

## Effects of Deposit Mobilization on Financial Performance (Profitability) of Microfinance Banks in Nigeria

**Sebastian O. Uremadu, Ph.D**

(Professor of Banking and Finance)

Department of Banking and Finance, COLMS  
Michael Okpara University of Agriculture, Umudike  
Umuahia, Abia State

E-mail: [sebauremadu@yahoo.com](mailto:sebauremadu@yahoo.com)

+234-8037876614(DL)

**Edim N. Obim (Ph.D Student)**

Department of Banking and Finance, COLMS  
Michael Okpara University of Agriculture, Umudike - Nigeria

<https://doi.org/10.61090/aksujacog.2024.001>

### Abstract

*The study examined the effects of deposit mobilization on the financial performance of microfinance banks in Nigeria between 2012 and 2021. The study employed real interest rate and gross capital formation as control variables. This study utilized the exploratory research design and the population of the study consisted of all the microfinance banks in Cross River State and Abia State. A purposive/judgment sampling technique was used. Data for the study were obtained from the annual reports of various microfinance banks in the selected states in Nigeria. Regression models were estimated and analyzed using panel random-effects, and fixed effects. From the result of these analyses, the findings of the research were summarized as follows: there was a positive and significant effect of the demand deposit variable on the financial performance of microfinance banks in Nigeria; there was a negative and significant effect of savings deposit variable on the financial performance of microfinance banks in Nigeria. The study therefore recommended that Commercial banks, and Microfinance banks in particular, should intensify efforts on deposit mobilization as one of their main financing options in the Nigerian financial system, as the study has confirmed that microfinance banks largely depended on deposits for financing their operations. Besides, banks should implement effective strategies promoting prize-linked-savings such as to mobilize more deposits from both the formal and informal sectors of the economy. Both strategies would enhance their profitability rating in the Nigerian banking environment in the years ahead.*

**Keywords:** Deposit mobilization, demand deposit, savings deposits, real interest rate, gross capital formation, financial performance, microfinance banks.

### Introduction

A major role of banks in a financial market is that of financial intermediation, and deposits constitute a vital component of this process. Both commercial banks and microfinance banks need deposits to fulfil this objective. Deposit mobilization is one of the most important functions of the banking business. It is therefore an important source of the working fund for banks, generally and for microfinance banks in particular. Banks make use of loan and deposit services to effectively channel idle funds from the general public into valuable productive activities and other investment projects that could help people reach their goals. Bello (2005), and Nzotta (2014) were of the same view that the banking system is the backbone of financial intermediation through the mobilization and channeling of financial resources to investment activities and other end-users.

Deposit mobilization also supports capital accumulation. The growth of any economy depends on capital accumulation, which in turn depends on investment and savings. Thus, deposit mobilization plays a crucial role in providing satisfactory services to various sectors of the economy. Abiola (2003), and Alex (2012) posited that the ability of commercial banks to generate growth and economic development depended on the health and stability of the banking system itself. Deposit mobilization serves as an indispensable source of increasing microfinance banks' resources for effective service delivery. It is inferred that the success of a bank's operations lies substantially in its deposit mobilization strength. Deposit mobilization is a major strategy adopted by banks in sourcing funds to support their lending operations and improve the profitability of the banking firm. In this case, the amount of deposit mobilized as well as the deposit mix play a significant role in determining the quantum and duration of loans a bank could grant. Large deposit holding by a commercial or microfinance bank would enhance its ability to give out bigger loans, while the deposit mix (whether DD, SD, or TD) enables the bank to decide how much of the loan portfolio should be short, medium or long term to avoid asset-liabilities mismatch (Obim, 2023).

The relationship between banks' deposit mobilization and capital formation is established through the activities of credit creation in the banking industry. Capital formation makes a significant contribution to the performance and growth of banks. Capital formation is influenced by the number of policy intervention programs formulated by the banks and geared towards achieving economic growth in the country. The growth of any economy depends on capital accumulation which, in turn, depends on investment and the amount of savings at its disposal. Two main issues of concern for developing countries are: how to stimulate investment, and how to boost the level of savings to finance the investment (Mohammed & Mahdi, 2010).

In performing their pivotal role in the economy, commercial banks facilitate financial settlement through the payment system, influence money market rates and provide a means for international payments. At the moment, the enabling statute establishing the Microfinance banking scheme in Nigeria prohibits them, among other things, from engaging in international payment transactions (Olakanmi, 2008). But with the rapid innovations in ICT and online banking globally, it is envisaged that this extant law might be reviewed in the future in line with global best practices. This study is therefore an attempt to investigate the effects that deposit mobilization has on the financial performance of microfinance banks in Nigeria. Moreso, because previous studies on similar topics had mixed results, some of which were significant while some were not significant; and some were positive while others were negative, the authors have deemed it fit to carry out this study, findings of research therefrom would point to the way forward in the years to come.

### **Statement of the Problem**

The low level of capital formation in Nigeria has been blamed on the low level of savings occasioned by the low level of income and high level of consumption. This has invariably reduced the ability of banks to create money through the intermediation process, and it has contributed to the lack of investible funds in the economy. Firms suffer severely for lack of funds to expand their activities and run their operations daily, and microfinance banks have not been able to mobilize adequate deposits from the public because of waning confidence from the banking public as well as the reluctance to invest in securities of microfinance financial institutions in the country, among other limitations. This has led to obvious discouragements in financial innovations which has contributed to the increased financial shallowness in the domestic economy.

Microfinance banks depend largely on depositors' money as a source of funds, which thus suggests that there exists a relationship between the ability of the banks to mobilize deposits and the amount of credit granted to the customers. To achieve self-sufficiency, there is therefore a compelling need to improve ways of mobilizing domestic deposits. Records indicate that a large chunk of deposits are lying idle under pillows, earthen pots, stashed in holes, bamboo and other improvised devices in rural areas and have been left out of the banking stream (Sharma, 2009). Traditionally, banks do not

have adequate funds of their own to finance their credit portfolio and routine operations. They depended on the size of deposits mobilized.

This snack further reduces the volume of deposits mobilized and the credit creation ability of the financial sector. The lack of investible funds renders banks illiquid and contributes to their inability to acquire modern technology, finance expansion and upscale performance. This appears to be even more severe in the microfinance banking sub-sector as evident in the frequent withdrawal of operating licenses and the number of liquidated microfinance banks in Nigeria within the last two decades (Obim, 2023). The specific objectives of the present study are to: examine the effect of demand deposit accounts on the financial performance (ROA) and or profitability of microfinance banks in Nigeria; and to determine the effect of savings deposits on the financial performance (ROA) of microfinance banks in Nigeria. By the time the study has been completed and the findings of research established, the authors shall be in a position to ascertain the true state of affairs and then proffer the right solutions to the problem at hand.

## **Conceptual Review of Relevant Literature**

### **Deposit Mobilization**

Deposit mobilization remains one of the important functions of banking all over the world. It is an important source of funding for both commercial and microfinance banks and has been proven by scholars such as Jhingan (2001), Agene (2002), Bakare (2011), and Orji (2012), among others, as an indispensable factor for increasing the sources of funding for banks to operate effectively. The mobilization of deposits plays a crucial role in providing satisfactory services to various sectors of the economy (Baye and Jason, 2006). However, the ability of banks to generate growth and economic development depends on the health, solidity and stability of the banking system itself (Alex, 2012).

The relationship between bank deposit mobilization, the financing of bank credit and capital formation is traceable to the activities of the banking industry such as the mobilization of deposits and the creation of credits. However, it has been argued in the public domain that banks have not been performing effectively to improve capital formation in a bid to guarantee a sound financial system (Venkati, 2016). Capital formation or real asset investment is an important element of economic development and growth. Large-scale capital formation is very beneficial. Existing share capital might need to be replaced by normal depreciation, plants might need to expand to benefit from economies of scale and be competent in increasing market demand (Uche & Ehikwe, 2001; Shantann et al., 2009).

The intensification of competition would dictate investment in the latest technology (Bhatt, 2010). This might also require plant assets and stocks if the supply of raw materials or market for the end product indicates a high degree of seasonality. In all cases, real asset investment could only be realized if sufficient funds are available. While there is a need to identify various sources of fund mobilization, borrowing from abroad could have negative effects on the balance of payments as it depends on how the loan might be used and also the level of exchange rate risk exposure involved. Therefore, domestic savings are necessary for economic growth because they provide the domestic resources needed to meet the investment efforts of a country. In the main, they supplement Foreign Direct Investment (FDI) and or Foreign Portfolio Investment (FPI) to achieve funds adequacy for capital formation and domestic investments at all times and most especially for fledgling economies like Nigeria for their domestic needs, so to speak. Discussions on the rate of growth of the Nigerian economy cannot be complete without looking at the contribution of capital formation to the nation's economic growth (Philip, 2018). Capital formation has thus been recognized as an important driving factor that determines the growth of the Nigerian economy. No country can be said to have fully attained or achieved sustainable investment in capital formation (Obim, 2023).

In a bid to attain economic growth around the world, emphasis has been placed on increased capital formation. It is good to understand the determinants of capital formation to design several policy interventions towards achieving economic growth. Capital formation refers to the proportion of present income saved and invested to augment future output and income. It usually results from the acquisition of a new factory along with machinery, equipment and all productive capital goods. This study is

necessary due to the consistent decline in private savings and the need to generate sufficient savings to finance investments required for economic growth in Nigeria.

### **Demand Deposits (SDs)**

These deposits are generally used by business persons to settle debts usually through the use of cheques (Jhingan, 2001). These are most often ready for payment upon demand anytime and usually, no interest is paid on these accounts. However, in exceptional cases where interest is paid, it is at a very minimal rate of interest.

### **Saving Deposits (SDs)**

These accounts are opened by many people who need to save their wealth usually beyond current consumption and in anticipation of future investments such as building their own house, buying a car and sponsorship of education of children or self. In doing so the account holder earns interest on the saving balance. Savings accounts are the most favoured deposit accounts of commercial and microfinance banks because they are cheap and usually stable (Ogundele, 2014; Uremadu, 2015).

### **Gross Capital Formation (GCF)**

It is that part of a country's current output and imports which is not consumed of the exported goods during the accounting period but is set aside as an addition to its stock of capital goods. Capital formation is a term used to describe a particular country's net capital accumulation during an accounting period (Obim, 2023)

### **Real Interest Rate (RIR)**

This refers to the rate of interest an investment saver or lender receives after allowing for inflation. It measures the percentage increase in purchasing power the lender receives when the borrower repays the loan with interest (Uremadu, 2015).

### **Financial Performance**

The word 'performance' is an action word which means 'to do', 'to carry out' or 'to render'. It refers to the act of performing; execution, accomplishment, fulfilment, etc. It also refers to the accomplishment of a given task measured against preset standards of accuracy, completeness, cost, and speed. In other words, it refers to the degree to which an achievement is being accomplished or has been accomplished. Performance is a generic term for part or all the conduct of activities of an organization over some time often concerning past or projected cost efficiency, management responsibility or accountability and the like. Thus, performance is not just the presentation, but also the quality of results achieved. It is used to indicate a firm's success, conditions, and compliance (Obim, 2023).

Financial performance refers to the act of performing financial activity. In a broader sense, financial performance refers to the degree to which financial objectives are being accomplished or have been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure a firm's overall financial health over a given period and could equally be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Casu, 2006).

The significant changes that have occurred in the financial sectors in the advanced economies have increased the importance of financial performance analysis for modern banks. The new operating environment is characterized by more intense competition and a movement towards an increasingly market-oriented banking system. It is not surprising that the increased riskiness of the environment in which banks operate has engendered the need for prudential regulations. Performance analysis is an important tool used by various agents operating either internally in the banks (e.g. managers) or who form part of the bank's external operating environment (e.g. regulators) (Casu, 2006). For purposes of clarity, financial performance indicators and financial performance measurement have been carefully

distinguished by various researchers in different studies as shall be seen shortly in the review of relevant literature that shall follow and stating the conceptual framework on which this study is hinged.

### **Savings Interest Rate**

One of the most effective factors for deciding to deposit money in the banking system is the interest rate (Mohammed & Mahdi, 2010). Herald & Heiko (2018) also mentioned interest as one of the determining factors for commercial bank deposits. Philip (2018) equally stated that the offering of attractive interest rates on bank deposits might be considered to have a beneficial effect. Mustafa & Sayera (2019) posited that low deposit rates are discouraging to saving mobilization.

Bhatt (2010) said that the banking system is unlikely to be in a position to meet the demand for bank credit unless a concerted policy is pursued to raise the rate of saving generally and the rate of saving in the form of deposits in particular.

### **Conceptual Framework**

Lending activities of a banking firm contribute to maximization of its profitability and all return on assets and by extension to a growth expansion and long-term sustainability of not only a particular bank in question, but they also enable the growth of the domestic economy via profitability increases in the banking industry. Therefore, these good showings in profitability or banking returns would translate to improved and frequent steady returns to shareholders and other stakeholders of the banking firm. Hence, conceptually a rise in a banking firm's deposits mobilized through the channels of DD, SD and TD (Demand Deposit, Savings Deposit and Time Deposit, respectively) would invariably engender growth in bank performance proxied by either profits and or returns in asset and by extension would prompt enormous growth in the domestic economy. With this in mind, the study can now go into its empirical review of core relevant studies consulted (Uremadu 2015 & Obim 2023).

### **Empirical Review**

Some studies have been conducted across the globe to investigate the relationship between deposit mobilization and the performance of Microfinance banks as presented hereunder. Koufopoulos (2023) investigated the correlation between deposit mobilization and the financial performance of commercial banks in Nigeria. Data were sourced from secondary sources using annual reports of banks. The study adopted multiple regression econometric methodology and the result revealed that deposit mobilization had positively affected the financial performance of commercial banks in Nigeria.

John et al., (2017) examined credit risk, deposit mobilization and profitability of Ghanaian banks. Panel regression analysis was adopted for this study. The dependent variable was return on asset while non-performing loan ratio, deposit mobilization, capital adequacy ratio, total asset of banks, inflation and growth in interest income were utilized as the independent variables. The result of the tests and analyses revealed a significantly positive relationship between credit risk, deposit mobilization, growth in interest income, capital adequacy ratio and profitability of Ghanaian banks. The present study will assess the situation among Nigerian banks

Mamo (2017) conducted an investigation of determinants of deposit mobilization in commercial banks in Ethiopia. Multiple linear regression was adopted for the study. The independent variables were competitors, interest rates, branches and loans while the dependent variable was total deposits. The result of the econometric tests and analyses indicated that loan provision, branch expansion and the number of customers were found to have had a significant positive impact on inducing deposit mobilization in that country.

Ogar & Oka (2017) examined the impact of financial deepening on capital formation in Nigeria. Ordinary least square model, multiple regression analytical technique and desk survey method were adopted for that study. The dependent variable was Gross fixed capital formation while broad money supply to GDP, gross domestic investment to GDP, credit to private sector to GDP and interest rate



spread were independent variables. They found that financial deepening had a positive and significant impact on capital formation.

Oka & Adesola (2017) examined commercial bank financing and its effect on real sector output in Nigeria: Evidence from trade and agricultural sectors. Vector error correction mechanism and augmented Dickey-Fuller were to conduct tests and analysis used for the study. Independent variables included deposit mobilization of banks, private sector credit, banks holding of treasury bills and interest rate spread while the agricultural sector output and trade sector output were dependent variables. The study found that commercial bank financing had a long-run significant effect on trade sector output but an insignificant long-run effect on agricultural sector output in Nigeria.

Akuma et al., (2017) investigated the relationship between deposit mobilization, credit risk and profitability of Ghanaian banks from 2002 to 2011. Secondary data were obtained from the financial statements of 17 Ghanaian banks which had operated consistently within the study period. Panel regression analysis was used in the estimation of a function relating to the return on assets (ROA) to measures of credit risk and deposit mobilization as well as a few control variables. The results revealed a significantly positive relationship between credit risk, deposit mobilization, growth in interest income, capital adequacy ratio and profitability of Ghanaian banks. However, a significantly negative relationship between year-on-year inflation and ROA was found. Regarding the relationship between bank size and profitability, the results found did not show a significant association between the two. In the Ghanaian case, a high proportion (64.33%) of total liabilities is represented by bank deposits; attesting to the fact that Ghanaian banks largely depended on deposits for financing their operations.

Gockel & Brow (2017) stated that a bank deposit is money placed in a banking institution for safekeeping. Bank deposits are made to deposit accounts at a banking institution, such as savings accounts, current (chequing) accounts and money market accounts. The account holder has the right to withdraw any deposited funds, as outlined in the terms and conditions of the account. The deposit itself is a liability owed by the bank to the depositor (the person or entity that made the deposit) and refers to this as liability rather than to the actual funds that are deposited. A bank deposit is generally made when opening an account or in the course of routine business or personal transactions that involve placing funds with the bank for future use. Bank deposits can be made in several different ways. The most direct way is to walk into a bank or a bank branch in which you hold an account. A bank deposit is done by filling in a bank deposit slip with the particulars of your account and the amount of money you wish to deposit. Bank deposits could be made via wire transfer, as well as through a direct deposit plan from employers in many cases.

According to Laura et al., (2017), to mobilize more deposits, financial institutions offer a range of savings products that are tailored to their particular clientele. They offer the widest variety of specialized savings products so that their customers have a choice between immediately accessible, liquid products, semi-liquid accounts or time deposits with higher interest rates. The simple and clear design of basic savings products enables depositors to easily select the product that best suits their needs. The simple and transparent design of the savings products also enables staff to administer them with ease, reducing administrative costs.

According to Tanzi (2017), fiscal policy relates government revenue to its expenditure. In most developing countries, taxation is the main source of government revenue and the effectiveness of which rests on its ability to generate required revenue and support investment. Taxation is often defined as the levying or compulsory contributions by public authorities having tax jurisdiction, to defray the cost of their activities. Taxation is also seen as forced savings and its accumulation is passed via the banking system as part of savings to boost deposit mobilization, so to say (see Laura et al., 2017). It is therefore a form of savings mobilization.

Ali-Nakyea, (2017) investigated the effects of deposit mobilization on financial performance in commercial banks in Rwanda (A case of Equity Bank Rwanda). That study attempted to establish the effects of deposit mobilization on the financial performance of commercial banks in Rwanda. The main source of data was primary and secondary data. The documentary method and the questionnaire were

used as research instruments to get the data needed for the research. Data were processed by use of descriptive statistics after editing had been done. The computer software SPSS version 20 was used as a device to accommodate analysis. Pearson and Spearman’s correlation analysis were used to test the nature of the relationship. The findings of the research indicated that the majority of the respondents (85%) confirmed that the brand name of the "Equity Bank" was an asset in itself.

**Research Methodology**

This study utilized the exploratory research design to empirically analyze the effects of deposit mobilization on the financial performance of microfinance banks in Nigeria. The population of this study consisted of all the microfinance banks in Cross River State and Abia State (see Obim, 2023). The purposive/judgement sampling technique was used in selecting the sample size. Secondary data, time series and cross-sectional data were used in the study. Data for the study were gathered from annual reports of various microfinance banks in the selected states in Nigeria, as well as institutional sources like the CBN statistical bulletins, and the NDIC reports and records (CBN, 2014).

**Model Specification**

It is crucial to identify the framework used for analysis in any empirical investigation. Return on asset (ROA) was used in this study as a proxy for bank performance or profitability representing the dependent variable; deposit mobilization was the independent variable, disaggregated into Demand deposit (DD) and Savings deposit (SD) while real interest rate and gross capital formation were the control variables. The study adopted pooled fixed effects and random effects models for empirical analysis. The fixed effect and random effect models are the appropriate models for panel data.

Panel data models are stated as follows:

$$(ROA)_{it} = \alpha + \beta(DM)_{it} + \gamma Z_{it} + \varepsilon_{it} \text{-----} \text{Equ 1}$$

$$(ROA)_{it} = \alpha + \mu_i + \theta_t + \beta(DM)_{it} + \gamma Z_{it} + \varepsilon_{it} \text{-----} \text{Equ 2}$$

$$(ROA)_{it} = \alpha + \mu_i + \theta_t + \beta(DM)_{it} + \delta D_{it} + \gamma Z_{it} + \varepsilon_{it} \text{-----} \text{Equ 3}$$

where  $(ROA)_{it}$  is the Return on Asset,  $\mu_i$  is the bank-specific, time-invariant effect,  $\theta_t$  is the time-specific, bank-invariant effect,  $(DM)_{it}$  is the deposit mobilization, and  $Z_{it}$  is the vector of explanatory variables (demand deposit, savings deposit). Subscript (i) represents banks, where N = 20. Subscript (t) represents time (t = 1, 2 ... T), where T = 10.  $\varepsilon_{it}$  represents an error term.

This is presented in a functional model as:

$$ROA = f(DD + SD + RIR + GCF) \text{---} \text{Eqn 4}$$

The panel regression equation is translated into its explicit form as follows:

$$ROA = \alpha_0 + \beta_1 DD + \beta_2 SD + RIR + GCF + \mu_t \text{-----} \text{Eqn 5}$$

Where;

ROA = Return on Asset

DD = Demand deposit

SD = Saving deposit

RIR = Real interest rate

GCF = Gross capital formation

$\alpha$  = the intercept or constant term

$\beta_1$ - $\beta_2$  = Coefficients estimated

**Classification and Description Model Variables**

1. Return on asset: This is a financial ratio that measures the profitability of a company concerning its total assets. In the present study, it will consider the assets of the banking firms under study. In the present study profitability is a mirror/proxy used for ROA (Return on asset variable).

2. Demand deposits (DDs): It is a current or checking account of a commercial or microfinance bank. Demand deposits are bank accounts from which deposited funds could be withdrawn at any time, without any advance notice.
3. Savings deposits (SDs): This refers to bank accounts with restrictions on the number of withdrawals that the particular commercial bank or microfinance bank pays interest on the accounts (as returns to the accounts holder in the form of an investment return).
4. Real interest rate (RIR). This refers to the rate of interest an investor, saver or lender receives after allowing for inflation. In this study, it is the interest rate on savings discount inflation rate. It measures the percentage increase in the purchasing power the lender receives when the borrower repays the loan with interest.
5. Gross capital formation (GCF): It refers to the gross additions to national wealth that result from categories of investment and or acquisition of produced assets or stock of capital. It serves as a control variable with RIR in this study.

### Data Analysis

**Table 1: Result of Test of Panel Random Analysis**

Dependent Variable: ROA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DD	0.198721	0.242479	0.819539	0.0145*
SD	-0.245162	0.208951	-1.173297	0.0436**
RIR	0.338534	0.046223	7.323976	0.0000*
GCF	0.791398	0.097017	8.157350	0.0000*
C	0.870638	0.070451	12.35811	0.0000*
Effects Specification			S.D.	Rho
Cross-section random			2.285763	0.0559
Idiosyncratic random			9.396565	0.9441
Weighted Statistic				
R-squared	0.569127	Mean dependent var	50.86264	
Adjusted R-squared	0.439732	S.D. dependent var	9.632128	
S.E. of regression	3.420324	Sum squared resid	8430.539	
F-statistic	6.351597	Durbin-Watson stat	1.267199	
Prob(F-statistic)	0.000157			
Unweighted Statistic				
R-squared	0.092528	Mean dependent var	64.05545	
Sum squared resid	8878.834	Durbin-Watson stat	1.203218	

Source: Authors' computations from E-Views 10.0 Statistical Software package.

\*Significant at 1% level of significance

\*\*Significant at 5% level of significance



**Table 2: Panel Fixed Effect Regression Analysis**

Dependent Variable: ROA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DD	0.424788	0.123074	3.451497	0.0009*
SD	-0.066477	0.134078	-0.495805	0.6213
RIR	0.799397	0.053727	14.87876	0.0000*
GCF	0.083102	0.191329	0.43431	0.6685
C	0.014796	0.095652	0.154685	0.8785
Effects Specification				
Cross-section fixed (dummy variables)				
Weighted Statistics				
R-squared	0.366500	Mean dependent var	80.26774	
Adjusted R-squared	0.278104	S.D. dependent var	29.30680	
S.E. of regression	9.272467	Sum squared resid	7394.163	
F-statistic	4.146142	Durbin-Watson stat	1.676513	
Prob(F-statistic)	0.000042			
Unweighted Statistics				
R-squared	0.210789	Mean dependent var	64.05545	
Sum squared resid	7721.748	Durbin-Watson stat	1.370822	

Source: Authors computations from E-Views 10.0 Statistical Software package.

\*Significant at 1% level of significance

**Table 3: Correlated Random Effects - Hausman Test**

Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
Cross-section random	3.483099	4	0.3230	
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var (Diff.)	Prob.
DD	0.139621	0.198721	0.009617	0.5467
SD	-0.204255	-0.245162	0.005659	0.5866
RIR	1.923273	0.552285	3.482395	0.0029
GCF	0.096651	0.167641	0.576539	0.0000

Source: Authors computations from E-Views 10.0 Statistical Software Package.

\*Significant at 1% level of significance

\*\*Significant at 5% level of significance

### The Hausmann Test

While adopting the null hypothesis that the random effect would be the most relevant and acceptable for this study, the study denied the alternative hypothesis (that its fixed effect is somewhat more useful). Given that a random effect model was chosen for the study rather than a fixed effect since the P-value for the Hausmann test in Table 3 was 0.3230 (which is higher than 0.05). The fixed effect has therefore proved very appropriate in this study going by the Hausmann Test results.

### Panel Random Effect

In Table 1, regression of different terms of deposit mobilization on the financial performance of microfinance banks in Nigeria was carried out. As shown, the profitability (return on asset) of a sample of microfinance banks drawn from two states of Nigeria, Abia and Cross River, increased by roughly 87.06 per cent, and this gain was significant at a 5% level of significance when other variables were taken into account are held constant. The implication of this is that the volume of demand deposit controlled by its savings and time and its impact on the level of return on the asset with the strengthening influence of control variables (RIR and GCF) was curtailed by about 87.06 per cent in the selected microfinance banks in Nigeria studied.

Specifically, the random effect model results from Table 1 also revealed the estimated coefficient, which is demand deposit, controlled by other variables as {0.1987}. This has demonstrated that a percentage change in demand deposit, savings deposit, time deposit and loans had an increase of 0.1987 in the performance of chosen microfinance banks in Nigeria but was significant. The presence of control variables in these banks had positively improved their return on assets by about 0.1987 per cent, *ceteris paribus*. Similarly, further analysis of the random effect model results, from Table 1

revealed that the estimated coefficient of savings deposit  $\{-0.2451\}$  demonstrated that a change in SD led to a 0.2451 decrease in the performance (return on asset) of the chosen microfinance banks in Nigeria and was non-significant. Table 1 also revealed that the estimated coefficient of RIR  $\{0.3385\}$  demonstrated that a variation in RIR led to an increase in the performance of banks in Nigeria and was non-significant. The analysis of the random effect model results from Table 1 revealed that the estimated coefficient of GCF  $\{0.7913\}$  demonstrated that a variation in GCF led to a 0.7913 increase in the performance of microfinance banks in Nigeria and was significant. The R<sup>2</sup> value of  $0.5691 = 56.91$  per cent (with control variables) approximately 57 per cent indicated that the variables (DD, SD, RIR and GCF) accounted for about 57 per cent of the difference in ROA. Also, the adjusted R<sup>2</sup> is at  $0.4379 = 43.97$  per cent. Adjusted R<sup>2</sup> measures the effect of the addition of irrelevant variables to the model and the effect on the prediction of the relationship of the variables. It was smarter than the R<sup>2</sup> as it did allow room for stochastic variables. In Table 1, f-calculated  $\{6.35\}$  was larger than 2.56, that was, the entire estimate is well-fitted and shows joint significance, which showed that both the independent as well as control variables were crucial at the same time.

### Results of Panel Fixed Effect Regression Analysis

Results from Table 2 under fixed effect regression analysis, showed that DD (Demand Deposit Accounts) had a very positive robust and significant impact on MFB's profitability or return on assets (ROA) while SD (Saving deposits) had an insignificant negative impact on MFB performance. It could portend that enough savings were not mobilized by the MFBs studied within the period under review. As to the control variables, RIR had a leading positive influence on MFB's financial performance within the period studied. It portends that there was a way to briskly the business of banking using funds or savings mobilized via checking accounts of the MFBs in Nigeria within the study period.

### Discussion of Findings

The research focus was to achieve two (2) stated objectives using various econometric analytical techniques. As a result, the tests for fixed and random effect panel analyses were conducted. Demand deposit is a significant and important determinant of selected microfinance banks' performances, hence, the findings of research showed a positive and moderately significant relationship between Demand Deposit (DD) and return on assets (ROA) of the chosen microfinance finance banks in Nigeria. Demand deposit showed a 0.1987 per cent level of relationship and was significant at a 5% level which showed that the rate of demand deposit in banks in Nigeria, as a single variable, did impact the ROA of microfinance banks positively as theoretically expected. The result showed that any change in the rate of demand deposit of microfinance banks would lead to a 0.1987 per cent increase in the return on assets. The theoretical body of knowledge argues that demand deposits do impede a bank's performance; therefore, findings from this study supported this proposition. However, savings deposits impacted negatively on the return on assets employed by these banks. The reason why SD did impede bank profitability was because it was unstable under random effect test analysis.

The significant and negative impact of savings on the ROA of banks in Nigeria was consistent with the works of Herald & Heiko (2009), who posited that accounts are opened by many people who need to save their wealth usually beyond current consumption and in anticipation of future investments such as building own house, buying a car and sponsorship of education of children or self. In doing so the account holder earns interest on the savings balance. Savings accounts are the most favoured deposit accounts in commercial and microfinance banks, because they are cheap and usually stable, thereby allowing the bank management to apply for funds accumulated into lending to enable maximization of returns from credit allocation (lending) (see Uremadu, 2015).

On the other hand, demand deposits or current accounts are generally used by business persons to settle debts usually through the use of cheques. They are most often ready for payment upon demand at any time. Again, as to the impacts of the control variables included in the study, results showed that the estimated coefficient of RIR (0.3385) had demonstrated that a variation of RIR led to an increase in

the performance of MF/banks in Nigeria and was very significant in influencing the performance of MFB in Nigeria. It was second in importance in the profitability rating of these banks.

Similarly, GCF had the most robust impact in impacting on the profitability of MFBs in Nigeria under panel random analysis.

Besides, the analysis of the random effect model results from Table 1, revealed that the estimated coefficient of GCF (0.7913) has demonstrated that a variation in GCF led to 0.7913 increases in the performance of MFBs in Nigeria and it was most significant in influencing MFB performance.

The R2 value of 0.5691, 56.9 per cent (with the control variables) approximately 57 per cent indicated that variables (DD, SD, RIR and GCF) accounted for about 57 per cent difference (deviation) in ROA or profitability. Also, the adjusted R2 was 0.4379 = 43.97 per cent. Adjusted R2 is the effect of the addition of irrelevant variables measures to the model and the effect on the prediction of the relationship of these variables. It is smarter than the R2 in that it allows room for stochastic variables. In Table 1, F-calculated (6.55) was larger than 2.56, that is, the entire estimate was well-filtered and showed joint significance, which showed that both the explanatory as well as control variables were crucial at the same time.

From the result of these analyses, the findings of the research are summarized as follows:

1. There was a significant and positive effect of demand deposits on the financial performance of microfinance banks in Nigeria.
2. There was a significant and negative effect of savings deposits on the financial performance of microfinance banks in Nigeria.
3. Both RIR and GCF had positive and leading significant effects on MFB's financial performance under panel random analysis.
4. Only RIR had a positive and leading impact on MFBs in Nigeria under panel fixed regression analysis. It should thus be noted that demand deposit is more flexible in turnover daily than SD and TD, SS and TD are more or less periodic.

### **Conclusion/Recommendations**

The study examined the effects of deposit mobilization on the financial performance of microfinance banks in Nigeria. The findings of the study revealed that there was a significant positive effect of demand deposits on the financial performance of microfinance banks in Nigeria; there was a significant negative effect of savings deposits on the financial performance of microfinance banks in Nigeria. It was evident from the study that deposit mobilization is one of the most important functions of the banking business. As such, it is an important source of working funds (i.e. working capital) for microfinance banks.

The role of banks in a financial market is that of financial intermediation, which makes use of loan and deposit services to effectively channel idle funds from the general public into valuable productive activities and other investment projects that help people reach their goals. The accompanying recommendations are given in the light of the results of the study:

1. Commercial banks, and Microfinance banks in particular, should intensify efforts on deposit mobilization as one of their main financing options, since the study has established the fact that microfinance banks largely depend on deposits for financing their operations.
2. Banks should implement effective strategies to mobilize more deposits from both the formal and informal sectors of the economy (eg promoting prize-linked-savings such as lotteries, setting up off-site cash/deposits receiving ATMs, testimonial-based advertisements, etc.). They should also invest heavily in credit risk management. Both strategies would enhance bank profitability.
3. RIR had an overriding positive and significant impact on MFB's financial performance in Nigeria. Hence banks should always give serious consideration to interest rate risk management to raise their savings.
4. The business of banking is always geared towards raising domestic investment called capital formation for the sake of boosting the national economy. Banks should always have an eye on this while trying to maximize profitability and or returns.

## References

- Abiola, R. O. (2003). Effects of bank distress on the economy: The Nigerian case. *Journal of the Chartered Institute of Bankers of Nigeria*, January -March, 16-20.
- Ali-Nakyea, M. (2017). Effects of deposits mobilization on financial performance in commercial banks in Rwanda: A case of equity bank Rwanda. *International Journal of Small Business and Entrepreneurship Research*. 3(6), 44-71.
- Agene, M. (2002). Poverty and wellbeing impacts of microfinance. What do we know? *Working paper University of York*, England.
- Akuma, J., Doku, I. & Awer, N. (2017). Credit risk, deposit mobilization and profitability of Ghanaian banks. *International Journal of Economics and Financial Issues*, 7(5), 394-399.
- Alex, I. O. (2012). Microfinance and poverty alleviation in South Western Nigeria: Empirical evidence. *Journal of South African Business Research*, 20 (2016), 1-19.
- Bakare, M. A. (2011). Microfinance credits and growth of business firms in Nigeria. *International Journal of Innovation and Research in Educational Sciences*, 6 (6), 782-790.
- Bhatt, K. (2010). Impact of microcredit on poverty alleviation in Nigeria, *International Journal of Business and Management Review*, 2(1), 127-51.
- Bello, C. A. (2005). *Microfinance banking: Principles and practice*. Ibadan: Daily Graphics.
- Casu, C. (2006). Microfinance and poverty reduction: The Nigerian experience. *International Journal of Business and Management*, 3(1), 220-227.
- CBN (2014). CBN annual reports and accounts. [www.cbn.gov.ng](http://www.cbn.gov.ng)
- Gockel, A. & Brown, U. (2007). The economic impact of microfinance: A comparative analysis of small enterprises. *Journal of Applied Environment*, 5(5), 280-287.
- Jhingan, M. L. (2001). *Money, banking, international trade and public finance* (6th). Revised and enlarged edition. Vvinda Publications.
- John, A., Lsaac, D. & Nathaniel, A. (2017). Credit risk deposit mobilization and profitability of Ghanaian banks. *International Journal of Economics and Financial Issue*, 7(5), 394-399.
- Koufopoulos, O. (2023). The relationship between deposit mobilization and financial performance of the commercial banks. *International Journal of finance*, 1 (1), 23-32
- Kumar, A (2020). Impact of microfinance bank on standard of living of hair dresser in Ogbomoso North Local Government of Oyo State, Nigeria. *American Journal of Social Sciences*, 2(1), 34-40.
- Laura, E., Alfred, H. & Sylvia, W. (2017). *CGAP working on savings mobilization comparative analysis of savings mobilization strategies*
- Mamo, E. A (2017). An investigation of determinants of deposit mobilization in commercial banks of Ethiopia. *Research Journal on Humanities and Social Science*, 2(1), 17-30.
- Mohammed, C. & Mahdi, U. (2010). The Role of inflation on financial regression: Evidence from Iran world. *Applied Science Journal*, 1(b), 653-661.
- Nzotta, S. M. (2014). *The Nigerian financial system* (3rd Ed). Osprey Publishers.
- Obim, N. O. (2023). *Effects of deposit mobilization on financial performance of microfinance banks in Nigeria*. Being a Ph.D Project submitted in the Department of banking and Finance for Internal Defence, in Partial Fulfilment for the requirement for the Award of a Doctorate Degree in Finance, BAF, COLMAS, MOUAU.
- Ogar, U., Oka, C. (2017). Impact of financial deepening on capital formation on Nigeria. *International Journal of Research in Management and Social Sciences*, 5(11), 2322-0899.
- Oka, U. & Adeshola, C. (2017). The contribution of deposit money banks in Nigeria. *Archives of Business Research*, 3(2), 5-7.
- Olakanmi & Co. (2008). *Financial institutions compendium* (2nd ed). Panaf Press.
- Orji, A. (2012). Bank savings and bank credits in Nigeria: Determinants and impact on economy. *International Journal of Economics and Financial Issues*, 2 (3), 357-372.
- Philip, M. (2018). Analyzing the relationship between commercial banks deposit interest rate and deposit mobilization. *Journal of Business and Management*, 1(16), 64-75.



- Sharma, R. O. (2009). Impact of microfinance banks on micro and small enterprises in Ogun State, Nigeria. *Binus Business Review*. 9 (2), 163-169.
- Shantann, B., Ufuk, G. I. & Paulina, G. (2009). *Borrower's investment incentive*. Lancaster University Management School.
- Tanzi, V. (2017). *Public finance in developing countries*.
- Uche, C. U. & Ehikwe, A. E. (2001). Marketing of banking services in Nigeria. *Journal of Financial Marketing* 6 (2), 133-146.
- Uremadu, S. O. (2015). *Bank management: Basic issues in money, Bank Lending & Credit Administration*. Benin City: Mindex Publishing Company Ltd.
- Venkati, P (2016). Impact of banks deposit mobilization and credit financing in capital formation. *International Research Journal of Marketing and Economics*, 3 (6), 2349-0314