked adults and low level of financial inclusion in many parts of the world, according to Nourani, et'al. (2020), is owing to the reluctance of formal financial institutions to render financial services to the poor, as it is deemed to be non-profitteering (Mia, et'al. 2019). This is why the emergence of microfinance and its expansion to many countries is crucial to the inclusion of financially excluded people (Haque, et'al. 2019). Consequently, MFIs are now being operated in a minimum of 120 countries globally, including Nigeria and owing to its unique mechanism of rendering financial services to the poor, many people perceived the institution as a potential solution to the problems of financial inclusion of the world's unbanked population (Mader, 2018). A survey by EfinA (2020) had shown that over 55% of the estimated 106million adult Nigeria were financially excluded or unbanked. This deplorable situation has led the Nigerian government in tandem with current global trends to formulate new strategies to tackle the financial exclusion problem. One of these, according to Kama and Adigun (2013), is "the incorporation of financial inclusion as one of the cardinal objectives of the Nigerian Financial System Strategy 2020 (FSS2020)". The FSS 2020 was comprehensive blueprints for developing the Nigerian financial sector to enable the country attains its ambition of becoming one of the world's largest economies by 2020. Other steps taken over time to improve financial access by Central Bank of Nigeria (CBN) are; encouraging banks to increasingly adopt low-cost branchless channels such as ATMs, POS, Mobile and Internet banking etc. (Anyanwu, et'al. 2020). The CBN has also introduced microfinance and non-interest banking to deal with the access to financial services by the poor and aversion to interest related financial services by Muslims, mobile money and agents banking are some other initiatives of the CBN in this direction (FSS2020).



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Vol 2 (1), 2025

To be precise, the CBN had in 2012 launched National Financial inclusion Strategy (NFIS). Acha et'al. (2021) asserted that this strategy had outlined the roles and responsibilities of stakeholders and established targets for payments, savings, insurance, etc. This target included extending financial services to 70% of adult population by 2020. In assigning responsibilities to stakeholders, NFIS 2012, had clearly noted the important role microfinance banks should play in the realisation of the objectives of improved access to financial services in Nigeria (CBN, 2012).

Fundamentally, the role assigned microfinance banks (MFBs) in the national financial inclusion strategy is based on the core objective of microfinance and its expected main area of operation. As it is generally accepted that microfinancing is provision of financial services to poor and low income households without access to formal financial institutions, and since it is expected that they operate mainly in rural and semi-urban areas (Acha, 2012a), and also it has been established that most financially excluded persons are poor or of low income and that most of them reside in rural areas, microfinance banks therefore offer formal financial services to many of these persons who hitherto would not access to financial services (Ifionu & Ibe, 2015; Aurora, 2012). Nourani et'al. (2020) asserted that microfinance remains a lucrative option towards achieving inclusive finance, it is not uncomplicated. For instance, most of the microfinance institutions (MFIs) were initially socially driven, with the provision of financial services to the poor and unbanked as a prime objective (Kang, et'al. 2019; Rambu, et'al. 2020).

However, with the passage of time and remarkable changes in the industry; attaining financial sustainability became a theme among the policymakers, managers and practitioners (Mia & Lee, 2017). To further buttress the fact that the poor are most financially excluded and strengthen the case for microfinance banking, Rangarajan Committee (2008) defined financial inclusion as a process of ensuring access to financial services that are timely and adequate, needed by vulnerable groups such as weaker sections and low income groups at affordable cost. Whether Microfinance banks can shoulder this responsibility is not in doubt as series of studies confirm positive impact of microfinance on financial inclusion (Ajinaja & Odeyale, 2017; Adeola & Evans, 2016).

However, Ofeimun (2020) found no evidence of positive relationship. Since the two questions whether microfinance improves financial inclusion and whether financial inclusion positively impacts the economy have been answered affirmatively, this study examined the effect of financial inclusion on the financial performance of microfinance banks spanning 2012 - 2022. It focused on the extent of inclusive finance's contribution in enhancing microfinance banks' operations in Nigeria.



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Vol 2 (1), 2025

Therefore, does financial inclusion has any statistically significant effect on financial performance of microfinance banks in Nigeria?

To be precise, the objectives of the study were to investigate:

- i. The statistical relationship between the number of deposit accounts and ROA of microfinance banks in Nigeria
- ii. Whether or not the number of rural branches has any significant effect on ROA of microfinance banks in Nigeria
- iii. The statistical effect of loans and advances on ROA of microfinance banks in Nigeria

To achieve the objectives, the following hypotheses were formulated and testing

H₀₁: Number of deposit accounts has no significant effect on ROA

H₀₂: Number of rural branches has no significant effect on ROA

H₀₃: Loans and advances have no significant effect on ROA

Literature Review

Concept of Financial Inclusion

Financial inclusion according to Djekonbe et al. (2022), could be broadly seen as the process of making the required financial services available and accessible at a fair price, in the right form, place and time to all members of the society without prejudice. They gave a broad view of financial inclusion but the definition loses the specific target of financial inclusion policy. However, the primary objective of financial inclusion is specifically drawing vulnerable/poor majority into the formal financial system so as to help them get free and affordable access to financial services and products such as credits, savings and as well as insurance services.

Specifically, financial inclusion is a set of initiatives which facilitate easy and affordable access to all forms of financial services by poor and underprivileged persons who are economically disadvantaged irrespective of geographical regions. In other words, financial inclusion aims at taking financial services to the unbanked population at their locality at an affordable rate. This was the position taken by Winful et al. (2022) who viewed financial inclusion as the strategy which enhances access to financial services at the right time and adequate credit when or where needed by the low-income earners in the economy at an affordable cost. In combining both narrow and broad views, Matekenya et al. (2020) defined financial inclusion as the process of ensuring access to appropriate financial products and services needed by all sections of the society in general, and vulnerable groups such as weaker sections and low-income groups in



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Vol 2 (1), 2025

particular. The financial services and products are bank accounts, savings, affordable loans, insurance and payments/remittances.

Peria and Shin (2020) expanded the scope of financial inclusion to include financial counseling. According to him, users of financial services/products need sufficient education as well as supporting them make good investment decisions. Conversely, lack of access to affordable financial products and services is called financial or social exclusion. A large proportion of poor masses in sub-Saharan Africa are financially illiterate and so their ability to use financial products and services is limited. In other words, insufficient financial education and support for customers is one of the factors responsible for financial exclusion in the sub-region.

Abdulrahman (2019) compared and contrasted the state of financial inclusion between the developed and developing economies. In developing countries, access to formal financial services by the large portion of poor population remains limited owing to paucity of financial services which include high levels of public debt constrained by access of credit to individuals as well as firms; high rate of inflation which discourages savings, inaccessibility to credit by poorest people due to their inability to provide collateral or credit history/records; poor physical and institutional infrastructure which prevent formal financial services to reach those in rural areas and lack of national credit policy which discourages lending. Abdulrahman identified two notable dimensions of financial inclusion viz: focus dimension and degree dimension. Focus dimension looks at the potential challenges faced by some segments of the population in the economy in assessing the financial sector services in the mainstream sector of financial system. Degree dimension on the other hand is about the degree of usage of financial products and services. Financial inclusion as defined by Cyn-Young and Rogello (2015) is the delivery of formal financial services at an affordable cost to section of disadvantaged and low-income segments of society, which is in contrast to financial exclusion where those services are not affordable or available. They view financial inclusion in terms of cost.

Soyemi et al. (2020) defined financial inclusion in terms of access to financial services provided by formal financial institutions to the rich, the poor and the low-income earners in the economy at an affordable cost. Similarly, Chima (2011) defined financial inclusion as the state of financial system where every member of the society has access to appropriate financial products and services for effective and efficient management of their resources; get needed capital to finance their businesses; and financial leverage to take advantage of opportunities that would bring an increase in their income. Chima's view of financial inclusion is very elaborate as it contains not only the target population that ought to have access to appropriate financial products and service but the benefits of having such access to financial services which include effective and efficient



Taraba State University, Jalingo
Faculty of Management Sciences

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Vol 2 (1), 2025

management of their resources, access to credit to finance business activities as well as taking up opportunities that lead to increase in per capita income in the economy.

However, Enhancing Financial Innovation and Access (2014) defined financial inclusion to mean the provision of series of financial services which are necessary for all the adults who include both the poor and the disadvantaged group of the society. This definition is in a narrow sense as it limits financial inclusion as financial services rendered to the poor and or disadvantaged group of people perhaps as a result of their location and other social exclusion factors. Banco Central do Brazil (2010) viewed financial inclusion globally as the right of every individual to social inclusion, better standard of living, and an instrument for economic empowerment of the poor in an economy. The right of easy access to financial products and services implies that financial institutions and governments have an obligation to bring every individual in the economy into the mainstream of the formal financial system.

According to Abidin (2019) financial inclusion has manifold merits. It enhances allocation of productive resources in an efficient manner such that the cost of capital can be potentially reduced. It ensures that economic resources are available by improving the financial system of an economy to be effective and efficient. It facilitates efficiency and welfare as it provides avenues for safe and secure financial services. It provides financial infrastructure needed to access financial services by promoting choices and competition in the system. It can also help to reduce or eliminate, if possible, the growth of informal sources of credit like money lenders who are usually found to be exploitative. Access to finance at an affordable cost could effectively eliminate income inequality as income is equitably distributed to the poor thereby contributes to creation of wealth and economic growth (Dabla-Noris et al., 2015).

Nigeria in 2011 has 11.23 ATMs per 100,000 adults on average while in 2022, the number rose to 16.15. The number of bank branches per 100,000 adults decreased from 6.56 to 4.28. The number of bank accounts per 100,000 adults increased from 19.23 to 34.9 while % of adults with at least one loan outstanding from a financial institution rose from 28.98% to 55.68%. This shows that there was a progress in account penetration, financial access and usage of financial services and products but the number of bank branches reduced probably due to the state of insecurity in the country (Sobonya, 2023).

It could be palpably seen from the conceptual review so far that financial inclusion is a multidimensional term by nature and it varies depending on the country specific agenda. Generally speaking, financial inclusion encompasses all initiatives geared towards making formal financial products and service available to all individuals and firms with a specific focus on those who are financially excluded from the formal financial sector. This implies that financial inclusion is zero-tolerance to informal financial services in a given economy. Financial inclusion is not limited to having easy access to and availability of financial products and services but it also includes the efforts to develop an efficient financial infrastructure that give all



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

individuals and firms opportunities to participate fully in the economy. In sub-Saharan Africa like other parts of the world, some persons have access to financial services but decide not to use it because of lack of financial education, lack of trust in financial institutions, religion and other reasons. This situation whereby individuals or firms have access but decide not to use financial products and services is called voluntary financial exclusion. This group of people is found, even in the urban areas where financial services are most accessible and so distance to service points is not a barrier.

Deposit Bank Accounts

According to Babajide et al. (2021), bank account is a financial account with a banking company, recording the financial transactions between a customer and the bank and the resulting financial position of the customer with the bank. It is an arrangement whereby you may place your deposit under the safekeeping of your bank or deposit taking financial institutions. The bank as financial intermediary channel these funds into productive resources and banks may pay remuneration out of profit they earn on such deposits. Bank accounts can help one manage your everyday money. A bank account according to Babajide et al. (2021), is a financial account maintained by a bank or other financial institution in which the financial transactions between the bank and a customer are recorded. Each financial institution sets the terms and conditions for each type of account it offers, which are classified in commonly understood types, such as deposit accounts, credit card accounts, current accounts, loan accounts or many other types of account. A customer may have more than one account. Once an account is opened, funds entrusted by the customer to the financial institution on deposit are recorded in the account designated by the customer. Funds can be withdrawn from loan lenders. The financial transactions which have occurred on a bank account within a given period of time are reported to the customer on a bank statement, and the balance of the accounts of a customer at any point in time is their financial position with the institution.

In most legal systems, a deposit of funds in a bank is not a bailment - that is, the actual funds deposited by a person in a bank cease to be the property of the depositor and become the property of the bank. The depositor acquires a claim against the bank for the sum deposited but not to the actual cash handed over to the bank. In accounting terms, the bank creates ("opens") an account in the name of the depositor or a name directed by the depositor in which the amount received by it is recorded as a transaction. The deposit account is a *liability* of the bank and an *asset* of the depositor (the account holder).

On the other hand, a bank can lend some or all of the money it has on deposit to a third party/s. Such accounts, generally called loan or credit accounts, are subject to similar but reverse principles of a deposit account. In accounting terms, a loan account is an *asset* of the bank and a *liability* of the borrower. Loan accounts may be unsecured or secured by the borrower, and they may be guaranteed by a third person, with or without security (Santos & Fulho, 2021).



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

Each financial institution sets the terms and conditions for each type of account it offers, and when a customer applies for the opening of an account, and accepted by the institution, they form the contract between the financial institution and the customer in relation to the account. The laws of each country specify how bank accounts may be opened and operated. They may specify who may open an account, for example, how the signatories can identify themselves, deposit, withdrawal limits among other specifications (Kasuma, 2020). The minimum age for opening a bank account is most commonly 18 years of age. However, in Nigeria for example, the minimum age to open a bank account is 16 years especially for students with admission letter, and accounts may be opened in the name of minors below 16 years but operated by their parent or guardian. In general, it is unlawful to open an account in a false name. In this study, number of bank account per 100,000 adults was used to measure bank account.

Bank Branches

A bank branch typically consists of a collection of tellers who can aid a customer in withdrawing money, depositing checks and cash and more. Many Americans prefer the in-person service a bank branch can offer, as it can be frustrating to deal with phone- and email-based customer service representatives (Soyemi et al.2020). Branches can also be especially helpful if you're applying for a loan, opening an investment portfolio or making any number of other important financial decisions. Bank branches began receiving the brick-and-mortar title, because that's what they were quite literally made of. While this terminology only became necessary due to the rise of web-based banks, branches still exist all over the country. However, according to Matekenya et al. (2020), there has been a sharp nationwide rise in the number of branches being closed by banks. In fact, the report highlights that bank such as Capital One shut down 32% of its branches from mid-2012 to mid-2017.

In its most basic form, banking has been around for thousands of years, with historians crediting the Mesopotamians, Sumerians, Babylonians and other ancient cultures with this financial advancement. Branches, or institutions similar to them, didn't begin appearing until the Roman Empire's reign, though. From then on, bank branches popped up around the world, most notably in Italy, England and the U.S. Access to finance is essential not only for maintaining and improving social-economic status but also is essential for meeting all needs (Dangi, 2013; Maity & Sahu, 2018a). A significant share of population is excluded from available banking services (Rafiq & Adewale, 2019). As such regulators have taken many initiatives both from demand side and from supply side. Without having an account people do not save for future purchases, child education and to invest for retirement, or avoid high-interest payments and fees. A formal account in a bank or in a post office can stimulate saving and open access to credit. It makes it easier to transfer wages, remittances and government payments. The public sector, private sector, regional rural and cooperative banks have the responsibility to spread their services in



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Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

metropolitan, urban, semi-urban and rural areas to strengthen the economy of households/firms thereby in the economy. Bank branches in this study were measured using number of Money Deposit Banks branches per 100,000 adults across the region.

Loans and Advances

Obilor (2018) stated that bank credit is the movement of money from the surplus to the deficit area of the economy by banks. He noted that credit is an agreement by a group to pay another an amount for goods and services received. Credit is what banks used to perform their intermediation functions where by deposits from the surplus units of the economy are passed on to the deficit units who need funds for productive purposes. Bank credit is the credit granted to an individual, government, firm or organization by the banking system in the form of loans. Sodeeq et al. (2019) defined credit as means of providing fund by an organisation or individual to another organisation or group of persons in an understanding that the collected sum will be paid back as contained in the agreement bidding the two parties. It is the exchanging of legal tender with an agreement to pay back at a later date. Credits could be cash or materials in form of inputs or services rendered to the lender and could lead to increase in productivity and profitability in agribusiness (Ashaolu et'al., 2019).

African Development Bank recognized as an essential tool for promoting Small and Medium Enterprises (SMEs). About 70 per cent of the population is engaged in the informal sector or in agricultural production. This regional Bank has recognized that for sustainable growth and development the financial empowerment of the rural areas is vital, being the repository of the predominantly poor in society and in particular the SMEs. If this growth strategy is adopted and the latent entrepreneurial capabilities of this large segment of the people is sufficiently stimulated and sustained, then positive multipliers will be felt throughout the economy. To give effect to these aspirations various policies have been instituted over time by various Governments in the region to improve agricultural production capabilities, positively channel the potential of SMEs to enhance their standard of living and to put the sector in the front burner of Government's development strategy (Omokanmi & Ogunleye, 2020).

Microfinance Bank Performance

Microfinance refers to financial services provided to low-income people, usually to help support self-employment. Examples of microfinance products include: small loans, savings plans, insurance, payment transfers, and other services that are provided in small increments that low-income individuals can afford. These services help families to start and build "micro" enterprises, the very small businesses that are important sources of employment, income, and economic vitality in developing countries. Banking and/or financial services targeted to low-and-moderate income businesses or households, including the provision of credit. Microfinance,



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

according to Ehigiamusoe (2006), is the supply of loans, savings and other financial services to the poor. The Central Bank of Nigeria's Microfinance Policy, Regulatory and Supervisory Framework for Nigeria (2005), sees microfinance as a "means of providing financial services to the poor, who are traditionally not served by the conventional financial institutions. Indeed, microfinance is about providing financial services to the poor who are traditionally not served by the conventional financial institutions such as commercial banks, who tend to concentrate on medium and large-scale enterprises, which are considered to be more profitable and viable. Banks avoid doing business with the poor and other small business because of the associated costs and risks, which they consider to be very high.

A microfinance institution (MFI), on the other hand, is an organization that arranges small loans and financial services to the poor people and small business. According to Microfinance gateway (2008) an MFI is the organization that offers financial services to the low-income people. There is a wide range of micro financial institutions. Mostly when we talk about these, financial NGO's come into the mind. These financial NGO's provide micro credit and micro finance services but in most cases these financial NGO's are not allowed to capture saving deposits from general public. In any case, many commercial bank are also providing microfinance along with their routine financial activities, so also are some specially designed institutions like the micro finance banks which are established to focus on providing financial services to the under banked.

The return on assets is a ratio that indicates the efficiency of assets of a company in generating the net income. It measures the operational efficiency of the business and an indicator of the performance of the company. It is shown in percentage terms and a higher ratio is favorable. It considers both debt and equity components in the analysis of profitability. It is calculated by dividing the net income of the business from its total assets. The net income and total assets are taken from the income statement and balance sheet respectively.

ROA is a good indicator of the efficiency of the investment in the generation of income. A company can use this ratio as a tool to compare the current year ratio with past year ratios. Also, a company compares its ROA ratio with the ratio of other firms in the same industry. A high ratio indicates the company is earning more amount of income against less amount of investment. A low ratio may indicate the deteriorating operational performance of a company.

Return on Assets = $\text{Net Income} / \text{Total Assets} \times 100$

A bank can use ROA in multiple ways. It can compare its overall ROA with that of other banks of similar sizes. It gives a brief understanding of the bank's performance in the industry. Also, a bank may compare the ROA of its business segments and compare that ratio with other bank's operations in those segments. A higher ratio for the bank is favorable and indicates a good position in the market. If a bank is having a below-average return on assets ratio, then it can look at specific areas where it is lagging behind. The bank has to make special plans and strategies to



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

focus on those areas. It helps to improve performance in those areas and it can lead to an increase in the bank's overall ROA.

Empirical Review

Yunus, et'al. (2023) examined the impact of financial inclusion on the performance of banks in Nigeria. Specifically, the study examines how banking performance is affected by ATMs, branch network, number of bank accounts and location of sales terminals. The study used all DBMs in Nigeria between 2013 and 2018 using data compiled on the basis of Least Squares. The secondary data used in the study were extensively sourced from World Bank database, Central Bank of Nigeria (CBN), Nigerian interbank settlement system (NIBSS) and Nigeria Bureau of Statistics (NBS) and annual financial report of deposit money banks; at the same time, a hybrid of data was used where necessary as required during the research. The results of the study show that the effect of ATMs, banking location, towers, performance of bank depository (ATM, BET and POS on ROA of DBMs) in Nigeria is positive and significant by 0.05. It is concluded that FI applications have proven to have a significant impact in improving customer satisfaction and bank profitability. It is recommended that to ensure that DMB services reach and serve the poor, financial institutions should not only upgrade their processes (using technological innovations), but also develop process and reasonable procedures to evaluate potential customers and ensure fairness in the selection process. The present study differs in that it focused on the microfinance banks.

Khatib, et'al. (2022) evaluated the association between financial inclusion and the performance of banks in Palestine using dynamic panel analysis applied to a sample of 11 banks, with two econometric models representing profitability indicators over a nine-year period (2012–2020). In addition to linear regression models, the generalized method of moments estimator was utilized. The results showed that access to financial services (e.g., the number of automated teller machines (ATMs) and the number of bank branches), service delivery (including the average costs to maintain a current account), and the quality of the products improve banks' profitability. However, point-of-sale terminals have no impact on profitability. Additionally, financial service utilization reflected in bank account number sand credit to small and medium-sized enterprises do not affect bank profitability, and among bank-specific variables, the nonperforming loan ratios, the cost-to-income ratios, and liquidity were found to be the main drivers of profitability. Policymakers in Palestine must prioritize FI by adopting rules that encourage lending. The study did not use loans as a variable of study but make recommendation on it. The present study was to ascertain the situation in Nigeria.

Nguyen, et'al. (2023) investigated the impact of financial inclusion on commercial banks profitability in 60 countries between 2017 and 2021. The study used 300 observations from countries with developed and undeveloped banking systems. The paper applies estimation



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

methods including pooled OLS, FEM, REM and GLS related to panel data as well as multicollinearity, heteroscedasticity tests for model selection. Similar to previous papers, this research proved that most financial inclusion indicators have positive correlation with commercial banks profitability. In addition, this research suggested 3 new variables and pointed out: “Institutions of commercial banks” “Outstanding-loans with commercial banks” positively impact banks profitability whereas “Outstanding-deposits with commercial banks” has negative influence on banks profitability. The majority of previous papers have explored the effect of financial inclusion at the national level, for example, the relationship between financial inclusion and economic growth. Meanwhile, this paper investigated the impact of financial inclusion on commercial bank profitability, an issue concerned recently. This study can assist countries achieve a higher level of financial inclusion to raise commercial banks profitability, thereby boosting economic growth

Obeid (2023) examined, using a dynamic panel data framework, the effects of financial inclusion on the performance of the banking sector, as measured by the return on assets, for eleven Arab countries during the period 2012-2019. In addition to financial inclusion and technologies indicators, our analysis incorporates banking and macroeconomic variables. The study revealed that bank-specific variables have a greater impact on the profitability of banks than macroeconomic variables. The results show that there is a positive and significant impact of the bank’s assets, the bank solvency, the credit growth, the economic growth rate, and the inflation rate on the profitability of the banking sector. However, the return on assets is unaffected by fluctuations in nonperforming loans and the interbank lending rate. Regarding indicators of financial inclusion and technologies, the study finds no evidence of significant effects of automated teller machines (ATM) distribution and bank branch density on return on assets. This study was in Arab countries, not Nigeria.

Oyetoyan, et’al., (2021) determined the effect of financial literacy programs, usage of agents and representatives, increased proliferation of ATMs and Mobile banking services on the financial performance of listed banks in Nigeria and to determine the effect of bank branch spread on performance of listed banks in Nigerian. The main theories reviewed in the study were the Bank Led Theory and Contemporary Banking Theory. The study adopted a descriptive research design, and the study population included management and operational level employees of the 5 Deposit Money Banks listed on the Nigerian Securities Exchange. A census study was conducted with primary data being collected using questionnaires. The analysis of data based on SPSS software (version 23) and regression analysis presented using tables. The results of the study determined that financial inclusion elements have a positive and strong impact on the financial performance of banks in terms of return on equity (ROE). The study determined that financial literacy programs have positive but weak impact on financial performance of selected banks. The



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

use of agents and representatives had positive and strong effect on performance of sampled banks. The proliferation of ATMs and Mobile banking services had positive but weak effect on financial performance of selected banks. Bank branch spread had positive but weak effect on financial performance of selected banks. The study recommends that policy makers in the financial institutions such as banks should make use of financial inclusion elements to improve financial performance of Nigerian banks. The study did not include the microfinance banks in Nigeria and the study used ROE as a measure of profitability while this study used ROA.

Shihadeh et al. (2018) examined the effects of financial inclusion indicators, namely the number of ATMs services, the number of credit cards, and the number of novel services, on the return on assets of thirteen (13) Jordanian commercial banks during the period of 2009-2014. The study used data from Bank Scope, World Bank economic development, and financial development databases for 189 countries and 701 banks. Using OLS, the study found that the impact on bank profitability is dependent on the financial inclusion indicator used; there is evidence of a positive and statistically significant relationship between the number of ATMs and the return on assets, indicating that this indicator contributed to the improvement of banks' performance. This evidence not only supports the global agenda to enhance financial inclusion but also encourages banks to invest in more branching and penetration. Therefore, policymakers can use these findings to develop their strategies in the expansion of the branches networks. Also, governments can play a vital role in developing the laws and procedures to enhance the banking penetration to reach more disadvantaged people.

Okereke , et'al., (2021) examined the impact of micro finance banks on financial inclusion in Nigeria using time series data from 1992 to 2020. Using the bound test and the Auto Regressive Distributed Lag model, the study was set to examine the impact of microfinance banks' lending on financial inclusion in Nigeria, and to examine the impact of microfinance banks investment on financial inclusion in Nigeria. The findings indicated that microfinance banks loans and advances have a significant impact on financial inclusion in Nigeria. Furthermore, the results showed that microfinance banks investments have a significant impact on financial inclusion in Nigeria. The study also found that availability of micro banking facilities and strong branch network also impact on financial inclusion in Nigeria. The study recommends that microfinance institutions should do more of group lending, individual lending, village banking and saving mobilization in order to enhance inclusive finances in microfinance banking in Nigeria.

Ofeimun (2020) examined the effect of microfinance banks' financial inclusion strategies on economic growth of Nigeria the period 2009 – 2018. The study adopted the ordinary least square (OLS) regression technique which reported that micro loan disbursed, loan to SMEs have a



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

significant positive effect on economic growth in Nigeria. Moreover, the study finds that bank deposit has a negative but insignificant relationship with economic growth. The study therefore concluded that financial inclusion strategies through microfinance banks have a great effect in stimulating the economy. The present study differs in the use of variable

Jouini et al. (2021) investigated the relationship between the financial inclusion and the return on assets ratio for the Arab region during the period (2013-2019). Using GMM, The study revealed that the bank-specific factors are the most influential on banks' profitability, and to a lesser extent the macroeconomic variables. Specifically, there is evidence of positive and significant impacts of the size of banks, the capital adequacy ratio, and the credit growth for the banking sector, the real GDP growth rate, and the inflation rate on banks' earnings for the set of Arab countries under study. However, the return on assets does not react to the movements in the non-performing loans and the interbank lending rate. Regarding inclusive finance, the study does not find any evidence of significant effects of the distribution of ATMs and the number of bank branches on the return on assets. The study provides relevant policy recommendations for the banking decision-makers in the considered Arab countries, which can help them, enhance management efficiency of the banking sector to improve banks' performance.

Khatib et' al. (2022) investigated the potential impact of financial inclusion on the performance of Palestinian banking sector using dynamic panel analysis over the period (2012-2020). The results show that access to financial services (e.g., the number of ATMs and the number of bank branches), service delivery (the average costs to maintain a current account), and the products' quality have a positive impact on banks' profitability, while the point-of-sale (POS) terminal has no significant impact on profitability.

Theoretical Framework

Grameen Theory

This is the underpinning theory in this study. The Grameen Bank through its creation of the Grameen Bank Model developed the Grameen theory. The bank created a program aimed at elevating poverty among the poor Bangladeshis from which the now famous Grameen theory was developed (Develtere & Huybrechts, 2012). The Grameen theory looks at the income expected by the financial institution from entrepreneurial borrowing. It states that poor members of the society are better borrowers since they value the relationship that they have with the bank.

The study in Grameen case looked at the dynamics of banks operating under monopoly conditions granting loans and taking deposits from future generations of entrepreneurs with varied levels of expected returns (Develtere & Huybrechts, 2012). The evidence shows that Grameen would focus on individuals with lower expected income, and did not give out the



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

dividends until it attained the level of potential borrowers. The theory does not fit well into financial inclusion research because it ignores the effect of the model on high-income earners in the society.

In a study of the effect of financial inclusion on the financial performance of banks, the concern is whether the various elements of financial inclusion lead to better returns for the financial institutions. The Grameen theory provides empirical evidence of the positive returns where the study covered the household survey in Bangladesh (Develtere & Huybrechts, 2012). The empirical results of the theory indicated that various measures of the income expected by the bank are positive and significantly related to the default probabilities. The Grameen theory should encourage banks to view the low-income borrowers are the best form of business since they have the low rate of default and they are charged high-interest rate over a short period. It means that policies structuring is in a way that low income and financially excluded groups form the targeted by the banks to gain from their good payment record.

Methodology

The study employed Ex-post facto Research design. The Ex-post facto research design examines past occurrences in order to understand the current state. A balance panel data set was constructed because the data set contains all elements observed in all time-frame and static panel data regression analysis was used as the estimation technique because data set for the study is a collection of multi-dimensional data set observed over multiple time periods. In Nigeria, there are about 916 licensed microfinance banks that provide essential financial services to low-income earners, unbanked and underserved groups. With only 64% of the adult population financially included, these microfinance banks have a significant role in the country's financial services industry (CBN, 2023).

Data for the study were obtained from the sampled microfinance banks spanning 10 years (2012 - 2022). The selected microfinance banks for the study are the top 10 microfinance banks in Nigeria that are leading the industry in terms of their capital base (CBN, 2023). They are: 1. KUDA Microfinance Bank; 2. LAPO Microfinance Bank ; 3. ACCION Microfinance Bank; 4. Mutual Trust Microfinance Bank; 5. Assets Microfinance Bank; 6. Fina Trust Microfinance Bank; 7. AB Microfinance Bank; 8. VFD Microfinance Bank; 9. Sparkle Microfinance Bank and 10. BoI Microfinance Bank.



Table 1: Measurement of Variables

S/N	Variable	Definitions	Measurements	Source
1.	Return on Asset	The efficiency of the investment in the generation of income	Return on Assets = $\frac{\text{Net Income}}{\text{Total Assets}} \times 100$	Yunus et'al (2023)
2.	Rural Branches	Number of commercial banks branches used as financial access indicator	Natural logarithm of the number of commercial bank branches per 100,000 adults	Omokami and Ogunleye (2020), Khatib et'al (2023)
3.	Account	Deposit accounts with commercial banks used financial usage indicator	Natural logarithm of the number of commercial bank branches per 100,000 adults	Babajide et al. (2021),
4.	Loans and Advances	Amount of loan disbursed to the private sector used as usage indicator	Natural logarithm of the amount of microfinance bank loan and advances	Obeid, et'al. (2023)

Source: Author, 2024

Model Specification

The functional relationship between number of deposit account, bank branches, loans and advances and ROA is mathematically expressed as:

Financial performance = $f(\text{inclusive finance}) \dots\dots\dots 1$

$ROA = f(\text{Number of deposit account, number of rural branches, loans and advances}) \dots\dots\dots 2$

This is expressed econometrically as follows;

$ROA_{it} = \beta_0 + \beta_1 ACC_{it1} + \beta_2 BBR_{it2} + \beta_3 LAA_{it3} + \epsilon_{it} \dots\dots\dots 3$

Where:

ROA = return on assets.

ACC = Number of Bank Account

BBR = Number of Rural Branches

LAA = Loans and Advances

ϵ_{it} = Error term

β_0 = Intercept coefficient/ Constant



A priori expectation = $\beta_0 > 0, \beta_1 > 0, \beta_2 > 0, \beta_3 > 0$

Data Analysis and Discussion of Findings

Table 2: Descriptive Statistics

	ROA	ACC	BBR	LAA
Mean	0.249450	14.28772	6.487267	4.737833
Median	0.225000	4.503600	5.759450	4.715000
Maximum	0.569000	46.99580	10.43500	8.600000
Minimum	0.215000	0.525200	1.942300	2.030000
Std. Dev.	0.065638	11.15297	3.068733	1.698781
Skewness	0.519230	1.147823	0.440638	0.448991
Kurtosis	2.199747	3.132563	1.360606	2.058752
Jarque-Bera	3.295014	11.21891	8.780644	3.260804
Probability	0.006658	0.001348	0.013163	0.120585
Sum	32.36700	687.2634	729.2360	917.0700
Sum Sq. Dev.	0.254193	10207.03	555.6103	170.2656
Observations	100	100	100	100

Source: Author using Eviews 10, 2024

The table 2 above shows that Return on Asset having an average value of 0.249450 while the deviation from the mean (Standard deviation) was 0.065638. This means that ROA is normally distributed. Skewness and Kurtosis values are 0.519230 and 2.199747 respectively. This means that Skewness has a long-left tail while Kurtosis was leptokurtic i.e it is peaked relative to the normal. The Jarque-Bera values of 3.295014 and probability of 0.006658 shows that the series are normally distributed. ACC has a mean value of 14.28772 while the standard deviation from the mean was 11.15297, indicating that the number deposit account was normally distributed. Table 2 also reveals the mean value of 4.737833 for LAA. The value of Skewness 0.448991 shows that the distribution has long-right tail while the Kurtosis value of 2.058752 shows that it is leptokurtic because it is more than 3 (Mesokurtic). The Jarque-Bera and probability values of 4.230804 and 0.120585 evidenced normal distribution of the series.



Table 3: Correlation Matrix

	ROA	ACC	BBR	LAA
ROA	1.000000			
ACC	0.739551	1.000000		
BBR	0.495020	0.295787	1.000000	
LAA	0.890639	0.373905	0.820766	1.000000

Source: Author, 2024

The relationship among all the variables is positive indicating that increase in one variable results in increase in another variable.

Table 4: Panel Fixed-effects

Variables	Coefficients	Standard Error	t-statistics	P-Value
ACC	0.56	0.79	0.71	0.03
BBR	0.18	0.28	0.65	0.01
LAA	0.32	0.14	2.29	0.00
C	33.12	18.45	1.80	0.02
R-squared	0.673909			
Adjusted R-squared	0.668511			
F-statistic	180.4142	Durbin-Watson stat	1.899571	
Prob(F-statistic)	0.000000			

Source: Eviews 10 output, 2024

Table 4 shows the fixed effect (within) linear relationship between return on asset ratio and its independent variables. The results obtained from the model revealed that the overall coefficient of determination R-squared (R^2) shows that the equation has a good fit with 67% of systematic variations in ROA ratio as explained by the variables for the signs and magnitudes of the determinants, all independent variables such as number of deposit accounts, rural bank branches and loans and advances are found to have significant relationship with ROA as indicated by their respective p-values.



Table 5: Panel Random-effects

Variables	Coefficients	Standard Error	t-statistics	P-Value
ACC	0.11	0.22	0.51	0.01
BBR	0.56	0.79	0.71	0.03
LAA	0.11	0.44	0.25	0.02
C	22.41	28.34	0.79	0.04

Source: Eviews 10 output, 2024

Table 5 shows the random-effect linear relationship between banks’ return on asset and its determinants. The results obtained from the model show that all independent variables such as number of deposit accounts, rural bank branches and loans and advances are found to have significant relationship with ROA as indicated by their respective p-values.

Discussion of Findings

The overall model statistics, as shown in the F statistics was found that the overall model is significant since the calculated F value of 180.4142 is greater than the critical F value of 0.05. This shows that there is a significant linear relationship between the independent and dependent variables in the study and that all the variables support each other and the bank will benefit. . Findings on the effect of financial inclusion on financial performance are consistent with Yunus, et’al. (2023), Khatib, et’al. (2022), Obeid, et’al (203), Oyetoan, et’al. (2021), Shihadeh, et’al. (2018), Okereke, et’al. (2021), Jouini, et’al. (2021) and Nguyen, et’al. (2023). However, the position is inconsistent with the findings of Ofeimun (2020).

Microfinance services are targeted at rural dwellers, the active poor and micro, small and medium sized businesses. Microfinance Banks could only achieve its stated objectives if its services are tailored to the needs of the poor and low income earners that mostly live in the rural areas and urban fringes. MFBs can attract this proportion into the micro financing system with the provision of appropriate services that are tailored to the needs of the poor and the financially weak. The survival of MFB may well depend on its ability to do the needful to engender itself as partners of the poor and the financially weak.

Conclusion and Recommendations

The results indicated that financial inclusion has a significant role in improving bank profitability. This suggests that microfinance banks must be aggressive in pursuing financial inclusion policies and strategies. In other words, It is empirically clear that financial inclusion is positively related to financial performance of microfinance banks in Nigeria. Based on the



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

results, the study concluded that the increase in financial services infrastructure encourages individuals and businesses to use financial services, would surely enhance the profitability of the bank.

In line with the objective of the study to examine the effect of financial inclusion on financial performance of microfinance banks in Nigeria, the following recommendations are made.

- i. Microfinance banks should intensify efforts in getting more people to open accounts through banking outreach and relax stringent requirements for account opening.
- ii. More bank branches can be opened especially in the rural areas in order to give financial access to the poor rural dwellers. Microfinance banks should expand their network of branches, helping to bring finance closer to people, especially in remote and rural areas.
- iii. Microfinance banks should develop diversified lending products for all individuals and businesses, especially low-income groups; small and medium enterprises. Improving the efficiency of lending will contribute to ensuring and increasing profits for banks, since lending is the main profit-making.



Reference

- Abdulrahman, M.D (2019). Effect of financial inclusion on poverty reduction in Nigeria. *Journal of Banking and Finance Research*. 5(1), 75-89.
- Abidin, A.A (2019). Three essays on financial inclusion in African and the Middle East. Retrieved from [https://research-commons.waikato.ac.nz/on 22/2/22](https://research-commons.waikato.ac.nz/on/22/2/22).
- Acha, I. A. (2012a). Non-Bank Financial Institutions and Economic Development in Nigeria, *International Journal of Finance and Accounting*, 1(2): 14-22
- Adeola, O. and Evans O. (2016). The Impact of Microfinance on Financial inclusion in Nigeria. *Proceedings of the International Conference for Bankers and Academics*, Dhaka.
- Ajinaja, T. and Odeyale, A. J. (2017). Microfinance and the Challenges of Financial inclusion for SME's Development in Nigeria. *IOSR Journal of Business & Management*, 19(2), 11-18.
- Anyanwu, G., Okere, P. & Adioha, N. (2020). Effects of Financial Dualism and Inclusion on Economic Development in Nigeria. *Asian Journal of Economics, Business and Accounting*, 20(2): 1-13, 2020; Article no.AJEBA.62039 ISSN: 2456-639X.
- Aruwa, S. A. S., Mairafi, S. L. & Sobonya, N. (2023). Effect of Financial Inclusion on Human Development in Sub-Saharan Africa. *NSUK Journal of Entrepreneurship*, 2(2), 20-43
- Ashaolu O. F., Mamioh S., Philip B. B. & Tijani I. A. (2011), "Microcredit Effect on Agricultural Productions: A Comparative Analysis of Rural Farmers in Ogun State, Nigeria", *International Journal of Applied*.
- Aurora, B. (2012). Comparing Financial inclusion across Countries based on FINSCOPE Survey Date. TFC Workshop on Financial inclusion Indicators co-hosted by Bank Negara Malaysia, 5-6 Nov, Sasana Kijang, Kuala Lumpur.
- Babajide, A.A., Akunlola, F.O., Lawal, A.I., Akinjare, V.B. & Lawal-Adedoyin, B.B. (2021). Inclusive finance: implementation per capita income in Nigeria. *Asian Economic Finance Review*, 11(8), 603-617.
- Banco Central do Brazil (2010). Report on the financial inclusion (1), retrieved from <https://www.bcb.gov.br/nor/reincfin/report-on-financial-inclusion-nl-2010.pdf>
- CBN (2012). National Financial inclusion Strategy. Abuja: CBN.
- Chima, O. (2011). Financial services still shallow in Africa. Retrieved from <https://allafrica.com/stories/20111219-0299.html>.
- Cyn-Young, P. & Rogello, V.M.J (2015). Inclusive finance, poverty and income inequality in developing Asia, *ADB Economics Working Paper Series*. 426, Mandaluyong City, Philippines.
- Dabla-Norris, M.E; Ji, Y; Townsend, R. & Unsal, D.F. (2015). Identifying the constraints to financial inclusion and their impact on GDP and inequality: A structural framework for policy. International Monetary Fund. Retrieved from <http://www.imf.org/external/pubs/ft/wp/2015/wp1522.pdf>.
- Dangi, N. & Kumar, P. (2013). Current situation of financial in India and its future visions. *International Journal of Management and Social Sciences Research*, 2(8), 155-166.
- Djekonbe, D., Tidjani, M. I. A., Oumarou, B. (2022). Reexamining the effect of financial inclusion on human development in Sub-Saharan Africa. *The Economic Research Guardian*; 12(1), 55-71.



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal Of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

- EFInA (2014) Access to Financial Services in Nigeria, Survey.
- Ehigiamusoe, G. (2006), Risk Management in Micro Finance, Paper Presented at a Workshop
- Haque, A. u., Kot, S., & Imran, M. (2019). The moderating role of environmental disaster in relation to microfinance non-financial services and women's micro- enterprise sustainability. *Journal of Security and Sustainability*, 8, 355-373.
- Harley, T. W., Adegoke, A. J., & Adegbola, D. (2017). Role of financial inclusion in economic growth and poverty reduction role of financial inclusion in economic growth and poverty reduction. *Internal Journal of Research in Economics and Social Science (IJRESS)*, 17(8), 265-271.
- Ifionu, E. & Ibe, R. (2015). "Financial Dualism, the Informal Sector and Economic Growth: An Econometric Investigation of the Nigerian Evidence". *International Journal of Empirical Finance, Research Academy of Social Sciences*, 4(7), 467-478.
- Jouini, J., Talha, E., & Obeid, R. (2021). Do Financial inclusion Indicators Affect Banks' Profitability? Evidence from Selected Arab Countries (January 14, 2021). *Working Paper, No.160-2021*, Arab Monetary Fund. <https://doi.org/10.2139/ssrn.4214730>.
- Kang, K., Zhao, Y., Ma, Y., & Li, Z. (2019). Green supply chain poverty alleviation through microfinance game model and cooperative analysis. *Journal of Cleaner Production*, 226, 1022-1041. doi:<https://doi.org/10.1016/j.jclepro.2019.04.099>.
- Kasuma, R. (2020) The impact of financial inclusion on economic growth, poverty, income inequality and financial stability in Asia. *Journal of Asian Finance, Economics and Business*, 7(10), 073-085.
- Khatib, S. F. A., Ernie H., Ayman, H. B., Ibraheem, A., Abu R. & Hamzeh A. A. (2022). Financial inclusion and the Performance of Banking Sector in Palestine. *Economies* 10: 247. <https://doi.org/10.3390/economies10100247>
- Mader, P. (2018). Contesting Inclusive finance. *Development and Change*, 49(2), 461- 483.
- Maity, S. & Sahu, T. N. (2018a). Role of Public and Private Sector Banks in financial inclusion in India – An empirical investigation using DEA, *SCMS Journal of Indian Management*, 15 (4), 62-73.
- Matekenya, W., Moyo, C. & Jeke, L. (2020). Financial inclusion and human development: Evidence from Sub-Saharan Africa. *Development Southern Africa*. DOI:10.1080/0376835X.2020.1799760
- Mia, M. A., & Lee, H.-A. (2017). Mission drift and ethical crisis in microfinance institutions: What matters? *Journal of Cleaner Production*, 164, 102-114. doi:<https://doi.org/10.1016/j.jclepro.2017.06.176>
- National Financial inclusion Strategy. (2012). Financial inclusion in Nigeria. *Summary*
- Nguyen, T. D., Nguyen, N. T., Nguyen, D. H., Huynh, A. T., Nguyen, T. H. (2023). Does Financial inclusion affect profitability of commercial banks? *International Journal of Social Science and Economics Invention*, 9(2), 19-29,
- Nourani, M., Malim N. A. K. & Mia, M. A. (2020). Inclusive finance, sustainability and efficiency of microfinance institutions: a global evidence. *Economic Research-Ekonomska Istraživanja*. <https://doi.org/10.1080/1331677X.2020.1819853>.



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal Of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

- Obeid, R. (2023). Factors Affecting Return on Assets (ROA) in the Banking Sector of Selected Arab Countries: Is There a Role for Financial inclusion and Technology Indicators? *International Journal of Economics and Finance*; 15(9), 1916-971
- Ofeimun, G. O. (2020). Effect of microfinance banks' financial inclusion strategies on economic growth of Nigeria (2009- 2018). *Noble International Journal of Economics and Financial Research*, 5(1): 14-23.
- Okereke, S. F. & Callistus, O. C. (2021). The role of micro finance banks in promoting financial inclusion in Nigeria. *British International Journal of Applied Economics, Finance and Accounting*, 5(6), 71-80.
- Omokanmi, O.J. & Ogunleye, E.O. (2020). Financial inclusion and human development in sub-Saharan Africa. *Journal of Economics and Finance*. 11(2), 01-09.
- Oyetoyan, S. A., Ajiboye, W. T. & Popoola T. A. (2021). Financial inclusion and performance of deposit money banks in Nigeria. *Al-Hikmah International Journal of Finance (AHJJoF)*, 1(1), 66-79.
- Peria, M. S. M. & Shin, M. Y. (2020). Financial inclusion and human development. *Oxford Research Encyclopedia of Economics and Finance*.
<https://doi.org/10.1093/acrefore/9780190625979.013.354>
- Rambu Atahau, A. D., Huruta, A. D., & Lee, C.-W. (2020). Rural microfinance sustainability: Does local wisdom driven - governance work? *Journal of Cleaner Production*, 267, 122153.
- Rangarajan Committee (2008). Report of the Committee on Financial inclusion to the Government of India, retrieved from: <https://www.sidbi.in/files/Rangarajan-Committee-report-on-Financial-Inclusion>.
- Santos, C.B & Gilho, E.T., (2021). Financial inclusion and economic development: An analysis under the Brazilian context. *Theoretical economics letters*. 11, 1192-1209.
- Shihadeh, F.H., Hannon, A.M.T., Ihtisham ul Haq, J.G., & Wang, X. (2018). Does financial inclusion improve the banks' performance? Evidence from Jordan. *Global Tensions in Financial Markets Research in Finance*, 34, 117-138.
- Sobonya, N. (2023). Effect of financial inclusion on human development in Sub-Saharan Africa. Ph.D thesis (unpublished), Department of Banking and Finance, Nasarawa State University, Keffi, Nigeria
- Sodeeq A.E., Saka J., Lamidi, L., Oguntade, M. & Adegboju U. (2019). Impact of Credit Access on Crop Farmers' Well-being in Osun State, Southwestern Nigeria. *Journal of Economics and Sustainable Development*, 10(4): 109-116.
- Soyemi, K., Olowofela, O.E & Yunusa, L.A (2020). Financial inclusion and sustainable development in Nigeria. *Journal of Economics and Management*. 39(1). 112-118.
- Uruakpa, N. I., Kalu, U. E.& Ufomadu, O. A. (2019). Impact of financial inclusion on the economic growth of Nigeria. *International Journal of Sustainable Development*, 12(2), 46 – 58.
- Uruakpa, N. I., Kalu, U. E.& Ufomadu, O. A. (2019). Impact of financial inclusion on the economic growth of Nigeria. *International Journal of Sustainable Development*, 12(2), 46 – 58.



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal Of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

Willful, C., Opoku-Asante, K., Mensal, M. O. & Quaye, J. N. A. (2022). Financial inclusion and economic development in Africa. *European Journal of Business and Management Research*, 7(2), 130 – 138.

Yunus, A. B., Abdulrafiu, D., Abdulmumin, B. A., Opefolu, F. O. & Hanafi. M. O. (2023). Impact of financial inclusion on bank's performance in Nigeria. *Nigerian Journal of Banking and Financial Issues (NJBFI)*, 9(1), 101-114.

Appendix

Data

BANK	Cross	YEAR	ROA	BBR	ACC	LAA
KUDA MFB	1	2012	12.7246	8.3737	8.6	20.18
	1	2013	15.1908	9.036	4.25	20.26
	1	2014	16.9931	10.1493	5.07	23.39
	1	2015	18.1921	10.1887	5.43	22.89
	1	2016	18.8224	10.435	5.92	27.0509
	1	2017	19.0621	10.2939	6.14	27.5431
	1	2018	19.1314	10.2864	6.29	29.7962
	1	2019	18.9223	9.4947	6.52	25.2864
	1	2020	18.3956	9.4421	5.69	24.502
	1	2021	17.8682	8.7468	7.02	32.0762
	1	2022	17.7694	8.2088	7.23	34.0135
LAPO MFB	2	2012	0.7125	2.5449	2.31	20.32
	2	2013	0.9876	2.7653	3.33	18.91
	2	2014	1.5534	3.2794	3.26	17.4
	2	2015	1.5081	3.2025	3.3	16.75
	2	2016	1.4272	3.2338	4.3	16.46
	2	2017	1.4186	3.2227	4.33	16.74
	2	2018	1.4284	3.3727	3.37	20.12
	2	2019	1.459	3.2267	4.42	21.45
	2	2020	1.4688	2.5672	4.44	24.02
	2	2021	1	3.4783	4.4	25.08
	2	2022	1.8963	3.9835	4.38	23.05
ACCION	3	2012	2.8968	3.2881	2.84	20.78



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal Of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

MFB						
	3	2013	3.1026	3.2805	2.93	21.87
	3	2014	3.2541	3.3572	3.09	22.6
	3	2015	3.5111	3.4597	4.36	23.98
	3	2016	3.685	3.6518	4.21	24
	3	2017	3.8798	3.6222	4.41	24.45
	3	2018	3.8396	3.3713	3.42	23.17
	3	2019	4.8714	3.2678	3.52	27.56
	3	2020	4.7797	3.944	3.59	30.75
	3	2021	4.3761	3.4241	3.7	32.83
	3	2022	4.2585	3.4592	4.01	36.4
MUTUAL TRUST MFB		2012	3.6523	2.1143	5.73	16.14
	4					
	4	2013	3.9827	2.16	5.82	17.98
	4	2014	4.0321	2.3402	6.09	22.91
	4	2015	4.2357	2.7785	6.32	25.7
	4	2016	4.4638	2.9116	6.44	27.67
	4	2017	4.8118	2.8871	6.79	27.53
	4	2018	5.3699	2.8608	6.87	28.53
	4	2019	4.1844	2.8325	7.02	26.98
	4	2020	5.1502	3.0776	7.58	29.33
	4	2021	4.5061	2.8206	7.63	30.87
	4	2022	4.5011	2.8867	7.68	32.34
ASSETS MFB		2012	27.9649	8.839	2.23	26.84
	5					
	5	2013	27.555	8.9591	2.45	31.79
	5	2014	29.0491	9.2361	2.57	31.02
	5	2015	30.3151	9.4918	2.77	33.81
	5	2016	33.9797	8.839	2.86	31.68
	5	2017	33.7559	9.0772	2.93	32.78
	5	2018	35.416	8.3698	3.27	34.21
	5	2019	44.5076	9.292	3.46	36.89
	5	2020	45.0238	9.3717	3.52	37.22
	5	2021	46.9958	9.0032	3.68	40.12
	5	2022	36.3092	7.4735	3.81	42.36
FINA	6	2012	6.9721	4.3119	3.42	16.81



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal Of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

TRUST MFB						
	6	2013	7.0453	4.5287	3.42	16.4
	6	2014	7.3251	4.4577	3.49	17.99
	6	2015	7.4338	4.6317	3.41	19.15
	6	2016	6.9486	4.9172	3.56	22.01
	6	2017	7.1468	5.0486	3.66	22.53
	6	2018	7.2251	5.1935	3.73	22.56
	6	2019	7.1353	5.0563	3.79	24.67
	6	2020	7.0324	5.017	3.92	25.77
	6	2021	7.2351	4.8998	3.98	25.96
	6	2022	7.3363	4.7774	4.04	27.43
AB MFB	7	2012	2.3425	5.45	3.49	19.67
	7	2013	2.582	5.23	3.41	20.45
	7	2014	3.1583	5.76	3.56	22.32
	7	2015	3.5815	5.33	3.66	22.89
	7	2016	3.9381	5.87	3.73	23.01
	7	2017	4.2868	6.03	4.09	24.53
	7	2018	4.3746	6.48	5.32	26.56
	7	2019	4.8112	6.98	5.44	27.67
	7	2020	4.6062	6.7	5.79	30.77
	7	2021	5.0391	6.87	5.87	33.96
	7	2022	5.1962	6.86	5.98	35.08
VFD MFB	8	2012	0.4878	5.56	3.52	15.92
	8	2013	0.6534	5.98	3.68	16.3
	8	2014	0.7214	6.23	3.81	16.81
	8	2015	1.1075	6.13	3.73	16.4
	8	2016	1.3126	6.18	3.79	17.99
	8	2017	1.9993	6.2	3.92	19.15
	8	2018	1.3516	6.45	3.98	19.08
	8	2019	1.4008	6.12	4.04	20.78
	8	2020	1.4586	6.62	5.42	21.87
	8	2021	1.4867	6.87	5.73	22.6
	8	2022	1.5012	7	5.82	23.98
SPARKLE MFB	9	2012	0.8999	0.313	4.58	7.77
	9	2013	1.2997	0.5351	4.67	9.59



Taraba State University, Jalingo
Faculty of Management Sciences

ISSN NO. 1118-3527 for "*Journal Of Management Science Research and Contemporary Issues (JMSRCI)*
Vol 2 (1), 2025

	9	2014	3.8479	1.98	4.72	11.32
	9	2015	5.1085	2.5542	7.44	14.09
	9	2016	5.7671	2.6343	8.92	22.06
	9	2017	7.3131	2.9807	9.24	25.02
	9	2018	8.6954	3.1344	8.15	26.22
	9	2019	11.3289	3.1432	9.56	27.24
	9	2020	12.2075	3.0836	9.89	28.98
	9	2021	11.9107	2.9931	10.23	30.03
	9	2022	11.8846	2.8139	15.8	32.18
BOI MFB	10	2012	6.1001	5.2892	26.5	15.05
	10	2013	6.2092	5.569	27.68	15.64
	10	2014	6.5108	5.9352	29.87	17.07
	10	2015	7.6068	6.983	32.4	19.91
	10	2016	8.35	6.9849	37.98	20.44
	10	2017	8.5708	8.4163	40.23	19.59
	10	2018	9.1272	8.5433	48.5	22.82
	10	2019	9.5399	8.3034	55.67	25.78
	10	2020	9.3277	6.1427	65.2	24.76
	10	2021	9.3107	5.7215	62.21	26.26
	10	2022	9.3046	11.4896	65.2	28.9

Source: Annual Reports and Accounts